MS462XX Vector Network Measurement System

GPIB QUICK REFERENCE GUIDE

This manual supplements the MS462XX Programming Manual. Insert it behind the tab marked Appendix B, GPIB Quick Reference Guide in that manual.

Anritsu

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MS462X VNMS GPIB Quick Reference Guide

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MS462X VNMS
GPIB Quick Reference Guide

1. *INTRODUCTION*

This appendix provides a quick reference to the MS462X GPIB Programming commands.

2. *GENERAL*

This guide is divided into two listings. Table 1, beginning on page 4, provides an alphabetical listing of all MS462X commands. These commands are also listed alphabetically and fully described in the MS462X Programming Manual, Chapter 11.

Table 2, beginning on page 88, provides a command listing that is functionally grouped. These function groups are described in Chapters 5 thru 10 of the MS462X Programming Manual.

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
*CLS	Clear status bytes and structures	REMOTE - IEEE 488.2 (Ch 8)
*DDT	Enter the 488.2 define device trigger command string	REMOTE - IEEE 488.2 (Ch 8)
*ESE	Enter the 488.2 standard event status enable mask	REMOTE - IEEE 488.2 (Ch 8)
*ESE?	Output the 488.2 standard event status enable mask	REMOTE - IEEE 488.2 (Ch 8)
*ESR?	Output the 488.2 standard event status register value	REMOTE - IEEE 488.2 (Ch 8)
*IDN?	Output the 488.2 instrument identification string	REMOTE - IEEE 488.2 (Ch 8)
*IST?	Output the value of the *ist* message	REMOTE - IEEE 488.2 (Ch 8)
*OPC	Initiate the 488.2 operation complete sequence	REMOTE - IEEE 488.2 (Ch 8)
*OPC?	Initiate the 488.2 operation complete query sequence	REMOTE - IEEE 488.2 (Ch 8)
*OPT?	Output the 488.2 options installed string	REMOTE - IEEE 488.2 (Ch 8)
*PRE	Enter the 488.2 parallel poll register enable mask	REMOTE - IEEE 488.2 (Ch 8)
*PRE?	Output the 488.2 parallel poll register enable mask	REMOTE - IEEE 488.2 (Ch 8)
*RST	Resets the instrument	REMOTE - IEEE 488.2 (Ch 8)
*SRE	Enter the 488.2 service request enable mask	REMOTE - IEEE 488.2 (Ch 8)
*SRE?	Output the 488.2 service request enable mask	REMOTE - IEEE 488.2 (Ch 8)
*STB?	Output the 488.2 status byte value	REMOTE - IEEE 488.2 (Ch 8)
*TRG	Initiate a group execute trigger sequence	REMOTE - IEEE 488.2 (Ch 8)
*TST?	Perform self test and output status	REMOTE - IEEE 488.2 (Ch 8)
*WAI	Wait to continue	REMOTE - IEEE 488.2 (Ch 8)
2PATH3PORT	Select 2-path 3-port calibration method	CAL (Ch 6)
A12	Simulate 12-term calibration	CAL (Ch 6)
A120	Simulate 12-term calibration and initialize all 2-port correction coefficients	CAL (Ch 6)
A24	Simulate 3-port calibration	CAL (Ch 6)
A3P	Simulate 3-port calibration	CAL (Ch 6)
A3P0	Simulate 3-port calibration and initialize all 3-port correction coefficients	CAL (Ch 6)
A40	Simulate 4-port calibration	CAL (Ch 6)
A4P	Simulate 4-port calibration	CAL (Ch 6)
A4P0	Simulate 4-port calibration and initialize all 4-port correction coefficients	CAL (Ch 6)
A8R	Simulate 1-path 2-port calibration reverse path	CAL (Ch 6)
A8T	Simulate 1-path 2-port calibration forward path	CAL (Ch 6)
ABORTCAL	Abort calibration and keep existing calibration data	CAL (Ch 6)
ABSPHASE0	Turn absolute phase OFF	APPL (Ch 10)
ABSPHASE1	Turn absolute phase ON	APPL (Ch 10)
ABSPHASE?	Output the absolute phase ON/OFF status	APPL (Ch 10)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
ABT	Simulate translation frequency response calibration forward and reverse	CAL (Ch 6)
AC2PBTYPE	Set AutoCal to 2-port box type	CAL - AUTOCAL (Ch 6)
AC4PBTYPE	Set AutoCal to 4-port box type	CAL - AUTOCAL (Ch 6)
ACAA	Set AutoCal standard to assurance	CAL - AUTOCAL (Ch 6)
ACADIR1	Enter directivity 1 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACADIR1?	Output directivity 1 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACADIR2	Enter directivity 2 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACADIR2?	Output directivity 2 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACADIR3	Enter directivity 3 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACADIR3?	Output directivity 3 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACADPL	Enter adapter length for AutoCal	CAL - AUTOCAL (Ch 6)
ACADPL?	Output adapter length for AutoCal	CAL - AUTOCAL (Ch 6)
ACADR	Set AutoCal type to adapter removal	CAL - AUTOCAL (Ch 6)
ACADTL	Adapter connected to “LEFT” port of the 2-port AutoCal box	CAL - AUTOCAL (Ch 6)
ACADTR	Adapter connected to “RIGHT” port of the 2-port AutoCal box	CAL - AUTOCAL (Ch 6)
ACADTX?	Output adapter removal port “LEFT” or “RIGHT” in the 2-port AutoCal box that the adapter is connected to	CAL - AUTOCAL (Ch 6)
ACAL1R2	Set adapter removal port to ADAPT & L=1 and R=2	CAL - AUTOCAL (Ch 6)
ACALM1	Enter load match 1 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACALM1?	Output load match 1 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACALM2	Enter load match 2 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACALM2?	Output load match 2 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACALM3	Enter load match 3 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACALM3?	Output load match 3 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACAP?	Output ports configuration for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACAR1L2	Set adapter removal port to ADAPT & R=1 and L=2	CAL - AUTOCAL (Ch 6)
ACARET1	Enter reflection tracking 1 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACARET1?	Output reflection tracking 1 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACARET2	Enter reflection tracking 2 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACARET2?	Output reflection tracking 2 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACARP?	Output adapter removal port configuration for AutoCal	CAL - AUTOCAL (Ch 6)
ACAS?	Output AutoCal assurance status	CAL - AUTOCAL (Ch 6)
ACASRC1	Enter source match 1 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACASRC1?	Output source match 1 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACASRC2	Enter source match 2 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACASRC2?	Output source match 2 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACASRC3	Enter source match 3 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
ACASRC3?	Output source match 3 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACATRT1	Enter transmission tracking 1 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACATRT1?	Output transmission tracking 1 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACATRT2	Enter transmission tracking 2 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACATRT2?	Output transmission tracking 2 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACAVNA1	Set adapter connected to port 1	CAL - AUTOCAL (Ch 6)
ACAVNA2	Set adapter connected to port 2	CAL - AUTOCAL (Ch 6)
ACAVNAPX?	Output adapter removal port configuration for AutoCal	CAL - AUTOCAL (Ch 6)
ACBTYPE?	Output AutoCal 2-port or 4-port box type	CAL - AUTOCAL (Ch 6)
ACDEF	Include isolation	CAL - AUTOCAL (Ch 6)
ACF2P?	Output port selection for full 2-port AutoCal	CAL - AUTOCAL (Ch 6)
ACF2TC	Set the AutoCal full 2-port Thru type to calibrator	CAL - AUTOCAL (Ch 6)
ACF2TT	Set the AutoCal full 2-port Thru type to True Thru	CAL - AUTOCAL (Ch 6)
ACF2TX?	Output full 2-port Thru type for AutoCal	CAL - AUTOCAL (Ch 6)
ACHFD	Save AutoCal characterization to floppy disk	CAL - AUTOCAL (Ch 6)
ACHHD	Save AutoCal characterization to hard disk	CAL - AUTOCAL (Ch 6)
ACIAX?	Output AutoCal isolation yes/no setting	CAL - AUTOCAL (Ch 6)
ACISO	Enter number of averaging for isolation	CAL - AUTOCAL (Ch 6)
ACISO?	Output number of averaging for isolation	CAL - AUTOCAL (Ch 6)
ACL1AR2	Set adapter removal port to L=1 and ADAPT & R=2	CAL - AUTOCAL (Ch 6)
ACL1R2	Set the AutoCal ports to L=1 and R=2	CAL - AUTOCAL (Ch 6)
ACLO	Enter number of averaging for load	CAL - AUTOCAL (Ch 6)
ACLO?	Output number of averaging for load	CAL - AUTOCAL (Ch 6)
ACLOAD	Set AutoCal standard to load	CAL - AUTOCAL (Ch 6)
ACOMIT	Omit isolation	CAL - AUTOCAL (Ch 6)
ACOPEN	Set AutoCal standard to open	CAL - AUTOCAL (Ch 6)
ACP1?	Output port 1 configuration for AutoCal	CAL - AUTOCAL (Ch 6)
ACP2?	Output port 2 configuration for AutoCal	CAL - AUTOCAL (Ch 6)
ACP2L	Set the AutoCal port to LEFT for reflection only cal, port 2	CAL - AUTOCAL (Ch 6)
ACP2R	Set the AutoCal port 2 to RIGHT for reflection only cal, port 2	CAL - AUTOCAL (Ch 6)
ACPA	Select AutoCal port A for reflection only cal	CAL - AUTOCAL (Ch 6)
ACPATH?	Output AutoCal connected path	CAL - AUTOCAL (Ch 6)
ACPB	Select AutoCal port B for reflection only cal	CAL - AUTOCAL (Ch 6)
ACPC	Select AutoCal port C for reflection only cal	CAL - AUTOCAL (Ch 6)
ACPCFG	Enter string to setup port configuration for 4 Port AutoCal Box	CAL - AUTOCAL (Ch 6)
ACPCFG?	Output port configuration for 4 Port AutoCal Box	CAL - AUTOCAL (Ch 6)
ACPL	Set the AutoCal port to LEFT	CAL - AUTOCAL (Ch 6)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
ACPR	Set the AutoCal port to RIGHT	CAL - AUTOCAL (Ch 6)
ACPX	Select AutoCal port X for reflection only cal	CAL - AUTOCAL (Ch 6)
ACPX?	Output AutoCal port selected for reflection only cal	CAL - AUTOCAL (Ch 6)
ACPXA	Set AutoCal connected path to port X-A	CAL - AUTOCAL (Ch 6)
ACPXB	Set AutoCal connected path to port X-B	CAL - AUTOCAL (Ch 6)
ACPXC	Set AutoCal connected path to port X-C	CAL - AUTOCAL (Ch 6)
ACR1AL2	Set adapter removal port to R=1 and ADAPT & L=2	CAL - AUTOCAL (Ch 6)
ACR1L2	Set the AutoCal ports to R=1 and L=2	CAL - AUTOCAL (Ch 6)
ACRFL	Enter number of averaging for reflection	CAL - AUTOCAL (Ch 6)
ACRFL?	Output number of averaging for reflection	CAL - AUTOCAL (Ch 6)
ACS11	Set AutoCal type to S11	CAL - AUTOCAL (Ch 6)
ACS11S22	Set AutoCal type to both S11 and S22	CAL - AUTOCAL (Ch 6)
ACS22	Set AutoCal type to S22	CAL - AUTOCAL (Ch 6)
ACSF2P	Set AutoCal type to full 2-port	CAL - AUTOCAL (Ch 6)
ACSF3P	Set AutoCal type to full 3-port	CAL - AUTOCAL (Ch 6)
ACSF4P	Set AutoCal type to full 4-port	CAL - AUTOCAL (Ch 6)
ACSHORT	Set AutoCal standard to short	CAL - AUTOCAL (Ch 6)
ACSTD?	Output AutoCal standard	CAL - AUTOCAL (Ch 6)
ACSTMEA	Continue AutoCal Thru update	CAL - AUTOCAL (Ch 6)
ACTHRU	Set AutoCal standard to Thru	CAL - AUTOCAL (Ch 6)
ACTHRU12T0	Do port 1, 2 thru measurement using AutoCal THRU or omit THRU depending on the port configuration	CAL - AUTOCAL (Ch 6)
ACTHRU12T1	Do port 1, 2 thru measurement using TRUE THRU	CAL - AUTOCAL (Ch 6)
ACTHRU12X?	Output selection of port 1, 2 thru measurement	CAL - AUTOCAL (Ch 6)
ACTHRU13T0	Do port 1, 3 thru measurement using AutoCal THRU or omit THRU depending on the port configuration	CAL - AUTOCAL (Ch 6)
ACTHRU13T1	Do port 1, 3 thru measurement using TRUE THRU	CAL - AUTOCAL (Ch 6)
ACTHRU13X?	Output selection of port 1, 3 thru measurement	CAL - AUTOCAL (Ch 6)
ACTHRU14T0	Do port 1, 4 thru measurement using AutoCal THRU or omit THRU depending on the port configuration	CAL - AUTOCAL (Ch 6)
ACTHRU14T1	Do port 1, 4 thru measurement using TRUE THRU	CAL - AUTOCAL (Ch 6)
ACTHRU14X?	Output selection of port 1, 4 thru measurement	CAL - AUTOCAL (Ch 6)
ACTHRU23T0	Do port 2, 3 thru measurement using AutoCal THRU or omit THRU depending on the port configuration	CAL - AUTOCAL (Ch 6)
ACTHRU23T1	Do port 2, 3 thru measurement using TRUE THRU	CAL - AUTOCAL (Ch 6)
ACTHRU23X?	Output selection of port 2, 3 thru measurement	CAL - AUTOCAL (Ch 6)
ACTHRU24T0	Do port 2, 4 thru measurement using AutoCal THRU or omit THRU depending on the port configuration	CAL - AUTOCAL (Ch 6)
ACTHRU24T1	Do port 2, 4 thru measurement using TRUE THRU	CAL - AUTOCAL (Ch 6)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
ACTHRU24X?	Output selection of port 2, 4 thru measurement	CAL - AUTOCAL (Ch 6)
ACTHRU34T0	Do port 3, 4 thru measurement using AutoCal THRU or omit THRU depending on the port configuration	CAL - AUTOCAL (Ch 6)
ACTHRU34T1	Do port 3, 4 thru measurement using TRUE THRU	CAL - AUTOCAL (Ch 6)
ACTHRU34X?	Output selection of port 3, 4 thru measurement	CAL - AUTOCAL (Ch 6)
ACTOLP12	Enter port 1, 2 thru line length for AutoCal	CAL - AUTOCAL (Ch 6)
ACTOLP12?	Output port 1, 2 thru offset length for AutoCal	CAL - AUTOCAL (Ch 6)
ACTOLP13	Enter port 1, 3 thru line length for AutoCal	CAL - AUTOCAL (Ch 6)
ACTOLP13?	Output port 1, 3 thru offset length for AutoCal	CAL - AUTOCAL (Ch 6)
ACTOLP14	Enter port 1, 4 thru line length for AutoCal	CAL - AUTOCAL (Ch 6)
ACTOLP14?	Output port 1, 4 thru offset length for AutoCal	CAL - AUTOCAL (Ch 6)
ACTOLP23	Enter port 2, 3 thru line length for AutoCal	CAL - AUTOCAL (Ch 6)
ACTOLP23?	Output port 2, 3 thru offset length for AutoCal	CAL - AUTOCAL (Ch 6)
ACTOLP24	Enter port 2, 4 thru line length for AutoCal	CAL - AUTOCAL (Ch 6)
ACTOLP24?	Output port 2, 4 thru offset length for AutoCal	CAL - AUTOCAL (Ch 6)
ACTOLP34	Enter port 3, 4 thru line length for AutoCal	CAL - AUTOCAL (Ch 6)
ACTOLP34?	Output port 3, 4 thru offset length for AutoCal	CAL - AUTOCAL (Ch 6)
ACTUAVG	Enter number of averaging for AutoCal Thru update	CAL - AUTOCAL (Ch 6)
ACTUAVG?	Output number of averaging for AutoCal Thru update	CAL - AUTOCAL (Ch 6)
ACTULS	Apply last Thru update calibration setup	CAL - AUTOCAL (Ch 6)
ACX?	Output AutoCal type	CAL - AUTOCAL (Ch 6)
ADD	Select addition as trace math for active channel	DISPLAY (Ch 5)
ADDGP?	Output instrument GPIB address	UTILITY (Ch 5)
ADDIP?	Output instrument network IP address	UTILITY (Ch 5)
ADDNDSG	Add the next defined segment or go to the next segment	SWEEP - SEGMENTED SWEEP (Ch 5)
ADDPLT	Enter plotter GPIB address	UTILITY (Ch 5)
ADDPLT?	Output plotter GPIB address	UTILITY (Ch 5)
ADDPM	Enter power meter GPIB address	UTILITY (Ch 5)
ADDPM?	Output power meter GPIB address	UTILITY (Ch 5)
ADDSRC2	Enter external source 2 GPIB address	CONFIG (Ch 5)
ADDSRC2?	Output external source 2 GPIB address	CONFIG (Ch 5)
ADDSRC3	Enter external source 3 GPIB address	CONFIG (Ch 5)
ADDSRC3?	Output external source 3 GPIB address	CONFIG (Ch 5)
ADDSRC4	Enter external source 4 GPIB address	CONFIG (Ch 5)
ADDSRC4?	Output external source 4 GPIB address	CONFIG (Ch 5)
ADPL	Enter electrical length for adapter removal	CAL (Ch 6)
ADPL?	Output electrical length for adapter removal	CAL (Ch 6)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
ADRIVE	Select the floppy drive as the default drive	UTILITY - DISK (Ch 9)
AFT	Simulate transmission frequency response calibration forward path	CAL (Ch 6)
AH0	Turn automatic DUT protection off	CONFIG (Ch 5)
AH1	Turn automatic DUT protection on	CONFIG (Ch 5)
AHX?	Output automatic DUT protection on/off status	CONFIG (Ch 5)
ALC	Perform ALC loop internal calibration	UTILITY - DIAGNOSTICS (Ch 9)
ALCERRS1?	Output source 1 ALC calibration error	CAL (Ch 6)
ALCERRS2?	Output source 2 ALC calibration error	CAL (Ch 6)
ALTS0	Turn alternate sweep mode off	SWEEP (Ch 5)
ALTS1	Turn alternate sweep mode on	SWEEP (Ch 5)
ALTSX?	Output alternate sweep mode on/off status	SWEEP (Ch 5)
AMKR	Select active marker on all channels marker mode	MARKER (Ch 7)
ANNCOL	Enter the color number for annotation and menu text	UTILITY (Ch 9)
ANNCOL?	Output the color number for annotation and menu text	UTILITY (Ch 9)
AOF	Turn averaging off	AVG (Ch 5)
AOF?	Output averaging on/off status	AVG (Ch 5)
AON	Turn averaging on	AVG (Ch 5)
APPC12T?	Output 12 Term calibration done status	CAL (Ch 6)
APPC3P?	Output 3-port calibration done status	CAL (Ch 6)
APPC4P?	Output 4-port calibration done status	CAL (Ch 6)
APPDEVM	Select mixer device type for application	APPL (Ch 10)
APPDEVS	Select standard device type for application	APPL (Ch 10)
APPDEVX?	Output device type for application	APPL (Ch 10)
APPENTC	Set application entry state to current state	APPL (Ch 10)
APPENTP	Set application entry state to previous state	APPL (Ch 10)
APPENTX?	Output application entry state	APPL (Ch 10)
APPFTGD	Select frequency translation group delay application type	APPL - FTGD (Ch 10)
APPGCF	Select swept frequency gain compression application type	APPL (Ch 10)
APPGCP	Select swept power gain compression application type	APPL (Ch 10)
APPHAR	Select harmonic application type	APPL (Ch 10)
APPIMD	Select IMD application type	APPL (Ch 10)
APPLORCW0	Turn off LO CW mode	APPL (Ch 10)
APPLORCW1	Turn on LO CW mode	APPL (Ch 10)
APPLORCWF	Enter LO CW frequency	APPL (Ch 10)
APPLORCWF?	Output LO CW frequency	APPL (Ch 10)
APPLORCWX?	Output LO CW on/off status	APPL (Ch 10)
APPLOROFF	Enter LO offset frequency	APPL (Ch 10)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
APPLOROFF?	Output LO offset frequency	APPL (Ch 10)
APPLORRCD	Select receiver down conversion	APPL (Ch 10)
APPLORRCN	Select receiver no conversion	APPL (Ch 10)
APPLORRCU	Select receiver up conversion	APPL (Ch 10)
APPLORRCX?	Output receiver conversion type	APPL (Ch 10)
APPLORS2	Select source 2 for LO	APPL (Ch 10)
APPLORS3	Select source 3 for LO	APPL (Ch 10)
APPLORS4	Select source 4 for LO	APPL (Ch 10)
APPLORSX?	Output LO source number	APPL (Ch 10)
APPNF	Select noise figure application type	APPL (Ch 10)
APPSWPC	Set application sweep mode to CW receiver	APPL (Ch 10)
APPSWPS	Set application sweep mode to source sweep	APPL (Ch 10)
APPSWPX?	Output application sweep mode	APPL (Ch 10)
APPTR	Select transmission and reflection application type	APPL (Ch 10)
APPX?	Output application type	APPL (Ch 10)
APR	Enter group delay aperture setting on active channel	DISPLAY (Ch 5)
APR?	Output group delay aperture setting on active channel	DISPLAY (Ch 5)
APRXSTP	Enter approximate stop frequency	CAL (Ch 6)
APRXSTP?	Output approximate stop frequency	CAL (Ch 6)
ARB	Simulate reflection only calibration both ports	CAL (Ch 6)
ARF	Simulate reflection only calibration port 1	CAL (Ch 6)
ARR	Simulate reflection only calibration port 2	CAL (Ch 6)
ART	Simulate translation frequency response calibration reverse path	CAL (Ch 6)
ASC	Autoscale the active channel display	DISPLAY (Ch 5)
ASP	Enter polar stop sweep position angle	DISPLAY (Ch 5)
ASP?	Output polar stop sweep position angle	DISPLAY (Ch 5)
AST	Enter polar start sweep position angle	DISPLAY (Ch 5)
AST?	Output polar start sweep position angle	DISPLAY (Ch 5)
ATTN	Attach next segment and make it the active segment	DISPLAY - LIMITS (Ch 7)
AVG	Enter averaging count and turn it on	AVG (Ch 5)
AVG?	Output averaging count	AVG (Ch 5)
AVGCNT?	Output the current Sweep-by-Sweep average sweep count	AVG (Ch 5)
BAC	Perform backend attenuator calibration	UTILITY - DIAGNOSTICS (Ch 9)
BBL	Select broadband load for calibration	CAL (Ch 6)
BBLP3	Select broadband load for 3-port calibration	CAL (Ch 6)
BBLP4	Select broadband load for 4-port calibration	CAL (Ch 6)
BBX?	Output load type for calibration broadband/sliding load	CAL (Ch 6)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
BBXP3?	Output load type for 3-port calibration broadband/sliding load	CAL (Ch 6)
BBXP4?	Output load type for 4-port calibration broadband/sliding load	CAL (Ch 6)
BBZ	Enter broadband load impedance for calibration	CAL (Ch 6)
BBZ?	Output broadband load impedance for calibration	CAL (Ch 6)
BBZL	Enter broadband load inductance for calibration	CAL (Ch 6)
BBZL?	Output broadband load inductance for calibration	CAL (Ch 6)
BC0	Turn LCD display off (disabled)	UTILITY (Ch 9)
BC1	Turn LCD display on (enabled)	UTILITY (Ch 9)
BCKCOL	Enter the color number for background	UTILITY (Ch 9)
BCKCOL?	Output the color number for background	UTILITY (Ch 9)
BCX?	Output LCD display on/off status	UTILITY (Ch 9)
BD1	Select band 1 for definition	CONFIG - MULTIPLE SOURCE (Ch 5)
BD2	Select band 2 for definition	CONFIG - MULTIPLE SOURCE (Ch 5)
BD3	Select band 3 for definition	CONFIG - MULTIPLE SOURCE (Ch 5)
BD4	Select band 4 for definition	CONFIG - MULTIPLE SOURCE (Ch 5)
BD5	Select band 5 for definition	CONFIG - MULTIPLE SOURCE (Ch 5)
BEEP0	Disable the instrument beeper on GPIB errors	UTILITY (Ch 9)
BEEP1	Enable the instrument beeper on GPIB errors	UTILITY (Ch 9)
BEEPX?	Output GPIB beep on error enable/disable status	UTILITY (Ch 9)
BEG	Begin taking calibration data	CAL (Ch 6)
BEG3P	Begin taking 3-port calibration data	CAL (Ch 6)
BEG4P	Begin taking 4-port calibration data	CAL (Ch 6)
BEGAC	Initialize an AutoCal measurement	CAL - AUTOCAL (Ch 6)
BEGACA	Start AutoCal assurance	CAL - AUTOCAL (Ch 6)
BEGCH	Start AutoCal characterization	CAL - AUTOCAL (Ch 6)
BEGEN	Begin taking harmonic enhancement calibration data	APPL - HARMONIC (Ch 10)
BEGFTGD	Start frequency translation group delay calibration	APPL - FTGD (Ch 10)
BEGHAR	Begin taking both harmonic enhancement and phase calibration	APPL - HARMONIC (Ch 10)
BEGIMD	Begin taking IMD calibration data	APPL - IMD (Ch 10)
BEGN	Begin next segment and make it the active segment	DISPLAY - LIMITS (Ch 7)
BEGNF	Begin taking noise figure calibration data	APPL - NOISE FIGURE (Ch 10)
BEGNFRF	Begin taking noise figure with RF calibration data	APPL - NOISE FIGURE (Ch 10)
BEGPH	Begin taking harmonic phase calibration data	APPL - HARMONIC (Ch 10)
BEGR	Begin receiver calibration	POWER - RECEIVER CAL (Ch 5)
BEGTU	Start AutoCal Thru update	CAL - AUTOCAL (Ch 6)
BH0	Turn bias off while in hold	CONFIG (Ch 5)
BH1	Turn bias on while in hold	CONFIG (Ch 5)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
BHX?	Output bias on/off during hold status	CONFIG (Ch 5)
BMPB	Select black on white as bitmap type	HARD COPY (Ch 9)
BMPC	Select color on white as bitmap type	HARD COPY (Ch 9)
BMPT	Select true color as bitmap type	HARD COPY (Ch 9)
BMPX?	Output bitmap type	HARD COPY (Ch 9)
BNDNFCW?	Output multiple source band Noise Figure ENR source CW flag	APPL - NOISE FIGURE (Ch 10)
BNDNFDIV?	Output multiple source band Noise Figure ENR source divisor	APPL - NOISE FIGURE (Ch 10)
BNDNFMUL?	Output multiple source band Noise Figure ENR source multiplier	APPL - NOISE FIGURE (Ch 10)
BNDNFOFF?	Output multiple source band Noise Figure ENR source offset	APPL - NOISE FIGURE (Ch 10)
BNDRCW?	Output multiple source band receiver CW flag for specified band	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDRDIV?	Output multiple source band receiver divisor for specified band	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDRMUL?	Output multiple source band receiver multiplier for specified band	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDROFF?	Output multiple source band receiver offset for specified band	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDRSCW?	Output multiple source band receiver source CW flag	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDRSDIV?	Output multiple source band receiver source divisor	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDRSMUL?	Output multiple source band receiver source multiplier	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDRSOFF?	Output multiple source band receiver source offset	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS1CW?	Output multiple source band source 1 CW flag for specified band	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS1DIV?	Output multiple source band source 1 divisor for specified band	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS1MUL?	Output multiple source band source 1 multiplier for specified band	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS1OFF?	Output multiple source band source 1 offset for specified band	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS2CW?	Output multiple source band source 2 CW flag for specified band	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS2DIV?	Output multiple source band source 2 divisor for specified band	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS2MUL?	Output multiple source band source 2 multiplier for specified band	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS2OFF?	Output multiple source band source 2 offset for specified band	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS3CW?	Output multiple source band source 3 CW flag	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS3DIV?	Output multiple source band source 3 divisor	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS3MUL?	Output multiple source band source 3 multiplier	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS3OFF?	Output multiple source band source 3 offset	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS4CW?	Output multiple source band source 4 CW flag	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS4DIV?	Output multiple source band source 4 divisor	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS4MUL?	Output multiple source band source 4 multiplier	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS4OFF?	Output multiple source band source 4 offset	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDSRT?	Output multiple source band start frequency for specified band	CONFIG - MULTIPLE SOURCE (Ch 5)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
BNDSTP?	Output multiple source band stop frequency for specified band	CONFIG - MULTIPLE SOURCE (Ch 5)
BPF	Enter break point frequency for 3 line LRL calibration	CAL (Ch 6)
BPF?	Output break point frequency for 3 line LRL calibration	CAL (Ch 6)
BSP	Enter band stop frequency	CONFIG - MULTIPLE SOURCE (Ch 5)
BSP?	Output band stop frequency	CONFIG - MULTIPLE SOURCE (Ch 5)
BST	Enter band start frequency	CONFIG - MULTIPLE SOURCE (Ch 5)
BST?	Output band start frequency	CONFIG - MULTIPLE SOURCE (Ch 5)
BWL3	Set bandwidth loss value to 3 dB	MARKER (Ch 7)
BWLS	Enter bandwidth loss value	MARKER (Ch 7)
BWLS?	Output bandwidth loss value	MARKER (Ch 7)
C12	Select 12 term calibration	CAL (Ch 6)
C8R	Select 1-path 2-port calibration reverse path	CAL (Ch 6)
C8T	Select 1-path 2-port calibration forward path	CAL (Ch 6)
CALR	Perform receiver calibration for gain compression testing	APPL - GAIN COMPRESSION (Ch 10)
CAS	Clear active segmented limit vertical/horizontal definitions	DISPLAY - LIMITS (Ch 7)
CBT	Select translation frequency response calibration forward and reverse	CAL (Ch 6)
CC0	Enter capacitance coefficient 0 for open	CAL (Ch 6)
CC0?	Output capacitance coefficient 0 for open	CAL (Ch 6)
CC1	Enter capacitance coefficient 1 for open	CAL (Ch 6)
CC1?	Output capacitance coefficient 1 for open	CAL (Ch 6)
CC2	Enter capacitance coefficient 2 for open	CAL (Ch 6)
CC2?	Output capacitance coefficient 2 for open	CAL (Ch 6)
CC3	Enter capacitance coefficient 3 for open	CAL (Ch 6)
CC3?	Output capacitance coefficient 3 for open	CAL (Ch 6)
CD	Change default directory	UTILITY - DISK (Ch 9)
CDATTN0?	Output port 1 attenuation of power sweep mode from selected cal memory	CAL (Ch 6)
CDATTN2?	Output port 3 attenuation of power sweep mode from selected cal memory	CAL (Ch 6)
CDCALTP?	Output 2-port cal type from selected cal memory	CAL (Ch 6)
CDCON?	Output port 1 connector from selected cal memory	CAL (Ch 6)
CDCWF?	Output cw mode frequency from selected cal memory	CAL (Ch 6)
CDEND1?	Output end power for power source 1 or end frequency from selected cal memory	CAL (Ch 6)
CDEND2?	Output end power for power source 2 from selected cal memory	CAL (Ch 6)
CDEND3?	Output end power for power source 3 from selected cal memory	CAL (Ch 6)
CDEND4?	Output end power for power source 4 from selected cal memory	CAL (Ch 6)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
CDFREQ?	Output cal data freq list from selected cal memory	CAL (Ch 6)
CDFSW?	Output sweep type from selected cal memory	CAL (Ch 6)
CDFXCALTP?	Output Flexible Cal calibration type	CAL - FLEXIBLE CAL (Ch 6)
CDLNTP?	Output line type from selected cal memory	CAL (Ch 6)
CDNOP1?	Output port 1 nominal offset of power sweep mode from selected cal memory	CAL (Ch 6)
CDNOP3?	Output port 3 nominal offset of power sweep mode from selected cal memory	CAL (Ch 6)
CDNUM?	Output data number of power/frequency from selected cal memory	CAL (Ch 6)
CDP2CON?	Output port 2 connector from selected cal memory	CAL (Ch 6)
CDP3CALTP?	Output 3-port cal type from selected cal memory	CAL (Ch 6)
CDP3CON?	Output port 3 connector from selected cal memory	CAL (Ch 6)
CDP4CALTP?	Output 4-port cal type from selected cal memory	CAL (Ch 6)
CDP4CON?	Output port 4 connector from selected cal memory	CAL (Ch 6)
CDPTS?	Output cal data points from selected cal memory	CAL (Ch 6)
CDPTSPWR?	Output cal data point of power sweep mode from selected cal memory	CAL (Ch 6)
CDRIVE	Select the hard disk as the default drive	UTILITY - DISK (Ch 9)
CDSRC2PWR?	Output power in power source 2 from selected cal memory	CAL (Ch 6)
CDSRCPWR?	Output power in power source 1 from selected cal memory	CAL (Ch 6)
CDSTEP?	Output min power/frequency step from selected cal memory	CAL (Ch 6)
CDSTRT1?	Output start power for power source 1 or start frequency from selected cal memory	CAL (Ch 6)
CDSTRT2?	Output start power for power source 2 from selected cal memory	CAL (Ch 6)
CDSTRT3?	Output start power for power source 3 from selected cal memory	CAL (Ch 6)
CDSTRT4?	Output start power for power source 4 from selected cal memory	CAL (Ch 6)
CF2	Select female 2.4mm connector for current port	CAL (Ch 6)
CF3	Select female GPC-3.5 connector for current port	CAL (Ch 6)
CF716	Select female Type 7/16 connector for current port	CAL (Ch 6)
CFC	Select female TNC connector for current port	CAL (Ch 6)
CFD	Collect final data in an internal buffer	REMOTE - MEASURED DATA (Ch 8)
CFFX?	Query Flexible Cal define mode	CAL - FLEXIBLE CAL (Ch 6)
CFK	Select female K Connector for current port	CAL (Ch 6)
CFN	Select female Type N connector for current port	CAL (Ch 6)
CFN75	Select female Type N 75-ohm connector for current port	CAL (Ch 6)
CFS	Select female SMA connector for current port	CAL (Ch 6)
CFSP	Select special female connector for current port	CAL (Ch 6)
CFT	Select transmission frequency response calibration forward path	CAL (Ch 6)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
CFV	Select female V Connector for current port	CAL (Ch 6)
CFXI?	Output Flexible Cal input method	CAL - FLEXIBLE CAL (Ch 6)
CFXICU	Select Flexible Customize Cal	CAL - FLEXIBLE CAL (Ch 6)
CFXIFU	Select Flexible Full Term Cal	CAL - FLEXIBLE CAL (Ch 6)
CFXIRF	Select Flexible Reflection Cal	CAL - FLEXIBLE CAL (Ch 6)
CH1	Make channel 1 the active channel	CH (Ch 5)
CH2	Make channel 2 the active channel	CH (Ch 5)
CH3	Make channel 3 the active channel	CH (Ch 5)
CH4	Make channel 4 the active channel	CH (Ch 5)
CHAPR?	Output group delay aperture setting for specified channel	DISPLAY (Ch 5)
CHDAT?	Output trace memory display mode for specified channel	DISPLAY (Ch 5)
CHDDX?	Output domain parameter frequency/distance/time for specified channel	APPL - TIME DOMAIN (Ch 10)
CHGOF?	Output the time domain gating mode on/off/display for specified channel	APPL - TIME DOMAIN (Ch 10)
CHGRF?	Output graph type for specified channel	DISPLAY (Ch 5)
CHLFD2?	Output limit frequency readout delta value for bottom graph for specified channel	DISPLAY - LIMITS (Ch 7)
CHLFD?	Output limit frequency readout delta value for top graph for specified channel	DISPLAY - LIMITS (Ch 7)
CHLLO2?	Output lower limit value for bottom graph for specified channel	DISPLAY - LIMITS (Ch 7)
CHLLO?	Output lower limit value for top graph for specified channel	DISPLAY - LIMITS (Ch 7)
CHLON?	Output limits display on/off status for specified channel	DISPLAY - LIMITS (Ch 7)
CHLPSX?	Output the time domain impulse/step response for specified channel	APPL - TIME DOMAIN (Ch 10)
CHLUP2?	Output upper limit value for bottom graph for specified channel	DISPLAY - LIMITS (Ch 7)
CHLUP?	Output upper limit value for top graph for specified channel	DISPLAY - LIMITS (Ch 7)
CHMTH?	Output trace math math type for specified channel	DISPLAY (Ch 5)
CHOFF2?	Output offset value for the bottom graph for specified channel	DISPLAY (Ch 5)
CHOFF?	Output offset value for the top graph for specified channel	DISPLAY (Ch 5)
CHOPMODE?	Output chop mode type status	SWEEP (Ch 5)
CHPHO?	Output phase offset for specified channel	DISPLAY (Ch 5)
CHRDD?	Output reference delay in distance for specified channel	DISPLAY (Ch 5)
CHRDT?	Output reference delay in time for specified channel	DISPLAY (Ch 5)
CHREF2?	Output reference line for the bottom graph for specified channel	DISPLAY (Ch 5)
CHREF?	Output reference line for the top graph for specified channel	DISPLAY (Ch 5)
CHSCL2?	Output scale resolution for the bottom graph for specified channel	DISPLAY (Ch 5)
CHSCL?	Output scale resolution for the top graph for specified channel	DISPLAY (Ch 5)
CHSLH?	Output segmented limits horizontal offset for specified channel	DISPLAY - LIMITS (Ch 7)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
CHSLLX?	Output lower segmented limits display on/off status for specified channel	DISPLAY - LIMITS (Ch 7)
CHSLUX?	Output upper segmented limits display on/off status for specified channel	DISPLAY - LIMITS (Ch 7)
CHSLV?	Output segmented limits vertical offset for specified channel	DISPLAY - LIMITS (Ch 7)
CHSXX?	Output parameter or user defined parameter for specified channel	MEAS (Ch 5)
CHTDDIST?	Output the time domain parameter distance/time for specified channel	APPL - TIME DOMAIN (Ch 10)
CHTDPIX?	Output the time domain phasor impulse on/off status for specified channel	APPL - TIME DOMAIN (Ch 10)
CHTDX?	Output domain mode for specified channel	APPL - TIME DOMAIN (Ch 10)
CHX?	Output active channel number	CH (Ch 5)
CL0	Enter inductive coefficient 0 for short	CAL (Ch 6)
CL0?	Output inductive coefficient 0 for short	CAL (Ch 6)
CL1	Enter inductive coefficient 1 for short	CAL (Ch 6)
CL1?	Output inductive coefficient 1 for short	CAL (Ch 6)
CL2	Enter inductive coefficient 2 for short	CAL (Ch 6)
CL2?	Output inductive coefficient 2 for short	CAL (Ch 6)
CL3	Enter inductive coefficient 3 for short	CAL (Ch 6)
CL3?	Output inductive coefficient 3 for short	CAL (Ch 6)
CLB	Clear all multiple source band definitions	CONFIG - MULTIPLE SOURCE (Ch 5)
CLRDSG	Clear all the defined segments of the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
CM	Suffix sets distance data type and scales by 1E-2	DATA ENTRY SUFFIXES (Ch 5)
CM2	Select male 2.4mm connector for current port	CAL (Ch 6)
CM3	Select male GPC-3.5 connector for current port	CAL (Ch 6)
CM3PX?	Output calibration method for 3-port cal	CAL (Ch 6)
CM4PX?	Output calibration method for 4-port calibration	CAL (Ch 6)
CM716	Select male Type 7/16 connector for current port	CAL (Ch 6)
CMC	Select male TNC connector for current port	CAL (Ch 6)
CMK	Select male K Connector for current port	CAL (Ch 6)
CMN	Select male N connector for current port	CAL (Ch 6)
CMN75	Select male Type N 75-Ohm connector for current port	CAL (Ch 6)
CMS	Select male SMA connector for current port	CAL (Ch 6)
CMSP	Select special male connector for current port	CAL (Ch 6)
CMT	Suffix sets distance data type and scales by 1E-2	DATA ENTRY SUFFIXES (Ch 5)
CMV	Select male V Connector for current port	CAL (Ch 6)
CMX?	Output calibration method	CAL (Ch 6)
CND	Select user specified connector for current port	CAL (Ch 6)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
CNG	Select GPC-7 connector for current port	CAL (Ch 6)
CNTR	Enter center frequency	FREQ (Ch 5)
CNTR?	Output center frequency	FREQ (Ch 5)
COF	Turn 2 and 3-port error correction and Flexible Cal off	CAL (Ch 6)
CON	Turn 2-port error correction on	CAL (Ch 6)
CON3P	Turn 3-port error correction on	CAL (Ch 6)
CON3P?	Output 3-port error correction on/off status	CAL (Ch 6)
CON4P	Turn 4-port error correction on	CAL (Ch 6)
CON4P?	Output 4-Port error correction on/off status	CAL (Ch 6)
CON?	Output 2-port error correction on/off status	CAL (Ch 6)
CONCC0?	Output capacitance coefficient 0 of open device for specified connector	CAL (Ch 6)
CONCC1?	Output capacitance coefficient 1 of open device for specified connector	CAL (Ch 6)
CONCC2?	Output capacitance coefficient 2 of open device for specified connector	CAL (Ch 6)
CONCC3?	Output capacitance coefficient 3 of open device for specified connector	CAL (Ch 6)
CONFX	Turn flexible error correction on	CAL - FLEXIBLE CAL (Ch 6)
CONFX?	Output flexible error correction on/off status	CAL - FLEXIBLE CAL (Ch 6)
CONOPOFF?	Output offset of open device for specified connector	CAL (Ch 6)
CONOPSER?	Output serial number of open device for specified connector	CAL (Ch 6)
CONSHANG?	Output angle of short device for specified connector	CAL (Ch 6)
CONSHOFF?	Output offset of short device for specified connector	CAL (Ch 6)
CONSHSER?	Output serial number of short device for specified connector	CAL (Ch 6)
COO	Enter offset for open for user specified connector	CAL (Ch 6)
COO?	Output offset for open for user specified connector	CAL (Ch 6)
COPY	Copy a files contents to another file	UTILITY - DISK (Ch 9)
COS	Enter offset for short for user specified connector	CAL (Ch 6)
COS?	Output offset for short for user specified connector	CAL (Ch 6)
CPYALLFH	Copy combined hardware cal file from floppy to hard disk	UTILITY - DISK (Ch 9)
CPYALLHF	Copy combined hardware cal file from hard to floppy disk	UTILITY - DISK (Ch 9)
CRB	Select reflection only calibration both ports	CAL (Ch 6)
CRF	Select reflection only calibration port 1	CAL (Ch 6)
CRR	Select reflection only calibration port 2	CAL (Ch 6)
CRT	Select transmission frequency response calibration reverse path	CAL (Ch 6)
CSB	Clear status bytes and structures (same as *CLS)	REMOTE - STATUS REPORTING (Ch 8)
CSF?	Output calibration start frequency	CAL (Ch 6)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
CSL	Clear service log	UTILITY - SERVICE LOG (Ch 9)
CSWP?	Output sweep mode for calibration	CAL (Ch 6)
CTF?	Output calibration stop frequency	CAL (Ch 6)
CTN	Continue sweeping from current point	HOLD (Ch 5)
CWC	Select CW frequency calibration data points	CAL (Ch 6)
CWD?	Output current working directory string	UTILITY - DISK (Ch 9)
CWF	Enter CW frequency and turn CW on	FREQ (Ch 5)
CWF?	Output CW frequency	FREQ (Ch 5)
CWON	Turn CW on at current CW frequency	FREQ (Ch 5)
CWON?	Output CW on/off status	FREQ (Ch 5)
CWP	Enter number of points drawn in CW	CONFIG (Ch 5)
CWP?	Output number of points drawn in CW	CONFIG (Ch 5)
CXD?	Output internal buffer data collection mode	REMOTE - MEASURED DATA (Ch 8)
CXX?	Output calibration type	CAL (Ch 6)
D13	Display channels 1 & 3	DISPLAY (Ch 5)
D14	Display all four channels	DISPLAY (Ch 5)
D24	Select dual channel display with channels 2 & 4	DISPLAY (Ch 5)
DA1	Select a1 = Ra as denominator for parameter being defined	MEAS (Ch 5)
DA2	Select a2 = Rb as denominator for parameter being defined	MEAS (Ch 5)
DA3	Select a3 = Rc as denominator for parameter being defined	MEAS (Ch 5)
DA4	Select a4 = Rd as denominator for parameter being defined	MEAS (Ch 5)
DAC	Enter DAC number of 10 MHz calibration	UTILITY (Ch 9)
DAC?	Output DAC number of 10 MHz calibration	UTILITY (Ch 9)
DAT	Display data only on active channel	DISPLAY (Ch 5)
DAT?	Output trace memory display mode	DISPLAY (Ch 5)
DATCOL	Enter the color number for data	UTILITY (Ch 9)
DATCOL?	Output the color number for data	UTILITY (Ch 9)
DATE	Enter the system date	UTILITY (Ch 9)
DATE?	Output the system date	UTILITY (Ch 9)
DB	Suffix sets power data type	DATA ENTRY SUFFIXES (Ch 5)
DB1	Select b1 = Ta as denominator for parameter being defined	MEAS (Ch 5)
DB2	Select b2 = Tb as denominator for parameter being defined	MEAS (Ch 5)
DB3	Select b3 = Tc as denominator for parameter being defined	MEAS (Ch 5)
DB4	Select b4 = Td as denominator for parameter being defined	MEAS (Ch 5)
DBL	Suffix sets power data type	DATA ENTRY SUFFIXES (Ch 5)
DBM	Suffix sets power data type	DATA ENTRY SUFFIXES (Ch 5)
DBP	Select distance bandpass mode for active channel	APPL - TIME DOMAIN (Ch 10)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
DC1	Display channel 1 and 2 operating parameters	UTILITY (Ch 9)
DC3	Display channel 3 and 4 operating parameters	UTILITY (Ch 9)
DCA	Select automatic DC term calculation for lowpass	APPL - TIME DOMAIN (Ch 10)
DCCTN	Resume internal buffer data collection	REMOTE - MEASURED DATA (Ch 8)
DCCTN?	Output internal buffer data collection resume/suspend status	REMOTE - MEASURED DATA (Ch 8)
DCHLD	Suspend internal buffer data collection	REMOTE - MEASURED DATA (Ch 8)
DCMRK	Insert the mark value into the internal buffer	REMOTE - MEASURED DATA (Ch 8)
DCO	Select open for DC term for lowpass	APPL - TIME DOMAIN (Ch 10)
DCOFF	Turn internal buffer data collection mode off	REMOTE - MEASURED DATA (Ch 8)
DCP	Display calibration parameters 1st page	UTILITY (Ch 9)
DCP1	Display calibration parameters 1st page	UTILITY (Ch 9)
DCPCUR?	Output data collection buffer current point count	REMOTE - MEASURED DATA (Ch 8)
DCPMAX?	Output data collection buffer maximum number of points	REMOTE - MEASURED DATA (Ch 8)
DCREFC?	Output reflection coefficient for lowpass	APPL - TIME DOMAIN (Ch 10)
DCS	Select short for DC term for lowpass	APPL - TIME DOMAIN (Ch 10)
DCV	Enter value for DC term for lowpass	APPL - TIME DOMAIN (Ch 10)
DCV?	Output lowpass DC term value	APPL - TIME DOMAIN (Ch 10)
DCX?	Output lowpass DC term selection	APPL - TIME DOMAIN (Ch 10)
DCZ	Select line impedance for DC term for lowpass	APPL - TIME DOMAIN (Ch 10)
DD0	Turn data drawing off	DISPLAY (Ch 5)
DD1	Turn data drawing on	DISPLAY (Ch 5)
DD1?	Output data drawing on/off status	DISPLAY (Ch 5)
DDX?	Output active channel domain parameter frequency distance or time	APPL - TIME DOMAIN (Ch 10)
DE1	Select unity as denominator for parameter being defined	MEAS (Ch 5)
DEG	Suffix sets phase data type	DATA ENTRY SUFFIXES (Ch 5)
DEL	Delete a file from disk	UTILITY - DISK (Ch 9)
DELALL	Delete combined hardware cal file from floppy disk	UTILITY - DISK (Ch 9)
DELALLH	Delete combined hardware cal file from hard disk	UTILITY - DISK (Ch 9)
DELLDSG	Delete the last defined segment of the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DEN?	Output denominator selection for parameter being defined	MEAS (Ch 5)
DF2	Display 2.4mm female connector information	UTILITY (Ch 9)
DF3	Display GPC-3.5 female connector information	UTILITY (Ch 9)
DF716	Display 7/16 female connector information	UTILITY (Ch 9)
DFC	Select discrete frequency calibration data points	CAL (Ch 6)
DFD	Done specifying discrete frequency ranges	FREQ - DISCRETE FILL (Ch 5)
DFK	Display K female connector information	UTILITY (Ch 9)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
DFN	Display N female connector information	UTILITY (Ch 9)
DFN75	Display N Female 75-Ohm connector information	UTILITY (Ch 9)
DFP	Display front panel instrument state	UTILITY (Ch 9)
DFQ	Enter single discrete frequency	FREQ - DISCRETE FILL (Ch 5)
DFQ?	Output discrete fill single discrete frequency	FREQ - DISCRETE FILL (Ch 5)
DFS	Display SMA female connector information	UTILITY (Ch 9)
DFSP	Display special female connector information	UTILITY (Ch 9)
DFT	Display TNC female connector information	UTILITY (Ch 9)
DFV	Display female V Connector information	UTILITY (Ch 9)
DG7	Display GPC-7 male connector information	UTILITY (Ch 9)
DGS	Display GPIB status information	UTILITY (Ch 9)
DGT	Display first LCD test pattern	UTILITY - DIAGNOSTICS (Ch 9)
DGT1	Display first LCD test pattern	UTILITY - DIAGNOSTICS (Ch 9)
DGT2	Display second LCD test pattern	UTILITY - DIAGNOSTICS (Ch 9)
DGT3	Display third LCD test pattern	UTILITY - DIAGNOSTICS (Ch 9)
DIA	Select air as active dielectric	DISPLAY (Ch 5)
DIE	Enter a dielectric value	DISPLAY (Ch 5)
DIM	Select microporous teflon as active dielectric	DISPLAY (Ch 5)
DIP	Select polyethylene as active dielectric	DISPLAY (Ch 5)
DIR	Output a directory listing to the GPIB	UTILITY - DISK (Ch 9)
DIS	Display active segmented limit	DISPLAY - LIMITS (Ch 7)
DIS?	Output active segmented limit on/off status	DISPLAY - LIMITS (Ch 7)
DISKRD	Output disk file data to the GPIB	UTILITY - DISK (Ch 9)
DISKWR	Write GPIB data to a disk file	UTILITY - DISK (Ch 9)
DIT	Select teflon as active dielectric	DISPLAY (Ch 5)
DIV	Select division as trace math for active channel	DISPLAY (Ch 5)
DIX?	Output dielectric constant	DISPLAY (Ch 5)
DLA	Select group delay display for active channel	DISPLAY (Ch 5)
DLP	Select distance lowpass mode for active channel	APPL - TIME DOMAIN (Ch 10)
DM2	Display 2.4mm male connector information	UTILITY (Ch 9)
DM3	Display GPC-3.5 male connector information	UTILITY (Ch 9)
DM716	Display 7/16 male connector information	UTILITY (Ch 9)
DMK	Display K male connector information	UTILITY (Ch 9)
DMN	Display N male connector information	UTILITY (Ch 9)
DMN75	Display N Male 75-Ohm connector information	UTILITY (Ch 9)
DMS	Display SMA male connector information	UTILITY (Ch 9)
DMSP	Display Special Male connector information	UTILITY (Ch 9)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
DMT	Display TNC male connector information	UTILITY (Ch 9)
DMV	Display V male connector information	UTILITY (Ch 9)
DNM	Display data normalized to trace memory on active channel	DISPLAY (Ch 5)
DPI	Select distance phasor impulse mode for active channel	APPL - TIME DOMAIN (Ch 10)
DPN	Enter pen number for data	HARD COPY (Ch 9)
DPN?	Output pen number for data	HARD COPY (Ch 9)
DPR0	Visible data only OFD format	REMOTE - MEASURED DATA (Ch 8)
DPR1	Data pair always OFD format	REMOTE - MEASURED DATA (Ch 8)
DPRX?	Output data pair mode visible only or pair always	REMOTE - MEASURED DATA (Ch 8)
DR1	Select Marker 1 as delta reference marker	MARKER (Ch 7)
DR10	Select Marker 10 as delta reference marker	MARKER (Ch 7)
DR11	Select Marker 11 as delta reference marker	MARKER (Ch 7)
DR12	Select Marker 12 as delta reference marker	MARKER (Ch 7)
DR2	Select Marker 2 as delta reference marker	MARKER (Ch 7)
DR3	Select Marker 3 as delta reference marker	MARKER (Ch 7)
DR4	Select Marker 4 as delta reference marker	MARKER (Ch 7)
DR5	Select Marker 5 as delta reference marker	MARKER (Ch 7)
DR6	Select Marker 6 as delta reference marker	MARKER (Ch 7)
DR7	Select Marker 7 as delta reference marker	MARKER (Ch 7)
DR8	Select Marker 8 as delta reference marker	MARKER (Ch 7)
DR9	Select Marker 9 as delta reference marker	MARKER (Ch 7)
DRF	Turn delta reference mode on	MARKER (Ch 7)
DRL	Diagnostic read latch	UTILITY - DIAGNOSTICS (Ch 9)
DRO	Turn delta reference mode off	MARKER (Ch 7)
DRO?	Output delta reference mode on/off status	MARKER (Ch 7)
DRX?	Output delta reference marker number	MARKER (Ch 7)
DSF0	Disable filter shape factor calculation	MARKER (Ch 7)
DSF1	Enable filter shape factor calculation	MARKER (Ch 7)
DSFX?	Output filter shape factor calculation enable/disable status	MARKER (Ch 7)
DSG?	Output the active defined segment flag ON/OFF status	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGAVG	Enter the averaging count for the active defined segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGAVG?	Output the averaging count of the active defined segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGDFD	Done specifying discrete frequency ranges for the active discrete segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGDFQ	Enter a single discrete frequency for the active discrete segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGDFQ?	Output the discrete fill single discrete frequency for the active discrete segment	SWEEP - SEGMENTED SWEEP (Ch 5)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
DSGFIL	Fill the defined discrete frequency range for the active discrete segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGFRC	Clear all of the defined discrete frequency ranges for the active discrete segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGFRI	Enter the segmented sweep discrete fill increment frequency for the active discrete segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGFRI?	Output the segmented sweep discrete fill increment frequency for the active discrete segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGFRP	Enter the segmented sweep discrete fill number of points for the active discrete segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGFRP?	Output the discrete fill number of points for the active discrete segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGFRS	Enter the discrete fill start frequency for the active discrete segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGFRS?	Output the discrete fill start frequency for the active discrete segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGIFBW10	Set the IFBW to 10 Hz for the active defined segment in the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGIFBW100	Set the IFBW to 100 Hz for the active defined segment in the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGIFBW10K	Set the IFBW to 10 kHz for the active defined segment in the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGIFBW1K	Set the IFBW to 1 kHz for the active defined segment in the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGIFBW30	Set the IFBW to 30 Hz for the active defined segment in the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGIFBW300	Set the IFBW to 300 Hz for the active defined segment in the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGIFBW30K	Set the IFBW to 30 kHz for the active defined segment in the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGIFBW3K	Set the IFBW to 3 kHz for the active defined segment in the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGIFBWX?	Output the active defined segment IF bandwidth in the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGNO	Set the active defined segment number for the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGNO?	Output the active defined segment number for the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGOFF	Turn the active defined segment flag OFF	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGON	Turn the active define segment flag ON	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGONDF	Output the number of discrete frequencies	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGPTS	Enter the number of points for the active defined segment for the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGPTS?	Output the number of points of the active defined segment for the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGPWR1	Enter the Source 1 power level for the active segment	SWEEP - SEGMENTED SWEEP (Ch 5)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
DSGPWR1?	Output the Source 1 power level of the active segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGPWR2	Enter the Source 2 power level for the active segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGPWR2?	Output the Source 2 power level of the active segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGSTP	Enter the stop frequency of the active defined segment for the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGSTP?	Output the start frequency of the active defined segment for the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGSTRT	Enter the start frequency of the active defined segment for the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGSTRT?	Output the start frequency of the active define segment for the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSP	Select single channel display	DISPLAY (Ch 5)
DSP?	Output channel display mode	DISPLAY (Ch 5)
DSQ0	Disable filter Q calculation	MARKER (Ch 7)
DSQ1	Enable filter Q calculation	MARKER (Ch 7)
DSQX?	Output filter Q calculation enable/disable status	MARKER (Ch 7)
DTM	Display measurement data and trace memory on active channel	DISPLAY (Ch 5)
DVM	Enter DVM channel number	UTILITY - DIAGNOSTICS (Ch 9)
DWG	Display waveguide parameters	UTILITY (Ch 9)
DWL	Diagnostic write latch	UTILITY - DIAGNOSTICS (Ch 9)
EANAIN	Measure EXT. ANALOG IN on active channel	MEAS (Ch 5)
ECW	Select CW operation for component being edited	CONFIG - MULTIPLE SOURCE (Ch 5)
ED1	Edit source 1 equation	CONFIG - MULTIPLE SOURCE (Ch 5)
ED2	Edit source 2 equation	CONFIG - MULTIPLE SOURCE (Ch 5)
ED3	Edit source 3 equation	CONFIG - MULTIPLE SOURCE (Ch 5)
ED4	Edit source 4 equation	CONFIG - MULTIPLE SOURCE (Ch 5)
EDADD	Select add on to network for embedding/de-embedding	CONFIG (Ch 5)
EDADD?	Output Add on to Network or Modify Last Network for embedding/de-embedding	CONFIG (Ch 5)
EDE	Edit ENR source equation	APPL (Ch 10)
EDE0	Turn Embedding/De-embedding Mode off	CONFIG (Ch 5)
EDE1	Turn Embedding/De-embedding Mode on	CONFIG (Ch 5)
EDE?	Output Embedding/De-embedding Mode status	CONFIG (Ch 5)
EDEAIR	Select air as dielectric type for T-line section	CONFIG (Ch 5)
EDEAPP	Apply Embedding/De-embedding Network	CONFIG (Ch 5)
EDECAP	Enter capacitance for LC circuit	CONFIG (Ch 5)
EDECAP4P1	Enter capacitance 1 for circuit topology in four port embedding/de-embedding	CONFIG (Ch 5)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
EDECAP4P1?	Output capacitance 1 for circuit topology in four port embedding/de-embedding	CONFIG (Ch 5)
EDECAP4P2	Enter capacitance 2 for circuit topology in four port embedding/de-embedding	CONFIG (Ch 5)
EDECAP4P2?	Output capacitance 2 for circuit topology in four port embedding/de-embedding	CONFIG (Ch 5)
EDECAP?	Output capacitance for LC circuit	CONFIG (Ch 5)
EDECKT?	Output embedding/de-embedding network generation method selection	CONFIG (Ch 5)
EDECPLS	Select C(P)-L(S) as LC circuit type	CONFIG (Ch 5)
EDECSCP	Select C(S)-L(P) as LC circuit type	CONFIG (Ch 5)
EDECSLP	Select C(S)-L(P) as LC circuit type	CONFIG (Ch 5)
EDECSLP4P	Select C(S)-L(P) as the LC circuit type for the 4-port circuit	CONFIG (Ch 5)
EDED	Select de-embedding as embedding/de-embedding method	CONFIG (Ch 5)
EDEDEF	Define embedding/de-embedding network	CONFIG (Ch 5)
EDEDEF?	Output apply or define embedding/de-embedding network	CONFIG (Ch 5)
EDEDIEL	Enter relative dielectric for T-line section	CONFIG (Ch 5)
EDEDIEL?	Output relative dielectric for T-line section	CONFIG (Ch 5)
EDEDT?	Output dielectric type for T-line section	CONFIG (Ch 5)
EDEDUT2	Select 2-port test device for embedding/de-embedding	CONFIG (Ch 5)
EDEDUT3	Select 3-port test device for embedding/de-embedding	CONFIG (Ch 5)
EDEDUT4	Select 4-port test device for embedding/de-embedding	CONFIG (Ch 5)
EDEDUT?	Output device type selection for embedding/de-embeddin	CONFIG (Ch 5)
EDEE	Select embedding as embedding/de-embedding method	CONFIG (Ch 5)
EDEED?	Output embedding/de-embedding method selection	CONFIG (Ch 5)
EDEIMP	Enter impedance for T-line section	CONFIG (Ch 5)
EDEIMP?	Output impedance for T-line section	CONFIG (Ch 5)
EDEIND	Enter inductance for LC circuit	CONFIG (Ch 5)
EDEIND4P	Enter inductance for circuit topology in four port embedding/de-embedding	CONFIG (Ch 5)
EDEIND4P2	Enter Inductance 2 for the circuit topology in four-port embedding/de-embedding	CONFIG (Ch 5)
EDEIND4P2?	Output Inductance 2 for the circuit topology in four-port embedding/de-embedding	CONFIG (Ch 5)
EDEIND4P?	Output inductance for circuit topology in four port embedding/de-embedding	CONFIG (Ch 5)
EDEIND?	Output inductance for LC circuit	CONFIG (Ch 5)
EDELC	Select LC circuit as embedding/de-embedding network generation method	CONFIG (Ch 5)
EDELC4P?	Outputs the four-port LC circuit type selection	CONFIG (Ch 5)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
EDELC?	Output LC circuit type selection	CONFIG (Ch 5)
EDELEN	Enter length for T-line section	CONFIG (Ch 5)
EDELEN?	Output length for T-line section	CONFIG (Ch 5)
EDELOS	Enter loss for T-line section	CONFIG (Ch 5)
EDELOS?	Output loss for T-line section	CONFIG (Ch 5)
EDELPCS	Select L(P)-C(S) as LC circuit type	CONFIG (Ch 5)
EDELSCP	Select L(S)-C(P) as LC circuit type	CONFIG (Ch 5)
EDELSCP4P	Select L(S)-C(P) as the LC circuit type for the four-port circuit	CONFIG (Ch 5)
EDEMIC	Select microporous teflon as dielectric type for T-line	CONFIG (Ch 5)
EDEMODIFY	Select Modify Last Network for embedding/de-embedding	CONFIG (Ch 5)
EDEOTH	Select Other as dielectric type for T-line section	CONFIG (Ch 5)
EDEPOLY	Select Polyethylene as dielectric type for T-line section	CONFIG (Ch 5)
EDEPORT1	Select port 1 for embedding/de-embedding	CONFIG (Ch 5)
EDEPORT12	Select port 1 and port 2 for embedding/de-embedding	CONFIG (Ch 5)
EDEPORT2	Select port 2 for embedding/de-embedding	CONFIG (Ch 5)
EDEPORT23	Select port 2 and port 3 for embedding/de-embedding	CONFIG (Ch 5)
EDEPORT3	Select port 3 for embedding/de-embedding	CONFIG (Ch 5)
EDEPORT34	Select port 3 and port 4 for embedding/de-embedding	CONFIG (Ch 5)
EDEPORT4	Select port 4 for embedding/de-embedding	CONFIG (Ch 5)
EDEPORT?	Output active port number for embedding/de-embedding	CONFIG (Ch 5)
EDERST	Reset all ports reference plane for embedding/de-embedding	CONFIG (Ch 5)
EDETEF	Select teflon as dielectric type for T-line section	CONFIG (Ch 5)
EDETIME	Enter time for T-line section	CONFIG (Ch 5)
EDETIME?	Output time for T-line section	CONFIG (Ch 5)
EDETLINE	Select T-line section as embedding/de-embedding network	CONFIG (Ch 5)
EDG	End diagnostics mode	UTILITY - DIAGNOSTICS (Ch 9)
EDR	Edit receiver equation	CONFIG - MULTIPLE SOURCE (Ch 5)
EDRS	Edit receiver source equation	CONFIG - MULTIPLE SOURCE (Ch 5)
EDV	Enter divisor value for equation being edited	CONFIG - MULTIPLE SOURCE (Ch 5)
EDV?	Output the divisor value for the equation being edited	CONFIG - MULTIPLE SOURCE (Ch 5)
EDX?	Output equation being edited	CONFIG - MULTIPLE SOURCE (Ch 5)
EKT	Select external keyboard testing	UTILITY - DIAGNOSTICS (Ch 9)
EML	Enter multiplier value for equation being edited	CONFIG - MULTIPLE SOURCE (Ch 5)
EML?	Output multiplier value for equation being edited	CONFIG - MULTIPLE SOURCE (Ch 5)
EOS	Enter offset frequency for equation being edited	CONFIG - MULTIPLE SOURCE (Ch 5)
EOS?	Output offset frequency for equation being edited	CONFIG - MULTIPLE SOURCE (Ch 5)
ESW	Select sweep operation for component being edited	CONFIG - MULTIPLE SOURCE (Ch 5)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
EX2RF0	Turn external source 2 rf off	CAL - FLEXIBLE CAL (Ch 6)
EX2RF1	Turn external source 2 rf on	CAL - FLEXIBLE CAL (Ch 6)
EX3RF0	Turn external source 3 rf off	CAL - FLEXIBLE CAL (Ch 6)
EX3RF1	Turn external source 3 rf on	CAL - FLEXIBLE CAL (Ch 6)
EX4RF0	Turn external source 4 rf off	CAL - FLEXIBLE CAL (Ch 6)
EX4RF1	Turn external source 4 rf on	CAL - FLEXIBLE CAL (Ch 6)
EXD	Display external A/D input	UTILITY - DIAGNOSTICS (Ch 9)
EXISTD?	Output directory existence information	UTILITY - DISK (Ch 9)
EXISTF?	Output file existence information	UTILITY - DISK (Ch 9)
EXRCALP1	Select Port 1 as the extended receiver port	POWER - RECEIVER CAL (Ch 5)
EXRCALP2	Select Port 2 as the extended receiver port	POWER - RECEIVER CAL (Ch 5)
EXRCALP3	Select Port 3 as the extended receiver port	POWER - RECEIVER CAL (Ch 5)
EXRCALPX?	Output the extended receiver port selection	POWER - RECEIVER CAL (Ch 5)
EXRCALTYPE?	Output the receiver type for extended receiver operation	POWER - RECEIVER CAL (Ch 5)
EXRRCALTYPE	Select the receiver type REFERENCE for the extended receiver operation	POWER - RECEIVER CAL (Ch 5)
EXTIO0	Disable external output I/O	DISPLAY (Ch 5)
EXTIO1	Enable external output I/O	DISPLAY (Ch 5)
EXTIOX?	Output external output I/O enable/disable status	DISPLAY (Ch 5)
EXTRCALTYPE	Select the receiver type TEST for extended receiver operation	POWER - RECEIVER CAL (Ch 5)
EXTRCLR	Clear all of the extended receiver calibrations	POWER - RECEIVER CAL (Ch 5)
EXW?	Output multiple source sweep flag for equation being edited	CONFIG - MULTIPLE SOURCE (Ch 5)
F	Suffix sets farad data type and scales by 1E0	DATA ENTRY SUFFIXES (Ch 5)
FCW0	Turn fast CW measurement mode off	SWEEP (Ch 5)
FCW1	Turn fast CW measurement mode 1 on	SWEEP (Ch 5)
FCWX?	Output fast CW measurement mode	SWEEP (Ch 5)
FDH0	Select variable length arbitrary block headers	REMOTE - FORMATTING (Ch 8)
FDH1	Select fixed length arbitrary block headers	REMOTE - FORMATTING (Ch 8)
FDH2	Select zero length arbitrary block headers	REMOTE - FORMATTING (Ch 8)
FDHX?	Output arbitrary block header length selection	REMOTE - FORMATTING (Ch 8)
FFD	Send form feed to printer and stop print/plot	HARD COPY (Ch 9)
FGT	Select frequency with time gate for active channel	APPL - TIME DOMAIN (Ch 10)
FHI	Set data points to 1601	CONFIG (Ch 5)
FIL	Fill defined discrete frequency range	FREQ - DISCRETE FILL (Ch 5)
FLICK0	Turn flickering off	SWEEP (Ch 5)
FLICK1	Turn flickering on	SWEEP (Ch 5)
FLICKX?	Output flickering on/off status	SWEEP (Ch 5)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
FLO	Set data points to 101	CONFIG (Ch 5)
FLTBW?	Output filter bandwidth	MARKER (Ch 7)
FLTC?	Output filter center frequency	MARKER (Ch 7)
FLTL?	Output filter loss at reference value	MARKER (Ch 7)
FLTQ?	Output filter Q	MARKER (Ch 7)
FLTS?	Output filter shape factor	MARKER (Ch 7)
FMA	Select ASCII data transfer format	REMOTE - FORMATTING (Ch 8)
FMB	Select IEEE754 64 bit data transfer format	REMOTE - FORMATTING (Ch 8)
FMC	Select IEEE754 32 bit data transfer format	REMOTE - FORMATTING (Ch 8)
FME	Set data points to 401	CONFIG (Ch 5)
FMKR	Select filter parameters marker mode	MARKER (Ch 7)
FMT0	Select normal ASCII data element delimiting	REMOTE - FORMATTING (Ch 8)
FMT1	Select enhanced ASCII data element delimiting	REMOTE - FORMATTING (Ch 8)
FMTX?	Output ASCII data element delimiting mode	REMOTE - FORMATTING (Ch 8)
FMX?	Output data output mode FMA FMB or FMC	REMOTE - FORMATTING (Ch 8)
FOF	Blank frequency information	CONFIG (Ch 5)
FON	Display frequency information	CONFIG (Ch 5)
FOX?	Output frequency information on/off status	CONFIG (Ch 5)
FP0	Turn flat power correction off	POWER - FLAT POWER (Ch 5)
FP1	Turn flat power correction on	POWER - FLAT POWER (Ch 5)
FP1DONE?	Output port 1 flat power correction done status	POWER - FLAT POWER (Ch 5)
FP30	Turn port 3 flat power correction off	POWER - FLAT POWER (Ch 5)
FP31	Turn port 3 flat power correction on	POWER - FLAT POWER (Ch 5)
FP3DONE?	Output port 3 flat power correction done status	POWER - FLAT POWER (Ch 5)
FP3X?	Output port 3 flat power correction on/off status	POWER - FLAT POWER (Ch 5)
FPT	Select front panel keypad testing	UTILITY - DIAGNOSTICS (Ch 9)
FPX?	Output flat power correction on/off status	POWER - FLAT POWER (Ch 5)
FQD	Select frequency domain for active channel	APPL - TIME DOMAIN (Ch 10)
FRC	Clear all defined discrete frequency ranges	FREQ - DISCRETE FILL (Ch 5)
FREFE	Select external frequency reference	UTILITY - REAR PANEL (Ch 10)
FREFI	Select internal frequency reference	UTILITY - REAR PANEL (Ch 10)
FREFX?	Output frequency reference internal/external setting	UTILITY - REAR PANEL (Ch 10)
FRI	Enter discrete fill increment frequency	FREQ - DISCRETE FILL (Ch 5)
FRI?	Output discrete fill increment frequency	FREQ - DISCRETE FILL (Ch 5)
FRP	Enter discrete fill number of points	FREQ - DISCRETE FILL (Ch 5)
FRP?	Output discrete fill number of points	FREQ - DISCRETE FILL (Ch 5)
FRS	Enter discrete fill start frequency	FREQ - DISCRETE FILL (Ch 5)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
FRS?	Output discrete fill start frequency	FREQ - DISCRETE FILL (Ch 5)
FS	Suffix sets time data type and scales by 1E-15	DATA ENTRY SUFFIXES (Ch 5)
FSWP	Select frequency sweep	SWEEP (Ch 5)
FTGDC0	Turn off frequency translation group delay correction	APPL - FTGD (Ch 10)
FTGDC1	Turn on frequency translation group delay correction	APPL - FTGD (Ch 10)
FTGDCDONE?	Output frequency translation group delay cal done status	APPL - FTGD (Ch 10)
FTGDCX?	Output frequency translation group delay correction on/off status	APPL - FTGD (Ch 10)
FTP1	Enter the target frequency for linear power correction	POWER (Ch 5)
FTP1?	Output the target frequency for linear power correction	POWER (Ch 5)
FTP3	Enter the target frequency for linear power correction	POWER (Ch 5)
FTP3?	Output the target frequency for linear power correction	POWER (Ch 5)
FXAPL	Apply Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXP1T0	Turns off Port 1 selection. Do not apply correction to any S-parameter involving port 1	CAL - FLEXIBLE CAL (Ch 6)
FXP1T1	Turns on Port 1 selection. Correct S11. If in full term cal input method	CAL - FLEXIBLE CAL (Ch 6)
FXP1T?	Query Port 1 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXP2T0	Turns off Port 2 selection. Do not apply correction to any S-parameter involving port 2	CAL - FLEXIBLE CAL (Ch 6)
FXP2T1	Turns on Port 2 selection. Correct S22. If in full term cal input method	CAL - FLEXIBLE CAL (Ch 6)
FXP2T?	Query Port 2 selection for Flexible Cal.	CAL - FLEXIBLE CAL (Ch 6)
FXP3T0	Turns off Port 3 selection. Do not apply correction to any S-parameter involving port 3	CAL - FLEXIBLE CAL (Ch 6)
FXP3T1	Turns on Port 3 selection. Correct S33. If in full term cal input method	CAL - FLEXIBLE CAL (Ch 6)
FXP3T?	Query Port 3 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXP4T0	Turns off Port 4 selection. Do not apply correction to any S-parameter involving port 4	CAL - FLEXIBLE CAL (Ch 6)
FXP4T1	Turns on Port 4 selection. Correct S44. If in full term cal input method	CAL - FLEXIBLE CAL (Ch 6)
FXP4T?	Query Port 4 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS11T0	Turn off S11 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS11T1	Turn on S11 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS11T?	Output S11 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS12T0	Turn off S12 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS12T1	Turn on S12 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS12T?	Output S12 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS13T0	Turn off S13 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS13T1	Turn on S13 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
FXS13T?	Output S13 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS14T0	Turn off S14 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS14T1	Turn on S14 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS14T?	Output S14 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS21T0	Turn off S21 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS21T1	Turn on S21 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS21T?	Output S21 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS22T0	Turn off S22 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS22T1	Turn on S22 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS22T?	Output S22 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS23T0	Turn off S23 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS23T1	Turn on S23 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS23T?	Output S23 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS24T0	Turn off S24 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS24T1	Turn on S24 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS24T?	Output S24 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS31T0	Turn off S31 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS31T1	Turn on S31 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS31T?	Output S31 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS32T0	Turn off S32 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS32T1	Turn on S32 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS32T?	Output S32 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS33T0	Turn off S33 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS33T1	Turn on S33 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS33T?	Output S33 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS34T0	Turn off S34 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS34T1	Turn on S34 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS34T?	Output S34 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS41T0	Turn off S41 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS41T1	Turn on S41 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS41T?	Output S41 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS42T0	Turn off S42 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS42T1	Turn on S42 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS42T?	Output S42 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS43T0	Turn off S43 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS43T1	Turn on S43 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS43T?	Output S43 selection on/off	CAL - FLEXIBLE CAL (Ch 6)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
FXS44T0	Turn off S44 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS44T1	Turn on S44 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS44T?	Output S44 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXSOFF	Turn off all the S-parameters when Flexible Cal is being applied	CAL - FLEXIBLE CAL (Ch 6)
FXSON	Turn on all the S-parameters when Flexible Cal is being applied	CAL - FLEXIBLE CAL (Ch 6)
GCFS?	Output the multiple gain compression fixed scale flag ON/OFF status	APPL - GAIN COMPRESSION (Ch 10)
GCFSOFF	Turn the multiple gain compression fixed scale flag OFF	APPL - GAIN COMPRESSION (Ch 10)
GCFSON	Turn the multiple gain compression fixed scale flag ON	APPL - GAIN COMPRESSION (Ch 10)
GCMP	Enter gain compression point search value	APPL - GAIN COMPRESSION (Ch 10)
GCMP?	Output gain compression point search value	APPL - GAIN COMPRESSION (Ch 10)
GCSNS210	Turn self normalization of S21 off	APPL - GAIN COMPRESSION (Ch 10)
GCSNS211	Turn self normalization of S21 on	APPL - GAIN COMPRESSION (Ch 10)
GCSNS21?	Output self normalization of S21 status	APPL - GAIN COMPRESSION (Ch 10)
GCT	Enter gate center value distance or time	APPL - TIME DOMAIN (Ch 10)
GCT?	Output gate center value	APPL - TIME DOMAIN (Ch 10)
GCYSP	Enter the Y-stop power level for multiple frequency gain compression	APPL - GAIN COMPRESSION (Ch 10)
GCYSP?	Output the Y-stop power level for multiple frequency gain compression	APPL - GAIN COMPRESSION (Ch 10)
GCYST	Enter the Y-start power level for multiple frequency gain compression	APPL - GAIN COMPRESSION (Ch 10)
GCYST?	Output the Y-start power level for multiple frequency gain compression	APPL - GAIN COMPRESSION (Ch 10)
GDS	Gate symbols displayed on active channel	APPL - TIME DOMAIN (Ch 10)
GENS2P	Generate S2P files in hard disk with default name (ntwk_p1.s2p, ..., ntwk_p4.s2p) from disk and calibrate	HARD COPY (Ch 9)
GHZ	Suffix sets frequency data type and scales by 1E9	DATA ENTRY SUFFIXES (Ch 5)
GLS	Select low sidelobe gate shape	APPL - TIME DOMAIN (Ch 10)
GMS	Select minimum sidelobe gate shape	APPL - TIME DOMAIN (Ch 10)
GNM	Select nominal gate shape	APPL - TIME DOMAIN (Ch 10)
GOF	Turn off gating on active channel	APPL - TIME DOMAIN (Ch 10)
GOF?	Output gating mode on active channel	APPL - TIME DOMAIN (Ch 10)
GON	Turn on gating on active channel	APPL - TIME DOMAIN (Ch 10)
GPN	Enter pen number for graticule	HARD COPY (Ch 9)
GPN?	Output pen number for graticule	HARD COPY (Ch 9)
GRF?	Output graph type for active channel	DISPLAY (Ch 5)
GROUP1	Select Group 1 to be active group	DISPLAY (Ch 5)
GROUP2	Select Group 2 to be active group	DISPLAY (Ch 5)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
GROUP3	Select Group 3 to be active group	DISPLAY (Ch 5)
GROUP4	Select Group 4 to be active group	DISPLAY (Ch 5)
GROUP?	Output active group number	DISPLAY (Ch 5)
GRT	Select Rectangular gate shape	APPL - TIME DOMAIN (Ch 10)
GRTCOL	Enter the color number for the graticule	UTILITY (Ch 9)
GRTCOL?	Output the color number for the graticule	UTILITY (Ch 9)
GSN	Enter gate span value distance or time	APPL - TIME DOMAIN (Ch 10)
GSN?	Output gate span value	APPL - TIME DOMAIN (Ch 10)
GSP	Enter gate stop value distance or time	APPL - TIME DOMAIN (Ch 10)
GSP?	Output gate stop value	APPL - TIME DOMAIN (Ch 10)
GST	Enter gate start value distance or time	APPL - TIME DOMAIN (Ch 10)
GST?	Output gate start value	APPL - TIME DOMAIN (Ch 10)
GSX?	Output Gate Shape setting	APPL - TIME DOMAIN (Ch 10)
H	Suffix sets farad data type and scales by 1E0	DATA ENTRY SUFFIXES (Ch 5)
HAR1	Select 1st harmonic (fundamental) frequency	APPL - HARMONIC (Ch 10)
HAR2	Select 2nd harmonic frequency	APPL - HARMONIC (Ch 10)
HAR3	Select 3rd harmonic frequency	APPL - HARMONIC (Ch 10)
HAR4	Select 4th harmonic frequency	APPL - HARMONIC (Ch 10)
HAR5	Select 5th harmonic frequency	APPL - HARMONIC (Ch 10)
HAR6	Select 6th harmonic frequency	APPL - HARMONIC (Ch 10)
HAR7	Select 7th harmonic frequency	APPL - HARMONIC (Ch 10)
HAR8	Select 8th harmonic frequency	APPL - HARMONIC (Ch 10)
HAR9	Select 9th harmonic frequency	APPL - HARMONIC (Ch 10)
HARCE	Select harmonic enhancement correction	APPL - HARMONIC (Ch 10)
HARCEDONE?	Output harmonic enhancement cal done status	APPL - HARMONIC (Ch 10)
HARCEP	Select harmonic enhancement and Phase correction	APPL - HARMONIC (Ch 10)
HARCEPDONE?	Output harmonic enhancement and Phase cal done status	APPL - HARMONIC (Ch 10)
HARCN	Select No harmonic correction	APPL - HARMONIC (Ch 10)
HARCPDONE?	Output harmonic phase cal done status	APPL - HARMONIC (Ch 10)
HARCX?	Output harmonic correction setting	APPL - HARMONIC (Ch 10)
HARDOF	Select harmonic display relative to output fundamental frequency	APPL - HARMONIC (Ch 10)
HARDSF	Select harmonic display relative to source fundamental frequency	APPL - HARMONIC (Ch 10)
HARDSH	Select harmonic display relative to source harmonic frequency	APPL - HARMONIC (Ch 10)
HARDX?	Output harmonic display setting	APPL - HARMONIC (Ch 10)
HARP12	Select ports 1 and 2	APPL - HARMONIC (Ch 10)
HARP13	Select ports 1 and 3	APPL - HARMONIC (Ch 10)
HARPX?	Output ports 1 and 2 or 1 and 3 setting	APPL - HARMONIC (Ch 10)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
HARX?	Output harmonic frequency number	APPL - HARMONIC (Ch 10)
HC0	Disable internal IF calibration	SWEEP (Ch 5)
HC1	Enable internal IF calibration and trigger an IF calibration	SWEEP (Ch 5)
HCT	Trigger an IF calibration	SWEEP (Ch 5)
HCX?	Output internal IF calibration enable/disable status	SWEEP (Ch 5)
HD0	Turn off tabular data headers and page formatting	HARD COPY (Ch 9)
HD1	Turn on tabular data headers and page formatting	HARD COPY (Ch 9)
HDX?	Output tabular data headers and page formatting on/off status	HARD COPY (Ch 9)
HELP0	Turn off help display	APPL (Ch 10)
HELP1	Turn on help display	APPL (Ch 10)
HELPX?	Output help display on/off status	APPL (Ch 10)
HID	Hide active segmented limit	DISPLAY - LIMITS (Ch 7)
HIGHF?	Output the highest frequency	REMOTE - MISC (Ch 8)
HLD	Put sweep into hold mode	HOLD (Ch 5)
HLD?	Output the sweep hold status	HOLD (Ch 5)
HPN	Enter pen number for header	HARD COPY (Ch 9)
HPN?	Output pen number for header	HARD COPY (Ch 9)
HZ	Suffix sets frequency data type	DATA ENTRY SUFFIXES (Ch 5)
IACCHAR	Input AutoCal characterization data from the GPIB	CAL - AUTOCAL (Ch 6)
IARF	Enter adapter removal files from GPIB and calibrate	CAL (Ch 6)
IC1	Enter calibration coefficient 1	REMOTE - CAL (Ch 8)
IC10	Enter calibration coefficient 10	REMOTE - CAL (Ch 8)
IC11	Enter calibration coefficient 11	REMOTE - CAL (Ch 8)
IC12	Enter calibration coefficient 12	REMOTE - CAL (Ch 8)
IC13	Enter calibration coefficient 13	REMOTE - CAL (Ch 8)
IC14	Enter calibration coefficient 14	REMOTE - CAL (Ch 8)
IC15	Enter calibration coefficient 15	REMOTE - CAL (Ch 8)
IC16	Enter calibration coefficient 16	REMOTE - CAL (Ch 8)
IC17	Enter calibration coefficient 17	REMOTE - CAL (Ch 8)
IC18	Enter calibration coefficient 18	REMOTE - CAL (Ch 8)
IC19	Enter calibration coefficient 19	REMOTE - CAL (Ch 8)
IC2	Enter calibration coefficient 2	REMOTE - CAL (Ch 8)
IC20	Enter calibration coefficient 20	REMOTE - CAL (Ch 8)
IC21	Enter calibration coefficient 21	REMOTE - CAL (Ch 8)
IC22	Enter calibration coefficient 22	REMOTE - CAL (Ch 8)
IC23	Enter calibration coefficient 23	REMOTE - CAL (Ch 8)
IC24	Enter calibration coefficient 24	REMOTE - CAL (Ch 8)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
IC25	Enter calibration coefficient 25	REMOTE - CAL (Ch 8)
IC26	Enter calibration coefficient 26	REMOTE - CAL (Ch 8)
IC27	Enter calibration coefficient 27	REMOTE - CAL (Ch 8)
IC28	Enter calibration coefficient 28	REMOTE - CAL (Ch 8)
IC29	Enter calibration coefficient 29	REMOTE - CAL (Ch 8)
IC3	Enter calibration coefficient 3	REMOTE - CAL (Ch 8)
IC30	Enter calibration coefficient 30	REMOTE - CAL (Ch 8)
IC31	Enter calibration coefficient 31	REMOTE - CAL (Ch 8)
IC32	Enter calibration coefficient 32	REMOTE - CAL (Ch 8)
IC33	Enter calibration coefficient 33	REMOTE - CAL (Ch 8)
IC34	Enter calibration coefficient 34	REMOTE - CAL (Ch 8)
IC35	Enter calibration coefficient 35	REMOTE - CAL (Ch 8)
IC36	Enter calibration coefficient 36	REMOTE - CAL (Ch 8)
IC37	Enter calibration coefficient 37	REMOTE - CAL (Ch 8)
IC38	Enter calibration coefficient 38	REMOTE - CAL (Ch 8)
IC39	Enter calibration coefficient 39	REMOTE - CAL (Ch 8)
IC4	Enter calibration coefficient 4	REMOTE - CAL (Ch 8)
IC40	Enter calibration coefficient 40	REMOTE - CAL (Ch 8)
IC5	Enter calibration coefficient 5	REMOTE - CAL (Ch 8)
IC6	Enter calibration coefficient 6	REMOTE - CAL (Ch 8)
IC7	Enter calibration coefficient 7	REMOTE - CAL (Ch 8)
IC8	Enter calibration coefficient 8	REMOTE - CAL (Ch 8)
IC9	Enter calibration coefficient 9	REMOTE - CAL (Ch 8)
ICA	Enter calibration coefficient 10	REMOTE - CAL (Ch 8)
ICB	Enter calibration coefficient 11	REMOTE - CAL (Ch 8)
ICC	Enter calibration coefficient 12	REMOTE - CAL (Ch 8)
ICD	Enter corrected data for active channel parameter	REMOTE - MEASURED DATA (Ch 8)
ICF	Enter front panel setup and calibration data	REMOTE - SETUP (Ch 8)
ICFEDE	Enter the front panel setup, calibration, and EDE data	REMOTE - SETUP (Ch 8)
ICFSG	Enter the segmented sweep data	REMOTE - SETUP (Ch 8)
ICL	Enter all applicable calibration coefficients for cal type	REMOTE - CAL (Ch 8)
ICL3P	Enter additional 12 calibration coefficients for 3-port	REMOTE - CAL (Ch 8)
ICM0	Turn interchannel math off	DISPLAY (Ch 5)
ICM1	Turn interchannel math on	DISPLAY (Ch 5)
ICMX?	Output interchannel math on/off status	DISPLAY (Ch 5)
ICOP1	Enter interchannel num for operand 1	DISPLAY (Ch 5)
ICOP1?	Output interchannel num for operand 1	DISPLAY (Ch 5)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
ICOP2	Enter interchannel num for operand 2	DISPLAY (Ch 5)
ICOP2?	Output interchannel num for operand 2	DISPLAY (Ch 5)
IEM	Enter extended status byte mask	REMOTE - STATUS REPORTING (Ch 8)
IF1	Select 10 Hz IF bandwidth	AVG (Ch 5)
IF2	Select 100 Hz IF bandwidth	AVG (Ch 5)
IF3	Select 1 kHz IF bandwidth	AVG (Ch 5)
IF4	Select 10 kHz IF bandwidth	AVG (Ch 5)
IFA	Select 30 kHz IF bandwidth	AVG (Ch 5)
IFBW10	Select 10 Hz IF bandwidth	AVG (Ch 5)
IFBW100	Select 100 Hz IF bandwidth	AVG (Ch 5)
IFBW10K	Select 10 kHz IF bandwidth	AVG (Ch 5)
IFBW1K	Select 1 kHz IF bandwidth	AVG (Ch 5)
IFBW30	Select 30 Hz IF bandwidth	AVG (Ch 5)
IFBW300	Select 300 Hz IF bandwidth	AVG (Ch 5)
IFBW30K	Select 30 kHz IF bandwidth	AVG (Ch 5)
IFBW3K	Select 3 kHz IF bandwidth	AVG (Ch 5)
IFBWX?	Output IF bandwidth (10-30000)	AVG (Ch 5)
IFD	Enter final data for active channel parameter	REMOTE - MEASURED DATA (Ch 8)
IFM	Select 10 Hz IF bandwidth	AVG (Ch 5)
IFN	Select 1 kHz IF bandwidth	AVG (Ch 5)
IFP	Enter current front panel setup	REMOTE - SETUP (Ch 8)
IFR	Select 100 Hz IF bandwidth	AVG (Ch 5)
IFV	Enter frequency values	APPL (Ch 10)
IFX?	Output IF bandwidth (1-4)	AVG (Ch 5)
IHDW	Enter hardware cal data from GPIB	REMOTE - MISC (Ch 8)
IKIT	Enter calkit data from GPIB	REMOTE - MISC (Ch 8)
ILM	Enter limits status byte mask	REMOTE - STATUS REPORTING (Ch 8)
IMD3	Select 3rd order intermodulation products	APPL - IMD (Ch 10)
IMD5	Select 5th order intermodulation products	APPL - IMD (Ch 10)
IMD7	Select 7th order intermodulation products	APPL - IMD (Ch 10)
IMD9	Select 9th order intermodulation products	APPL - IMD (Ch 10)
IMDC0	Turn off IMD correction	APPL - IMD (Ch 10)
IMDC1	Turn on IMD correction	APPL - IMD (Ch 10)
IMDCDONE?	Output IMD cal done status	APPL - IMD (Ch 10)
IMDCX?	Output IMD correction on/off status	APPL - IMD (Ch 10)
IMDDI	Display IMD intercept	APPL - IMD (Ch 10)
IMDDP	Display IMD product	APPL - IMD (Ch 10)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
IMDDX?	Output IMD display selection	APPL - IMD (Ch 10)
IMDLOS2	Select source 2 for IMD LO	APPL - IMD (Ch 10)
IMDLOS3	Select source 3 for IMD LO	APPL - IMD (Ch 10)
IMDLOS4	Select source 4 for IMD LO	APPL - IMD (Ch 10)
IMDLOSX?	Output IMD tone 1 source number	APPL - IMD (Ch 10)
IMDMRI	Select Input as measurement reference for IMD	APPL - IMD (Ch 10)
IMDMRO	Select Output as measurement reference for IMD	APPL - IMD (Ch 10)
IMDMRX?	Output measurement reference for IMD	APPL - IMD (Ch 10)
IMDOX?	Output IMD ORDER selection	APPL - IMD (Ch 10)
IMDRT1	Select IMD relative to tone 1	APPL - IMD (Ch 10)
IMDRT2	Select IMD relative to tone 2	APPL - IMD (Ch 10)
IMDRTX?	Output IMD display relative to tone number selection	APPL - IMD (Ch 10)
IMDSSMA	Select source selection apply mode	APPL - IMD (Ch 10)
IMDSSMD	Select source selection define mode	APPL - IMD (Ch 10)
IMDSSMX?	Output source selection mode	APPL - IMD (Ch 10)
IMDT1S1	Select source 1 for IMD tone 1	APPL - IMD (Ch 10)
IMDT1S2	Select source 2 for IMD tone 1	APPL - IMD (Ch 10)
IMDT1S3	Select source 3 for IMD tone 1	APPL - IMD (Ch 10)
IMDT1S4	Select source 4 for IMD tone 1	APPL - IMD (Ch 10)
IMDT1SX?	Output IMD tone 1 source number	APPL - IMD (Ch 10)
IMDT2OFF	Enter IMD tone 2 offset	APPL - IMD (Ch 10)
IMDT2OFF?	Output IMD tone 2 offset	APPL - IMD (Ch 10)
IMDT2S1	Select source 1 for IMD tone 2	APPL - IMD (Ch 10)
IMDT2S2	Select source 2 for IMD tone 2	APPL - IMD (Ch 10)
IMDT2S3	Select source 3 for IMD tone 2	APPL - IMD (Ch 10)
IMDT2S4	Select source 4 for IMD tone 2	APPL - IMD (Ch 10)
IMDT2SX?	Output IMD tone 2 source number	APPL - IMD (Ch 10)
IMG	Select imaginary display for active channel	DISPLAY (Ch 5)
IMPCOMPU?	Output computation method selection for impedance transformation	CONFIG (Ch 5)
IMPPORT	Enter port number as active for impedance transformation	CONFIG (Ch 5)
IMPPORT?	Output active port number for impedance transformation	CONFIG (Ch 5)
IMPPOWER	Select power-wave as computation method for impedance transformation	CONFIG (Ch 5)
IMPPSEUDO	Select pseudo-wave as computation method for impedance transformation	CONFIG (Ch 5)
IMPREACT	Enter reactive term for impedance transformation	CONFIG (Ch 5)
IMPREACT?	Output reactiv term for impedance transformation	CONFIG (Ch 5)
IMPRESIST	Enter resistive term for impedance transformation	CONFIG (Ch 5)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
IMPRESIST?	Output resistive term for impedance transformation	CONFIG (Ch 5)
IMPTS0	Turn impedance transformation mode off	CONFIG (Ch 5)
IMPTS1	Turn impedance transformation mode on	CONFIG (Ch 5)
IMPTS?	Output impedance transformation mode status	CONFIG (Ch 5)
IMU	Suffix sets imaginary data type	DATA ENTRY SUFFIXES (Ch 5)
INRM	Enter normalization data from GPIB	REMOTE - MEASURED DATA (Ch 8)
INT	Initialize (format) floppy disk	UTILITY - DISK (Ch 9)
IPM	Enter the 488.2 service request enable mask	REMOTE - STATUS REPORTING (Ch 8)
IS1	Enter front panel setup 1	REMOTE - SETUP (Ch 8)
IS10	Enter front panel setup 10	REMOTE - SETUP (Ch 8)
IS2	Enter front panel setup 2	REMOTE - SETUP (Ch 8)
IS3	Enter front panel setup 3	REMOTE - SETUP (Ch 8)
IS4	Enter front panel setup 4	REMOTE - SETUP (Ch 8)
IS5	Enter front panel setup 5	REMOTE - SETUP (Ch 8)
IS6	Enter front panel setup 6	REMOTE - SETUP (Ch 8)
IS7	Enter front panel setup 7	REMOTE - SETUP (Ch 8)
IS8	Enter front panel setup 8	REMOTE - SETUP (Ch 8)
IS9	Enter front panel setup 9	REMOTE - SETUP (Ch 8)
ISC	Enter scale and select inverted compressed Smith chart display	DISPLAY (Ch 5)
ISE	Enter scale and select inverted expanded Smith chart display	DISPLAY (Ch 5)
ISF	Exclude isolation	CAL (Ch 6)
ISM	Select normal inverted Smith chart for active channel	DISPLAY (Ch 5)
ISN	Include isolation	CAL (Ch 6)
ISX?	Output isolation calibration selected true/false	CAL (Ch 6)
K	Suffix sets degrees Kelvin data type	DATA ENTRY SUFFIXES (Ch 5)
KEC	Keep existing calibration data	CAL (Ch 6)
KEL	Suffix sets degrees Kelvin data type	DATA ENTRY SUFFIXES (Ch 5)
KHZ	Suffix sets frequency data type and scales by 1E3	DATA ENTRY SUFFIXES (Ch 5)
LAND	Select landscape mode for output plot	HARD COPY (Ch 9)
LANG	Enable the specified language support	UTILITY (Ch 9)
LANG?	Query the current language support	UTILITY (Ch 9)
LAYCOL	Enter the color number for overlay data	UTILITY (Ch 9)
LAYCOL?	Output the color number for overlay data	UTILITY (Ch 9)
LB0	Turn limits testing beep on failure off	DISPLAY - LIMITS (Ch 7)
LB1	Turn limits testing beep on failure on	DISPLAY - LIMITS (Ch 7)
LBX?	Output limits testing beeper enable status	DISPLAY - LIMITS (Ch 7)
LCM	Select LRL calibration method	CAL (Ch 6)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
LCM0	Disable printing comment information	HARD COPY (Ch 9)
LCM1	Enable printing comment information	HARD COPY (Ch 9)
LDARF	Load adapter removal files from disk and calibrate	CAL (Ch 6)
LDT0	Disable printing date/time	HARD COPY (Ch 9)
LDT1	Enable printing date/time	HARD COPY (Ch 9)
LDV0	Disable printing device ID	HARD COPY (Ch 9)
LDV1	Enable printing device ID	HARD COPY (Ch 9)
LFD	Enter limit frequency readout delta value	DISPLAY - LIMITS (Ch 7)
LFD2	Enter limit frequency readout delta value for bottom graph	DISPLAY - LIMITS (Ch 7)
LFD2?	Output limit frequency readout delta value for bottom graph	DISPLAY - LIMITS (Ch 7)
LFD?	Output limit frequency readout delta value	DISPLAY - LIMITS (Ch 7)
LFP	Select limit frequency readout for phase displays	DISPLAY - LIMITS (Ch 7)
LFR	Select limit frequency readout for active channel	DISPLAY - LIMITS (Ch 7)
LID	Enter string for DUT identity	HARD COPY (Ch 9)
LID?	Output string for DUT identity	HARD COPY (Ch 9)
LIN	Select linear magnitude display for active channel	DISPLAY (Ch 5)
LKT	Load calibration kit information from floppy disk	UTILITY - DISK (Ch 9)
LL1	Enter length of line 1 for LRL calibration	CAL (Ch 6)
LL1?	Output length of line 1 for LRL calibration	CAL (Ch 6)
LL1P3	Enter length of line 1 for 3-port TRX calibration	CAL (Ch 6)
LL1P3?	Output length of line 1 for 3-port TRX calibration	CAL (Ch 6)
LL2	Enter length of line 2 for LRL calibration	CAL (Ch 6)
LL2?	Output length of line 2 for LRL calibration	CAL (Ch 6)
LL2P3	Enter length of line 2 for 3-port TRX calibration	CAL (Ch 6)
LL2P3?	Output length of line 2 for 3-port TRX calibration	CAL (Ch 6)
LL3	Enter length of line 3 for LRL calibration	CAL (Ch 6)
LL3?	Output length of line 3 for LRL calibration	CAL (Ch 6)
LLM?	Output limit line display mode single or segmented	DISPLAY - LIMITS (Ch 7)
LLO	Enter lower limit value for top graph on active channel	DISPLAY - LIMITS (Ch 7)
LLO2	Enter lower limit value for bottom graph on active channel	DISPLAY - LIMITS (Ch 7)
LLO2?	Output lower limit value for bottom graph on active channel	DISPLAY - LIMITS (Ch 7)
LLO?	Output lower limit value for top graph on active channel	DISPLAY - LIMITS (Ch 7)
LLZ	Enter line impedance for LRL calibration	CAL (Ch 6)
LLZ?	Output line impedance for LRL calibration	CAL (Ch 6)
LM2	Select a match for the second device during a LRM type calibration	CAL (Ch 6)
LM3	Select a match for the third device during a LRM type calibration	CAL (Ch 6)
LMD0	Disable printing model information	HARD COPY (Ch 9)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
LMD1	Enable printing model information	HARD COPY (Ch 9)
LMS	Enter string for DUT model/serial number	HARD COPY (Ch 9)
LMS?	Output string for DUT model/serial number	HARD COPY (Ch 9)
LNM	Enter string for operator name	HARD COPY (Ch 9)
LNM?	Output string for operator name	HARD COPY (Ch 9)
LOC	Enter string for operator comment	HARD COPY (Ch 9)
LOC?	Output string for operator comment	HARD COPY (Ch 9)
LOF	Limits display off	DISPLAY - LIMITS (Ch 7)
LOGO0	Turn hard copy logo off	HARD COPY (Ch 9)
LOGO1	Turn hard copy logo on	HARD COPY (Ch 9)
LOGO?	Output hard copy logo selection standard/user defined	HARD COPY (Ch 9)
LOGOS	Select standard hard copy logo	HARD COPY (Ch 9)
LOGOU	Select user defined hard copy logo	HARD COPY (Ch 9)
LOGOX?	Output hard copy logo on/off status	HARD COPY (Ch 9)
LOL0	Turn lower limit off	DISPLAY - LIMITS (Ch 7)
LOL1	Turn lower limit on at current value	DISPLAY - LIMITS (Ch 7)
LOL20	Turn lower limit off for bottom graph	DISPLAY - LIMITS (Ch 7)
LOL21	Turn lower limit on at current value for bottom graph	DISPLAY - LIMITS (Ch 7)
LOL2X?	Output lower limit on/off status for bottom graph	DISPLAY - LIMITS (Ch 7)
LOLX?	Output lower limit on/off status	DISPLAY - LIMITS (Ch 7)
LON	Limits display on	DISPLAY - LIMITS (Ch 7)
LON?	Output limits display on/off status	DISPLAY - LIMITS (Ch 7)
LOP0	Disable printing operator information	HARD COPY (Ch 9)
LOP1	Enable printing operator information	HARD COPY (Ch 9)
LPF1?	Output limit test failure status on channel 1	DISPLAY - LIMITS (Ch 7)
LPF2?	Output limit test failure status on channel 2	DISPLAY - LIMITS (Ch 7)
LPF3?	Output limit test failure status on channel 3	DISPLAY - LIMITS (Ch 7)
LPF4?	Output limit test failure status on channel 4	DISPLAY - LIMITS (Ch 7)
LPF?	Output limit test failure status all channels	DISPLAY - LIMITS (Ch 7)
LPH	Select linear magnitude and phase display for active channel	DISPLAY (Ch 5)
LPI	Select lowpass impulse response for active channel	APPL - TIME DOMAIN (Ch 10)
LPS	Select lowpass step response for active channel	APPL - TIME DOMAIN (Ch 10)
LPSX?	Output lowpass response for active channel impulse or step	APPL - TIME DOMAIN (Ch 10)
LR2	Specify 2 line LRL calibration	CAL (Ch 6)
LR3	Specify 3 line LRL calibration	CAL (Ch 6)
LRX?	Output line selection for LRL calibration 2 line/3 line	CAL (Ch 6)
LS1	Set lower segmented limit 1 as the active segment	DISPLAY - LIMITS (Ch 7)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
LS10	Select lower segmented limit 10 as the active segment	DISPLAY - LIMITS (Ch 7)
LS2	Select lower segmented limit 2 as the active segment	DISPLAY - LIMITS (Ch 7)
LS3	Select lower segmented limit 3 as the active segment	DISPLAY - LIMITS (Ch 7)
LS4	Select lower segmented limit 4 as the active segment	DISPLAY - LIMITS (Ch 7)
LS5	Select lower segmented limit 5 as the active segment	DISPLAY - LIMITS (Ch 7)
LS6	Select lower segmented limit 6 as the active segment	DISPLAY - LIMITS (Ch 7)
LS7	Select lower segmented limit 7 as the active segment	DISPLAY - LIMITS (Ch 7)
LS8	Select lower segmented limit 8 as the active segment	DISPLAY - LIMITS (Ch 7)
LS9	Select lower segmented limit 9 as the active segment	DISPLAY - LIMITS (Ch 7)
LSB	Select least significant byte first binary transfer	REMOTE - FORMATTING (Ch 8)
LSEG	Select segmented limit line display mode	DISPLAY - LIMITS (Ch 7)
LSNG	Select single limit line display mode	DISPLAY - LIMITS (Ch 7)
LSX?	Output active segmented limit	DISPLAY - LIMITS (Ch 7)
LT0	Turn limits testing off	DISPLAY - LIMITS (Ch 7)
LT1	Turn limits testing on	DISPLAY - LIMITS (Ch 7)
LT1?	Output limits testing enable status	DISPLAY - LIMITS (Ch 7)
LTC	Select coaxial transmission line for calibration	CAL (Ch 6)
LTRD	Output response data from the dedicated GPIB bus	CONFIG - MULTIPLE SOURCE (Ch 5)
LTST	Display the limits testing menu	DISPLAY - LIMITS (Ch 7)
LTU	Select microstrip transmission line for calibration	CAL (Ch 6)
LTW	Select waveguide transmission line for calibration	CAL (Ch 6)
LTWRT	Send program data to the dedicated GPIB bus	CONFIG - MULTIPLE SOURCE (Ch 5)
LTX?	Output line type	CAL (Ch 6)
LUP	Enter upper limit value for top graph on active channel	DISPLAY - LIMITS (Ch 7)
LUP2	Enter upper limit value for bottom graph on active channel	DISPLAY - LIMITS (Ch 7)
LUP2?	Output upper limit value for bottom graph on active channel	DISPLAY - LIMITS (Ch 7)
LUP?	Output upper limit value for top graph on active channel	DISPLAY - LIMITS (Ch 7)
LVH	Select high as limits testing TTL level	DISPLAY - LIMITS (Ch 7)
LVL	Select low as limits testing TTL level	DISPLAY - LIMITS (Ch 7)
LVX?	Output limits testing TTL level status	DISPLAY - LIMITS (Ch 7)
LX2?	Output device for line 2 of LRL calibration line/match	CAL (Ch 6)
LX3?	Output device for line 3 of LRL calibration line/match	CAL (Ch 6)
M	Suffix sets distance data type	DATA ENTRY SUFFIXES (Ch 5)
M10C	Set CW mode at marker 10 frequency	MARKER (Ch 7)
M10E	Set sweep/zoom end to marker 10 frequency distance or time	MARKER (Ch 7)
M10S	Set sweep/zoom start to marker 10 frequency distance or time	MARKER (Ch 7)
M11C	Set CW mode at marker 11 frequency	MARKER (Ch 7)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
M11E	Set sweep/zoom end to marker 11 frequency distance or time	MARKER (Ch 7)
M11S	Set sweep/zoom start to marker 11 frequency distance or time	MARKER (Ch 7)
M12C	Set CW mode at marker 12 frequency	MARKER (Ch 7)
M12E	Set sweep/zoom end to marker 12 frequency distance or time	MARKER (Ch 7)
M12S	Set sweep/zoom start to marker 12 frequency distance or time	MARKER (Ch 7)
M1C	Set CW mode at marker 1 frequency	MARKER (Ch 7)
M1E	Set sweep/zoom end to marker 1 frequency distance or time	MARKER (Ch 7)
M1S	Set sweep/zoom start to marker 1 frequency distance or time	MARKER (Ch 7)
M2C	Set CW mode at marker 2 frequency	MARKER (Ch 7)
M2E	Set sweep/zoom end to marker 2 frequency distance or time	MARKER (Ch 7)
M2S	Set sweep/zoom start to marker 2 frequency distance or time	MARKER (Ch 7)
M3C	Set CW mode at marker 3 frequency	MARKER (Ch 7)
M3E	Set sweep/zoom end to marker 3 frequency distance or time	MARKER (Ch 7)
M3P1?	Query the mixed mode 1st balanced port pair for the M3P setup	HARD COPY (Ch 9)
M3P1P12	Set the mixed mode 1st balanced port pair to 1:2 for the M3P setup	HARD COPY (Ch 9)
M3P1P13	Set the mixed mode 1st balanced port pair to 1:3 for the M3P setup	HARD COPY (Ch 9)
M3P1P14	Set the mixed mode 1st balanced port pair to 1:4 for the M3P setup	HARD COPY (Ch 9)
M3P1P21	Set the mixed mode 1st balanced port pair to 2:1 for the M3P setup	HARD COPY (Ch 9)
M3P1P23	Set the mixed mode 1st balanced port pair to 2:3 for the M3P setup	HARD COPY (Ch 9)
M3P1P24	Set the mixed mode 1st balanced port pair to 2:4 for the M3P setup	HARD COPY (Ch 9)
M3P1P31	Set the mixed mode 1st balanced port pair to 3:1 for the M3P setup	HARD COPY (Ch 9)
M3P1P32	Set the mixed mode 1st balanced port pair to 3:2 for the M3P setup	HARD COPY (Ch 9)
M3P1P34	Set the mixed mode 1st balanced port pair to 3:4 for the M3P setup	HARD COPY (Ch 9)
M3P1P41	Set the mixed mode 1st balanced port pair to 4:1 for the M3P setup	HARD COPY (Ch 9)
M3P1P42	Set the mixed mode 1st balanced port pair to 4:2 for the M3P setup	HARD COPY (Ch 9)
M3P1P43	Set the mixed mode 1st balanced port pair to 4:3 for the M3P setup	HARD COPY (Ch 9)
M3PS1	Set the mixed mode single ended port to port 1 for the M3P setup	HARD COPY (Ch 9)
M3PS2	Set the mixed mode single ended port to port 2 for the M3P setup	HARD COPY (Ch 9)
M3PS3	Set the mixed mode single ended port to port 3 for the M3P setup	HARD COPY (Ch 9)
M3PS4	Set the mixed mode single ended port to port 4 for the M3P setup	HARD COPY (Ch 9)
M3PS?	Query the mixed mode singled ended port for the M3P setup	HARD COPY (Ch 9)
M3S	Set sweep/zoom start to marker 3 frequency distance or time	MARKER (Ch 7)
M4C	Set CW mode at marker 4 frequency	MARKER (Ch 7)
M4E	Set sweep/zoom end to marker 4 frequency distance or time	MARKER (Ch 7)
M4P1?	Query the mixed mode 1st balanced port pair for the M4P setup	HARD COPY (Ch 9)
M4P1P12	Set the mixed mode 1st balanced port pair to 1:2 for the M4P setup	HARD COPY (Ch 9)
M4P1P13	Set the mixed mode 1st balanced port pair to 1:3 for the M4P setup	HARD COPY (Ch 9)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
M4P1P14	Set the mixed mode 1st balanced port pair to 1:4 for the M4P setup	HARD COPY (Ch 9)
M4P1P21	Set the mixed mode 1st balanced port pair to 2:1 for the M4P setup	HARD COPY (Ch 9)
M4P1P23	Set the mixed mode 1st balanced port pair to 2:3 for the M4P setup	HARD COPY (Ch 9)
M4P1P24	Set the mixed mode 1st balanced port pair to 2:4 for the M4P setup	HARD COPY (Ch 9)
M4P1P31	Set the mixed mode 1st balanced port pair to 3:1 for the M4P setup	HARD COPY (Ch 9)
M4P1P32	Set the mixed mode 1st balanced port pair to 3:2 for the M4P setup	HARD COPY (Ch 9)
M4P1P34	Set the mixed mode 1st balanced port pair to 3:4 for the M4P setup	HARD COPY (Ch 9)
M4P1P41	Set the mixed mode 1st balanced port pair to 4:1 for the M4P setup	HARD COPY (Ch 9)
M4P1P42	Set the mixed mode 1st balanced port pair to 4:2 for the M4P setup	HARD COPY (Ch 9)
M4P1P43	Set the mixed mode 1st balanced port pair to 4:3 for the M4P setup	HARD COPY (Ch 9)
M4P2?	Query the mixed mode 2nd balanced port pair for the M4P setup	HARD COPY (Ch 9)
M4P2P12	Set the mixed mode 2nd balanced port pair to 1:2 for the M4P setup	HARD COPY (Ch 9)
M4P2P13	Set the mixed mode 2nd balanced port pair to 1:3 for the M4P setup	HARD COPY (Ch 9)
M4P2P14	Set the mixed mode 2nd balanced port pair to 1:4 for the M4P setup	HARD COPY (Ch 9)
M4P2P21	Set the mixed mode 2nd balanced port pair to 2:1 for the M4P setup	HARD COPY (Ch 9)
M4P2P23	Set the mixed mode 2nd balanced port pair to 2:3 for the M4P setup	HARD COPY (Ch 9)
M4P2P24	Set the mixed mode 2nd balanced port pair to 2:4 for the M4P setup	HARD COPY (Ch 9)
M4P2P31	Set the mixed mode 2nd balanced port pair to 3:1 for the M4P setup	HARD COPY (Ch 9)
M4P2P32	Set the mixed mode 2nd balanced port pair to 3:2 for the M4P setup	HARD COPY (Ch 9)
M4P2P34	Set the mixed mode 2nd balanced port pair to 3:4 for the M4P setup	HARD COPY (Ch 9)
M4P2P41	Set the mixed mode 2nd balanced port pair to 4:1 for the M4P setup	HARD COPY (Ch 9)
M4P2P42	Set the mixed mode 2nd balanced port pair to 4:2 for the M4P setup	HARD COPY (Ch 9)
M4P2P43	Set the mixed mode 2nd balanced port pair to 4:3 for the M4P setup	HARD COPY (Ch 9)
M4S	Set sweep/zoom start to marker 4 frequency distance or time	MARKER (Ch 7)
M5C	Set CW mode at marker 5 frequency	MARKER (Ch 7)
M5E	Set sweep/zoom end to marker 5 frequency distance or time	MARKER (Ch 7)
M5S	Set sweep/zoom start to marker 5 frequency distance or time	MARKER (Ch 7)
M6C	Set CW mode at marker 6 frequency	MARKER (Ch 7)
M6E	Set sweep/zoom end to marker 6 frequency distance or time	MARKER (Ch 7)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
M6S	Set sweep/zoom start to marker 6 frequency distance or time	MARKER (Ch 7)
M7C	Set CW mode at marker 7 frequency	MARKER (Ch 7)
M7E	Set sweep/zoom end to marker 7 frequency distance or time	MARKER (Ch 7)
M7S	Set sweep/zoom start to marker 7 frequency distance or time	MARKER (Ch 7)
M8C	Set CW mode at marker 8 frequency	MARKER (Ch 7)
M8E	Set sweep/zoom end to marker 8 frequency distance or time	MARKER (Ch 7)
M8S	Set sweep/zoom start to marker 8 frequency distance or time	MARKER (Ch 7)
M9C	Set CW mode at marker 9 frequency	MARKER (Ch 7)
M9E	Set sweep/zoom end to marker 9 frequency distance or time	MARKER (Ch 7)
M9S	Set sweep/zoom start to marker 9 frequency distance or time	MARKER (Ch 7)
MAG	Select log magnitude display for active channel	DISPLAY (Ch 5)
MAT	Select matched reflective devices during calibration	CAL (Ch 6)
MD	Create a new disk directory	UTILITY - DISK (Ch 9)
MD0	Turn mean display off	DISPLAY (Ch 5)
MD1	Turn mean display on	DISPLAY (Ch 5)
MDX?	Output mean display status	DISPLAY (Ch 5)
MEM	Display trace memory on active channel	DISPLAY (Ch 5)
MF	Suffix sets farad data type and scales by 1E-3	DATA ENTRY SUFFIXES (Ch 5)
MFGCT	Start multiple frequency swept power gain compression test	APPL - GAIN COMPRESSION (Ch 10)
MH	Suffix sets farad data type and scales by 1E-3	DATA ENTRY SUFFIXES (Ch 5)
MHZ	Suffix sets frequency data type and scales by 1E6	DATA ENTRY SUFFIXES (Ch 5)
MIN	Select subtraction as trace math for active channel	DISPLAY (Ch 5)
MIX	Select mixed reflective devices during calibration	CAL (Ch 6)
MIX?	Output reflective devices selection during calibration	CAL (Ch 6)
MIXP3	Set port 3 to be mixer port when source 2 using	CAL (Ch 6)
MIXP4	Set port 4 to be mixer port when source 2 using	CAL (Ch 6)
MIXPORT?	Output mixer port when source 2 using	CAL (Ch 6)
MK1	Enter marker 1 frequency distance or time and turn on	MARKER (Ch 7)
MK10	Enter marker 10 frequency distance or time and turn on	MARKER (Ch 7)
MK10?	Output marker 10 frequency distance or time	MARKER (Ch 7)
MK11	Enter marker 11 frequency distance or time and turn on	MARKER (Ch 7)
MK11?	Output marker 11 frequency distance or time	MARKER (Ch 7)
MK12	Enter marker 12 frequency distance or time and turn on	MARKER (Ch 7)
MK12?	Output marker 12 frequency distance or time	MARKER (Ch 7)
MK1?	Output marker 1 frequency distance or time	MARKER (Ch 7)
MK2	Enter marker 2 frequency distance or time and turn on	MARKER (Ch 7)
MK2?	Output marker 2 frequency distance or time	MARKER (Ch 7)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
MK3	Enter marker 3 frequency distance or time and turn on	MARKER (Ch 7)
MK3?	Output marker 3 frequency distance or time	MARKER (Ch 7)
MK4	Enter marker 4 frequency distance or time and turn on	MARKER (Ch 7)
MK4?	Output marker 4 frequency distance or time	MARKER (Ch 7)
MK5	Enter marker 5 frequency distance or time and turn on	MARKER (Ch 7)
MK5?	Output marker 5 frequency distance or time	MARKER (Ch 7)
MK6	Enter marker 6 frequency distance or time and turn on	MARKER (Ch 7)
MK6?	Output marker 6 frequency distance or time	MARKER (Ch 7)
MK7	Enter marker 7 frequency distance or time and turn on	MARKER (Ch 7)
MK7?	Output marker 7 frequency distance or time	MARKER (Ch 7)
MK8	Enter marker 8 frequency distance or time and turn on	MARKER (Ch 7)
MK8?	Output marker 8 frequency distance or time	MARKER (Ch 7)
MK9	Enter marker 9 frequency distance or time and turn on	MARKER (Ch 7)
MK9?	Output marker 9 frequency distance or time	MARKER (Ch 7)
MKRC	Select interpolated marker functionality	MARKER (Ch 7)
MKRCOL	Enter the color number for the markers	UTILITY (Ch 9)
MKRCOL?	Output the color number for the markers	UTILITY (Ch 9)
MKRD	Select discrete marker functionality	MARKER (Ch 7)
MKRX?	Output interpolated/discrete marker functionality	MARKER (Ch 7)
MKSL	Marker search left	MARKER (Ch 7)
MKSR	Marker search right	MARKER (Ch 7)
MKT0	Turn marker tracking off	MARKER (Ch 7)
MKT1	Turn marker tracking on	MARKER (Ch 7)
MKTX?	Output marker tracking on/off status	MARKER (Ch 7)
MM	Suffix sets distance data type and scales by 1E-3	DATA ENTRY SUFFIXES (Ch 5)
MM1P12	Set the mixed mode 1st balanced port pair to 1:2 for the active channel S-parameter	MEAS (Ch 5)
MM1P13	Set the mixed mode 1st balanced port pair to 1:3 for the active channel S-parameter	MEAS (Ch 5)
MM1P14	Set the mixed mode 1st balanced port pair to 1:4 for the active channel S-parameter	MEAS (Ch 5)
MM1P21	Set the mixed mode 1st balanced port pair to 2:1 for the active channel S-parameter	MEAS (Ch 5)
MM1P23	Set the mixed mode 1st balanced port pair to 2:3 for the active channel S-parameter	MEAS (Ch 5)
MM1P24	Set the mixed mode 1st balanced port pair to 2:4 for the active channel S-parameter	MEAS (Ch 5)
MM1P31	Set the mixed mode 1st balanced port pair to 3:1 for the active channel S-parameter	MEAS (Ch 5)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
MM1P32	Set the mixed mode 1st balanced port pair to 3:2 for the active channel S-parameter	MEAS (Ch 5)
MM1P34	Set the mixed mode 1st balanced port pair to 3:4 for the active channel S-parameter	MEAS (Ch 5)
MM1P41	Set the mixed mode 1st balanced port pair to 4:1 for the active channel S-parameter	MEAS (Ch 5)
MM1P42	Set the mixed mode 1st balanced port pair to 4:2 for the active channel S-parameter	MEAS (Ch 5)
MM1P43	Set the mixed mode 1st balanced port pair to 4:3 for the active channel S-parameter	MEAS (Ch 5)
MM1P?	Query the mixed mode 1st balanced port pair for the active channel S-parameter	MEAS (Ch 5)
MM2P12	Set the mixed mode 2nd balanced port pair to 1:2 for the active channel S-parameter	MEAS (Ch 5)
MM2P13	Set the mixed mode 2nd balanced port pair to 1:3 for the active channel S-parameter	MEAS (Ch 5)
MM2P14	Set the mixed mode 2nd balanced port pair to 1:4 for the active channel S-parameter	MEAS (Ch 5)
MM2P21	Set the mixed mode 2nd balanced port pair to 2:1 for the active channel S-parameter	MEAS (Ch 5)
MM2P23	Set the mixed mode 2nd balanced port pair to 2:3 for the active channel S-parameter	MEAS (Ch 5)
MM2P24	Set the mixed mode 2nd balanced port pair to 2:4 for the active channel S-parameter	MEAS (Ch 5)
MM2P31	Set the mixed mode 2nd balanced port pair to 3:1 for the active channel S-parameter	MEAS (Ch 5)
MM2P32	Set the mixed mode 2nd balanced port pair to 3:2 for the active channel S-parameter	MEAS (Ch 5)
MM2P34	Set the mixed mode 2nd balanced port pair to 3:4 for the active channel S-parameter	MEAS (Ch 5)
MM2P41	Set the mixed mode 2nd balanced port pair to 4:1 for the active channel S-parameter	MEAS (Ch 5)
MM2P42	Set the mixed mode 2nd balanced port pair to 4:2 for the active channel S-parameter	MEAS (Ch 5)
MM2P43	Set the mixed mode 2nd balanced port pair to 4:3 for the active channel S-parameter	MEAS (Ch 5)
MM2P?	Query the mixed mode 2nd balanced port pair for the active channel S-parameter	MEAS (Ch 5)
MMN	Move active marker to minimum trace value	MARKER (Ch 7)
MMS1	Set the mixed mode single ended port to Port 1 for the active channel S-parameter	MEAS (Ch 5)
MMS2	Set the mixed mode single ended port to Port 2 for the active channel S-parameter	MEAS (Ch 5)
MMS3	Set the mixed mode single ended port to Port 3 for the active channel S-parameter	MEAS (Ch 5)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
MMS4	Set the mixed mode single ended port to Port 4 for the active channel S-parameter	MEAS (Ch 5)
MMS?	Query the mixed mode single ended port for the active channel S-parameter	MEAS (Ch 5)
MMSC1C1	Set the S-parameter to mixed mode SC1C1 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSC1C2	Set the S-parameter to mixed mode SC1C2 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSC1D1	Set the S-parameter to mixed mode SC1D1 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSC1D2	Set the S-parameter to mixed mode SC1D2 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSC2C1	Set the S-parameter to mixed mode SC2C1 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSC2C2	Set the S-parameter to mixed mode SC2C2 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSC2D1	Set the S-parameter to mixed mode SC2D1 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSC2D2	Set the S-parameter to mixed mode SC2D2 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSCC	Set the S-parameter to mixed mode SCC with the current port pair/singleton selection for the active channel	MEAS (Ch 5)
MMSCD	Set the S-parameter to mixed mode SCD with the current port pair/singleton selection for the active channel	MEAS (Ch 5)
MMSCS	Set the S-parameter to mixed mode SCS with the current port pair/singleton selection for the active channel	MEAS (Ch 5)
MMSD1C1	Set the S-parameter to mixed mode SD1C1 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSD1C2	Set the S-parameter to mixed mode SD1C2 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSD1D1	Set the S-parameter to mixed mode SD1D1 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSD1D2	Set the S-parameter to mixed mode SD1D2 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSD2C1	Set the S-parameter to mixed mode SD2C1 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSD2C2	Set the S-parameter to mixed mode SD2C2 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSD2D1	Set the S-parameter to mixed mode SD2D1 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSD2D2	Set the S-parameter to mixed mode SD2D2 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSDC	Set the S-parameter to mixed mode SDC with the current port pair/singleton selection for the active channel	MEAS (Ch 5)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
MMSDD	Set the S-parameter to mixed mode SDD with the current port pair/singleton selection for the active channel	MEAS (Ch 5)
MMSDS	Set the S-parameter to mixed mode SDS with the current port pair/singleton selection for the active channel	MEAS (Ch 5)
MMSSC	Set the S-parameter to mixed mode SSC with the current port pair/singleton selection for the active channel	MEAS (Ch 5)
MMSSD	Set the S-parameter to mixed mode SSD with the current port pair/singleton selection for the active channel	MEAS (Ch 5)
MMT	Suffix sets distance data type and scales by 1E-3	DATA ENTRY SUFFIXES (Ch 5)
MMX	Move active marker to maximum trace value	MARKER (Ch 7)
MNUCOL	Enter the color number for the menu headers	UTILITY (Ch 9)
MNUCOL?	Output the color number for the menu headers	UTILITY (Ch 9)
MO1	Turn off marker 1	MARKER (Ch 7)
MO10	Turn off marker 10	MARKER (Ch 7)
MO11	Turn off marker 11	MARKER (Ch 7)
MO12	Turn off marker 12	MARKER (Ch 7)
MO2	Turn off marker 2	MARKER (Ch 7)
MO3	Turn off marker 3	MARKER (Ch 7)
MO4	Turn off marker 4	MARKER (Ch 7)
MO5	Turn off marker 5	MARKER (Ch 7)
MO6	Turn off marker 6	MARKER (Ch 7)
MO7	Turn off marker 7	MARKER (Ch 7)
MO8	Turn off marker 8	MARKER (Ch 7)
MO9	Turn off marker 9	MARKER (Ch 7)
MOF	Turn marker display off	MARKER (Ch 7)
MON	Turn marker display on	MARKER (Ch 7)
MON?	Output marker display on/off status	MARKER (Ch 7)
MPH	Select log magnitude and phase display for active channel	DISPLAY (Ch 5)
MPN	Enter pen number for markers and limits	HARD COPY (Ch 9)
MPN?	Output pen number for markers and limits	HARD COPY (Ch 9)
MR1	Turn marker 1 on and make it the active marker	MARKER (Ch 7)
MR10	Turn marker 10 on and make it the active marker	MARKER (Ch 7)
MR10?	Output marker 10 on/off status	MARKER (Ch 7)
MR11	Turn marker 11 on and make it the active marker	MARKER (Ch 7)
MR11?	Output marker 11 on/off status	MARKER (Ch 7)
MR12	Turn marker 12 on and make it the active marker	MARKER (Ch 7)
MR12?	Output marker 12 on/off status	MARKER (Ch 7)
MR1?	Output marker 1 on/off status	MARKER (Ch 7)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
MR2	Turn marker 2 on and make it the active marker	MARKER (Ch 7)
MR2?	Output marker 2 on/off status	MARKER (Ch 7)
MR3	Turn marker 3 on and make it the active marker	MARKER (Ch 7)
MR3?	Output marker 3 on/off status	MARKER (Ch 7)
MR4	Turn marker 4 on and make it the active marker	MARKER (Ch 7)
MR4?	Output marker 4 on/off status	MARKER (Ch 7)
MR5	Turn marker 5 on and make it the active marker	MARKER (Ch 7)
MR5?	Output marker 5 on/off status	MARKER (Ch 7)
MR6	Turn marker 6 on and make it the active marker	MARKER (Ch 7)
MR6?	Output marker 6 on/off status	MARKER (Ch 7)
MR7	Turn marker 7 on and make it the active marker	MARKER (Ch 7)
MR7?	Output marker 7 on/off status	MARKER (Ch 7)
MR8	Turn marker 8 on and make it the active marker	MARKER (Ch 7)
MR8?	Output marker 8 on/off status	MARKER (Ch 7)
MR9	Turn marker 9 on and make it the active marker	MARKER (Ch 7)
MR9?	Output marker 9 on/off status	MARKER (Ch 7)
MRM	Display the Marker Readout menu	MARKER (Ch 7)
MRR	Restore original marker range	APPL - TIME DOMAIN (Ch 10)
MRX?	Output active marker number	MARKER (Ch 7)
MS	Suffix sets time data type and scales by 1E-3	DATA ENTRY SUFFIXES (Ch 5)
MS0	Turn multiple source mode off	CONFIG - MULTIPLE SOURCE (Ch 5)
MS1	Turn multiple source mode on	CONFIG - MULTIPLE SOURCE (Ch 5)
MS1C	Set the balanced port pair and singleton selection to (2:3)1 and S-parameter to S1C/SSC for the active channel	MEAS (Ch 5)
MS1D	Set the balanced port pair and singleton selection to (2:3)1 and S-parameter to S1D/SSD for the active channel	MEAS (Ch 5)
MSB	Select most significant byte first binary transfer	REMOTE - FORMATTING (Ch 8)
MSC1	Set the balanced port pair and singleton selection to (2:3)1 and S-parameter to SC1/SCS for the active channel	MEAS (Ch 5)
MSC1C1	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SC1C1 for the active channel	MEAS (Ch 5)
MSC1C2	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SC1C2 for the active channel	MEAS (Ch 5)
MSC1D1	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SC1D1 for the active channel	MEAS (Ch 5)
MSC1D2	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SC1D2 for the active channel	MEAS (Ch 5)
MSC2C1	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SC2C1 for the active channel	MEAS (Ch 5)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
MSC2C2	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SC2C2 for the active channel	MEAS (Ch 5)
MSC2D1	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SC2D1 for the active channel	MEAS (Ch 5)
MSC2D2	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SC2D2 for the active channel	MEAS (Ch 5)
MSCC	Set the balanced port pair and singleton selection to (2:3)1 and S-parameter to SCC for the active channel	MEAS (Ch 5)
MSCD	Set the balanced port pair and singleton selection to (2:3)1 and S-parameter to SCD for the active channel	MEAS (Ch 5)
MSD	Select multiple source define mode	CONFIG - MULTIPLE SOURCE (Ch 5)
MSD1	Set the balanced port pair and singleton selection to (2:3)1 and S-parameter to SD1/SDS for the active channel	MEAS (Ch 5)
MSD1C1	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SD1C1 for the active channel	MEAS (Ch 5)
MSD1C2	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SD1C2 for the active channel	MEAS (Ch 5)
MSD1D1	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SD1D1 for the active channel	MEAS (Ch 5)
MSD1D2	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SD1D2 for the active channel	MEAS (Ch 5)
MSD2C1	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SD2C1 for the active channel	MEAS (Ch 5)
MSD2C2	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SD2C2 for the active channel	MEAS (Ch 5)
MSD2D1	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SD2D1 for the active channel	MEAS (Ch 5)
MSD2D2	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SD2D2 for the active channel	MEAS (Ch 5)
MSDC	Set the balanced port pair and singleton selection to (2:3)1 and S-parameter to SDC for the active channel	MEAS (Ch 5)
MSDD	Set the balanced port pair and singleton selection to (2:3)1 and S-parameter to SDD for the active channel	MEAS (Ch 5)
MSFH	Enter high loss value for shape factor calculation	MARKER (Ch 7)
MSFH?	Output high loss value for shape factor calculation	MARKER (Ch 7)
MSFL	Enter low loss value for shape factor calculation	MARKER (Ch 7)
MSFL?	Output low loss value for shape factor calculation	MARKER (Ch 7)
MSR0	Select 0 as reference for marker search and bandwidth calculation	MARKER (Ch 7)
MSRD	Select delta reference marker as reference for marker search and bandwidth calculation	MARKER (Ch 7)
MSRM	Select maximum as reference for marker search and bandwidth calculation	MARKER (Ch 7)
MSRMIN	Select min as ref for marker search and bandwidth calculation	MARKER (Ch 7)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
MSRMR	Select maximum return as ref for marker search and bandwidth calculation	MARKER (Ch 7)
MSRMRA	Select auto mode of maximum return as ref for marker search and bandwidth calculation	MARKER (Ch 7)
MSRMRM	Select manual mode of maximum return as ref for marker search and bandwidth calculation	MARKER (Ch 7)
MSRMRV	Enter maximum return value for marker search and bandwidth calculation	MARKER (Ch 7)
MSRMRV?	Output maximum return value for marker search and bandwidth calculation	MARKER (Ch 7)
MSRMRX?	Output maximum return mode for marker search and bandwidth calculation	MARKER (Ch 7)
MSRX?	Output reference selection for marker search and bandwidth calculation	MARKER (Ch 7)
MSX?	Output multiple source mode on/off/define	CONFIG - MULTIPLE SOURCE (Ch 5)
MTH?	Output trace math math type	DISPLAY (Ch 5)
MTR	Suffix sets distance data type	DATA ENTRY SUFFIXES (Ch 5)
MUL	Select multiplication as trace math for active channel	DISPLAY (Ch 5)
MV	Suffix sets voltage data type and scales by 1E-3	DATA ENTRY SUFFIXES (Ch 5)
NA1	Select a1 as numerator for parameter being defined	MEAS (Ch 5)
NA2	Select a2 as numerator for parameter being defined	MEAS (Ch 5)
NA3	Select a3 = Rc as numerator for parameter being defined	MEAS (Ch 5)
NA4	Select a4 = Rd as numerator for parameter being define	MEAS (Ch 5)
NB1	Select b1 as numerator for parameter being defined	MEAS (Ch 5)
NB2	Select b2 as numerator for parameter being defined	MEAS (Ch 5)
NB3	Select b3 = Tc as numerator for parameter being defined	MEAS (Ch 5)
NB4	Select b4 = Td as numerator for parameter being define	MEAS (Ch 5)
NCS	Go to next calibration step	CAL (Ch 6)
NF	Suffix sets farad data type and scales by 1E-9	DATA ENTRY SUFFIXES (Ch 5)
NFALCK0	Turn off the lock down	APPL - NOISE FIGURE (Ch 10)
NFALCK1	Lock down the front end attenuator	APPL - NOISE FIGURE (Ch 10)
NFALCK?	Output lock or unlock down status for the front end attenuator setting	APPL - NOISE FIGURE (Ch 10)
NFAOF	Turn noise figure measurement averaging off	APPL - NOISE FIGURE (Ch 10)
NFAON	Turn noise figure measurement averaging on	APPL - NOISE FIGURE (Ch 10)
NFAON?	Noise figure averaging on/off query	APPL - NOISE FIGURE (Ch 10)
NFASET	Lock down the front end attenuator and set it to 0, 1, 2, 3, or 4	APPL - NOISE FIGURE (Ch 10)
NFAVEC	Enter noise figure averaging count	AVG (Ch 5)
NFAVEC?	Output noise figure averaging count	AVG (Ch 5)
NFBATTN	Output the backend attenuator setting	APPL - NOISE FIGURE (Ch 10)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
NFBCAL	Output NF backend calibration table	APPL - NOISE FIGURE (Ch 10)
NFBW	Enter noise figure bandwidth correction	APPL - NOISE FIGURE (Ch 10)
NFBW?	Output noise figure bandwidth correction	APPL - NOISE FIGURE (Ch 10)
NFBWC0	Turn off noise figure bandwidth correction	APPL - NOISE FIGURE (Ch 10)
NFBWC1	Turn on noise figure bandwidth correction	APPL - NOISE FIGURE (Ch 10)
NFBWCX?	Output noise figure bandwidth correction on/off status	APPL - NOISE FIGURE (Ch 10)
NFC0	Turn off noise figure correction	APPL - NOISE FIGURE (Ch 10)
NFC1	Turn on noise figure correction	APPL - NOISE FIGURE (Ch 10)
NFC12TDONE?	Output noise figure with 12 term cal done status	APPL - NOISE FIGURE (Ch 10)
NFC2	Turn on noise figure with 12-term correction	APPL - NOISE FIGURE (Ch 10)
NFCDONE?	Output noise figure cal done status	APPL - NOISE FIGURE (Ch 10)
NFCOLD	Output corrected data for cold noise power	APPL - NOISE FIGURE (Ch 10)
NFCT	Enter noise figure cold temperature	APPL - NOISE FIGURE (Ch 10)
NFCT?	Output noise figure cold temperature	APPL - NOISE FIGURE (Ch 10)
NFCX?	Output noise figure correction on/off status	APPL - NOISE FIGURE (Ch 10)
NFDAG	Display available gain	APPL - NOISE FIGURE (Ch 10)
NFDATA	Output the cold data, the hot data, the front end attenuator	APPL - NOISE FIGURE (Ch 10)
NFDBWN	Select narrow DUT BW	APPL - NOISE FIGURE (Ch 10)
NFDBWW	Select wide DUT BW	APPL - NOISE FIGURE (Ch 10)
NFDBWX?	Output DUT BW setting	APPL - NOISE FIGURE (Ch 10)
NFDENT	Display equivalent noise temperature	APPL - NOISE FIGURE (Ch 10)
NFDIG	Display insertion gain	APPL - NOISE FIGURE (Ch 10)
NFDNF	Display noise figure	APPL - NOISE FIGURE (Ch 10)
NFDX?	Output noise figure display selection	APPL - NOISE FIGURE (Ch 10)
NFDYF	Display Y-factor	APPL - NOISE FIGURE (Ch 10)
NFFATTN	Output the front end attenuator setting	APPL - NOISE FIGURE (Ch 10)
NFHOT	Output corrected data for hot noise power	APPL - NOISE FIGURE (Ch 10)
NFLA	Enter noise figure loss after DUT	APPL - NOISE FIGURE (Ch 10)
NFLA?	Output noise figure loss after DUT	APPL - NOISE FIGURE (Ch 10)
NFLB	Enter noise figure loss before DUT	APPL - NOISE FIGURE (Ch 10)
NFLB?	Output noise figure loss before DUT	APPL - NOISE FIGURE (Ch 10)
NFLENR	Load ENR file from floppy disk	APPL - NOISE FIGURE (Ch 10)
NFLENRH	Load ENR file from hard disk	APPL - NOISE FIGURE (Ch 10)
NFLENRX	Load ENR extension correction file from floppy disk	APPL - NOISE FIGURE (Ch 10)
NFLENRXH	Load ENR extension correction file from hard disk	APPL - NOISE FIGURE (Ch 10)
NFLNFX	Load ENR external extension correction file from floppy disk	APPL - NOISE FIGURE (Ch 10)
NFLNFXH	Load ENR external extension correction file from hard disk	APPL - NOISE FIGURE (Ch 10)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
NFOL	Output noise figure overload status	APPL - NOISE FIGURE (Ch 10)
NFSRCE	Select external noise source	APPL - NOISE FIGURE (Ch 10)
NFSRCI	Select internal noise source	APPL - NOISE FIGURE (Ch 10)
NFSRCX?	Output noise source selection	APPL - NOISE FIGURE (Ch 10)
NFSSBC0	Turn off noise figure single sideband correction	APPL - NOISE FIGURE (Ch 10)
NFSSBC1	Turn on noise figure single sideband correction	APPL - NOISE FIGURE (Ch 10)
NFSSBCX?	Output noise figure single sideband correction on/off	APPL - NOISE FIGURE (Ch 10)
NFV	Start noise figure verification	UTILITY - DIAGNOSTICS (Ch 9)
NFVNB?	Output noise figure verification NB data	UTILITY - DIAGNOSTICS (Ch 9)
NFVNC?	Output noise figure verification NC data	UTILITY - DIAGNOSTICS (Ch 9)
NFVND?	Output noise figure verification ND data	UTILITY - DIAGNOSTICS (Ch 9)
NFVSB?	Output noise figure verification SB data	UTILITY - DIAGNOSTICS (Ch 9)
NFVSC?	Output noise figure verification SC data	UTILITY - DIAGNOSTICS (Ch 9)
NFVSD?	Output noise figure verification SD data	UTILITY - DIAGNOSTICS (Ch 9)
NFXENR0	Turn off ENR extension table	APPL - NOISE FIGURE (Ch 10)
NFXENR1	Turn on ENR extension table	APPL - NOISE FIGURE (Ch 10)
NFXENRX?	Query on/off status of ENR extension table	APPL - NOISE FIGURE (Ch 10)
NH	Suffix sets farad data type and scales by 1E-9	DATA ENTRY SUFFIXES (Ch 5)
NMKR	Select normal markers on active channel marker mode	MARKER (Ch 7)
NOC	Select normal calibration data points	CAL (Ch 6)
NOFST	Enter nominal offset value for external gain	APPL - GAIN COMPRESSION (Ch 10)
NOFST?	Output nominal offset value for external gain	APPL - GAIN COMPRESSION (Ch 10)
NOP	No operation	REMOTE - MISC (Ch 8)
NP101	Set data points to 101	CONFIG (Ch 5)
NP15	Set data points to 15	CONFIG (Ch 5)
NP1601	Set data points to 1601	CONFIG (Ch 5)
NP201	Set data points to 201	CONFIG (Ch 5)
NP3	Set data points to 3	CONFIG (Ch 5)
NP401	Set data points to 401	CONFIG (Ch 5)
NP51	Set data points to 51	CONFIG (Ch 5)
NP801	Set data points to 801	CONFIG (Ch 5)
NPX?	Output number of points currently being measured	CAL (Ch 6)
NRMS	Normalize S21 for gain compression testing	APPL - GAIN COMPRESSION (Ch 10)
NS	Suffix sets time data type and scales by 1E-9	DATA ENTRY SUFFIXES (Ch 5)
NS0	Turn noise source off	APPL - NOISE FIGURE (Ch 10)
NS1	Turn noise source on	APPL - NOISE FIGURE (Ch 10)
NSC	Suffix sets time data type and scales by 1E-9	DATA ENTRY SUFFIXES (Ch 5)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
NU1	Select unity as numerator for parameter being defined	MEAS (Ch 5)
NUM?	Output numerator selection for parameter being defined	MEAS (Ch 5)
NUS3P	Select Don't Use existing 3-port calibration	CAL (Ch 6)
OACCHAR	Output AutoCal characterization data to the GPIB	CAL - AUTOCAL (Ch 6)
OACCSER2P	Output the AutoCal characterization serial number for 2-port AutoCal	CAL - AUTOCAL (Ch 6)
OACCSER4P	Output the AutoCal characterization serial number for 4-port AutoCal	CAL - AUTOCAL (Ch 6)
OACSER	Output AutoCal box serial number	CAL - AUTOCAL (Ch 6)
OACTYPE	Output AutoCal box type	CAL - AUTOCAL (Ch 6)
OAM1	Output channel 1 active marker value	MARKER (Ch 7)
OAM2	Output channel 2 active marker value	MARKER (Ch 7)
OAM3	Output channel 3 active marker value	MARKER (Ch 7)
OAM4	Output channel 4 active marker value	MARKER (Ch 7)
OBMP	Output the display as a bitmap	REMOTE - MISC (Ch 8)
OC1	Output calibration coefficients 1	REMOTE - CAL (Ch 8)
OC10	Output calibration coefficients 10	REMOTE - CAL (Ch 8)
OC11	Output calibration coefficients 11	REMOTE - CAL (Ch 8)
OC12	Output calibration coefficients 12	REMOTE - CAL (Ch 8)
OC13	Output calibration coefficients 13	REMOTE - CAL (Ch 8)
OC14	Output calibration coefficients 14	REMOTE - CAL (Ch 8)
OC15	Output calibration coefficients 15	REMOTE - CAL (Ch 8)
OC16	Output calibration coefficients 16	REMOTE - CAL (Ch 8)
OC17	Output calibration coefficients 17	REMOTE - CAL (Ch 8)
OC18	Output calibration coefficients 18	REMOTE - CAL (Ch 8)
OC19	Output calibration coefficients 19	REMOTE - CAL (Ch 8)
OC2	Output calibration coefficients 2	REMOTE - CAL (Ch 8)
OC20	Output calibration coefficients 20	REMOTE - CAL (Ch 8)
OC21	Output calibration coefficients 21	REMOTE - CAL (Ch 8)
OC22	Output calibration coefficients 22	REMOTE - CAL (Ch 8)
OC23	Output calibration coefficients 23	REMOTE - CAL (Ch 8)
OC24	Output calibration coefficients 24	REMOTE - CAL (Ch 8)
OC25	Output calibration coefficient 25	REMOTE - CAL (Ch 8)
OC26	Output calibration coefficient 26	REMOTE - CAL (Ch 8)
OC27	Output calibration coefficient 27	REMOTE - CAL (Ch 8)
OC28	Output calibration coefficient 28	REMOTE - CAL (Ch 8)
OC29	Output calibration coefficient 29	REMOTE - CAL (Ch 8)
OC3	Output calibration coefficients 3	REMOTE - CAL (Ch 8)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
OC30	Output calibration coefficient 30	REMOTE - CAL (Ch 8)
OC31	Output calibration coefficient 31	REMOTE - CAL (Ch 8)
OC32	Output calibration coefficient 32	REMOTE - CAL (Ch 8)
OC33	Output calibration coefficient 33	REMOTE - CAL (Ch 8)
OC34	Output calibration coefficient 34	REMOTE - CAL (Ch 8)
OC35	Output calibration coefficient 35	REMOTE - CAL (Ch 8)
OC36	Output calibration coefficient 36	REMOTE - CAL (Ch 8)
OC37	Output calibration coefficient 37	REMOTE - CAL (Ch 8)
OC38	Output calibration coefficient 38	REMOTE - CAL (Ch 8)
OC39	Output calibration coefficient 39	REMOTE - CAL (Ch 8)
OC4	Output calibration coefficients 4	REMOTE - CAL (Ch 8)
OC40	Output calibration coefficient 40	REMOTE - CAL (Ch 8)
OC5	Output calibration coefficients 5	REMOTE - CAL (Ch 8)
OC6	Output calibration coefficients 6	REMOTE - CAL (Ch 8)
OC7	Output calibration coefficients 7	REMOTE - CAL (Ch 8)
OC8	Output calibration coefficients 8	REMOTE - CAL (Ch 8)
OC9	Output calibration coefficients 9	REMOTE - CAL (Ch 8)
OCA	Output calibration coefficient 10	REMOTE - CAL (Ch 8)
OCB	Output calibration coefficient 11	REMOTE - CAL (Ch 8)
OCC	Output calibration coefficient 12	REMOTE - CAL (Ch 8)
OCD	Output corrected data for active channel parameter	REMOTE - MEASURED DATA (Ch 8)
OCF	Output front panel setup and calibration data	REMOTE - SETUP (Ch 8)
OCFEDE	Output the front panel setup, calibration, and EDE data	REMOTE - MEASURED DATA (Ch 8)
OCFSG	Output the segmented sweep data	REMOTE - MEASURED DATA (Ch 8)
OCL	Output all applicable calibration coefficients for calibration type	REMOTE - CAL (Ch 8)
OCL3P	Output additional 12 calibration coefficients for 3-port	REMOTE - CAL (Ch 8)
OCM	Select offset short calibration method	CAL (Ch 6)
OCS	Output the internal buffer collected data	REMOTE - MEASURED DATA (Ch 8)
ODAT	Output hard copy tabular data to GPIB	REMOTE - MEASURED DATA (Ch 8)
ODR	Output directory listing of the floppy drive	REMOTE - MISC (Ch 8)
ODRH	Output directory listing of the hard drive	REMOTE - MISC (Ch 8)
ODV	Output distance values for time domain	REMOTE - MEASURED POINTS (Ch 8)
OEB	Output extended status byte	REMOTE - STATUS REPORTING (Ch 8)
OEDELOG	Output current EDE log	CONFIG (Ch 5)
OEL	Output error list	REMOTE - ERROR REPORTING (Ch 8)
OEM	Output extended status byte mask	REMOTE - STATUS REPORTING (Ch 8)
OFD	Output final data for active channel parameter	REMOTE - MEASURED DATA (Ch 8)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
OFF	Enter offset value for top graph of active channel	DISPLAY (Ch 5)
OFF2	Enter offset value for bottom graph of active channel	DISPLAY (Ch 5)
OFF2?	Output offset value for bottom graph of active channel	DISPLAY (Ch 5)
OFF?	Output offset value for top graph of active channel	DISPLAY (Ch 5)
OFP	Output current front panel setup	REMOTE - SETUP (Ch 8)
OFV	Output frequency values	REMOTE - MEASURED POINTS (Ch 8)
OGCFD	Output gain compression final data to GPIB	REMOTE - MEASURED DATA (Ch 8)
OGCFV	Output gain compression frequency values to GPIB	REMOTE - MEASURED POINTS (Ch 8)
OGCTXT	Output text format gain compression data to GPIB	REMOTE - MEASURED DATA (Ch 8)
OGE	Output extended description of current GPIB error	REMOTE - ERROR REPORTING (Ch 8)
OGL	Output extended description of previous GPIB error	REMOTE - ERROR REPORTING (Ch 8)
OHDR	Output hard copy header information to GPIB	REMOTE - MISC (Ch 8)
OHDW	Output hardware cal data to GPIB	REMOTE - MISC (Ch 8)
OHGL	Output HPGL format data to GPIB	REMOTE - MISC (Ch 8)
OHM	Suffix sets impedance data type	DATA ENTRY SUFFIXES (Ch 5)
OI	Output instrument identification string with serial number	REMOTE - MISC (Ch 8)
OID	Output instrument identification string	REMOTE - MISC (Ch 8)
OLB	Output limits status byte	REMOTE - STATUS REPORTING (Ch 8)
OLM	Output limits status byte mask	REMOTE - STATUS REPORTING (Ch 8)
OM1	Output marker 1 value	REMOTE - MEASURED DATA (Ch 8)
OM10	Output marker 10 value	REMOTE - MEASURED DATA (Ch 8)
OM11	Output marker 11 value	REMOTE - MEASURED DATA (Ch 8)
OM12	Output marker 12 value	REMOTE - MEASURED DATA (Ch 8)
OM2	Output marker 2 value	REMOTE - MEASURED DATA (Ch 8)
OM3	Output marker 3 value	REMOTE - MEASURED DATA (Ch 8)
OM3P	Output M3P format data to GPIB with M3P setup set to (2:3)1	REMOTE - MEASURED DATA (Ch 8)
OM4	Output marker 4 value	REMOTE - MEASURED DATA (Ch 8)
OM4P	Output M4P format data to GPIB with M4P setup set to (1:2)(3:4)	REMOTE - MEASURED DATA (Ch 8)
OM5	Output marker 5 value	REMOTE - MEASURED DATA (Ch 8)
OM6	Output marker 6 value	REMOTE - MEASURED DATA (Ch 8)
OM7	Output marker 7 value	REMOTE - MEASURED DATA (Ch 8)
OM8	Output marker 8 value	REMOTE - MEASURED DATA (Ch 8)
OM9	Output marker 9 value	REMOTE - MEASURED DATA (Ch 8)
OMM3P	Output the M3P format data to the GPIB with the current M3P setup	HARD COPY (Ch 9)
OMM4P	Output the M4P format data to the GPIB with the current M4P setup	HARD COPY (Ch 9)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
OMOD	Output instrument model number	REMOTE - MISC (Ch 8)
ONCP	Output number of points for current calibration	REMOTE - CAL (Ch 8)
ONCT	Output number of calibration terms for current calibration	REMOTE - CAL (Ch 8)
ONDF	Output number of discrete frequencies	REMOTE - MEASURED POINTS (Ch 8)
ONE	Output number of lines in the error list	REMOTE - ERROR REPORTING (Ch 8)
ONP	Output number of points currently being measured	CONFIG (Ch 5)
ONPV	Output the number of power sweep power values	REMOTE - MEASURED POINTS (Ch 8)
ONRM	Output stored normalization data to GPIB	REMOTE - MEASURED DATA (Ch 8)
OPB	Output the 488.2 status byte value (same as *STB?)	REMOTE - STATUS REPORTING (Ch 8)
OPSV	Output power sweep power values	REMOTE - MEASURED DATA (Ch 8)
ORD	Output raw data for active channel parameter	REMOTE - MEASURED DATA (Ch 8)
OS1	Output front panel setup number 1	REMOTE - SETUP (Ch 8)
OS10	Output front panel setup number 10	REMOTE - SETUP (Ch 8)
OS11C	Output corrected S11 data	REMOTE - MEASURED DATA (Ch 8)
OS11R	Output raw S11 data	REMOTE - MEASURED DATA (Ch 8)
OS12C	Output corrected S12 data	REMOTE - MEASURED DATA (Ch 8)
OS12R	Output raw S12 data	REMOTE - MEASURED DATA (Ch 8)
OS13C	Output corrected S13 data	REMOTE - MEASURED DATA (Ch 8)
OS13R	Output raw S13 data	REMOTE - MEASURED DATA (Ch 8)
OS14C	Output corrected S14 data	REMOTE - MEASURED DATA (Ch 8)
OS14R	Output raw S14 data	REMOTE - MEASURED DATA (Ch 8)
OS1P1	Output S1P1 format data to gpib	HARD COPY (Ch 9)
OS1P2	Output S1P2 format data to gpib	HARD COPY (Ch 9)
OS1P3	Output S1P3 format data to gpib	HARD COPY (Ch 9)
OS1P4	Output S1P4 format data to GPIB	REMOTE - MEASURED DATA (Ch 8)
OS2	Output front panel setup number 2	REMOTE - SETUP (Ch 8)
OS21C	Output corrected S21 data	REMOTE - MEASURED DATA (Ch 8)
OS21R	Output raw S21 data	REMOTE - MEASURED DATA (Ch 8)
OS22C	Output corrected S22 data	REMOTE - MEASURED DATA (Ch 8)
OS22R	Output raw S22 data	REMOTE - MEASURED DATA (Ch 8)
OS23C	Output corrected S23 data	REMOTE - MEASURED DATA (Ch 8)
OS23R	Output raw S23 data	REMOTE - MEASURED DATA (Ch 8)
OS24C	Output corrected S24 data	REMOTE - MEASURED DATA (Ch 8)
OS24R	Output raw S24 data	REMOTE - MEASURED DATA (Ch 8)
OS2P	Output S2P format data to GPIB	HARD COPY (Ch 9)
OS3	Output front panel setup number 3	REMOTE - SETUP (Ch 8)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
OS31C	Output corrected S31 data	REMOTE - MEASURED DATA (Ch 8)
OS31R	Output raw S31 data	REMOTE - MEASURED DATA (Ch 8)
OS32C	Output corrected S32 data	REMOTE - MEASURED DATA (Ch 8)
OS32R	Output raw S32 data	REMOTE - MEASURED DATA (Ch 8)
OS33C	Output corrected S33 data	REMOTE - MEASURED DATA (Ch 8)
OS33R	Output raw S33 data	REMOTE - MEASURED DATA (Ch 8)
OS34C	Output corrected S34 data	REMOTE - MEASURED DATA (Ch 8)
OS34R	Output raw S34 data	REMOTE - MEASURED DATA (Ch 8)
OS3P	Output S3P format data to gpib	HARD COPY (Ch 9)
OS4	Output front panel setup number 4	REMOTE - SETUP (Ch 8)
OS41C	Output corrected S41 data	REMOTE - SETUP (Ch 8)
OS41R	Output raw S41 data	REMOTE - SETUP (Ch 8)
OS42C	Output corrected S42 data	REMOTE - SETUP (Ch 8)
OS42R	Output raw S42 data	REMOTE - SETUP (Ch 8)
OS43C	Output corrected S43 data	REMOTE - SETUP (Ch 8)
OS43R	Output raw S43 data	REMOTE - SETUP (Ch 8)
OS44C	Output corrected S44 data	REMOTE - SETUP (Ch 8)
OS44R	Output raw S44 data	REMOTE - SETUP (Ch 8)
OS4P	Output S3P format data to GPIB	REMOTE - SETUP (Ch 8)
OS5	Output front panel setup number 5	REMOTE - SETUP (Ch 8)
OS6	Output front panel setup number 6	REMOTE - SETUP (Ch 8)
OS7	Output front panel setup number 7	REMOTE - SETUP (Ch 8)
OS8	Output front panel setup number 8	REMOTE - SETUP (Ch 8)
OS9	Output front panel setup number 9	REMOTE - SETUP (Ch 8)
OSER	Output instrument serial number	REMOTE - MISC (Ch 8)
OSGLOG	Output the current segmented sweep log	SWEEP - SEGMENTED SWEEP (Ch 5)
OSL	Output service log	UTILITY - SERVICE LOG (Ch 9)
OTV	Output time values for time domain	REMOTE - MEASURED POINTS (Ch 8)
OTXT	Output text format data to GPIB	REMOTE - MEASURED DATA (Ch 8)
P1C	Select port 1 for connector specification	CAL (Ch 6)
P1C?	Output port 1 connector type	CAL (Ch 6)
P1CW0	Turn off port 1 CW mode in linear cal	SWEEP - POWER SWEEP (Ch 5)
P1CW1	Turn on port 1 CW mode in linear cal	SWEEP - POWER SWEEP (Ch 5)
P1CW?	Output port 1 CW mode in linear cal on/off status	SWEEP - POWER SWEEP (Ch 5)
P1LCOR0	Turn off port 1 linear cal correction	SWEEP - POWER SWEEP (Ch 5)
P1LCOR1	Turn on port 1 linear cal correction	SWEEP - POWER SWEEP (Ch 5)
P1LCOR?	Output port 1 linear cal correction on/off status	SWEEP - POWER SWEEP (Ch 5)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
P1LDONE?	Output port 1 linear power correction Done status	SWEEP - POWER SWEEP (Ch 5)
P1P?	Output approximate power level at port 1	POWER (Ch 5)
P2C	Select port 2 for connector specification	CAL (Ch 6)
P2C?	Output port 2 connector type	CAL (Ch 6)
P3C	Select port 3 for connector specification	CAL (Ch 6)
P3C?	Output port 3 connector type	CAL (Ch 6)
P3CW0	Turn off port 3 CW mode in linear cal	SWEEP - POWER SWEEP (Ch 5)
P3CW1	Turn on port 3 CW mode in linear cal	SWEEP - POWER SWEEP (Ch 5)
P3CW?	Output port 3 CW mode in linear cal on/off status	SWEEP - POWER SWEEP (Ch 5)
P3LCOR0	Turn off port 3 linear cal correction	SWEEP - POWER SWEEP (Ch 5)
P3LCOR1	Turn on port 3 linear cal correction	SWEEP - POWER SWEEP (Ch 5)
P3LCOR?	Output port 3 linear cal correction on/off status	SWEEP - POWER SWEEP (Ch 5)
P3LDONE?	Output port 1 linear power correction done status	SWEEP - POWER SWEEP (Ch 5)
P3P?	Output approximate power level at port 3	POWER (Ch 5)
P4C	Select port 4 for connector specification	CAL (Ch 6)
P4C?	Output port 4 connector type	CAL (Ch 6)
PBL	Select 1/4 size plot bottom left corner	HARD COPY (Ch 9)
PBR	Select 1/4 size plot bottom right corner	HARD COPY (Ch 9)
PCP	Select measurement phase polar chart mode	DISPLAY (Ch 5)
PCS	Select sweep position polar chart mode	DISPLAY (Ch 5)
PCX?	Output polar chart mode	DISPLAY (Ch 5)
PDR	Print directory listing of the floppy drive	UTILITY - DISK (Ch 9)
PDRH	Print directory listing of the hard drive	UTILITY - DISK (Ch 9)
PEDELOG	Print current EDE log	CONFIG (Ch 5)
PEL	Print the error list	UTILITY - SERVICE LOG (Ch 9)
PERPORT	Select per port as chop mode type	SWEEP (Ch 5)
PF	Suffix sets farad data type and scales by 1E-12	DATA ENTRY SUFFIXES (Ch 5)
PFL	Select full-size plot	HARD COPY (Ch 9)
PFS	Print full screen image	HARD COPY (Ch 9)
PGR	Print graph area screen image	HARD COPY (Ch 9)
PGT	Plot graticule	HARD COPY (Ch 9)
PH	Suffix sets farad data type and scales by 1E-12	DATA ENTRY SUFFIXES (Ch 5)
PHA	Select phase display for active channel	DISPLAY (Ch 5)
PHO	Enter phase offset for display channel	DISPLAY (Ch 5)
PHO?	Output phase offset for display channel	DISPLAY (Ch 5)
PLD	Plot data area only	HARD COPY (Ch 9)
PLG	Select log polar display for active channel	DISPLAY (Ch 5)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
PLH	Plot header	HARD COPY (Ch 9)
PLM	Plot markers and limits	HARD COPY (Ch 9)
PLO?	Output plot mode portrait or landscape	HARD COPY (Ch 9)
PLR	Select linear polar display for active channel	DISPLAY (Ch 5)
PLS	Plot entire screen	HARD COPY (Ch 9)
PLT	Plot data traces only	HARD COPY (Ch 9)
PMK	Print tabular data for Markers	HARD COPY (Ch 9)
PMN	Plot menu	HARD COPY (Ch 9)
PMT	Print tabular data for traces and markers	HARD COPY (Ch 9)
POP	Enter parallel output port 8-bit decimal word (0-255)	SEQ (Ch 10)
POP?	Output parallel output port 8-bit decimal word (0-255)	SEQ (Ch 10)
POPBC0	Clear parallel output port bit 0	SEQ (Ch 10)
POPBC1	Clear parallel output port bit 1	SEQ (Ch 10)
POPBC2	Clear parallel output port bit 2	SEQ (Ch 10)
POPBC3	Clear parallel output port bit 3	SEQ (Ch 10)
POPBC4	Clear parallel output port bit 4	SEQ (Ch 10)
POPBC5	Clear parallel output port bit 5	SEQ (Ch 10)
POPBC6	Clear parallel output port bit 6	SEQ (Ch 10)
POPBC7	Clear parallel output port bit 7	SEQ (Ch 10)
POPBS0	Set parallel output port bit 0	SEQ (Ch 10)
POPBS1	Set parallel output port bit 1	SEQ (Ch 10)
POPBS2	Set parallel output port bit 2	SEQ (Ch 10)
POPBS3	Set parallel output port bit 3	SEQ (Ch 10)
POPBS4	Set parallel output port bit 4	SEQ (Ch 10)
POPBS5	Set parallel output port bit 5	SEQ (Ch 10)
POPBS6	Set parallel output port bit 6	SEQ (Ch 10)
POPBS7	Set parallel output port bit 7	SEQ (Ch 10)
PORT	Select portrait mode for output plot	HARD COPY (Ch 9)
POSET	Enter phase offset for active channel	DISPLAY (Ch 5)
POSET?	Output phase offset for active channel	DISPLAY (Ch 5)
POW	Select power out display for active channel	DISPLAY (Ch 5)
PRNTYPDJ	Select HP Deskjet printer	HARD COPY (Ch 9)
PRNTYPEP	Select Epson FX printer	HARD COPY (Ch 9)
PRNTYPLJ	Select HP Laserjet printer	HARD COPY (Ch 9)
PRNTYPTJ	Select HP Thinkjet printer	HARD COPY (Ch 9)
PRNTYPX?	Output printer type	HARD COPY (Ch 9)
PRT?	Perform printer test and output status	UTILITY - DIAGNOSTICS (Ch 9)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
PS	Suffix sets time data type and scales by 1E02	DATA ENTRY SUFFIXES (Ch 5)
PSC	Suffix sets time data type and scales by 1E02	DATA ENTRY SUFFIXES (Ch 5)
PSDP	Enter number of points drawn in power sweep mode	SWEEP - POWER SWEEP (Ch 5)
PSDP?	Output number of points drawn in power sweep	SWEEP - POWER SWEEP (Ch 5)
PSET	Enter target power for gain compression receiver calibration	APPL - GAIN COMPRESSION (Ch 10)
PSET?	Output target power for gain compression receiver calibration	APPL - GAIN COMPRESSION (Ch 10)
PSF	Enter swept power frequency	APPL - GAIN COMPRESSION (Ch 10)
PSF?	Output swept power frequency	APPL - GAIN COMPRESSION (Ch 10)
PSFP1	Enter number of frequency points to be skipped during linear power correction for source 1	SWEEP - POWER SWEEP (Ch 5)
PSFP1?	Output number of frequency points to be skipped during linear power correction for source 1	SWEEP - POWER SWEEP (Ch 5)
PSFP3	Enter number of frequency points to be skipped during linear power correction for source 2	SWEEP - POWER SWEEP (Ch 5)
PSFP3?	Output number of frequency points to be skipped during linear power correction for source 2	SWEEP - POWER SWEEP (Ch 5)
PSGLOG	Print the current segmented sweep log	SWEEP - SEGMENTED SWEEP (Ch 5)
PSL	Print the service log	UTILITY - SERVICE LOG (Ch 9)
PSLC	Perform power sweep linearity calibration	SWEEP - POWER SWEEP (Ch 5)
PSLCP10	Turn power sweep linearity calibration off	SWEEP - POWER SWEEP (Ch 5)
PSLCP11	Turn power sweep linearity calibration on	SWEEP - POWER SWEEP (Ch 5)
PSLCP1DONE?	Output power sweep linearity calibration done status	SWEEP - POWER SWEEP (Ch 5)
PSLCP1X?	Output power sweep linearity calibration on/off status	SWEEP - POWER SWEEP (Ch 5)
PSLCP30	Turn power sweep linearity calibration off	SWEEP - POWER SWEEP (Ch 5)
PSLCP31	Turn power sweep linearity calibration on	SWEEP - POWER SWEEP (Ch 5)
PSLCP3DONE?	Output power sweep linearity calibration done status	SWEEP - POWER SWEEP (Ch 5)
PSLCP3X?	Output power sweep linearity calibration on/off status	SWEEP - POWER SWEEP (Ch 5)
PSNOP1	Enter port 1 nominal offset in power sweep mode	SWEEP - POWER SWEEP (Ch 5)
PSNOP1?	Output port 1 nominal offset in power sweep mode	SWEEP - POWER SWEEP (Ch 5)
PSNOP3	Enter port 3 nominal offset in power sweep mode	SWEEP - POWER SWEEP (Ch 5)
PSNOP3?	Output port 3 nominal offset in power sweep mode	SWEEP - POWER SWEEP (Ch 5)
PSRC	Enter power source as active	CONFIG - MULTIPLE SOURCE (Ch 5)
PSRC?	Output active power source	CONFIG - MULTIPLE SOURCE (Ch 5)
PST	Stop print/plot	HARD COPY (Ch 9)
PSTEP	Enter power sweep step size	APPL - GAIN COMPRESSION (Ch 10)
PSTEP?	Output power sweep step size	APPL - GAIN COMPRESSION (Ch 10)
PSTOP	Enter power sweep stop power	APPL - GAIN COMPRESSION (Ch 10)
PSTOP?	Output power sweep stop power	APPL - GAIN COMPRESSION (Ch 10)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
PSTRT	Enter power sweep start power	APPL - GAIN COMPRESSION (Ch 10)
PSTRT?	Output power sweep start power	APPL - GAIN COMPRESSION (Ch 10)
PSWC	Perform power sweep linearity calibration	APPL - GAIN COMPRESSION (Ch 10)
PSWC0	Turn power sweep linearity calibration off	APPL - GAIN COMPRESSION (Ch 10)
PSWC1	Turn power sweep linearity calibration on	APPL - GAIN COMPRESSION (Ch 10)
PSWCDONE?	Output power sweep linearity cal done status	APPL - GAIN COMPRESSION (Ch 10)
PSWCX?	Output power sweep linearity calibration on/off status	APPL - GAIN COMPRESSION (Ch 10)
PSWP	Select power sweep	SWEEP - POWER SWEEP (Ch 5)
PSWP0	Turn power sweep off	APPL - GAIN COMPRESSION (Ch 10)
PSWP1	Turn power sweep on	APPL - GAIN COMPRESSION (Ch 10)
PSWPX?	Output power sweep on/off status	APPL - GAIN COMPRESSION (Ch 10)
PT0	Set tabular printout points skipped to 0	HARD COPY (Ch 9)
PT1	Set tabular printout points skipped to 1	HARD COPY (Ch 9)
PT2	Set tabular printout points skipped to 2	HARD COPY (Ch 9)
PT3	Set tabular printout points skipped to 3	HARD COPY (Ch 9)
PT4	Set tabular printout points skipped to 4	HARD COPY (Ch 9)
PT5	Set tabular printout points skipped to 5	HARD COPY (Ch 9)
PT6	Set tabular printout points skipped to 6	HARD COPY (Ch 9)
PT7	Set tabular printout points skipped to 7	HARD COPY (Ch 9)
PT8	Set tabular printout points skipped to 8	HARD COPY (Ch 9)
PT9	Set tabular printout points skipped to 9	HARD COPY (Ch 9)
PTAVG	Set the averaging type to Point-by-Point averaging	AVG (Ch 5)
PTB	Print tabular data for traces	HARD COPY (Ch 9)
PTL	Select 1/4 size plot top left corner	HARD COPY (Ch 9)
PTP	Enter the target power for flat power correction	POWER - FLAT POWER (Ch 5)
PTP3	Enter the target power for flat power correction for source 2	POWER - FLAT POWER (Ch 5)
PTP3?	Output the target power for flat power correction for	POWER - FLAT POWER (Ch 5)
PTP?	Output the target power for flat power correction	POWER - FLAT POWER (Ch 5)
PTR	Select 1/4 size plot top right corner	HARD COPY (Ch 9)
PTS	Enter number of points to be skipped during flat power correction	POWER - FLAT POWER (Ch 5)
PTS3	Enter number of points to be skipped during flat power correction for source 2	POWER - FLAT POWER (Ch 5)
PTS3?	Output number of points to be skipped during flat power correction for source 2	POWER - FLAT POWER (Ch 5)
PTX?	Output tabular printout points skipped	HARD COPY (Ch 9)
PW2	Enter source 2 power level	POWER (Ch 5)
PW2?	Output source 2 power level	POWER (Ch 5)
PW3	Enter external source 3 power level	POWER (Ch 5)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
PW3?	Output external source 3 power level	POWER (Ch 5)
PW4	Enter external source 4 power level	POWER (Ch 5)
PW4?	Output external source 4 power level	POWER (Ch 5)
PWR	Enter internal source power level	POWER (Ch 5)
PWR?	Output internal source power level	POWER (Ch 5)
PXX?	Output plot location	HARD COPY (Ch 9)
RAD	Suffix sets phase data type and scales by 180/pi	DATA ENTRY SUFFIXES (Ch 5)
RC1	Recall front panel setup number 1 from memory	SAVE/RECALL (Ch 9)
RC10	Recall front panel setup number 10 from memory	SAVE/RECALL (Ch 9)
RC2	Recall front panel setup number 2 from memory	SAVE/RECALL (Ch 9)
RC3	Recall front panel setup number 3 from memory	SAVE/RECALL (Ch 9)
RC4	Recall front panel setup number 4 from memory	SAVE/RECALL (Ch 9)
RC5	Recall front panel setup number 5 from memory	SAVE/RECALL (Ch 9)
RC6	Recall front panel setup number 6 from memory	SAVE/RECALL (Ch 9)
RC7	Recall front panel setup number 7 from memory	SAVE/RECALL (Ch 9)
RC8	Recall front panel setup number 8 from memory	SAVE/RECALL (Ch 9)
RC9	Recall front panel setup number 9 from memory	SAVE/RECALL (Ch 9)
RCALLOG	Output the receiver calibration log	POWER - RECEIVER CAL (Ch 5)
RCALP10	Turn off port 1 receiver calibration for receiver type TEST	POWER - RECEIVER CAL (Ch 5)
RCALP11	Turn on port 1 receiver calibration for receiver type TEST	POWER - RECEIVER CAL (Ch 5)
RCALP1DONE?	Output port 1 receiver calibration done status for receiver type TEST	POWER - RECEIVER CAL (Ch 5)
RCALP1X?	Output port 1 receiver calibration on/off status for receiver type TEST	POWER - RECEIVER CAL (Ch 5)
RCALP20	Turn off port 2 receiver calibration for receiver type TEST	POWER - RECEIVER CAL (Ch 5)
RCALP21	Turn on port 2 receiver calibration for receiver type TEST	POWER - RECEIVER CAL (Ch 5)
RCALP2DONE?	Output port 2 receiver calibration done status for receiver type TEST	POWER - RECEIVER CAL (Ch 5)
RCALP2X?	Output port 2 receiver calibration on/off status for receiver type TEST	POWER - RECEIVER CAL (Ch 5)
RCALP30	Turn off port 3 receiver calibration for receiver type TEST	POWER - RECEIVER CAL (Ch 5)
RCALP31	Turn on port 3 receiver calibration for receiver type TEST	POWER - RECEIVER CAL (Ch 5)
RCALP3DONE?	Output port 3 receiver calibration done status for receiver type TEST	POWER - RECEIVER CAL (Ch 5)
RCALP3X?	Output port 3 receiver calibration on/off status for receiver type TEST	POWER - RECEIVER CAL (Ch 5)
RCALRP1	Set receiver calibration receive to port 1	POWER - RECEIVER CAL (Ch 5)
RCALRP2	Set receiver calibration receive to port 2	POWER - RECEIVER CAL (Ch 5)
RCALRP3	Set receiver calibration receive to port 3	POWER - RECEIVER CAL (Ch 5)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
RCALRPX?	Output receiver calibration receive port	POWER - RECEIVER CAL (Ch 5)
RCALSP1	Set receiver calibration source to port 1	POWER - RECEIVER CAL (Ch 5)
RCALSP2	Set receiver calibration source to port 2	POWER - RECEIVER CAL (Ch 5)
RCALSP3	Set receiver calibration source to port 3	POWER - RECEIVER CAL (Ch 5)
RCALSPX?	Output receiver calibration source port	POWER - RECEIVER CAL (Ch 5)
RCALTYPE?	Output the receiver type	POWER - RECEIVER CAL (Ch 5)
RCCM1	Fast recall cal data from memory 1	SAVE/RECALL (Ch 9)
RCCM2	Fast recall cal data from memory 2	SAVE/RECALL (Ch 9)
RCCM3	Fast recall cal data from memory 3	SAVE/RECALL (Ch 9)
RCCM4	Fast recall cal data from memory 4	SAVE/RECALL (Ch 9)
RCCM5	Fast recall cal data from memory 5	SAVE/RECALL (Ch 9)
RCCM6	Fast recall cal data from memory 6	SAVE/RECALL (Ch 9)
RCCM7	Fast recall cal data from memory 7	SAVE/RECALL (Ch 9)
RCCM8	Fast recall cal data from memory 8	SAVE/RECALL (Ch 9)
RCLALL	Recall combined hardware calibration file from floppy disk	UTILITY - DISK (Ch 9)
RCLALLH	Recall combined hardware calibration file from hard disk	UTILITY - DISK (Ch 9)
RD	Remove a disk directory	UTILITY - DISK (Ch 9)
RDA	Select automatic reference delay calculation	DISPLAY (Ch 5)
RDD	Enter reference delay in distance for active channel	DISPLAY (Ch 5)
RDD?	Output reference delay in distance for active channel	DISPLAY (Ch 5)
RDDS	Enter reference delay in distance for S-parameters in active channel	DISPLAY (Ch 5)
RDDS?	Output reference delay in distance for S-parameters in active channel	DISPLAY (Ch 5)
RDT	Enter reference delay in time for active channel	DISPLAY (Ch 5)
RDT?	Output reference delay in time for active channel	DISPLAY (Ch 5)
RDTS	Enter reference delay in time for S-parameters in active channel	DISPLAY (Ch 5)
RDTS?	Output reference delay in time for S-parameters in active channel	DISPLAY (Ch 5)
REBOOT	Reboots the instrument	REMOTE - SYNC (Ch 8)
RECALL	Recall a data file from disk to a task	DISPLAY (Ch 5)
REF	Enter reference line for top graph of active channel	DISPLAY (Ch 5)
REF2	Enter reference line for bottom graph of active channel	DISPLAY (Ch 5)
REF2?	Output reference line for bottom graph of active channel	DISPLAY (Ch 5)
REF?	Output reference line for top graph of active channel	DISPLAY (Ch 5)
REL	Select real display for active channel	DISPLAY (Ch 5)
RESTARTCAL	Restart application calibration measurement	CAL (Ch 6)
REU	Suffix sets real data type	DATA ENTRY SUFFIXES (Ch 5)
RGZ	Select reflective device greater than Z0	CAL (Ch 6)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
RH0	Select RF off in hold mode	CONFIG (Ch 5)
RH1	Select RF on in hold	CONFIG (Ch 5)
RHX?	Output RF on/off during hold status	CONFIG (Ch 5)
RIM	Select real and imaginary display for active channel	DISPLAY (Ch 5)
RK?	Output RK mode on/off status	REMOTE - MISC (Ch 8)
RKOFF	Turn off RK mode	REMOTE - MISC (Ch 8)
RKON	Turn on RK mode	REMOTE - MISC (Ch 8)
RLZ	Select reflective device less than Z0	CAL (Ch 6)
RM1	Select reference plane at line 1 midpoint	CAL (Ch 6)
RMX?	Output reference plane location for LRL calibration	CAL (Ch 6)
ROL	Enter reflective device offset length	CAL (Ch 6)
ROL?	Output reflective device offset length	CAL (Ch 6)
ROLP3	Enter reflective device offset length for 3-port TRX calibration	CAL (Ch 6)
ROLP3?	Output reflective device offset length for 3-port TRX	CAL (Ch 6)
ROLP4	Enter reflective device offset length for 4-port TRX calibration	CAL (Ch 6)
ROLP4?	Output reflective device offset length for 4-port TRX calibration	CAL (Ch 6)
RPC	Repeat previous calibration	CAL (Ch 6)
RPCHAN	Select Per Channel for reference plane	CAL (Ch 6)
RPCPX?	Output reference plane Per Channel/Port status	CAL (Ch 6)
RPO	Enter rear panel DC voltage value	UTILITY - REAR PANEL (Ch 10)
RPO?	Output rear panel DC voltage value	UTILITY - REAR PANEL (Ch 10)
RPPORT	Select Per Port for reference plane	CAL (Ch 6)
RPPORTNUM	Enter reference plane port number	DISPLAY (Ch 5)
RPPORTNUM?	Output active reference plane port number	DISPLAY (Ch 5)
RRCALP10	Turn Off the Port 1 receiver calibration for the receiver type REFERENCE	POWER - RECEIVER CAL (Ch 5)
RRCALP11	Turn On the Port 1 receiver calibration for the receiver type REFERENCE	POWER - RECEIVER CAL (Ch 5)
RRCALP1DONE?	Output the Port 1 receiver calibration Done status for the receiver type REFERENCE	POWER - RECEIVER CAL (Ch 5)
RRCALP1X?	Output the Port 1 receiver calibration On/Off status for the receiver type REFERENCE	POWER - RECEIVER CAL (Ch 5)
RRCALP20	Turn Off the Port 2 receiver calibration for the receiver type REFERENCE	POWER - RECEIVER CAL (Ch 5)
RRCALP21	Turn On the Port 2 receiver calibration for the receiver type REFERENCE	POWER - RECEIVER CAL (Ch 5)
RRCALP2DONE?	Output the Port 2 receiver calibration Done status for the receiver type REFERENCE	POWER - RECEIVER CAL (Ch 5)
RRCALP2X?	Output the Port 2 receiver calibration On/Off status for the receiver type REFERENCE	POWER - RECEIVER CAL (Ch 5)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
RRCALP30	Turn Off the Port 3 receiver calibration for the receiver type REFERENCE	POWER - RECEIVER CAL (Ch 5)
RRCALP31	Turn On the Port 3 receiver calibration for the receiver type REFERENCE	POWER - RECEIVER CAL (Ch 5)
RRCALP3DONE?	Output the Port 3 receiver calibration Done status for the receiver type REFERENCE	POWER - RECEIVER CAL (Ch 5)
RRCALP3X?	Output the Port 3 receiver calibration On/Off status for the receiver type REFERENCE	POWER - RECEIVER CAL (Ch 5)
RRCALTYPE	Select the receiver type REFERENCE	POWER - RECEIVER CAL (Ch 5)
RRP	Select reference plane at reflection plane	CAL (Ch 6)
RST	Instrument reset (same as *RST)	DEFAULT (Ch 5)
RST0	Reset instrument front panel memories and reserved parameters	DEFAULT (Ch 5)
RST1	Reset instrument and front panel memories	DEFAULT (Ch 5)
RSTAVG	Reset the Sweep-by-Sweep averaging sweep count	AVG (Ch 5)
RSTCOL	Reset color configuration to default	UTILITY (Ch 9)
RSTDAC	Restore frequency from 10 MHz calibration and not save DAC number into BBRAM	UTILITY (Ch 9)
RSTFSWP	Restore full sweep	SWEEP (Ch 5)
RSTGC	Reset gain compression parameters to default	APPL - GAIN COMPRESSION (Ch 10)
RT0	Turn ripples testing off	CONFIG (Ch 5)
RT1	Turn ripples testing on	CONFIG (Ch 5)
RT?	Output ripples testing enable status	CONFIG (Ch 5)
RTL	Return to local	CLR/LOCAL (Ch 9)
RTVAL	Enter ripples testing value	CONFIG (Ch 5)
RTVAL?	Output ripples testing value	CONFIG (Ch 5)
RV0	Turn rear panel output voltage off	UTILITY - REAR PANEL (Ch 10)
RV1	Turn rear panel output voltage on	UTILITY - REAR PANEL (Ch 10)
RV1?	Output rear panel output voltage on/off status	UTILITY - REAR PANEL (Ch 10)
RVA1	Enter rear panel output voltage value when port 1 is driving	UTILITY - REAR PANEL (Ch 10)
RVA1?	Output rear panel output voltage value when port 1 is driving	UTILITY - REAR PANEL (Ch 10)
RVA2	Enter rear panel output voltage value when port 2 is driving	UTILITY - REAR PANEL (Ch 10)
RVA2?	Output rear panel output voltage value when port 2 is driving	UTILITY - REAR PANEL (Ch 10)
RVA3	Enter rear panel output voltage value when port 3 is driving	UTILITY - REAR PANEL (Ch 10)
RVA3?	Output rear panel output voltage value when port 3 is driving	UTILITY - REAR PANEL (Ch 10)
RVA4	Enter rear panel output voltage value when Port 4 is driving	UTILITY - REAR PANEL (Ch 10)
RVA4?	Output rear panel output voltage value when Port 4 is driving	UTILITY - REAR PANEL (Ch 10)
RVD	Set rear panel output mode to dc value	UTILITY - REAR PANEL (Ch 10)
RVH	Set rear panel output mode to horizontal	UTILITY - REAR PANEL (Ch 10)
RVL	Set rear panel output mode to lock direction	UTILITY - REAR PANEL (Ch 10)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
RVP	Set rear panel output mode to driven port	UTILITY - REAR PANEL (Ch 10)
RVSP	Enter rear panel stop voltage value	UTILITY - REAR PANEL (Ch 10)
RVSP?	Output rear panel stop voltage value	UTILITY - REAR PANEL (Ch 10)
RVST	Enter rear panel start voltage value	UTILITY - REAR PANEL (Ch 10)
RVST?	Output rear panel start voltage value	UTILITY - REAR PANEL (Ch 10)
RVT	Set rear panel output mode to TTL	UTILITY - REAR PANEL (Ch 10)
RVTP1	Select port 1 for TTL rear panel output voltage	UTILITY - REAR PANEL (Ch 10)
RVTP1HL	Set TTL rear panel output voltage type to TTL active high level	UTILITY - REAR PANEL (Ch 10)
RVTP1HP	Set TTL rear panel output voltage type to TTL active high pulse	UTILITY - REAR PANEL (Ch 10)
RVTP1LL	Set TTL rear panel output voltage type to TTL active low level	UTILITY - REAR PANEL (Ch 10)
RVTP1LP	Set TTL rear panel output voltage type to TTL active low pulse	UTILITY - REAR PANEL (Ch 10)
RVTP1X?	Output TTL rear panel output voltage type	UTILITY - REAR PANEL (Ch 10)
RVTP2	Select port 2 for TTL rear panel output voltage	UTILITY - REAR PANEL (Ch 10)
RVTP2HL	Set TTL rear panel output voltage type on port 2 to TTL active high level.	UTILITY - REAR PANEL (Ch 10)
RVTP2HP	Set TTL rear panel output voltage type on port 2 to TTL active high pulse.	UTILITY - REAR PANEL (Ch 10)
RVTP2LL	Set TTL rear panel output voltage type on port 2 to TTL active low level.	UTILITY - REAR PANEL (Ch 10)
RVTP2LP	Set TTL rear panel output voltage type on port 2 to TTL active low pulse.	UTILITY - REAR PANEL (Ch 10)
RVTP2X?	Output TTL rear panel output voltage type on port 2.	UTILITY - REAR PANEL (Ch 10)
RVTP3	Select port 3 for TTL rear panel output voltage	UTILITY - REAR PANEL (Ch 10)
RVTP3HL	Set TTL rear panel output voltage type on port 3 to TTL active high level.	UTILITY - REAR PANEL (Ch 10)
RVTP3HP	Set TTL rear panel output voltage type on port 3 to TTL active high pulse.	UTILITY - REAR PANEL (Ch 10)
RVTP3LL	Set TTL rear panel output voltage type on port 3 to TTL active low level.	UTILITY - REAR PANEL (Ch 10)
RVTP3LP	Set TTL rear panel output voltage type on port 3 to TTL active low pulse.	UTILITY - REAR PANEL (Ch 10)
RVTP3X?	Output TTL rear panel output voltage type on port 3.	UTILITY - REAR PANEL (Ch 10)
RVTP4	Select Port 4 for TTL rear panel output voltage.	UTILITY - REAR PANEL (Ch 10)
RVTP4HL	Set TTL rear panel output voltage type on port 4 to TTL active high level	UTILITY - REAR PANEL (Ch 10)
RVTP4HP	Set TTL rear panel output voltage type on port 4 to TTL active high pulse	UTILITY - REAR PANEL (Ch 10)
RVTP4LL	Set TTL rear panel output voltage type on port 4 to TTL active low level	UTILITY - REAR PANEL (Ch 10)
RVTP4LP	Set TTL rear panel output voltage type on port 4 to TTL active low pulse	UTILITY - REAR PANEL (Ch 10)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
RVTP4X?	Output TTL rear panel output voltage type on port 4	UTILITY - REAR PANEL (Ch 10)
RVTPX?	Output TTL rear panel output voltage type	UTILITY - REAR PANEL (Ch 10)
RVV	Set rear panel output mode to vertical	UTILITY - REAR PANEL (Ch 10)
RVX?	Output rear panel output mode	UTILITY - REAR PANEL (Ch 10)
RXZ?	Output reflective device type in LRL calibration greater/less than Z0	CAL (Ch 6)
S	Suffix sets time data type	DATA ENTRY SUFFIXES (Ch 5)
S11	Measure S11 on active channel	MEAS (Ch 5)
S12	Measure S12 on active channel	MEAS (Ch 5)
S13	Measure S13 on active channel	MEAS (Ch 5)
S14	Measure S14 on active channel	MEAS (Ch 5)
S21	Measure S21 on active channel	MEAS (Ch 5)
S22	Measure S22 on active channel	MEAS (Ch 5)
S23	Measure S23 on active channel	MEAS (Ch 5)
S24	Measure S24 on active channel	MEAS (Ch 5)
S31	Measure S31 on active channel	MEAS (Ch 5)
S32	Measure S32 on active channel	MEAS (Ch 5)
S33	Measure S33 on active channel	MEAS (Ch 5)
S34	Measure S34 on active channel	MEAS (Ch 5)
S41	Measure S41 on active channel	MEAS (Ch 5)
S42	Measure S42 on active channel	MEAS (Ch 5)
S43	Measure S43 on active channel	MEAS (Ch 5)
S44	Measure S44 on active channel	MEAS (Ch 5)
SA1	Enter port 1 source attenuator value	POWER (Ch 5)
SA1?	Output port 1 source attenuator value	POWER (Ch 5)
SA3	Enter port 3 source attenuator value	POWER (Ch 5)
SA3?	Output port 3 source attenuator value	POWER (Ch 5)
SAVALL	Save combined hardware cal to floppy disk	UTILITY - DISK (Ch 9)
SAVALLH	Save combined hardware cal to hard disk	UTILITY - DISK (Ch 9)
SAVDAC	Save 10 MHz DAC number into BBRAM	SAVE/RECALL (Ch 9)
SAVE	Save a data file to disk	SAVE/RECALL (Ch 9)
SAVEGC	Save text format gain compression data to disk	UTILITY - DISK (Ch 9)
SBD	Enter substrate dielectric for microstrip calibration	CAL (Ch 6)
SBD?	Output substrate dielectric for microstrip calibration	CAL (Ch 6)
SBT	Enter substrate thickness for microstrip calibration	CAL (Ch 6)
SBT?	Output substrate thickness for microstrip calibration	CAL (Ch 6)
SCL	Enter scale resolution for top graph of active channel	DISPLAY (Ch 5)
SCL2	Enter scale resolution for bottom graph of active channel	DISPLAY (Ch 5)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
SCL2?	Output scale resolution for bottom graph of active channel	DISPLAY (Ch 5)
SCL?	Output scale resolution for top graph of active channel	DISPLAY (Ch 5)
SCM	Select standard calibration method	CAL (Ch 6)
SD0	Turn marker screen display off	MARKER (Ch 7)
SD1	Turn marker screen display on	MARKER (Ch 7)
SDG	Start diagnostics mode	UTILITY - DIAGNOSTICS (Ch 9)
SDP0	Turn the power sweep marker screen display OFF	MARKER (Ch 7)
SDP1	Turn the power sweep marker screen display ON	MARKER (Ch 7)
SDPX?	Output the power sweep marker screen display status	MARKER (Ch 7)
SDX?	Output marker screen display status	MARKER (Ch 7)
SEQDEL1	Delete sequence 1	SEQ (Ch 10)
SEQDEL2	Delete sequence 2	SEQ (Ch 10)
SEQDEL3	Delete sequence 3	SEQ (Ch 10)
SEQDEL4	Delete sequence 4	SEQ (Ch 10)
SEQDEL5	Delete sequence 5	SEQ (Ch 10)
SEQDEL6	Delete sequence 6	SEQ (Ch 10)
SEQDEL7	Delete sequence 7	SEQ (Ch 10)
SEQDGMSG0	Turn saving sequence display message to service log off	SEQ (Ch 10)
SEQDGMSG1	Turn saving sequence display message to service log on	SEQ (Ch 10)
SEQDGMSG?	Output saving sequence display message to service log status	SEQ (Ch 10)
SEQEXE1	Execute sequence 1	SEQ (Ch 10)
SEQEXE2	Execute sequence 2	SEQ (Ch 10)
SEQEXE3	Execute sequence 3	SEQ (Ch 10)
SEQEXE4	Execute sequence 4	SEQ (Ch 10)
SEQEXE5	Execute sequence 5	SEQ (Ch 10)
SEQEXE6	Execute sequence 6	SEQ (Ch 10)
SEQEXE7	Execute sequence 7	SEQ (Ch 10)
SEQHELP0	Turn off sequence help message	SEQ (Ch 10)
SEQHELP1	Turn on sequence help message	SEQ (Ch 10)
SEQHELP?	Output sequence help message mode on/off	SEQ (Ch 10)
SEQLOA1	Recall sequence 1 from floppy disk	SEQ (Ch 10)
SEQLOA2	Recall sequence 2 from floppy disk	SEQ (Ch 10)
SEQLOA3	Recall sequence 3 from floppy disk	SEQ (Ch 10)
SEQLOA4	Recall sequence 4 from floppy disk	SEQ (Ch 10)
SEQLOA5	Recall sequence 5 from floppy disk	SEQ (Ch 10)
SEQLOA6	Recall sequence 6 from floppy disk	SEQ (Ch 10)
SEQLOA7	Recall sequence 7 from floppy disk	SEQ (Ch 10)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
SEQLOAH1	Recall sequence 1 from hard disk	SEQ (Ch 10)
SEQLOAH2	Recall sequence 2 from hard disk	SEQ (Ch 10)
SEQLOAH3	Recall sequence 3 from hard disk	SEQ (Ch 10)
SEQLOAH4	Recall sequence 4 from hard disk	SEQ (Ch 10)
SEQLOAH5	Recall sequence 5 from hard disk	SEQ (Ch 10)
SEQLOAH6	Recall sequence 6 from hard disk	SEQ (Ch 10)
SEQLOAH7	Recall sequence 7 from hard disk	SEQ (Ch 10)
SEQNAM1	Enter sequence 1 name	SEQ (Ch 10)
SEQNAM1?	Output sequence 1 name	SEQ (Ch 10)
SEQNAM2	Enter sequence 2 name	SEQ (Ch 10)
SEQNAM2?	Output sequence 2 name	SEQ (Ch 10)
SEQNAM3	Enter sequence 3 name	SEQ (Ch 10)
SEQNAM3?	Output sequence 3 name	SEQ (Ch 10)
SEQNAM4	Enter sequence 4 name	SEQ (Ch 10)
SEQNAM4?	Output sequence 4 name	SEQ (Ch 10)
SEQNAM5	Enter sequence 5 name	SEQ (Ch 10)
SEQNAM5?	Output sequence 5 name	SEQ (Ch 10)
SEQNAM6	Enter sequence 6 name	SEQ (Ch 10)
SEQNAM6?	Output sequence 6 name	SEQ (Ch 10)
SEQNAM7	Enter sequence 7 name	SEQ (Ch 10)
SEQNAM7?	Output sequence 7 name	SEQ (Ch 10)
SEQOP0	Turn off sequence operator message	HARD COPY (Ch 9)
SEQOP1	Turn on sequence operator message	HARD COPY (Ch 9)
SEQOP?	Output sequence operator message mode on/off	HARD COPY (Ch 9)
SEQSAV1	Save sequence 1 to floppy disk	SEQ (Ch 10)
SEQSAV2	Save sequence 2 to floppy disk	SEQ (Ch 10)
SEQSAV3	Save sequence 3 to floppy disk	SEQ (Ch 10)
SEQSAV4	Save sequence 4 to floppy disk	SEQ (Ch 10)
SEQSAV5	Save sequence 5 to floppy disk	SEQ (Ch 10)
SEQSAV6	Save sequence 6 to floppy disk	SEQ (Ch 10)
SEQSAV7	Save sequence 7 to floppy disk	SEQ (Ch 10)
SEQSAVH1	Save sequence 1 to hard disk	SEQ (Ch 10)
SEQSAVH2	Save sequence 2 to hard disk	SEQ (Ch 10)
SEQSAVH3	Save sequence 3 to hard disk	SEQ (Ch 10)
SEQSAVH4	Save sequence 4 to hard disk	SEQ (Ch 10)
SEQSAVH5	Save sequence 5 to hard disk	SEQ (Ch 10)
SEQSAVH6	Save sequence 6 to hard disk	SEQ (Ch 10)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
SEQSAVH7	Save sequence 7 to hard disk	SEQ (Ch 10)
SEQSAVT1	Save sequence 1 text to floppy disk	SEQ (Ch 10)
SEQSAVT2	Save sequence 2 text to floppy disk	SEQ (Ch 10)
SEQSAVT3	Save sequence 3 text to floppy disk	SEQ (Ch 10)
SEQSAVT4	Save sequence 4 text to floppy disk	SEQ (Ch 10)
SEQSAVT5	Save sequence 5 text to floppy disk	SEQ (Ch 10)
SEQSAVT6	Save sequence 6 text to floppy disk	SEQ (Ch 10)
SEQSAVT7	Save sequence 7 text to floppy disk	SEQ (Ch 10)
SEQSAVTH1	Save sequence 1 text to hard disk	SEQ (Ch 10)
SEQSAVTH2	Save sequence 2 text to hard disk	SEQ (Ch 10)
SEQSAVTH3	Save sequence 3 text to hard disk	SEQ (Ch 10)
SEQSAVTH4	Save sequence 4 text to hard disk	SEQ (Ch 10)
SEQSAVTH5	Save sequence 5 text to hard disk	SEQ (Ch 10)
SEQSAVTH6	Save sequence 6 text to hard disk	SEQ (Ch 10)
SEQSAVTH7	Save sequence 7 text to hard disk	SEQ (Ch 10)
SETBD	Set balanced differential S-parameters setup to be default setup for all channels	DISPLAY (Ch 5)
SETCHANKEY	Setup channel keys on front panel to channel keys	DISPLAY (Ch 5)
SETCHANKEY?	Output channel key setup	DISPLAY (Ch 5)
SETGRPKEY	Setup channel keys on front panel to group keys	DISPLAY (Ch 5)
SETSB	Set single ended/balanced differential S-parameters setup to be default setup for all channels	DISPLAY (Ch 5)
SETSE	Set single ended S-parameters setup to be default setup for all channels	DISPLAY (Ch 5)
SETSPARAM?	Output default S-parameter setup for all channels	DISPLAY (Ch 5)
SETUP	Display frequency menu	FREQ (Ch 5)
SFC	Perform flat test port calibration	POWER - FLAT POWER (Ch 5)
SFGCA	Select swept frequency gain compression application	APPL - GAIN COMPRESSION (Ch 10)
SFGCT	Start swept frequency gain compression test	APPL - GAIN COMPRESSION (Ch 10)
SG?	Output the segmented sweep flag on/off status	SWEEP - SEGMENTED SWEEP (Ch 5)
SGAPL	Apply the current define definition of the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
SGMODE?	Query the segmented sweep define mode	SWEEP - SEGMENTED SWEEP (Ch 5)
SGOFF	Turn the segmented sweep flag OFF	SWEEP - SEGMENTED SWEEP (Ch 5)
SGON	Turn the segmented sweep flag ON	SWEEP - SEGMENTED SWEEP (Ch 5)
SGPTS?	Output the total number of points of all of the applied segments	SWEEP - SEGMENTED SWEEP (Ch 5)
SGSTP?	Output the stop frequency of the last applied segment	SWEEP - SEGMENTED SWEEP (Ch 5)
SGSTRT?	Output the start frequency of the first applied segment	SWEEP - SEGMENTED SWEEP (Ch 5)
SH1	Set offset short 1 or 2 offset length for offset short calibration	CAL (Ch 6)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
SH1?	Output offset short 1 offset length	CAL (Ch 6)
SH2	Set offset short 1 or 2 offset length for offset short calibration	CAL (Ch 6)
SH2?	Output offset short 2 offset length	CAL (Ch 6)
SINP	Enter single power	SWEEP - POWER SWEEP (Ch 5)
SINP0	Turn off single power mode	SWEEP - POWER SWEEP (Ch 5)
SINP1	Turn on single power mode	SWEEP - POWER SWEEP (Ch 5)
SINP?	Output single power	SWEEP - POWER SWEEP (Ch 5)
SINPX?	Output single power mode on/off status	SWEEP - POWER SWEEP (Ch 5)
SIS0	Turn off simultaneous internal sources mode	CONFIG (Ch 5)
SIS1	Turn on simultaneous internal sources mode	CONFIG (Ch 5)
SIS2CWF	Enter internal source 2 CW frequency and turn CW on	CONFIG (Ch 5)
SIS2CWF?	Output internal source 2 CW frequency	CONFIG (Ch 5)
SIS2CWOFF	Turn internal source 2 CW off	CONFIG (Ch 5)
SIS2CWON	Turn internal source 2 CW on at current CW frequency	CONFIG (Ch 5)
SIS2CWON?	Output internal source 2 CW on/off status	CONFIG (Ch 5)
SIS2OFF	Enter internal source 2 offset from source 1 frequency	CONFIG (Ch 5)
SIS2OFF?	Output internal source 2 offset from source 1 frequency	CONFIG (Ch 5)
SISX?	Output simultaneous internal sources mode on/off	CONFIG (Ch 5)
SLC	Clear all segmented limits definitions	DISPLAY - LIMITS (Ch 7)
SLD	Select sliding load for calibration	CAL (Ch 6)
SLDP3	Select sliding load for 3-port calibration	CAL (Ch 6)
SLDP4	Select sliding load for 4-port calibration	CAL (Ch 6)
SLH	Enter segmented limits horizontal offset	DISPLAY - LIMITS (Ch 7)
SLH?	Output segmented limits horizontal offset	DISPLAY - LIMITS (Ch 7)
SLL0	Turn lower segmented limits display off	DISPLAY - LIMITS (Ch 7)
SLL1	Turn lower segmented limits display on	DISPLAY - LIMITS (Ch 7)
SLLX?	Output lower segmented limits display on/off status	DISPLAY - LIMITS (Ch 7)
SLU0	Turn upper segmented limits display off	DISPLAY - LIMITS (Ch 7)
SLU1	Turn upper segmented limits display on	DISPLAY - LIMITS (Ch 7)
SLUX?	Output upper segmented limits display on/off status	DISPLAY - LIMITS (Ch 7)
SLV	Enter segmented limits vertical offset	DISPLAY - LIMITS (Ch 7)
SLV?	Output segmented limits vertical offset	DISPLAY - LIMITS (Ch 7)
SMC	Enter scale and select compressed Smith chart display	DISPLAY (Ch 5)
SME	Enter scale and select expanded Smith chart display	DISPLAY (Ch 5)
SMI	Select normal Smith chart for active channel	DISPLAY (Ch 5)
SMKR	Select marker search marker mode	MARKER (Ch 7)
SMKRMAX	Select marker search maximum	MARKER (Ch 7)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
SMKRMIN	Select marker search minimum	MARKER (Ch 7)
SMKRX	Select the marker search x-axis marker mode	MARKER (Ch 7)
SNPDB	Select log magnitude and phase as SnP output format	HARD COPY (Ch 9)
SNPFMTX?	Output SnP output format selection	HARD COPY (Ch 9)
SNPGHZ	Select GHz as SnP frequency units	HARD COPY (Ch 9)
SNPHZ	Select Hz as SnP frequency units	HARD COPY (Ch 9)
SNPKHZ	Select KHz as SnP frequency units	HARD COPY (Ch 9)
SNPMA	Select linear magnitude and phase as SnP output format	HARD COPY (Ch 9)
SNPMHZ	Select MHz as SnP frequency units	HARD COPY (Ch 9)
SNPRI	Select real and imaginary as SnP output format	HARD COPY (Ch 9)
SNPUNITX?	Output SnP frequency units selection	HARD COPY (Ch 9)
SOF	Turn off smoothing	AVG (Ch 5)
SOF?	Output smoothing on/off status	AVG (Ch 5)
SOLT	Select SOLT calibration method	CAL (Ch 6)
SOLT4P	Select SOLT calibration method for 4-port calibration	CAL (Ch 6)
SON	Enter smoothing value and turn on	AVG (Ch 5)
SON?	Output smoothing value	AVG (Ch 5)
SPA0	Spur avoidance mode off	SWEEP (Ch 5)
SPA1	Spur avoidance mode on	SWEEP (Ch 5)
SPAN	Enter frequency span	FREQ (Ch 5)
SPAN?	Output frequency span	FREQ (Ch 5)
SPARAM	Select All S-parameters as chop mode type	SWEEP (Ch 5)
SPAX?	Output spur avoidance mode on/off status	SWEEP (Ch 5)
SPD	Enter pen speed percentage	HARD COPY (Ch 9)
SPD?	Output pen speed percentage	HARD COPY (Ch 9)
SPGCA	Select swept power gain compression application	APPL - GAIN COMPRESSION (Ch 10)
SPGCT	Start swept power gain compression test	APPL - GAIN COMPRESSION (Ch 10)
SPH	Enter active segmented limit horizontal stop position	DISPLAY - LIMITS (Ch 7)
SPH?	Output active segmented limit horizontal stop position	DISPLAY - LIMITS (Ch 7)
SPTS?	Output the number of smoothing points	AVG (Ch 5)
SPV	Enter active segmented limit vertical stop position	DISPLAY - LIMITS (Ch 7)
SPV?	Output active segmented limit vertical stop position	DISPLAY - LIMITS (Ch 7)
SRC1AC?	Output source 1 active/inactive status	CONFIG (Ch 5)
SRC2?	Output external source 2 existence information	CONFIG (Ch 5)
SRC2AC	Select source 2 as active	CONFIG (Ch 5)
SRC2AC?	Output source 2 active/inactive status	CONFIG (Ch 5)
SRC2MOD?	Output external source 2 model/version string	CONFIG (Ch 5)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
SRC2NA	Select source 2 as not active	CONFIG (Ch 5)
SRC3?	Output external source 3 existence information	CONFIG (Ch 5)
SRC3AC	Select source 3 as active	CONFIG (Ch 5)
SRC3AC?	Output source 3 active/inactive status	CONFIG (Ch 5)
SRC3MOD?	Output external source 3 model/version string	CONFIG (Ch 5)
SRC3NA	Select source 3 as not active	CONFIG (Ch 5)
SRC4?	Output external source 4 existence information	CONFIG (Ch 5)
SRC4AC	Select source 4 as active	CONFIG (Ch 5)
SRC4AC?	Output source 4 active/inactive status	CONFIG (Ch 5)
SRC4MOD?	Output external source 4 model/version string	CONFIG (Ch 5)
SRC4NA	Select source 4 as not active	CONFIG (Ch 5)
SRCH	Enter marker search value	MARKER (Ch 7)
SRCH?	Output marker search value	MARKER (Ch 7)
SRCHFX?	Output the marker search x-value in GHz and the marker failure status	MARKER (Ch 7)
SRCHFXP?	Output the marker search x-value in dBm and the marker failure status in the power sweep mode	MARKER (Ch 7)
SRCHP	Enter marker search value in power sweep mode	MARKER (Ch 7)
SRCHP?	Output marker search value in power sweep mode	MARKER (Ch 7)
SRCHX?	Output the marker search x-value	MARKER (Ch 7)
SRCHXP?	Output the marker search x-value in the power sweep mode	MARKER (Ch 7)
SRT	Enter start frequency	FREQ (Ch 5)
SRT?	Output start frequency	FREQ (Ch 5)
SSC	Select the segmented sweep calibration data points	CAL (Ch 6)
STD	Store trace to memory on active channel	DISPLAY (Ch 5)
STEPP	Enter power step	SWEEP - POWER SWEEP (Ch 5)
STEPP?	Output power step	SWEEP - POWER SWEEP (Ch 5)
STH	Enter active segmented limit horizontal start position	DISPLAY - LIMITS (Ch 7)
STH?	Output active segmented limit horizontal start position	DISPLAY - LIMITS (Ch 7)
STOPP	Enter stop power	SWEEP - POWER SWEEP (Ch 5)
STOPP?	Output stop power	SWEEP - POWER SWEEP (Ch 5)
STP	Enter stop frequency	FREQ (Ch 5)
STP?	Output stop frequency	FREQ (Ch 5)
STRTP	Enter start power	SWEEP - POWER SWEEP (Ch 5)
STRTP?	Output start power	SWEEP - POWER SWEEP (Ch 5)
STV	Enter active segmented limit vertical start position	DISPLAY - LIMITS (Ch 7)
STV?	Output active segmented limit vertical start position	DISPLAY - LIMITS (Ch 7)
SV1	Save front panel setup number 1 to memory	SAVE/RECALL (Ch 9)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
SV10	Save front panel setup number 10 to memory	SAVE/RECALL (Ch 9)
SV2	Save front panel setup number 2 to memory	SAVE/RECALL (Ch 9)
SV3	Save front panel setup number 3 to memory	SAVE/RECALL (Ch 9)
SV4	Save front panel setup number 4 to memory	SAVE/RECALL (Ch 9)
SV5	Save front panel setup number 5 to memory	SAVE/RECALL (Ch 9)
SV6	Save front panel setup number 6 to memory	SAVE/RECALL (Ch 9)
SV7	Save front panel setup number 7 to memory	SAVE/RECALL (Ch 9)
SV8	Save front panel setup number 8 to memory	SAVE/RECALL (Ch 9)
SV9	Save front panel setup number 9 to memory	SAVE/RECALL (Ch 9)
SVB	Save current band definitions	CONFIG - MULTIPLE SOURCE (Ch 5)
SVCM1	Save cal data in internal memory 1	SAVE/RECALL (Ch 9)
SVCM2	Save cal data in internal memory 2	SAVE/RECALL (Ch 9)
SVCM3	Save cal data in internal memory 3	SAVE/RECALL (Ch 9)
SVCM4	Save cal data in internal memory 4	SAVE/RECALL (Ch 9)
SVCM5	Save cal data in internal memory 5	SAVE/RECALL (Ch 9)
SVCM6	Save cal data in internal memory 6	SAVE/RECALL (Ch 9)
SVCM7	Save cal data in internal memory 7	SAVE/RECALL (Ch 9)
SVCM8	Save cal data in internal memory 8	SAVE/RECALL (Ch 9)
SWAVG	Set the averaging type to Sweep-by-Sweep averaging	AVG (Ch 5)
SWAVG?	Output the averaging type of Point-by-Point or Sweep-by-Sweep	AVG (Ch 5)
SWP	Return to normal sweep mode	FREQ (Ch 5)
SWP?	Output sweep mode	FREQ (Ch 5)
SWPC0	Turn off chop sweep mode	SWEEP (Ch 5)
SWPC1	Turn on chop sweep mode	SWEEP (Ch 5)
SWPCX?	Output chop sweep mode on/off	SWEEP (Ch 5)
SWPDIR?	Output instantaneous sweep direction forward/reverse	REMOTE - SYNC (Ch 8)
SWPT	Enter sweep time	SWEEP (Ch 5)
SWPT0	Turn off sweep time measurement	SWEEP (Ch 5)
SWPT1	Turn on sweep time measurement	SWEEP (Ch 5)
SWPT?	Output sweep time	SWEEP (Ch 5)
SWPTMA	Set auto sweep time mode	SWEEP (Ch 5)
SWPTMM	Set manual sweep time mode	SWEEP (Ch 5)
SWPTMX?	Output sweep time mode	SWEEP (Ch 5)
SWPTX?	Output sweep time measurement on/off status	SWEEP (Ch 5)
SWPX?	Output sweep type selection	SWEEP (Ch 5)
SWR	Select SWR display for active channel	DISPLAY (Ch 5)
SXX?	Output S-parameter or user defined parameter of active channel	MEAS (Ch 5)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
SYSZ0?	Output system impedance	CAL (Ch 6)
T13	Select overlaid channel 1 and 3 display	DISPLAY (Ch 5)
T14	Overlay all four channels (Limited to selected Graph types)	DISPLAY (Ch 5)
T24	Select overlaid channel 2 and 4 display	DISPLAY (Ch 5)
TBP	Select time bandpass mode for active channel	APPL - TIME DOMAIN (Ch 10)
TC1	Take calibration data for port 1	CAL (Ch 6)
TC2	Take calibration data for port 2	CAL (Ch 6)
TCD	Take calibration data on one or both ports as necessary	CAL (Ch 6)
TCM	Select TRM calibration method	CAL (Ch 6)
TDC	Select time domain harmonic frequency calibration data points	CAL (Ch 6)
TDDIST	Set time domain parameter to distance for active channel	APPL - TIME DOMAIN (Ch 10)
TDDIST?	Output active channel time domain parameter distance or time	APPL - TIME DOMAIN (Ch 10)
TDPI0	Turn phasor impulse response off for active channel	APPL - TIME DOMAIN (Ch 10)
TDPI1	Turn phasor impulse response on for active channel	APPL - TIME DOMAIN (Ch 10)
TDPIX?	Output phasor impulse on/off status for active channel	APPL - TIME DOMAIN (Ch 10)
TDTIME	Set time domain parameter to time for active channel	APPL - TIME DOMAIN (Ch 10)
TDX?	Output domain mode for active channel	APPL - TIME DOMAIN (Ch 10)
TEB	Select external trigger executes *DDT definition	SWEEP (Ch 5)
TENMHZERR?	Output 10 MHz calibration max error	CAL (Ch 6)
TEX	Select external measurement triggering	SWEEP (Ch 5)
TEXS	Select external measurement sweep triggering	SWEEP (Ch 5)
TEXSB	Select external measurement sweep triggering and execute trigger buffer	SWEEP (Ch 5)
THRU23	Include port 2, 3 thru/reciprocal measurement	CAL (Ch 6)
THRU23?	Output selection of include or omit port 2, 3 thru/reciprocal measurement	CAL (Ch 6)
THRU23N	Omit port 2, 3 thru/reciprocal measurement	CAL (Ch 6)
THRU24	Include port 2, 4 thru/reciprocal measurement	CAL (Ch 6)
THRU24?	Output selection of include or omit port 2, 4 thru/reciprocal measurement	CAL (Ch 6)
THRU24N	Omit port 2, 4 thru/reciprocal measurement	CAL (Ch 6)
THRU34	Include port 3, 4 thru/reciprocal measurement	CAL (Ch 6)
THRU34?	Output selection of include or omit port 3, 4 thru/reciprocal measurement	CAL (Ch 6)
THRU34N	Omit port 3, 4 thru/reciprocal measurement	CAL (Ch 6)
TIB	Select GPIB measurement triggering	SWEEP (Ch 5)
TIBS	Select GPIB measurement sweep triggering	SWEEP (Ch 5)
TIBSB	Select GPIB measurement sweep triggering and execute trigger buffer	SWEEP (Ch 5)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
TIME	Enter the system time	UTILITY (Ch 9)
TIME?	Output the system time	UTILITY (Ch 9)
TIN	Select internal measurement triggering	SWEEP (Ch 5)
TLP	Select time lowpass mode for active channel	APPL - TIME DOMAIN (Ch 10)
TLZ	Enter thru line impedance for calibration	CAL (Ch 6)
TLZ?	Output thru line impedance for calibration	CAL (Ch 6)
TOL	Enter thru offset/reciprocal length for calibration	CAL (Ch 6)
TOL?	Output thru offset/reciprocal length for calibration	CAL (Ch 6)
TOLP14	Enter port 1, 4 thru offset/reciprocal length for 4-port calibration	CAL (Ch 6)
TOLP14?	Output port 1, 4 thru offset/reciprocal length for 4-port calibration	CAL (Ch 6)
TOLP23	Enter port 2, 3 thru offset/reciprocal length for 3-port calibration	CAL (Ch 6)
TOLP23?	Output port 2, 3 thru offset/reciprocal length for 3-port calibration	CAL (Ch 6)
TOLP24	Enter port 2, 4 thru offset/reciprocal length for 4-port calibration	CAL (Ch 6)
TOLP24?	Output port 2, 4 thru offset/reciprocal length for 4-port calibration	CAL (Ch 6)
TOLP3	Enter thru offset/reciprocal length for 3-port calibration	CAL (Ch 6)
TOLP34	Enter port 3, 4 thru offset/reciprocal length for 4-port calibration	CAL (Ch 6)
TOLP34?	Output port 3, 4 thru offset/reciprocal length for 4-port calibration	CAL (Ch 6)
TOLP3?	Output thru offsett/reciprocal length for 3-port calibration	CAL (Ch 6)
TP1	Select port 1 for flat power correction	POWER - FLAT POWER (Ch 5)
TP3	Select port 3 for flat power correction	POWER - FLAT POWER (Ch 5)
TPI	Select time phasor impulse mode for active channel	APPL - TIME DOMAIN (Ch 10)
TPN	Enter pen number for trace overlay data	HARD COPY (Ch 9)
TPN?	Output pen number for trace overlay data	HARD COPY (Ch 9)
TPX?	Output selected port for flat power correction	POWER - FLAT POWER (Ch 5)
TRCALTYPE	Select the receiver type TEST	POWER - RECEIVER CAL (Ch 5)
TRCCOL	Enter the color number for memory data	UTILITY (Ch 9)
TRCCOL?	Output the color number for memory data	UTILITY (Ch 9)
TRP12D?	Query the port 1, 2 device type	CAL (Ch 6)
TRP12DR	Set the port 1, 2 device type to RECIPROCAL	CAL (Ch 6)
TRP12DT	Set the port 1, 2 device type to THRU	CAL (Ch 6)
TRP12OL	Enter the thru/reciprocal offset length for port 1, 2	CAL (Ch 6)
TRP12OL?	Output the thru/reciprocal offset length for port 1, 2	CAL (Ch 6)
TRP13D?	Query the port 1, 3 device type	CAL (Ch 6)
TRP13DR	Set the port 1, 3 device type to RECIPROCAL	CAL (Ch 6)
TRP13DT	Set the port 1, 3 device type to THRU	CAL (Ch 6)
TRP13I	Include the port 1, 3 thru/reciprocal measurement	CAL (Ch 6)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
TRP13I?	Output the selection of omit or include for the port 1, 3 thru/reciprocal measurement	CAL (Ch 6)
TRP13O	Omit the port 1, 3 thru/reciprocal measurement	CAL (Ch 6)
TRP13OL	Enter the thru/reciprocal offset length for port 1, 3	CAL (Ch 6)
TRP13OL?	Output the thru/reciprocal offset length for port 1, 3	CAL (Ch 6)
TRP14D?	Query the port 1, 4 device type	CAL (Ch 6)
TRP14DR	Set the port 1, 4 device type to RECIPROCAL	CAL (Ch 6)
TRP14DT	Set the port 1, 4 device type to THRU	CAL (Ch 6)
TRP14I	Include the port 1, 4 thru/reciprocal measurement	CAL (Ch 6)
TRP14I?	Output the selection of omit or include for the port 1, 4 thru/reciprocal measurement	CAL (Ch 6)
TRP14O	Omit the port 1, 4 thru/reciprocal measurement	CAL (Ch 6)
TRP14OL	Enter the thru/reciprocal offset length for port 1, 4	CAL (Ch 6)
TRP14OL?	Output the thru/reciprocal offset length for port 1, 4	CAL (Ch 6)
TRP23D?	Query the port 2, 3 device type	CAL (Ch 6)
TRP23DR	Set the port 2, 3 device type to RECIPROCAL	CAL (Ch 6)
TRP23DT	Set the port 2, 3 device type to THRU	CAL (Ch 6)
TRP23I	Include the port 2, 3 thru/reciprocal measurement	CAL (Ch 6)
TRP23I?	Output the selection of omit or include for the port 2, 3 thru/reciprocal measurement	CAL (Ch 6)
TRP23O	Omit the port 2, 3 thru/reciprocal measurement	CAL (Ch 6)
TRP23OL	Enter the thru/reciprocal offset length for port 2, 3	CAL (Ch 6)
TRP23OL?	Output the thru/reciprocal offset length for port 2, 3	CAL (Ch 6)
TRP24D?	Query the port 2, 4 device type	CAL (Ch 6)
TRP24DR	Set the port 2, 4 device type to RECIPROCAL	CAL (Ch 6)
TRP24DT	Set the port 2, 4 device type to THRU	CAL (Ch 6)
TRP24I	Include the port 2, 4 thru/reciprocal measurement	CAL (Ch 6)
TRP24I?	Output the selection of omit or include for the port 2, 4 thru/reciprocal measurement	CAL (Ch 6)
TRP24O	Omit the port 2, 4 thru/reciprocal measurement	CAL (Ch 6)
TRP24OL	Enter the thru/reciprocal offset length for port 2, 4	CAL (Ch 6)
TRP24OL?	Output the thru/reciprocal offset length for port 2, 4	CAL (Ch 6)
TRP34D?	Query the port 3, 4 device type	CAL (Ch 6)
TRP34DR	Set the port 3, 4 device type to RECIPROCAL	CAL (Ch 6)
TRP34DT	Set the port 3, 4 device type to THRU	CAL (Ch 6)
TRP34I	Include the port 3, 4 thru/reciprocal measurement	CAL (Ch 6)
TRP34I?	Output the selection of omit or include for the port 3, 4 thru/reciprocal measurement	CAL (Ch 6)
TRP34O	Omit the port 3, 4 thru/reciprocal measurement	CAL (Ch 6)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
TRP34OL	Enter the thru/reciprocal offset length for port 3, 4	CAL (Ch 6)
TRP34OL?	Output the thru/reciprocal offset length for port 3, 4	CAL (Ch 6)
TRS	Trigger/restart sweep	CONFIG (Ch 5)
TRX	Select TRX calibration method	CAL (Ch 6)
TRX4P	Select TRX calibration method for 4-port calibration	CAL (Ch 6)
TSALCMS1	Source 1 ALC modulator drive voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSALCMS2	Source 2 ALC modulator drive voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSALCS1	Select source 1 for ALC verification	UTILITY - DIAGNOSTICS (Ch 9)
TSALCS2	Select source 2 for ALC verification	UTILITY - DIAGNOSTICS (Ch 9)
TSALCV	Start source ALC verification	UTILITY - DIAGNOSTICS (Ch 9)
TSBEG	Start diagnostics mode - same as SDG	UTILITY - DIAGNOSTICS (Ch 9)
TSDDSS1	Source 1 reference DDS voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSDDSS2	Source 2 reference DDS voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSDRAM	Start DRAM test	UTILITY - DIAGNOSTICS (Ch 9)
TSDSPSRAM	Start DSP SRAM test	UTILITY - DIAGNOSTICS (Ch 9)
TSDVMC	Enter DVM channel number - same as DVM	UTILITY - DIAGNOSTICS (Ch 9)
TSEFMEM	Start extended FLASH memory test	UTILITY - DIAGNOSTICS (Ch 9)
TSEND	End diagnostics mode - same as EDG	UTILITY - DIAGNOSTICS (Ch 9)
TSEXTI	Display external A/D input - same as EXD	UTILITY - DIAGNOSTICS (Ch 9)
TSFMEM	Start FLASH memory test	UTILITY - DIAGNOSTICS (Ch 9)
TSGDRAM	Start graphic DRAM test	UTILITY - DIAGNOSTICS (Ch 9)
TSGVRAM	Start graphic VRAM test	UTILITY - DIAGNOSTICS (Ch 9)
TSHETO	Het oscillator voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSLATR?	Diagnostic read latch - same as DRL	UTILITY - DIAGNOSTICS (Ch 9)
TSLATW	Diagnostic write latch - same as DWL	UTILITY - DIAGNOSTICS (Ch 9)
TSLEVAS1	Source 1 level amplifier voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSLEVAS2	Source 2 level amplifier voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSLOGAS1	Source 1 logarithmic amplifier voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSLOGAS2	Source 2 logarithmic amplifier voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSMAIVLO1	LO1 main VCO voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSMAIVS1	Source 1 main VCO voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSMAIVS2	Source 2 main VCO voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSMCOO0	Common offset mode off	UTILITY - DIAGNOSTICS (Ch 9)
TSMCOO1	Common offset mode on	UTILITY - DIAGNOSTICS (Ch 9)
TSMHAR0	Harmonic mode off	UTILITY - DIAGNOSTICS (Ch 9)
TSMHAR1	Harmonic mode on	UTILITY - DIAGNOSTICS (Ch 9)
TSMSPA0	Spur avoidance mode off	UTILITY - DIAGNOSTICS (Ch 9)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
TSMSPA1	Spur avoidance mode on	UTILITY - DIAGNOSTICS (Ch 9)
TSMSPU0	Speed up circuit mode off	UTILITY - DIAGNOSTICS (Ch 9)
TSMSPU1	Speed up circuit mode on	UTILITY - DIAGNOSTICS (Ch 9)
TSOFFVLO1	LO1 offset VCO voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSOFFVS1	Source 1 offset VCO voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSOFFVS2	Source 2 offset VCO voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSPWRLS1	Source 1 power level DAC voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSPWRLS2	Source 2 power level DAC voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSSRAM	Start SRAM test	UTILITY - DIAGNOSTICS (Ch 9)
TSSRAMD	Start SRAM disk test	UTILITY - DIAGNOSTICS (Ch 9)
TST	Perform self test and output status (same as *TST?)	REMOTE - IEEE 488.2 (Ch 8)
TSTRENF	Noise figure measurement	UTILITY - DIAGNOSTICS (Ch 9)
TUNE0	Turn tune mode off	SWEEP (Ch 5)
TUNE1	Turn tune mode on	SWEEP (Ch 5)
TUNESWP	Enter number of sweeps in tune mode	SWEEP (Ch 5)
TUNESWP?	Output number of sweeps in tune mode	SWEEP (Ch 5)
TUNEX?	Output tune mode on/off status	SWEEP (Ch 5)
TXX?	Output trigger source	SWEEP (Ch 5)
U10	Select 10 mil UTF calibration kit	CAL (Ch 6)
U15	Select 15 mil UTF calibration kit	CAL (Ch 6)
U25	Select 25 mil UTF calibration kit	CAL (Ch 6)
UDP11	Select the S11 user defined parameter	MEAS (Ch 5)
UDP12	Select the S12 user defined parameter	MEAS (Ch 5)
UDP13	Select the S13 user defined parameter	MEAS (Ch 5)
UDP14	Select the S14 User Defined parameter	MEAS (Ch 5)
UDP21	Select the S21 user defined parameter	MEAS (Ch 5)
UDP22	Select the S22 user defined parameter	MEAS (Ch 5)
UDP23	Select the S23 user defined parameter	MEAS (Ch 5)
UDP24	Select the S24 User Defined parameter	MEAS (Ch 5)
UDP31	Select the S31 user defined parameter	MEAS (Ch 5)
UDP32	Select the S32 user defined parameter	MEAS (Ch 5)
UDP33	Select the S33 user defined parameter	MEAS (Ch 5)
UDP34	Select the S34 User Defined parameter	MEAS (Ch 5)
UDP41	Select the S41 User Defined parameter	MEAS (Ch 5)
UDP42	Select the S42 User Defined parameter	MEAS (Ch 5)
UDP43	Select the S43 User Defined parameter	MEAS (Ch 5)
UDP44	Select the S44 User Defined parameter	MEAS (Ch 5)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
UDPX?	Output User Defined parameter for active channel	MEAS (Ch 5)
UF	Suffix sets farad data type and scales by 1E-6	DATA ENTRY SUFFIXES (Ch 5)
UH	Suffix sets farad data type and scales by 1E-6	DATA ENTRY SUFFIXES (Ch 5)
UMDIS0	Turn off user message display	REMOTE - USER MESSAGE (Ch 8)
UMDIS1	Turn on user message display	REMOTE - USER MESSAGE (Ch 8)
UMDISX?	Output user message display on/off status	REMOTE - USER MESSAGE (Ch 8)
UMRST	Reset all user message display parameters	REMOTE - USER MESSAGE (Ch 8)
UMSTR	Enter the user message display string	REMOTE - USER MESSAGE (Ch 8)
UMSTR?	Output the user message display string	REMOTE - USER MESSAGE (Ch 8)
UMXLOC	Enter the user message display starting X location	REMOTE - USER MESSAGE (Ch 8)
UMXLOC?	Output the user message display starting X location	REMOTE - USER MESSAGE (Ch 8)
UMYLOC	Enter the user message display starting Y location	REMOTE - USER MESSAGE (Ch 8)
UMYLOC?	Output the user message display starting Y location	REMOTE - USER MESSAGE (Ch 8)
UNDOGC	Exit gain compression and undo changes	APPL - GAIN COMPRESSION (Ch 10)
UPL0	Turn upper limit off	DISPLAY - LIMITS (Ch 7)
UPL1	Turn upper limit on at current value	DISPLAY - LIMITS (Ch 7)
UPL20	Turn upper limit off for bottom graph	DISPLAY - LIMITS (Ch 7)
UPL21	Turn upper limit on at current value for bottom graph	DISPLAY - LIMITS (Ch 7)
UPL2X?	Output upper limit on/off status for bottom graph	DISPLAY - LIMITS (Ch 7)
UPLX?	Output upper limit on/off status	DISPLAY - LIMITS (Ch 7)
US	Suffix sets time data type and scales by 1E-6	DATA ENTRY SUFFIXES (Ch 5)
US1	Select upper segmented limit 1 as the active segment	DISPLAY - LIMITS (Ch 7)
US10	Select upper segmented limit 10 as the active segment	DISPLAY - LIMITS (Ch 7)
US2	Select upper segmented limit 2 as the active segment	DISPLAY - LIMITS (Ch 7)
US3	Select upper segmented limit 3 as the active segment	DISPLAY - LIMITS (Ch 7)
US3P	Select use existing 3-port calibration	CAL (Ch 6)
US3P?	Output selection of use existing 3-port calibration or not	CAL (Ch 6)
US4	Select upper segmented limit 4 as the active segment	DISPLAY - LIMITS (Ch 7)
US5	Select upper segmented limit 5 as the active segment	DISPLAY - LIMITS (Ch 7)
US6	Select upper segmented limit 6 as the active segment	DISPLAY - LIMITS (Ch 7)
US7	Select upper segmented limit 7 as the active segment	DISPLAY - LIMITS (Ch 7)
US8	Select upper segmented limit 8 as the active segment	DISPLAY - LIMITS (Ch 7)
US9	Select upper segmented limit 9 as the active segment	DISPLAY - LIMITS (Ch 7)
USC	Suffix sets time data type and scales by 1E-6	DATA ENTRY SUFFIXES (Ch 5)
USE	Enter effective dielectric for microstrip calibration	CAL (Ch 6)
USE?	Output effective dielectric for microstrip calibration	CAL (Ch 6)
USL	Enter label string for user parameter being defined	MEAS (Ch 5)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
USL?	Output label string for the user parameter being defined	MEAS (Ch 5)
USR1	Measure the user parameter 1 on active channel	MEAS (Ch 5)
USR10	Measure user parameter 10 on active channel	MEAS (Ch 5)
USR11	Measure user parameter 11 on active channel	MEAS (Ch 5)
USR12	Measure user parameter 12 on active channel	MEAS (Ch 5)
USR13	Measure user parameter 13 on active channel	MEAS (Ch 5)
USR14	Measure user parameter 14 on active channel	MEAS (Ch 5)
USR15	Measure user parameter 15 on active channel	MEAS (Ch 5)
USR16	Measure user parameter 16 on active channel	MEAS (Ch 5)
USR2	Measure user parameter 2 on active channel	MEAS (Ch 5)
USR3	Measure user parameter 3 on active channel	MEAS (Ch 5)
USR4	Measure user parameter 4 on active channel	MEAS (Ch 5)
USR5	Measure user parameter 5 on active channel	MEAS (Ch 5)
USR6	Measure user parameter 6 on active channel	MEAS (Ch 5)
USR7	Measure user parameter 7 on active channel	MEAS (Ch 5)
USR8	Measure user parameter 8 on active channel	MEAS (Ch 5)
USR9	Measure user parameter 9 on active channel	MEAS (Ch 5)
USW	Enter microstrip width for microstrip calibration	CAL (Ch 6)
USW?	Output microstrip width for microstrip calibration	CAL (Ch 6)
USZ	Enter microstrip impedance for microstrip calibration	CAL (Ch 6)
USZ?	Output microstrip impedance for microstrip calibration	CAL (Ch 6)
UTFD	Select user defined microstrip calibration kit	CAL (Ch 6)
UTFX?	Output microstrip cal kit selection USER/U10/U15/U25	CAL (Ch 6)
V	Suffix sets voltage data type	DATA ENTRY SUFFIXES (Ch 5)
VELO?	Output relative velocity for lowpass distance	APPL - TIME DOMAIN (Ch 10)
VLT	Suffix sets voltage data type	DATA ENTRY SUFFIXES (Ch 5)
VSP	Enter rear panel stop voltage value	UTILITY - REAR PANEL (Ch 10)
VSP?	Output rear panel stop voltage value	UTILITY - REAR PANEL (Ch 10)
VST	Enter rear panel start voltage value	UTILITY - REAR PANEL (Ch 10)
VST?	Output rear panel start voltage value	UTILITY - REAR PANEL (Ch 10)
WCO	Enter waveguide cutoff frequency for user defined kit	CAL (Ch 6)
WCO?	Output waveguide cutoff frequency for user defined kit	CAL (Ch 6)
WFS	Wait full sweep until all display data is valid	REMOTE - SYNC (Ch 8)
WGCUTOFF?	Output the waveguide cal kit cutoff frequency	CAL (Ch 6)
WGSER?	Output waveguide cal kit serial number	CAL (Ch 6)
WGSHOFF1?	Output the waveguide cal kit short 1 offset	CAL (Ch 6)
WGSHOFF2?	Output the waveguide cal kit short 2 offset	CAL (Ch 6)

Table 1. *Alphabetical Listing of Programming Codes (Mnemonics)*

Command	Description	Function
WIDE	Use entire display width for graphs	UTILITY (Ch 9)
WKD	Select user defined waveguide calibration kit	CAL (Ch 6)
WKI	Select installed waveguide calibration kit	CAL (Ch 6)
WKX?	Output waveguide calibration kit selection user/install	CAL (Ch 6)
WLS	Select low sidelobe window shape	APPL - TIME DOMAIN (Ch 10)
WMS	Select minimum sidelobe window shape	APPL - TIME DOMAIN (Ch 10)
WNM	Select nominal window shape	APPL - TIME DOMAIN (Ch 10)
WRT	Select rectangular window shape	APPL - TIME DOMAIN (Ch 10)
WSH1	Enter waveguide short offset 1 for user defined kit	CAL (Ch 6)
WSH1?	Output waveguide short 1 offset for user defined kit	CAL (Ch 6)
WSH2	Enter waveguide short offset 2 for user defined kit	CAL (Ch 6)
WSH2?	Output waveguide short 2 offset for user defined kit	CAL (Ch 6)
WSX?	Output window shape	APPL - TIME DOMAIN (Ch 10)
XM3	Suffix sets unitless data type and scales by 1E-3	DATA ENTRY SUFFIXES (Ch 5)
XMKR?	Output marker mode	MARKER (Ch 7)
XMKRP?	Output the power sweep marker mode	MARKER (Ch 7)
XSB?	Output byte order for output data LSB or MSB	REMOTE - FORMATTING (Ch 8)
XX1	Suffix sets unitless data type	DATA ENTRY SUFFIXES (Ch 5)
XX3	Suffix sets unitless data type and scales by 1E3	DATA ENTRY SUFFIXES (Ch 5)
ZCT	Enter zoom range center value time or distance	APPL - TIME DOMAIN (Ch 10)
ZCT?	Output zoom range center value	APPL - TIME DOMAIN (Ch 10)
ZSN	Enter zoom range span value time or distance	APPL - TIME DOMAIN (Ch 10)
ZSN?	Output zoom range span value	APPL - TIME DOMAIN (Ch 10)
ZSP	Enter zoom range stop value time or distance	APPL - TIME DOMAIN (Ch 10)
ZSP?	Output zoom range stop value	APPL - TIME DOMAIN (Ch 10)
ZST	Enter zoom range start value time or distance	APPL - TIME DOMAIN (Ch 10)
ZST?	Output zoom range start value	APPL - TIME DOMAIN (Ch 10)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
ABSPHASE?	Output the absolute phase ON/OFF status	APPL (Ch 10)
ABSPHASE0	Turn absolute phase OFF	APPL (Ch 10)
ABSPHASE1	Turn absolute phase ON	APPL (Ch 10)
APPDEVM	Select mixer device type for application	APPL (Ch 10)
APPDEVS	Select standard device type for application	APPL (Ch 10)
APPDEVX?	Output device type for application	APPL (Ch 10)
APPENTC	Set application entry state to current state	APPL (Ch 10)
APPENTP	Set application entry state to previous state	APPL (Ch 10)
APPENTX?	Output application entry state	APPL (Ch 10)
APPGCF	Select swept frequency gain compression application type	APPL (Ch 10)
APPGCP	Select swept power gain compression application type	APPL (Ch 10)
APPHAR	Select harmonic application type	APPL (Ch 10)
APPIMD	Select IMD application type	APPL (Ch 10)
APPLORCW0	Turn off LO CW mode	APPL (Ch 10)
APPLORCW1	Turn on LO CW mode	APPL (Ch 10)
APPLORCWF	Enter LO CW frequency	APPL (Ch 10)
APPLORCWF?	Output LO CW frequency	APPL (Ch 10)
APPLORCWX?	Output LO CW on/off status	APPL (Ch 10)
APPLOROFF	Enter LO offset frequency	APPL (Ch 10)
APPLOROFF?	Output LO offset frequency	APPL (Ch 10)
APPLORRCD	Select receiver down conversion	APPL (Ch 10)
APPLORRCN	Select receiver no conversion	APPL (Ch 10)
APPLORRCU	Select receiver up conversion	APPL (Ch 10)
APPLORRCX?	Output receiver conversion type	APPL (Ch 10)
APPLORS2	Select source 2 for LO	APPL (Ch 10)
APPLORS3	Select source 3 for LO	APPL (Ch 10)
APPLORS4	Select source 4 for LO	APPL (Ch 10)
APPLORSX?	Output LO source number	APPL (Ch 10)
APPNF	Select noise figure application type	APPL (Ch 10)
APPSWPC	Set application sweep mode to CW receiver	APPL (Ch 10)
APPSWPS	Set application sweep mode to source sweep	APPL (Ch 10)
APPSWPX?	Output application sweep mode	APPL (Ch 10)
APPTR	Select transmission and reflection application type	APPL (Ch 10)
APPX?	Output application type	APPL (Ch 10)
EDE	Edit ENR source equation	APPL (Ch 10)
HELP0	Turn off help display	APPL (Ch 10)
HELP1	Turn on help display	APPL (Ch 10)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
HELPX?	Output help display on/off status	APPL (Ch 10)
IFV	Enter frequency values	APPL (Ch 10)
APPFTGD	Select frequency translation group delay application type	APPL - FTGD (Ch 10)
BEGFTGD	Start frequency translation group delay calibration	APPL - FTGD (Ch 10)
FTGDC0	Turn off frequency translation group delay correction	APPL - FTGD (Ch 10)
FTGDC1	Turn on frequency translation group delay correction	APPL - FTGD (Ch 10)
FTGDCDONE?	Output frequency translation group delay cal done status	APPL - FTGD (Ch 10)
FTGDCX?	Output frequency translation group delay correction on/off status	APPL - FTGD (Ch 10)
CALR	Perform receiver calibration for gain compression testing	APPL - GAIN COMPRESSION (Ch 10)
GCFS?	Output the multiple gain compression fixed scale flag ON/OFF status	APPL - GAIN COMPRESSION (Ch 10)
GCFSOFF	Turn the multiple gain compression fixed scale flag OFF	APPL - GAIN COMPRESSION (Ch 10)
GCFSON	Turn the multiple gain compression fixed scale flag ON	APPL - GAIN COMPRESSION (Ch 10)
GCMP	Enter gain compression point search value	APPL - GAIN COMPRESSION (Ch 10)
GCMP?	Output gain compression point search value	APPL - GAIN COMPRESSION (Ch 10)
GCSNS21?	Output self normalization of S21 status	APPL - GAIN COMPRESSION (Ch 10)
GCSNS210	Turn self normalization of S21 off	APPL - GAIN COMPRESSION (Ch 10)
GCSNS211	Turn self normalization of S21 on	APPL - GAIN COMPRESSION (Ch 10)
GCYSP	Enter the Y-stop power level for multiple frequency gain compression	APPL - GAIN COMPRESSION (Ch 10)
GCYSP?	Output the Y-stop power level for multiple frequency gain compression	APPL - GAIN COMPRESSION (Ch 10)
GCYST	Enter the Y-start power level for multiple frequency gain compression	APPL - GAIN COMPRESSION (Ch 10)
GCYST?	Output the Y-start power level for multiple frequency gain compression	APPL - GAIN COMPRESSION (Ch 10)
MFGCT	Start multiple frequency swept power gain compression test	APPL - GAIN COMPRESSION (Ch 10)
NOFST	Enter nominal offset value for external gain	APPL - GAIN COMPRESSION (Ch 10)
NOFST?	Output nominal offset value for external gain	APPL - GAIN COMPRESSION (Ch 10)
NRMS	Normalize S21 for gain compression testing	APPL - GAIN COMPRESSION (Ch 10)
PSET	Enter target power for gain compression receiver calibration	APPL - GAIN COMPRESSION (Ch 10)
PSET?	Output target power for gain compression receiver calibration	APPL - GAIN COMPRESSION (Ch 10)
PSF	Enter swept power frequency	APPL - GAIN COMPRESSION (Ch 10)
PSF?	Output swept power frequency	APPL - GAIN COMPRESSION (Ch 10)
PSTEP	Enter power sweep step size	APPL - GAIN COMPRESSION (Ch 10)
PSTEP?	Output power sweep step size	APPL - GAIN COMPRESSION (Ch 10)
PSTOP	Enter power sweep stop power	APPL - GAIN COMPRESSION (Ch 10)
PSTOP?	Output power sweep stop power	APPL - GAIN COMPRESSION (Ch 10)
PSTRT	Enter power sweep start power	APPL - GAIN COMPRESSION (Ch 10)
PSTRT?	Output power sweep start power	APPL - GAIN COMPRESSION (Ch 10)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
PSWC	Perform power sweep linearity calibration	APPL - GAIN COMPRESSION (Ch 10)
PSWC0	Turn power sweep linearity calibration off	APPL - GAIN COMPRESSION (Ch 10)
PSWC1	Turn power sweep linearity calibration on	APPL - GAIN COMPRESSION (Ch 10)
PSWCDONE?	Output power sweep linearity cal done status	APPL - GAIN COMPRESSION (Ch 10)
PSWCX?	Output power sweep linearity calibration on/off status	APPL - GAIN COMPRESSION (Ch 10)
PSWP0	Turn power sweep off	APPL - GAIN COMPRESSION (Ch 10)
PSWP1	Turn power sweep on	APPL - GAIN COMPRESSION (Ch 10)
PSWPX?	Output power sweep on/off status	APPL - GAIN COMPRESSION (Ch 10)
RSTGC	Reset gain compression parameters to default	APPL - GAIN COMPRESSION (Ch 10)
SFGCA	Select swept frequency gain compression application	APPL - GAIN COMPRESSION (Ch 10)
SFGCT	Start swept frequency gain compression test	APPL - GAIN COMPRESSION (Ch 10)
SPGCA	Select swept power gain compression application	APPL - GAIN COMPRESSION (Ch 10)
SPGCT	Start swept power gain compression test	APPL - GAIN COMPRESSION (Ch 10)
UNDOGC	Exit gain compression and undo changes	APPL - GAIN COMPRESSION (Ch 10)
BEGEN	Begin taking harmonic enhancement calibration data	APPL - HARMONIC (Ch 10)
BEGHAR	Begin taking both harmonic enhancement and phase calibration	APPL - HARMONIC (Ch 10)
BEGPH	Begin taking harmonic phase calibration data	APPL - HARMONIC (Ch 10)
HAR1	Select 1st harmonic (fundamental) frequency	APPL - HARMONIC (Ch 10)
HAR2	Select 2nd harmonic frequency	APPL - HARMONIC (Ch 10)
HAR3	Select 3rd harmonic frequency	APPL - HARMONIC (Ch 10)
HAR4	Select 4th harmonic frequency	APPL - HARMONIC (Ch 10)
HAR5	Select 5th harmonic frequency	APPL - HARMONIC (Ch 10)
HAR6	Select 6th harmonic frequency	APPL - HARMONIC (Ch 10)
HAR7	Select 7th harmonic frequency	APPL - HARMONIC (Ch 10)
HAR8	Select 8th harmonic frequency	APPL - HARMONIC (Ch 10)
HAR9	Select 9th harmonic frequency	APPL - HARMONIC (Ch 10)
HARCE	Select harmonic enhancement correction	APPL - HARMONIC (Ch 10)
HARCEDONE?	Output harmonic enhancement cal done status	APPL - HARMONIC (Ch 10)
HARCEP	Select harmonic enhancement and Phase correction	APPL - HARMONIC (Ch 10)
HARCEPDONE?	Output harmonic enhancement and Phase cal done status	APPL - HARMONIC (Ch 10)
HARCN	Select No harmonic correction	APPL - HARMONIC (Ch 10)
HARCPDONE?	Output harmonic phase cal done status	APPL - HARMONIC (Ch 10)
HARCX?	Output harmonic correction setting	APPL - HARMONIC (Ch 10)
HARDOF	Select harmonic display relative to output fundamental frequency	APPL - HARMONIC (Ch 10)
HARDSF	Select harmonic display relative to source fundamental frequency	APPL - HARMONIC (Ch 10)
HARDSH	Select harmonic display relative to source harmonic frequency	APPL - HARMONIC (Ch 10)
HARDX?	Output harmonic display setting	APPL - HARMONIC (Ch 10)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
HARP12	Select ports 1 and 2	APPL - HARMONIC (Ch 10)
HARP13	Select ports 1 and 3	APPL - HARMONIC (Ch 10)
HARPX?	Output ports 1 and 2 or 1 and 3 setting	APPL - HARMONIC (Ch 10)
HARX?	Output harmonic frequency number	APPL - HARMONIC (Ch 10)
BEGIMD	Begin taking IMD calibration data	APPL - IMD (Ch 10)
IMD3	Select 3rd order intermodulation products	APPL - IMD (Ch 10)
IMD5	Select 5th order intermodulation products	APPL - IMD (Ch 10)
IMD7	Select 7th order intermodulation products	APPL - IMD (Ch 10)
IMD9	Select 9th order intermodulation products	APPL - IMD (Ch 10)
IMDC0	Turn off IMD correction	APPL - IMD (Ch 10)
IMDC1	Turn on IMD correction	APPL - IMD (Ch 10)
IMDCDONE?	Output IMD cal done status	APPL - IMD (Ch 10)
IMDCX?	Output IMD correction on/off status	APPL - IMD (Ch 10)
IMDDI	Display IMD intercept	APPL - IMD (Ch 10)
IMDDP	Display IMD product	APPL - IMD (Ch 10)
IMDDX?	Output IMD display selection	APPL - IMD (Ch 10)
IMDLOS2	Select source 2 for IMD LO	APPL - IMD (Ch 10)
IMDLOS3	Select source 3 for IMD LO	APPL - IMD (Ch 10)
IMDLOS4	Select source 4 for IMD LO	APPL - IMD (Ch 10)
IMDLOSX?	Output IMD tone 1 source number	APPL - IMD (Ch 10)
IMDMRI	Select Input as measurement reference for IMD	APPL - IMD (Ch 10)
IMDMRO	Select Output as measurement reference for IMD	APPL - IMD (Ch 10)
IMDMRX?	Output measurement reference for IMD	APPL - IMD (Ch 10)
IMDOX?	Output IMD ORDER selection	APPL - IMD (Ch 10)
IMDRT1	Select IMD relative to tone 1	APPL - IMD (Ch 10)
IMDRT2	Select IMD relative to tone 2	APPL - IMD (Ch 10)
IMDRTX?	Output IMD display relative to tone number selection	APPL - IMD (Ch 10)
IMDSSMA	Select source selection apply mode	APPL - IMD (Ch 10)
IMDSSMD	Select source selection define mode	APPL - IMD (Ch 10)
IMDSSMX?	Output source selection mode	APPL - IMD (Ch 10)
IMDT1S1	Select source 1 for IMD tone 1	APPL - IMD (Ch 10)
IMDT1S2	Select source 2 for IMD tone 1	APPL - IMD (Ch 10)
IMDT1S3	Select source 3 for IMD tone 1	APPL - IMD (Ch 10)
IMDT1S4	Select source 4 for IMD tone 1	APPL - IMD (Ch 10)
IMDT1SX?	Output IMD tone 1 source number	APPL - IMD (Ch 10)
IMDT2OFF	Enter IMD tone 2 offset	APPL - IMD (Ch 10)
IMDT2OFF?	Output IMD tone 2 offset	APPL - IMD (Ch 10)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
IMDT2S1	Select source 1 for IMD tone 2	APPL - IMD (Ch 10)
IMDT2S2	Select source 2 for IMD tone 2	APPL - IMD (Ch 10)
IMDT2S3	Select source 3 for IMD tone 2	APPL - IMD (Ch 10)
IMDT2S4	Select source 4 for IMD tone 2	APPL - IMD (Ch 10)
IMDT2SX?	Output IMD tone 2 source number	APPL - IMD (Ch 10)
BEGNF	Begin taking noise figure calibration data	APPL - NOISE FIGURE (Ch 10)
BEGNFRF	Begin taking noise figure with RF calibration data	APPL - NOISE FIGURE (Ch 10)
BNDNFCW?	Output multiple source band Noise Figure ENR source CW flag	APPL - NOISE FIGURE (Ch 10)
BNDNFDIV?	Output multiple source band Noise Figure ENR source divisor	APPL - NOISE FIGURE (Ch 10)
BNDNFMUL?	Output multiple source band Noise Figure ENR source multiplier	APPL - NOISE FIGURE (Ch 10)
BNDNFOFF?	Output multiple source band Noise Figure ENR source offset	APPL - NOISE FIGURE (Ch 10)
NFALCK?	Output lock or unlock down status for the front end attenuator setting	APPL - NOISE FIGURE (Ch 10)
NFALCK0	Turn off the lock down	APPL - NOISE FIGURE (Ch 10)
NFALCK1	Lock down the front end attenuator	APPL - NOISE FIGURE (Ch 10)
NFAOF	Turn noise figure measurement averaging off	APPL - NOISE FIGURE (Ch 10)
NFAON	Turn noise figure measurement averaging on	APPL - NOISE FIGURE (Ch 10)
NFAON?	Noise figure averaging on/off query	APPL - NOISE FIGURE (Ch 10)
NFASET	Lock down the front end attenuator and set it to 0, 1, 2, 3, or 4	APPL - NOISE FIGURE (Ch 10)
NFBATTN	Output the backend attenuator setting	APPL - NOISE FIGURE (Ch 10)
NFBCAL	Output NF backend calibration table	APPL - NOISE FIGURE (Ch 10)
NFBW	Enter noise figure bandwidth correction	APPL - NOISE FIGURE (Ch 10)
NFBW?	Output noise figure bandwidth correction	APPL - NOISE FIGURE (Ch 10)
NFBWC0	Turn off noise figure bandwidth correction	APPL - NOISE FIGURE (Ch 10)
NFBWC1	Turn on noise figure bandwidth correction	APPL - NOISE FIGURE (Ch 10)
NFBWCX?	Output noise figure bandwidth correction on/off status	APPL - NOISE FIGURE (Ch 10)
NFC0	Turn off noise figure correction	APPL - NOISE FIGURE (Ch 10)
NFC1	Turn on noise figure correction	APPL - NOISE FIGURE (Ch 10)
NFC12TDONE?	Output noise figure with 12 term cal done status	APPL - NOISE FIGURE (Ch 10)
NFC2	Turn on noise figure with 12-term correction	APPL - NOISE FIGURE (Ch 10)
NFCDONE?	Output noise figure cal done status	APPL - NOISE FIGURE (Ch 10)
NFCOLD	Output corrected data for cold noise power	APPL - NOISE FIGURE (Ch 10)
NFCT	Enter noise figure cold temperature	APPL - NOISE FIGURE (Ch 10)
NFCT?	Output noise figure cold temperature	APPL - NOISE FIGURE (Ch 10)
NFCX?	Output noise figure correction on/off status	APPL - NOISE FIGURE (Ch 10)
NFDAG	Display available gain	APPL - NOISE FIGURE (Ch 10)
NFDATA	Output the cold data, the hot data, the front end attenuator	APPL - NOISE FIGURE (Ch 10)
NFDBWN	Select narrow DUT BW	APPL - NOISE FIGURE (Ch 10)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
NFDBWW	Select wide DUT BW	APPL - NOISE FIGURE (Ch 10)
NFDBWX?	Output DUT BW setting	APPL - NOISE FIGURE (Ch 10)
NFDENT	Display equivalent noise temperature	APPL - NOISE FIGURE (Ch 10)
NFDIG	Display insertion gain	APPL - NOISE FIGURE (Ch 10)
NFDNF	Display noise figure	APPL - NOISE FIGURE (Ch 10)
NFDX?	Output noise figure display selection	APPL - NOISE FIGURE (Ch 10)
NFDYF	Display Y-factor	APPL - NOISE FIGURE (Ch 10)
NFFATTN	Output the front end attenuator setting	APPL - NOISE FIGURE (Ch 10)
NFHOT	Output corrected data for hot noise power	APPL - NOISE FIGURE (Ch 10)
NFLA	Enter noise figure loss after DUT	APPL - NOISE FIGURE (Ch 10)
NFLA?	Output noise figure loss after DUT	APPL - NOISE FIGURE (Ch 10)
NFLB	Enter noise figure loss before DUT	APPL - NOISE FIGURE (Ch 10)
NFLB?	Output noise figure loss before DUT	APPL - NOISE FIGURE (Ch 10)
NFLENR	Load ENR file from floppy disk	APPL - NOISE FIGURE (Ch 10)
NFLENRH	Load ENR file from hard disk	APPL - NOISE FIGURE (Ch 10)
NFLENRX	Load ENR extension correction file from floppy disk	APPL - NOISE FIGURE (Ch 10)
NFLENRXH	Load ENR extension correction file from hard disk	APPL - NOISE FIGURE (Ch 10)
NFLNFX	Load ENR external extension correction file from floppy disk	APPL - NOISE FIGURE (Ch 10)
NFLNFXH	Load ENR external extension correction file from hard disk	APPL - NOISE FIGURE (Ch 10)
NFOL	Output noise figure overload status	APPL - NOISE FIGURE (Ch 10)
NFSRCE	Select external noise source	APPL - NOISE FIGURE (Ch 10)
NFSRCI	Select internal noise source	APPL - NOISE FIGURE (Ch 10)
NFSRCX?	Output noise source selection	APPL - NOISE FIGURE (Ch 10)
NFSSBC0	Turn off noise figure single sideband correction	APPL - NOISE FIGURE (Ch 10)
NFSSBC1	Turn on noise figure single sideband correction	APPL - NOISE FIGURE (Ch 10)
NFSSBCX?	Output noise figure single sideband correction on/off	APPL - NOISE FIGURE (Ch 10)
NFXENR0	Turn off ENR extension table	APPL - NOISE FIGURE (Ch 10)
NFXENR1	Turn on ENR extension table	APPL - NOISE FIGURE (Ch 10)
NFXENRX?	Query on/off status of ENR extension table	APPL - NOISE FIGURE (Ch 10)
NS0	Turn noise source off	APPL - NOISE FIGURE (Ch 10)
NS1	Turn noise source on	APPL - NOISE FIGURE (Ch 10)
CHDDX?	Output domain parameter frequency/distance/time for specified channel	APPL - TIME DOMAIN (Ch 10)
CHGOF?	Output the time domain gating mode on/off/display for specified channel	APPL - TIME DOMAIN (Ch 10)
CHLPSX?	Output the time domain impulse/step response for specified channel	APPL - TIME DOMAIN (Ch 10)
CHTDDIST?	Output the time domain parameter distance/time for specified channel	APPL - TIME DOMAIN (Ch 10)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
CHTDPIX?	Output the time domain phasor impulse on/off status for specified channel	APPL - TIME DOMAIN (Ch 10)
CHTDX?	Output domain mode for specified channel	APPL - TIME DOMAIN (Ch 10)
DBP	Select distance bandpass mode for active channel	APPL - TIME DOMAIN (Ch 10)
DCA	Select automatic DC term calculation for lowpass	APPL - TIME DOMAIN (Ch 10)
DCO	Select open for DC term for lowpass	APPL - TIME DOMAIN (Ch 10)
DCREFC?	Output reflection coefficient for lowpass	APPL - TIME DOMAIN (Ch 10)
DCS	Select short for DC term for lowpass	APPL - TIME DOMAIN (Ch 10)
DCV	Enter value for DC term for lowpass	APPL - TIME DOMAIN (Ch 10)
DCV?	Output lowpass DC term value	APPL - TIME DOMAIN (Ch 10)
DCX?	Output lowpass DC term selection	APPL - TIME DOMAIN (Ch 10)
DCZ	Select line impedance for DC term for lowpass	APPL - TIME DOMAIN (Ch 10)
DDX?	Output active channel domain parameter frequency distance or time	APPL - TIME DOMAIN (Ch 10)
DLP	Select distance lowpass mode for active channel	APPL - TIME DOMAIN (Ch 10)
DPI	Select distance phasor impulse mode for active channel	APPL - TIME DOMAIN (Ch 10)
FGT	Select frequency with time gate for active channel	APPL - TIME DOMAIN (Ch 10)
FQD	Select frequency domain for active channel	APPL - TIME DOMAIN (Ch 10)
GCT	Enter gate center value distance or time	APPL - TIME DOMAIN (Ch 10)
GCT?	Output gate center value	APPL - TIME DOMAIN (Ch 10)
GDS	Gate symbols displayed on active channel	APPL - TIME DOMAIN (Ch 10)
GLS	Select low sidelobe gate shape	APPL - TIME DOMAIN (Ch 10)
GMS	Select minimum sidelobe gate shape	APPL - TIME DOMAIN (Ch 10)
GNM	Select nominal gate shape	APPL - TIME DOMAIN (Ch 10)
GOF	Turn off gating on active channel	APPL - TIME DOMAIN (Ch 10)
GOF?	Output gating mode on active channel	APPL - TIME DOMAIN (Ch 10)
GON	Turn on gating on active channel	APPL - TIME DOMAIN (Ch 10)
GRT	Select Rectangular gate shape	APPL - TIME DOMAIN (Ch 10)
GSN	Enter gate span value distance or time	APPL - TIME DOMAIN (Ch 10)
GSN?	Output gate span value	APPL - TIME DOMAIN (Ch 10)
GSP	Enter gate stop value distance or time	APPL - TIME DOMAIN (Ch 10)
GSP?	Output gate stop value	APPL - TIME DOMAIN (Ch 10)
GST	Enter gate start value distance or time	APPL - TIME DOMAIN (Ch 10)
GST?	Output gate start value	APPL - TIME DOMAIN (Ch 10)
GSX?	Output Gate Shape setting	APPL - TIME DOMAIN (Ch 10)
LPI	Select lowpass impulse response for active channel	APPL - TIME DOMAIN (Ch 10)
LPS	Select lowpass step response for active channel	APPL - TIME DOMAIN (Ch 10)
LPSX?	Output lowpass response for active channel impulse or step	APPL - TIME DOMAIN (Ch 10)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
MRR	Restore original marker range	APPL - TIME DOMAIN (Ch 10)
TBP	Select time bandpass mode for active channel	APPL - TIME DOMAIN (Ch 10)
TDDIST	Set time domain parameter to distance for active channel	APPL - TIME DOMAIN (Ch 10)
TDDIST?	Output active channel time domain parameter distance or time	APPL - TIME DOMAIN (Ch 10)
TDPI0	Turn phasor impulse response off for active channel	APPL - TIME DOMAIN (Ch 10)
TDPI1	Turn phasor impulse response on for active channel	APPL - TIME DOMAIN (Ch 10)
TDPIX?	Output phasor impulse on/off status for active channel	APPL - TIME DOMAIN (Ch 10)
TDTIME	Set time domain parameter to time for active channel	APPL - TIME DOMAIN (Ch 10)
TDX?	Output domain mode for active channel	APPL - TIME DOMAIN (Ch 10)
TLP	Select time lowpass mode for active channel	APPL - TIME DOMAIN (Ch 10)
TPI	Select time phasor impulse mode for active channel	APPL - TIME DOMAIN (Ch 10)
VELO?	Output relative velocity for lowpass distance	APPL - TIME DOMAIN (Ch 10)
WLS	Select low sidelobe window shape	APPL - TIME DOMAIN (Ch 10)
WMS	Select minimum sidelobe window shape	APPL - TIME DOMAIN (Ch 10)
WNM	Select nominal window shape	APPL - TIME DOMAIN (Ch 10)
WRT	Select rectangular window shape	APPL - TIME DOMAIN (Ch 10)
WSX?	Output window shape	APPL - TIME DOMAIN (Ch 10)
ZCT	Enter zoom range center value time or distance	APPL - TIME DOMAIN (Ch 10)
ZCT?	Output zoom range center value	APPL - TIME DOMAIN (Ch 10)
ZSN	Enter zoom range span value time or distance	APPL - TIME DOMAIN (Ch 10)
ZSN?	Output zoom range span value	APPL - TIME DOMAIN (Ch 10)
ZSP	Enter zoom range stop value time or distance	APPL - TIME DOMAIN (Ch 10)
ZSP?	Output zoom range stop value	APPL - TIME DOMAIN (Ch 10)
ZST	Enter zoom range start value time or distance	APPL - TIME DOMAIN (Ch 10)
ZST?	Output zoom range start value	APPL - TIME DOMAIN (Ch 10)
AOF	Turn averaging off	AVG (Ch 5)
AOF?	Output averaging on/off status	AVG (Ch 5)
AON	Turn averaging on	AVG (Ch 5)
AVG	Enter averaging count and turn it on	AVG (Ch 5)
AVG?	Output averaging count	AVG (Ch 5)
AVGCNT?	Output the current Sweep-by-Sweep average sweep count	AVG (Ch 5)
IF1	Select 10 Hz IF bandwidth	AVG (Ch 5)
IF2	Select 100 Hz IF bandwidth	AVG (Ch 5)
IF3	Select 1 kHz IF bandwidth	AVG (Ch 5)
IF4	Select 10 kHz IF bandwidth	AVG (Ch 5)
IFA	Select 30 kHz IF bandwidth	AVG (Ch 5)
IFBW10	Select 10 Hz IF bandwidth	AVG (Ch 5)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
IFBW100	Select 100 Hz IF bandwidth	AVG (Ch 5)
IFBW10K	Select 10 kHz IF bandwidth	AVG (Ch 5)
IFBW1K	Select 1 kHz IF bandwidth	AVG (Ch 5)
IFBW30	Select 30 Hz IF bandwidth	AVG (Ch 5)
IFBW300	Select 300 Hz IF bandwidth	AVG (Ch 5)
IFBW30K	Select 30 kHz IF bandwidth	AVG (Ch 5)
IFBW3K	Select 3 kHz IF bandwidth	AVG (Ch 5)
IFBWX?	Output IF bandwidth (10-30000)	AVG (Ch 5)
IFM	Select 10 Hz IF bandwidth	AVG (Ch 5)
IFN	Select 1 kHz IF bandwidth	AVG (Ch 5)
IFR	Select 100 Hz IF bandwidth	AVG (Ch 5)
IFX?	Output IF bandwidth (1-4)	AVG (Ch 5)
NFAVEC	Enter noise figure averaging count	AVG (Ch 5)
NFAVEC?	Output noise figure averaging count	AVG (Ch 5)
PTAVG	Set the averaging type to Point-by-Point averaging	AVG (Ch 5)
RSTAVG	Reset the Sweep-by-Sweep averaging sweep count	AVG (Ch 5)
SOF	Turn off smoothing	AVG (Ch 5)
SOF?	Output smoothing on/off status	AVG (Ch 5)
SON	Enter smoothing value and turn on	AVG (Ch 5)
SON?	Output smoothing value	AVG (Ch 5)
SPTS?	Output the number of smoothing points	AVG (Ch 5)
SWAVG	Set the averaging type to Sweep-by-Sweep averaging	AVG (Ch 5)
SWAVG?	Output the averaging type of Point-by-Point or Sweep-by-Sweep	AVG (Ch 5)
2PATH3PORT	Select 2-path 3-port calibration method	CAL (Ch 6)
A12	Simulate 12-term calibration	CAL (Ch 6)
A24	Simulate 3-port calibration	CAL (Ch 6)
A3P	Simulate 3-port calibration	CAL (Ch 6)
A40	Simulate 4-port calibration	CAL (Ch 6)
A4P	Simulate 4-port calibration	CAL (Ch 6)
A4P0	Simulate 4-port calibration and initialize all 4-port correction coefficients	CAL (Ch 6)
A8R	Simulate 1-path 2-port calibration reverse path	CAL (Ch 6)
A8T	Simulate 1-path 2-port calibration forward path	CAL (Ch 6)
ABORTCAL	Abort calibration and keep existing calibration data	CAL (Ch 6)
ABT	Simulate translation frequency response calibration forward and reverse	CAL (Ch 6)
ADPL	Enter electrical length for adapter removal	CAL (Ch 6)
ADPL?	Output electrical length for adapter removal	CAL (Ch 6)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
AFT	Simulate transmission frequency response calibration forward path	CAL (Ch 6)
ALCERRS1?	Output source 1 ALC calibration error	CAL (Ch 6)
ALCERRS2?	Output source 2 ALC calibration error	CAL (Ch 6)
APPC12T?	Output 12 Term calibration done status	CAL (Ch 6)
APPC3P?	Output 3-port calibration done status	CAL (Ch 6)
APPC4P?	Output 4-port calibration done status	CAL (Ch 6)
APRXSTP	Enter approximate stop frequency	CAL (Ch 6)
APRXSTP?	Output approximate stop frequency	CAL (Ch 6)
ARB	Simulate reflection only calibration both ports	CAL (Ch 6)
ARF	Simulate reflection only calibration port 1	CAL (Ch 6)
ARR	Simulate reflection only calibration port 2	CAL (Ch 6)
ART	Simulate translation frequency response calibration reverse path	CAL (Ch 6)
BBL	Select broadband load for calibration	CAL (Ch 6)
BBLP3	Select broadband load for 3-port calibration	CAL (Ch 6)
BBLP4	Select broadband load for 4-port calibration	CAL (Ch 6)
BBX?	Output load type for calibration broadband/sliding load	CAL (Ch 6)
BBXP3?	Output load type for 3-port calibration broadband/sliding load	CAL (Ch 6)
BBXP4?	Output load type for 4-port calibration broadband/sliding load	CAL (Ch 6)
BBZ	Enter broadband load impedance for calibration	CAL (Ch 6)
BBZ?	Output broadband load impedance for calibration	CAL (Ch 6)
BBZL	Enter broadband load inductance for calibration	CAL (Ch 6)
BBZL?	Output broadband load inductance for calibration	CAL (Ch 6)
BEG	Begin taking calibration data	CAL (Ch 6)
BEG3P	Begin taking 3-port calibration data	CAL (Ch 6)
BEG4P	Begin taking 4-port calibration data	CAL (Ch 6)
BPF	Enter break point frequency for 3 line LRL calibration	CAL (Ch 6)
BPF?	Output break point frequency for 3 line LRL calibration	CAL (Ch 6)
C12	Select 12 term calibration	CAL (Ch 6)
C8R	Select 1-path 2-port calibration reverse path	CAL (Ch 6)
C8T	Select 1-path 2-port calibration forward path	CAL (Ch 6)
CBT	Select translation frequency response calibration forward and reverse	CAL (Ch 6)
CC0	Enter capacitance coefficient 0 for open	CAL (Ch 6)
CC0?	Output capacitance coefficient 0 for open	CAL (Ch 6)
CC1	Enter capacitance coefficient 1 for open	CAL (Ch 6)
CC1?	Output capacitance coefficient 1 for open	CAL (Ch 6)
CC2	Enter capacitance coefficient 2 for open	CAL (Ch 6)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
CC2?	Output capacitance coefficient 2 for open	CAL (Ch 6)
CC3	Enter capacitance coefficient 3 for open	CAL (Ch 6)
CC3?	Output capacitance coefficient 3 for open	CAL (Ch 6)
CDATTN0?	Output port 1 attenuation of power sweep mode from selected cal memory	CAL (Ch 6)
CDATTN2?	Output port 3 attenuation of power sweep mode from selected cal memory	CAL (Ch 6)
CDCALTP?	Output 2-port cal type from selected cal memory	CAL (Ch 6)
CDCON?	Output port 1 connector from selected cal memory	CAL (Ch 6)
CDCWF?	Output cw mode frequency from selected cal memory	CAL (Ch 6)
CDEND1?	Output end power for power source 1 or end frequency from selected cal memory	CAL (Ch 6)
CDEND2?	Output end power for power source 2 from selected cal memory	CAL (Ch 6)
CDEND3?	Output end power for power source 3 from selected cal memory	CAL (Ch 6)
CDEND4?	Output end power for power source 4 from selected cal memory	CAL (Ch 6)
CDFREQ?	Output cal data freq list from selected cal memory	CAL (Ch 6)
CDFSW?	Output sweep type from selected cal memory	CAL (Ch 6)
CDLNTP?	Output line type from selected cal memory	CAL (Ch 6)
CDNOP1?	Output port 1 nominal offset of power sweep mode from selected cal memory	CAL (Ch 6)
CDNOP3?	Output port 3 nominal offset of power sweep mode from selected cal memory	CAL (Ch 6)
CDNUM?	Output data number of power/frequency from selected cal memory	CAL (Ch 6)
CDP2CON?	Output port 2 connector from selected cal memory	CAL (Ch 6)
CDP3CALTP?	Output 3-port cal type from selected cal memory	CAL (Ch 6)
CDP3CON?	Output port 3 connector from selected cal memory	CAL (Ch 6)
CDP4CALTP?	Output 4-port cal type from selected cal memory	CAL (Ch 6)
CDP4CON?	Output port 4 connector from selected cal memory	CAL (Ch 6)
CDPTS?	Output cal data points from selected cal memory	CAL (Ch 6)
CDPTSPWR?	Output cal data point of power sweep mode from selected cal memory	CAL (Ch 6)
CDSRC2PWR?	Output power in power source 2 from selected cal memory	CAL (Ch 6)
CDSRCPWR?	Output power in power source 1 from selected cal memory	CAL (Ch 6)
CDSTEP?	Output min power/frequency step from selected cal memory	CAL (Ch 6)
CDSTRT1?	Output start power for power source 1 or start frequency from selected cal memory	CAL (Ch 6)
CDSTRT2?	Output start power for power source 2 from selected cal memory	CAL (Ch 6)
CDSTRT3?	Output start power for power source 3 from selected cal memory	CAL (Ch 6)
CDSTRT4?	Output start power for power source 4 from selected cal memory	CAL (Ch 6)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
CF2	Select female 2.4mm connector for current port	CAL (Ch 6)
CF3	Select female GPC-3.5 connector for current port	CAL (Ch 6)
CF716	Select female Type 7/16 connector for current port	CAL (Ch 6)
CFC	Select female TNC connector for current port	CAL (Ch 6)
CFK	Select female K Connector for current port	CAL (Ch 6)
CFN	Select female Type N connector for current port	CAL (Ch 6)
CFN75	Select female Type N 75-ohm connector for current port	CAL (Ch 6)
CFS	Select female SMA connector for current port	CAL (Ch 6)
CFSP	Select special female connector for current port	CAL (Ch 6)
CFT	Select transmission frequency response calibration forward path	CAL (Ch 6)
CFV	Select female V Connector for current port	CAL (Ch 6)
CL0	Enter inductive coefficient 0 for short	CAL (Ch 6)
CL0?	Output inductive coefficient 0 for short	CAL (Ch 6)
CL1	Enter inductive coefficient 1 for short	CAL (Ch 6)
CL1?	Output inductive coefficient 1 for short	CAL (Ch 6)
CL2	Enter inductive coefficient 2 for short	CAL (Ch 6)
CL2?	Output inductive coefficient 2 for short	CAL (Ch 6)
CL3	Enter inductive coefficient 3 for short	CAL (Ch 6)
CL3?	Output inductive coefficient 3 for short	CAL (Ch 6)
CM2	Select male 2.4mm connector for current port	CAL (Ch 6)
CM3	Select male GPC-3.5 connector for current port	CAL (Ch 6)
CM3PX?	Output calibration method for 3-port cal	CAL (Ch 6)
CM4PX?	Output calibration method for 4-port calibration	CAL (Ch 6)
CM716	Select male Type 7/16 connector for current port	CAL (Ch 6)
CMC	Select male TNC connector for current port	CAL (Ch 6)
CMK	Select male K Connector for current port	CAL (Ch 6)
CMN	Select male N connector for current port	CAL (Ch 6)
CMN75	Select male Type N 75-Ohm connector for current port	CAL (Ch 6)
CMS	Select male SMA connector for current port	CAL (Ch 6)
CMSP	Select special male connector for current port	CAL (Ch 6)
CMV	Select male V Connector for current port	CAL (Ch 6)
CMX?	Output calibration method	CAL (Ch 6)
CND	Select user specified connector for current port	CAL (Ch 6)
CNG	Select GPC-7 connector for current port	CAL (Ch 6)
COF	Turn 2 and 3-port error correction and Flexible Cal off	CAL (Ch 6)
CON	Turn 2-port error correction on	CAL (Ch 6)
CON?	Output 2-port error correction on/off status	CAL (Ch 6)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
CON3P	Turn 3-port error correction on	CAL (Ch 6)
CON3P?	Output 3-port error correction on/off status	CAL (Ch 6)
CON4P	Turn 4-port error correction on	CAL (Ch 6)
CON4P?	Output 4-Port error correction on/off status	CAL (Ch 6)
CONCC0?	Output capacitance coefficient 0 of open device for specified connector	CAL (Ch 6)
CONCC1?	Output capacitance coefficient 1 of open device for specified connector	CAL (Ch 6)
CONCC2?	Output capacitance coefficient 2 of open device for specified connector	CAL (Ch 6)
CONCC3?	Output capacitance coefficient 3 of open device for specified connector	CAL (Ch 6)
CONOPOFF?	Output offset of open device for specified connector	CAL (Ch 6)
CONOPSER?	Output serial number of open device for specified connector	CAL (Ch 6)
CONSHANG?	Output angle of short device for specified connector	CAL (Ch 6)
CONSHOFF?	Output offset of short device for specified connector	CAL (Ch 6)
CONSHSER?	Output serial number of short device for specified connector	CAL (Ch 6)
COO	Enter offset for open for user specified connector	CAL (Ch 6)
COO?	Output offset for open for user specified connector	CAL (Ch 6)
COS	Enter offset for short for user specified connector	CAL (Ch 6)
COS?	Output offset for short for user specified connector	CAL (Ch 6)
CRB	Select reflection only calibration both ports	CAL (Ch 6)
CRF	Select reflection only calibration port 1	CAL (Ch 6)
CRR	Select reflection only calibration port 2	CAL (Ch 6)
CRT	Select transmission frequency response calibration reverse path	CAL (Ch 6)
CSF?	Output calibration start frequency	CAL (Ch 6)
CSWP?	Output sweep mode for calibration	CAL (Ch 6)
CTF?	Output calibration stop frequency	CAL (Ch 6)
CWC	Select CW frequency calibration data points	CAL (Ch 6)
CXX?	Output calibration type	CAL (Ch 6)
DFC	Select discrete frequency calibration data points	CAL (Ch 6)
IARF	Enter adapter removal files from GPIB and calibrate	CAL (Ch 6)
ISF	Exclude isolation	CAL (Ch 6)
ISN	Include isolation	CAL (Ch 6)
ISX?	Output isolation calibration selected true/false	CAL (Ch 6)
KEC	Keep existing calibration data	CAL (Ch 6)
LCM	Select LRL calibration method	CAL (Ch 6)
LDARF	Load adapter removal files from disk and calibrate	CAL (Ch 6)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
LL1	Enter length of line 1 for LRL calibration	CAL (Ch 6)
LL1?	Output length of line 1 for LRL calibration	CAL (Ch 6)
LL1P3	Enter length of line 1 for 3-port TRX calibration	CAL (Ch 6)
LL1P3?	Output length of line 1 for 3-port TRX calibration	CAL (Ch 6)
LL2	Enter length of line 2 for LRL calibration	CAL (Ch 6)
LL2?	Output length of line 2 for LRL calibration	CAL (Ch 6)
LL2P3	Enter length of line 2 for 3-port TRX calibration	CAL (Ch 6)
LL2P3?	Output length of line 2 for 3-port TRX calibration	CAL (Ch 6)
LL3	Enter length of line 3 for LRL calibration	CAL (Ch 6)
LL3?	Output length of line 3 for LRL calibration	CAL (Ch 6)
LLZ	Enter line impedance for LRL calibration	CAL (Ch 6)
LLZ?	Output line impedance for LRL calibration	CAL (Ch 6)
LM2	Select a match for the second device during a LRM type calibration	CAL (Ch 6)
LM3	Select a match for the third device during a LRM type calibration	CAL (Ch 6)
LR2	Specify 2 line LRL calibration	CAL (Ch 6)
LR3	Specify 3 line LRL calibration	CAL (Ch 6)
LRX?	Output line selection for LRL calibration 2 line/3 line	CAL (Ch 6)
LTC	Select coaxial transmission line for calibration	CAL (Ch 6)
LTU	Select microstrip transmission line for calibration	CAL (Ch 6)
LTW	Select waveguide transmission line for calibration	CAL (Ch 6)
LTX?	Output line type	CAL (Ch 6)
LX2?	Output device for line 2 of LRL calibration line/match	CAL (Ch 6)
LX3?	Output device for line 3 of LRL calibration line/match	CAL (Ch 6)
MAT	Select matched reflective devices during calibration	CAL (Ch 6)
MIX	Select mixed reflective devices during calibration	CAL (Ch 6)
MIX?	Output reflective devices selection during calibration	CAL (Ch 6)
MIXP3	Set port 3 to be mixer port when source 2 using	CAL (Ch 6)
MIXP4	Set port 4 to be mixer port when source 2 using	CAL (Ch 6)
MIXPORT?	Output mixer port when source 2 using	CAL (Ch 6)
NCS	Go to next calibration step	CAL (Ch 6)
NOC	Select normal calibration data points	CAL (Ch 6)
NPX?	Output number of points currently being measured	CAL (Ch 6)
NUS3P	Select Don’t Use existing 3-port calibration	CAL (Ch 6)
OCM	Select offset short calibration method	CAL (Ch 6)
P1C	Select port 1 for connector specification	CAL (Ch 6)
P1C?	Output port 1 connector type	CAL (Ch 6)
P2C	Select port 2 for connector specification	CAL (Ch 6)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
P2C?	Output port 2 connector type	CAL (Ch 6)
P3C	Select port 3 for connector specification	CAL (Ch 6)
P3C?	Output port 3 connector type	CAL (Ch 6)
P4C	Select port 4 for connector specification	CAL (Ch 6)
P4C?	Output port 4 connector type	CAL (Ch 6)
RESTARTCAL	Restart application calibration measurement	CAL (Ch 6)
RGZ	Select reflective device greater than Z0	CAL (Ch 6)
RLZ	Select reflective device less than Z0	CAL (Ch 6)
RM1	Select reference plane at line 1 midpoint	CAL (Ch 6)
RMX?	Output reference plane location for LRL calibration	CAL (Ch 6)
ROL	Enter reflective device offset length	CAL (Ch 6)
ROL?	Output reflective device offset length	CAL (Ch 6)
ROLP3	Enter reflective device offset length for 3-port TRX calibration	CAL (Ch 6)
ROLP3?	Output reflective device offset length for 3-port TRX	CAL (Ch 6)
ROLP4	Enter reflective device offset length for 4-port TRX calibration	CAL (Ch 6)
ROLP4?	Output reflective device offset length for 4-port TRX calibration	CAL (Ch 6)
RPC	Repeat previous calibration	CAL (Ch 6)
RPCHAN	Select Per Channel for reference plane	CAL (Ch 6)
RPCPX?	Output reference plane Per Channel/Port status	CAL (Ch 6)
RPPORT	Select Per Port for reference plane	CAL (Ch 6)
RRP	Select reference plane at reflection plane	CAL (Ch 6)
RXZ?	Output reflective device type in LRL calibration greater/less than Z0	CAL (Ch 6)
SBD	Enter substrate dielectric for microstrip calibration	CAL (Ch 6)
SBD?	Output substrate dielectric for microstrip calibration	CAL (Ch 6)
SBT	Enter substrate thickness for microstrip calibration	CAL (Ch 6)
SBT?	Output substrate thickness for microstrip calibration	CAL (Ch 6)
SCM	Select standard calibration method	CAL (Ch 6)
SH1	Set offset short 1 or 2 offset length for offset short calibration	CAL (Ch 6)
SH1?	Output offset short 1 offset length	CAL (Ch 6)
SH2	Set offset short 1 or 2 offset length for offset short calibration	CAL (Ch 6)
SH2?	Output offset short 2 offset length	CAL (Ch 6)
SLD	Select sliding load for calibration	CAL (Ch 6)
SLDP3	Select sliding load for 3-port calibration	CAL (Ch 6)
SLDP4	Select sliding load for 4-port calibration	CAL (Ch 6)
TRP14I	Include the port 1, 4 thru/reciprocal measurement	CAL (Ch 6)
TRP14I?	Output the selection of omit or include for the port 1, 4 thru/reciprocal measurement	CAL (Ch 6)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
TRP14O	Omit the port 1, 4 thru/reciprocal measurement	CAL (Ch 6)
TRP14OL	Enter the thru/reciprocal offset length for port 1, 4	CAL (Ch 6)
TRP14OL?	Output the thru/reciprocal offset length for port 1, 4	CAL (Ch 6)
TRP23D?	Query the port 2, 3 device type	CAL (Ch 6)
TRP23DR	Set the port 2, 3 device type to RECIPROCAL	CAL (Ch 6)
TRP23DT	Set the port 2, 3 device type to THRU	CAL (Ch 6)
TRP23I	Include the port 2, 3 thru/reciprocal measurement	CAL (Ch 6)
SOLT	Select SOLT calibration method	CAL (Ch 6)
SOLT4P	Select SOLT calibration method for 4-port calibration	CAL (Ch 6)
SSC	Select the segmented sweep calibration data points	CAL (Ch 6)
SYSZ0?	Output system impedance	CAL (Ch 6)
TC1	Take calibration data for port 1	CAL (Ch 6)
TC2	Take calibration data for port 2	CAL (Ch 6)
TCD	Take calibration data on one or both ports as necessary	CAL (Ch 6)
TCM	Select TRM calibration method	CAL (Ch 6)
TDC	Select time domain harmonic frequency calibration data points	CAL (Ch 6)
TENMHZERR?	Output 10 MHz calibration max error	CAL (Ch 6)
THRU23	Include port 2, 3 thru/reciprocal measurement	CAL (Ch 6)
THRU23?	Output selection of include or omit port 2, 3 thru/reciprocal measurement	CAL (Ch 6)
THRU23N	Omit port 2, 3 thru/reciprocal measurement	CAL (Ch 6)
THRU24	Include port 2, 4 thru/reciprocal measurement	CAL (Ch 6)
THRU24?	Output selection of include or omit port 2, 4 thru/reciprocal measurement	CAL (Ch 6)
THRU24N	Omit port 2, 4 thru/reciprocal measurement	CAL (Ch 6)
THRU34	Include port 3, 4 thru/reciprocal measurement	CAL (Ch 6)
THRU34?	Output selection of include or omit port 3, 4 thru/reciprocal measurement	CAL (Ch 6)
THRU34N	Omit port 3, 4 thru/reciprocal measurement	CAL (Ch 6)
TLZ	Enter thru line impedance for calibration	CAL (Ch 6)
TLZ?	Output thru line impedance for calibration	CAL (Ch 6)
TOL	Enter thru offset/reciprocal length for calibration	CAL (Ch 6)
TOL?	Output thru offset/reciprocal length for calibration	CAL (Ch 6)
TOLP14	Enter port 1, 4 thru offset/reciprocal length for 4-port calibration	CAL (Ch 6)
TOLP14?	Output port 1, 4 thru offset/reciprocal length for 4-port calibration	CAL (Ch 6)
TOLP23	Enter port 2, 3 thru offset/reciprocal length for 3-port calibration	CAL (Ch 6)
TOLP23?	Output port 2, 3 thru offset/reciprocal length for 3-port calibration	CAL (Ch 6)
TOLP24	Enter port 2, 4 thru offset/reciprocal length for 4-port calibration	CAL (Ch 6)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
TOLP24?	Output port 2, 4 thru offset/reciprocal length for 4-port calibration	CAL (Ch 6)
TOLP3	Enter thru offset/reciprocal length for 3-port calibration	CAL (Ch 6)
TOLP3?	Output thru offsett/reciprocal length for 3-port calibration	CAL (Ch 6)
TOLP34	Enter port 3, 4 thru offset/reciprocal length for 4-port calibration	CAL (Ch 6)
TOLP34?	Output port 3, 4 thru offset/reciprocal length for 4-port calibration	CAL (Ch 6)
TRP12D?	Query the port 1, 2 device type	CAL (Ch 6)
TRP12DR	Set the port 1, 2 device type to RECIPROCAL	CAL (Ch 6)
TRP12DT	Set the port 1, 2 device type to THRU	CAL (Ch 6)
TRP12OL	Enter the thru/reciprocal offset length for port 1, 2	CAL (Ch 6)
TRP12OL?	Output the thru/reciprocal offset length for port 1, 2	CAL (Ch 6)
TRP13D?	Query the port 1, 3 device type	CAL (Ch 6)
TRP13DR	Set the port 1, 3 device type to RECIPROCAL	CAL (Ch 6)
TRP13DT	Set the port 1, 3 device type to THRU	CAL (Ch 6)
TRP13I	Include the port 1, 3 thru/reciprocal measurement	CAL (Ch 6)
TRP13I?	Output the selection of omit or include for the port 1, 3 thru/reciprocal measurement	CAL (Ch 6)
TRP13O	Omit the port 1, 3 thru/reciprocal measurement	CAL (Ch 6)
TRP13OL	Enter the thru/reciprocal offset length for port 1, 3	CAL (Ch 6)
TRP13OL?	Output the thru/reciprocal offset length for port 1, 3	CAL (Ch 6)
TRP14D?	Query the port 1, 4 device type	CAL (Ch 6)
TRP14DR	Set the port 1, 4 device type to RECIPROCAL	CAL (Ch 6)
TRP14DT	Set the port 1, 4 device type to THRU	CAL (Ch 6)
TRP23I?	Output the selection of omit or include for the port 2, 3 thru/reciprocal measurement	CAL (Ch 6)
TRP23O	Omit the port 2, 3 thru/reciprocal measurement	CAL (Ch 6)
TRP23OL	Enter the thru/reciprocal offset length for port 2, 3	CAL (Ch 6)
TRP23OL?	Output the thru/reciprocal offset length for port 2, 3	CAL (Ch 6)
TRP24D?	Query the port 2, 4 device type	CAL (Ch 6)
TRP24DR	Set the port 2, 4 device type to RECIPROCAL	CAL (Ch 6)
TRP24DT	Set the port 2, 4 device type to THRU	CAL (Ch 6)
TRP24I	Include the port 2, 4 thru/reciprocal measurement	CAL (Ch 6)
TRP24I?	Output the selection of omit or include for the port 2, 4 thru/reciprocal measurement	CAL (Ch 6)
TRP24O	Omit the port 2, 4 thru/reciprocal measurement	CAL (Ch 6)
TRP24OL	Enter the thru/reciprocal offset length for port 2, 4	CAL (Ch 6)
TRP24OL?	Output the thru/reciprocal offset length for port 2, 4	CAL (Ch 6)
TRP34D?	Query the port 3, 4 device type	CAL (Ch 6)
TRP34DR	Set the port 3, 4 device type to RECIPROCAL	CAL (Ch 6)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
TRP34DT	Set the port 3, 4 device type to THRU	CAL (Ch 6)
TRP34I	Include the port 3, 4 thru/reciprocal measurement	CAL (Ch 6)
TRP34I?	Output the selection of omit or include for the port 3, 4 thru/reciprocal measurement	CAL (Ch 6)
TRP34O	Omit the port 3, 4 thru/reciprocal measurement	CAL (Ch 6)
TRP34OL	Enter the thru/reciprocal offset length for port 3, 4	CAL (Ch 6)
TRP34OL?	Output the thru/reciprocal offset length for port 3, 4	CAL (Ch 6)
TRX	Select TRX calibration method	CAL (Ch 6)
TRX4P	Select TRX calibration method for 4-port calibration	CAL (Ch 6)
U10	Select 10 mil UTF calibration kit	CAL (Ch 6)
U15	Select 15 mil UTF calibration kit	CAL (Ch 6)
U25	Select 25 mil UTF calibration kit	CAL (Ch 6)
US3P	Select use existing 3-port calibration	CAL (Ch 6)
US3P?	Output selection of use existing 3-port calibration or not	CAL (Ch 6)
USE	Enter effective dielectric for microstrip calibration	CAL (Ch 6)
USE?	Output effective dielectric for microstrip calibration	CAL (Ch 6)
USW	Enter microstrip width for microstrip calibration	CAL (Ch 6)
USW?	Output microstrip width for microstrip calibration	CAL (Ch 6)
USZ	Enter microstrip impedance for microstrip calibration	CAL (Ch 6)
USZ?	Output microstrip impedance for microstrip calibration	CAL (Ch 6)
UTFD	Select user defined microstrip calibration kit	CAL (Ch 6)
UTFX?	Output microstrip cal kit selection USER/U10/U15/U25	CAL (Ch 6)
WCO	Enter waveguide cutoff frequency for user defined kit	CAL (Ch 6)
WCO?	Output waveguide cutoff frequency for user defined kit	CAL (Ch 6)
WGCUTOFF?	Output the waveguide cal kit cutoff frequency	CAL (Ch 6)
WGSER?	Output waveguide cal kit serial number	CAL (Ch 6)
WGSHOFF1?	Output the waveguide cal kit short 1 offset	CAL (Ch 6)
WGSHOFF2?	Output the waveguide cal kit short 2 offset	CAL (Ch 6)
WKD	Select user defined waveguide calibration kit	CAL (Ch 6)
WKI	Select installed waveguide calibration kit	CAL (Ch 6)
WKX?	Output waveguide calibration kit selection user/install	CAL (Ch 6)
WSH1	Enter waveguide short offset 1 for user defined kit	CAL (Ch 6)
WSH1?	Output waveguide short 1 offset for user defined kit	CAL (Ch 6)
WSH2	Enter waveguide short offset 2 for user defined kit	CAL (Ch 6)
WSH2?	Output waveguide short 2 offset for user defined kit	CAL (Ch 6)
ACF2TT	Set the AutoCal full 2-port Thru type to True Thru	CAL - AUTOCAL (Ch 6)
ACF2TX?	Output full 2-port Thru type for AutoCal	CAL - AUTOCAL (Ch 6)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
ACHFD	Save AutoCal characterization to floppy disk	CAL - AUTOCAL (Ch 6)
ACHHD	Save AutoCal characterization to hard disk	CAL - AUTOCAL (Ch 6)
ACIAX?	Output AutoCal isolation yes/no setting	CAL - AUTOCAL (Ch 6)
ACISO	Enter number of averaging for isolation	CAL - AUTOCAL (Ch 6)
ACISO?	Output number of averaging for isolation	CAL - AUTOCAL (Ch 6)
ACL1AR2	Set adapter removal port to L=1 and ADAPT & R=2	CAL - AUTOCAL (Ch 6)
ACL1R2	Set the AutoCal ports to L=1 and R=2	CAL - AUTOCAL (Ch 6)
ACLO	Enter number of averaging for load	CAL - AUTOCAL (Ch 6)
ACLO?	Output number of averaging for load	CAL - AUTOCAL (Ch 6)
ACLOAD	Set AutoCal standard to load	CAL - AUTOCAL (Ch 6)
ACOMIT	Omit isolation	CAL - AUTOCAL (Ch 6)
ACOPEN	Set AutoCal standard to open	CAL - AUTOCAL (Ch 6)
ACP1?	Output port 1 configuration for AutoCal	CAL - AUTOCAL (Ch 6)
ACP2?	Output port 2 configuration for AutoCal	CAL - AUTOCAL (Ch 6)
ACP2L	Set the AutoCal port to LEFT for reflection only cal, port 2	CAL - AUTOCAL (Ch 6)
ACP2R	Set the AutoCal port 2 to RIGHT for reflection only cal, port 2	CAL - AUTOCAL (Ch 6)
ACPA	Select AutoCal port A for reflection only cal	CAL - AUTOCAL (Ch 6)
ACPATH?	Output AutoCal connected path	CAL - AUTOCAL (Ch 6)
ACPB	Select AutoCal port B for reflection only cal	CAL - AUTOCAL (Ch 6)
ACPC	Select AutoCal port C for reflection only cal	CAL - AUTOCAL (Ch 6)
AC2PBTYPE	Set AutoCal to 2-port box type	CAL - AUTOCAL (Ch 6)
AC4PBTYPE	Set AutoCal to 4-port box type	CAL - AUTOCAL (Ch 6)
ACAA	Set AutoCal standard to assurance	CAL - AUTOCAL (Ch 6)
ACADIR1	Enter directivity 1 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACADIR1?	Output directivity 1 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACADIR2	Enter directivity 2 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACADIR2?	Output directivity 2 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACADIR3	Enter directivity 3 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACADIR3?	Output directivity 3 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACADPL	Enter adapter length for AutoCal	CAL - AUTOCAL (Ch 6)
ACADPL?	Output adapter length for AutoCal	CAL - AUTOCAL (Ch 6)
ACADR	Set AutoCal type to adapter removal	CAL - AUTOCAL (Ch 6)
ACADTL	Adapter connected to “LEFT” port of the 2-port AutoCal box	CAL - AUTOCAL (Ch 6)
ACADTR	Adapter connected to “RIGHT” port of the 2-port AutoCal box	CAL - AUTOCAL (Ch 6)
ACADTX?	Output adapter removal port “LEFT” or “RIGHT” in the 2-port AutoCal box that the adapter is connected to	CAL - AUTOCAL (Ch 6)
ACAL1R2	Set adapter removal port to ADAPT & L=1 and R=2	CAL - AUTOCAL (Ch 6)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
ACALM1	Enter load match 1 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACALM1?	Output load match 1 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACALM2	Enter load match 2 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACALM2?	Output load match 2 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACALM3	Enter load match 3 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACALM3?	Output load match 3 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACAP?	Output ports configuration for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACAR1L2	Set adapter removal port to ADAPT & R=1 and L=2	CAL - AUTOCAL (Ch 6)
ACARET1	Enter reflection tracking 1 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACARET1?	Output reflection tracking 1 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACARET2	Enter reflection tracking 2 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACARET2?	Output reflection tracking 2 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACARP?	Output adapter removal port configuration for AutoCal	CAL - AUTOCAL (Ch 6)
ACAS?	Output AutoCal assurance status	CAL - AUTOCAL (Ch 6)
ACASRC1	Enter source match 1 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACASRC1?	Output source match 1 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACASRC2	Enter source match 2 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACASRC2?	Output source match 2 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACASRC3	Enter source match 3 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACASRC3?	Output source match 3 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACATRT1	Enter transmission tracking 1 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACATRT1?	Output transmission tracking 1 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACATRT2	Enter transmission tracking 2 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACATRT2?	Output transmission tracking 2 for AutoCal assurance limits	CAL - AUTOCAL (Ch 6)
ACAVNA1	Set adapter connected to port 1	CAL - AUTOCAL (Ch 6)
ACAVNA2	Set adapter connected to port 2	CAL - AUTOCAL (Ch 6)
ACAVNAPX?	Output adapter removal port configuration for AutoCal	CAL - AUTOCAL (Ch 6)
ACBTYPE?	Output AutoCal 2-port or 4-port box type	CAL - AUTOCAL (Ch 6)
ACDEF	Include isolation	CAL - AUTOCAL (Ch 6)
ACF2P?	Output port selection for full 2-port AutoCal	CAL - AUTOCAL (Ch 6)
ACF2TC	Set the AutoCal full 2-port Thru type to calibrator	CAL - AUTOCAL (Ch 6)
ACPCFG	Enter string to setup port configuration for 4 Port AutoCal Box	CAL - AUTOCAL (Ch 6)
ACPCFG?	Output port configuration for 4 Port AutoCal Box	CAL - AUTOCAL (Ch 6)
ACPL	Set the AutoCal port to LEFT	CAL - AUTOCAL (Ch 6)
ACPR	Set the AutoCal port to RIGHT	CAL - AUTOCAL (Ch 6)
ACPX	Select AutoCal port X for reflection only cal	CAL - AUTOCAL (Ch 6)
ACPX?	Output AutoCal port selected for reflection only cal	CAL - AUTOCAL (Ch 6)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
ACPXA	Set AutoCal connected path to port X-A	CAL - AUTOCAL (Ch 6)
ACPXB	Set AutoCal connected path to port X-B	CAL - AUTOCAL (Ch 6)
ACPXC	Set AutoCal connected path to port X-C	CAL - AUTOCAL (Ch 6)
ACR1AL2	Set adapter removal port to R=1 and ADAPT & L=2	CAL - AUTOCAL (Ch 6)
ACR1L2	Set the AutoCal ports to R=1 and L=2	CAL - AUTOCAL (Ch 6)
ACRFL	Enter number of averaging for reflection	CAL - AUTOCAL (Ch 6)
ACRFL?	Output number of averaging for reflection	CAL - AUTOCAL (Ch 6)
ACS11	Set AutoCal type to S11	CAL - AUTOCAL (Ch 6)
ACS11S22	Set AutoCal type to both S11 and S22	CAL - AUTOCAL (Ch 6)
ACS22	Set AutoCal type to S22	CAL - AUTOCAL (Ch 6)
ACSF2P	Set AutoCal type to full 2-port	CAL - AUTOCAL (Ch 6)
ACSF3P	Set AutoCal type to full 3-port	CAL - AUTOCAL (Ch 6)
ACSF4P	Set AutoCal type to full 4-port	CAL - AUTOCAL (Ch 6)
ACSHORT	Set AutoCal standard to short	CAL - AUTOCAL (Ch 6)
ACSTD?	Output AutoCal standard	CAL - AUTOCAL (Ch 6)
ACSTMEA	Continue AutoCal Thru update	CAL - AUTOCAL (Ch 6)
ACTHRU	Set AutoCal standard to Thru	CAL - AUTOCAL (Ch 6)
ACTHRU12T0	Do port 1, 2 thru measurement using AutoCal THRU or omit THRU depending on the port configuration	CAL - AUTOCAL (Ch 6)
ACTHRU12T1	Do port 1, 2 thru measurement using TRUE THRU	CAL - AUTOCAL (Ch 6)
ACTHRU12X?	Output selection of port 1, 2 thru measurement	CAL - AUTOCAL (Ch 6)
ACTHRU13T0	Do port 1, 3 thru measurement using AutoCal THRU or omit THRU depending on the port configuration	CAL - AUTOCAL (Ch 6)
ACTHRU13T1	Do port 1, 3 thru measurement using TRUE THRU	CAL - AUTOCAL (Ch 6)
ACTHRU13X?	Output selection of port 1, 3 thru measurement	CAL - AUTOCAL (Ch 6)
ACTHRU14T0	Do port 1, 4 thru measurement using AutoCal THRU or omit THRU depending on the port configuration	CAL - AUTOCAL (Ch 6)
ACTHRU14T1	Do port 1, 4 thru measurement using TRUE THRU	CAL - AUTOCAL (Ch 6)
ACTHRU14X?	Output selection of port 1, 4 thru measurement	CAL - AUTOCAL (Ch 6)
ACTHRU23T0	Do port 2, 3 thru measurement using AutoCal THRU or omit THRU depending on the port configuration	CAL - AUTOCAL (Ch 6)
ACTHRU23T1	Do port 2, 3 thru measurement using TRUE THRU	CAL - AUTOCAL (Ch 6)
ACTHRU23X?	Output selection of port 2, 3 thru measurement	CAL - AUTOCAL (Ch 6)
ACTHRU24T0	Do port 2, 4 thru measurement using AutoCal THRU or omit THRU depending on the port configuration	CAL - AUTOCAL (Ch 6)
ACTHRU24T1	Do port 2, 4 thru measurement using TRUE THRU	CAL - AUTOCAL (Ch 6)
ACTHRU24X?	Output selection of port 2, 4 thru measurement	CAL - AUTOCAL (Ch 6)
ACTHRU34T0	Do port 3, 4 thru measurement using AutoCal THRU or omit THRU depending on the port configuration	CAL - AUTOCAL (Ch 6)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
ACTHRU34T1	Do port 3, 4 thru measurement using TRUE THRU	CAL - AUTOCAL (Ch 6)
ACTHRU34X?	Output selection of port 3, 4 thru measurement	CAL - AUTOCAL (Ch 6)
ACTOLP12	Enter port 1, 2 thru line length for AutoCal	CAL - AUTOCAL (Ch 6)
ACTOLP12?	Output port 1, 2 thru offset length for AutoCal	CAL - AUTOCAL (Ch 6)
ACTOLP13	Enter port 1, 3 thru line length for AutoCal	CAL - AUTOCAL (Ch 6)
ACTOLP13?	Output port 1, 3 thru offset length for AutoCal	CAL - AUTOCAL (Ch 6)
ACTOLP14	Enter port 1, 4 thru line length for AutoCal	CAL - AUTOCAL (Ch 6)
ACTOLP14?	Output port 1, 4 thru offset length for AutoCal	CAL - AUTOCAL (Ch 6)
ACTOLP23	Enter port 2, 3 thru line length for AutoCal	CAL - AUTOCAL (Ch 6)
ACTOLP23?	Output port 2, 3 thru offset length for AutoCal	CAL - AUTOCAL (Ch 6)
ACTOLP24	Enter port 2, 4 thru line length for AutoCal	CAL - AUTOCAL (Ch 6)
ACTOLP24?	Output port 2, 4 thru offset length for AutoCal	CAL - AUTOCAL (Ch 6)
ACTOLP34	Enter port 3, 4 thru line length for AutoCal	CAL - AUTOCAL (Ch 6)
ACTOLP34?	Output port 3, 4 thru offset length for AutoCal	CAL - AUTOCAL (Ch 6)
ACTUAVG	Enter number of averaging for AutoCal Thru update	CAL - AUTOCAL (Ch 6)
ACTUAVG?	Output number of averaging for AutoCal Thru update	CAL - AUTOCAL (Ch 6)
ACTULS	Apply last Thru update calibration setup	CAL - AUTOCAL (Ch 6)
ACX?	Output AutoCal type	CAL - AUTOCAL (Ch 6)
BEGAC	Initialize an AutoCal measurement	CAL - AUTOCAL (Ch 6)
BEGACA	Start AutoCal assurance	CAL - AUTOCAL (Ch 6)
BEGCH	Start AutoCal characterization	CAL - AUTOCAL (Ch 6)
BEGTU	Start AutoCal Thru update	CAL - AUTOCAL (Ch 6)
IACCHAR	Input AutoCal characterization data from the GPIB	CAL - AUTOCAL (Ch 6)
OACCHAR	Output AutoCal characterization data to the GPIB	CAL - AUTOCAL (Ch 6)
OACCSER2P	Output the AutoCal characterization serial number for 2-port AutoCal	CAL - AUTOCAL (Ch 6)
OACCSER4P	Output the AutoCal characterization serial number for 4-port AutoCal	CAL - AUTOCAL (Ch 6)
OACSER	Output AutoCal box serial number	CAL - AUTOCAL (Ch 6)
OACTYPE	Output AutoCal box type	CAL - AUTOCAL (Ch 6)
FXAPL	Apply Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXP1T?	Query Port 1 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXP1T0	Turns off Port 1 selection. Do not apply correction to any S-parameter involving port 1	CAL - FLEXIBLE CAL (Ch 6)
FXP1T1	Turns on Port 1 selection. Correct S11. If in full term cal input method	CAL - FLEXIBLE CAL (Ch 6)
FXP2T?	Query Port 2 selection for Flexible Cal.	CAL - FLEXIBLE CAL (Ch 6)
FXP2T0	Turns off Port 2 selection. Do not apply correction to any S-parameter involving port 2	CAL - FLEXIBLE CAL (Ch 6)
FXP2T1	Turns on Port 2 selection. Correct S22. If in full term cal input method	CAL - FLEXIBLE CAL (Ch 6)
FXP3T?	Query Port 3 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
FXP3T0	Turns off Port 3 selection. Do not apply correction to any S-parameter involving port 3	CAL - FLEXIBLE CAL (Ch 6)
FXP3T1	Turns on Port 3 selection. Correct S33. If in full term cal input method	CAL - FLEXIBLE CAL (Ch 6)
CDFXCALTP?	Output Flexible Cal calibration type	CAL - FLEXIBLE CAL (Ch 6)
CFFX?	Query Flexible Cal define mode	CAL - FLEXIBLE CAL (Ch 6)
CFXI?	Output Flexible Cal input method	CAL - FLEXIBLE CAL (Ch 6)
CFXICU	Select Flexible Customize Cal	CAL - FLEXIBLE CAL (Ch 6)
CFXIFU	Select Flexible Full Term Cal	CAL - FLEXIBLE CAL (Ch 6)
CFXIRF	Select Flexible Reflection Cal	CAL - FLEXIBLE CAL (Ch 6)
CONFX	Turn flexible error correction on	CAL - FLEXIBLE CAL (Ch 6)
CONFX?	Output flexible error correction on/off status	CAL - FLEXIBLE CAL (Ch 6)
EX2RF0	Turn external source 2 rf off	CAL - FLEXIBLE CAL (Ch 6)
EX2RF1	Turn external source 2 rf on	CAL - FLEXIBLE CAL (Ch 6)
EX3RF0	Turn external source 3 rf off	CAL - FLEXIBLE CAL (Ch 6)
EX3RF1	Turn external source 3 rf on	CAL - FLEXIBLE CAL (Ch 6)
EX4RF0	Turn external source 4 rf off	CAL - FLEXIBLE CAL (Ch 6)
EX4RF1	Turn external source 4 rf on	CAL - FLEXIBLE CAL (Ch 6)
FXP4T?	Query Port 4 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXP4T0	Turns off Port 4 selection. Do not apply correction to any S-parameter involving port 4	CAL - FLEXIBLE CAL (Ch 6)
FXP4T1	Turns on Port 4 selection. Correct S44. If in full term cal input method	CAL - FLEXIBLE CAL (Ch 6)
FXS11T?	Output S11 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS11T0	Turn off S11 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS11T1	Turn on S11 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS12T?	Output S12 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS12T0	Turn off S12 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS12T1	Turn on S12 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS13T?	Output S13 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS13T0	Turn off S13 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS13T1	Turn on S13 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS14T?	Output S14 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS14T0	Turn off S14 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS14T1	Turn on S14 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS21T?	Output S21 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS21T0	Turn off S21 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS21T1	Turn on S21 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS22T?	Output S22 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS22T0	Turn off S22 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
FXS22T1	Turn on S22 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS23T?	Output S23 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS23T0	Turn off S23 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS23T1	Turn on S23 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS24T?	Output S24 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS24T0	Turn off S24 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS24T1	Turn on S24 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS31T?	Output S31 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS31T0	Turn off S31 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS31T1	Turn on S31 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS32T?	Output S32 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS32T0	Turn off S32 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS32T1	Turn on S32 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS33T?	Output S33 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS33T0	Turn off S33 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS33T1	Turn on S33 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS34T?	Output S34 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS34T0	Turn off S34 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS34T1	Turn on S34 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS41T?	Output S41 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS41T0	Turn off S41 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS41T1	Turn on S41 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS42T?	Output S42 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS42T0	Turn off S42 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS42T1	Turn on S42 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS43T?	Output S43 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS43T0	Turn off S43 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS43T1	Turn on S43 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS44T?	Output S44 selection on/off	CAL - FLEXIBLE CAL (Ch 6)
FXS44T0	Turn off S44 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXS44T1	Turn on S44 selection for Flexible Cal	CAL - FLEXIBLE CAL (Ch 6)
FXSOFF	Turn off all the S-parameters when Flexible Cal is being applied	CAL - FLEXIBLE CAL (Ch 6)
FXSON	Turn on all the S-parameters when Flexible Cal is being applied	CAL - FLEXIBLE CAL (Ch 6)
CH1	Make channel 1 the active channel	CH (Ch 5)
CH2	Make channel 2 the active channel	CH (Ch 5)
CH3	Make channel 3 the active channel	CH (Ch 5)
CH4	Make channel 4 the active channel	CH (Ch 5)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
CHX?	Output active channel number	CH (Ch 5)
RTL	Return to local	CLR/LOCAL (Ch 9)
ADDSRC2	Enter external source 2 GPIB address	CONFIG (Ch 5)
ADDSRC2?	Output external source 2 GPIB address	CONFIG (Ch 5)
ADDSRC3	Enter external source 3 GPIB address	CONFIG (Ch 5)
ADDSRC3?	Output external source 3 GPIB address	CONFIG (Ch 5)
ADDSRC4	Enter external source 4 GPIB address	CONFIG (Ch 5)
ADDSRC4?	Output external source 4 GPIB address	CONFIG (Ch 5)
AH0	Turn automatic DUT protection off	CONFIG (Ch 5)
AH1	Turn automatic DUT protection on	CONFIG (Ch 5)
AHX?	Output automatic DUT protection on/off status	CONFIG (Ch 5)
BH0	Turn bias off while in hold	CONFIG (Ch 5)
BH1	Turn bias on while in hold	CONFIG (Ch 5)
BHX?	Output bias on/off during hold status	CONFIG (Ch 5)
CWP	Enter number of points drawn in CW	CONFIG (Ch 5)
CWP?	Output number of points drawn in CW	CONFIG (Ch 5)
EDADD	Select add on to network for embedding/de-embedding	CONFIG (Ch 5)
EDADD?	Output Add on to Network or Modify Last Network for embedding/de-embedding	CONFIG (Ch 5)
EDE?	Output Embedding/De-embedding Mode status	CONFIG (Ch 5)
EDE0	Turn Embedding/De-embedding Mode off	CONFIG (Ch 5)
EDE1	Turn Embedding/De-embedding Mode on	CONFIG (Ch 5)
EDEAIR	Select air as dielectric type for T-line section	CONFIG (Ch 5)
EDEAPP	Apply Embedding/De-embedding Network	CONFIG (Ch 5)
EDECAP	Enter capacitance for LC circuit	CONFIG (Ch 5)
EDECAP?	Output capacitance for LC circuit	CONFIG (Ch 5)
EDECAP4P1	Enter capacitance 1 for circuit topology in four port embedding/de-embedding	CONFIG (Ch 5)
EDECAP4P1?	Output capacitance 1 for circuit topology in four port embedding/de-embedding	CONFIG (Ch 5)
EDECAP4P2	Enter capacitance 2 for circuit topology in four port embedding/de-embedding	CONFIG (Ch 5)
EDECAP4P2?	Output capacitance 2 for circuit topology in four port embedding/de-embedding	CONFIG (Ch 5)
EDECKT?	Output embedding/de-embedding network generation method selection	CONFIG (Ch 5)
EDECPLS	Select C(P)-L(S) as LC circuit type	CONFIG (Ch 5)
EDECSCP	Select C(S)-L(P) as LC circuit type	CONFIG (Ch 5)
EDECSLP	Select C(S)-L(P) as LC circuit type	CONFIG (Ch 5)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
EDECSLP4P	Select C(S)-L(P) as the LC circuit type for the 4-port circuit	CONFIG (Ch 5)
EDED	Select de-embedding as embedding/de-embedding method	CONFIG (Ch 5)
EDEDEF	Define embedding/de-embedding network	CONFIG (Ch 5)
EDEDEF?	Output apply or define embedding/de-embedding network	CONFIG (Ch 5)
EDEDIEL	Enter relative dielectric for T-line section	CONFIG (Ch 5)
EDEDIEL?	Output relative dielectric for T-line section	CONFIG (Ch 5)
EDEDT?	Output dielectric type for T-line section	CONFIG (Ch 5)
EDEDUT?	Output device type selection for embedding/de-embeddin	CONFIG (Ch 5)
EDEDUT2	Select 2-port test device for embedding/de-embedding	CONFIG (Ch 5)
EDEDUT3	Select 3-port test device for embedding/de-embedding	CONFIG (Ch 5)
EDEDUT4	Select 4-port test device for embedding/de-embedding	CONFIG (Ch 5)
EDEE	Select embedding as embedding/de-embedding method	CONFIG (Ch 5)
EDEED?	Output embedding/de-embedding method selection	CONFIG (Ch 5)
EDEIMP	Enter impedance for T-line section	CONFIG (Ch 5)
EDEIMP?	Output impedance for T-line section	CONFIG (Ch 5)
EDEIND	Enter inductance for LC circuit	CONFIG (Ch 5)
EDEIND?	Output inductance for LC circuit	CONFIG (Ch 5)
EDEIND4P	Enter inductance for circuit topology in four port embedding/de-embedding	CONFIG (Ch 5)
EDEIND4P?	Output inductance for circuit topology in four port embedding/de-embedding	CONFIG (Ch 5)
EDEIND4P2	Enter Inductance 2 for the circuit topology in four-port embedding/de-embedding	CONFIG (Ch 5)
EDEIND4P2?	Output Inductance 2 for the circuit topology in four-port embedding/de-embedding	CONFIG (Ch 5)
EDELC	Select LC circuit as embedding/de-embedding network generation method	CONFIG (Ch 5)
EDELC?	Output LC circuit type selection	CONFIG (Ch 5)
EDELC4P?	Outputs the four-port LC circuit type selection	CONFIG (Ch 5)
EDELEN	Enter length for T-line section	CONFIG (Ch 5)
EDELEN?	Output length for T-line section	CONFIG (Ch 5)
EDELOS	Enter loss for T-line section	CONFIG (Ch 5)
EDELOS?	Output loss for T-line section	CONFIG (Ch 5)
EDELPCS	Select L(P)-C(S) as LC circuit type	CONFIG (Ch 5)
EDELSCP	Select L(S)-C(P) as LC circuit type	CONFIG (Ch 5)
EDELSCP4P	Select L(S)-C(P) as the LC circuit type for the four-port circuit	CONFIG (Ch 5)
EDEMIC	Select microporous teflon as dielectric type for T-line	CONFIG (Ch 5)
EDEMODIFY	Select Modify Last Network for embedding/de-embedding	CONFIG (Ch 5)
EDEOTH	Select Other as dielectric type for T-line section	CONFIG (Ch 5)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
EDEPOLY	Select Polyethylene as dielectric type for T-line section	CONFIG (Ch 5)
EDEPORT?	Output active port number for embedding/de-embedding	CONFIG (Ch 5)
EDEPORT1	Select port 1 for embedding/de-embedding	CONFIG (Ch 5)
EDEPORT12	Select port 1 and port 2 for embedding/de-embedding	CONFIG (Ch 5)
EDEPORT2	Select port 2 for embedding/de-embedding	CONFIG (Ch 5)
EDEPORT23	Select port 2 and port 3 for embedding/de-embedding	CONFIG (Ch 5)
EDEPORT3	Select port 3 for embedding/de-embedding	CONFIG (Ch 5)
EDEPORT34	Select port 3 and port 4 for embedding/de-embedding	CONFIG (Ch 5)
EDEPORT4	Select port 4 for embedding/de-embedding	CONFIG (Ch 5)
EDERST	Reset all ports reference plane for embedding/de-embedding	CONFIG (Ch 5)
EDETEF	Select teflon as dielectric type for T-line section	CONFIG (Ch 5)
EDETIME	Enter time for T-line section	CONFIG (Ch 5)
EDETIME?	Output time for T-line section	CONFIG (Ch 5)
EDETLINE	Select T-line section as embedding/de-embedding network	CONFIG (Ch 5)
FHI	Set data points to 1601	CONFIG (Ch 5)
FLO	Set data points to 101	CONFIG (Ch 5)
FME	Set data points to 401	CONFIG (Ch 5)
FOF	Blank frequency information	CONFIG (Ch 5)
FON	Display frequency information	CONFIG (Ch 5)
FOX?	Output frequency information on/off status	CONFIG (Ch 5)
IMPCOMPU?	Output computation method selection for impedance transformation	CONFIG (Ch 5)
IMPPORT	Enter port number as active for impedance transformation	CONFIG (Ch 5)
IMPPORT?	Output active port number for impedance transformation	CONFIG (Ch 5)
IMPPOWER	Select power-wave as computation method for impedance transformation	CONFIG (Ch 5)
IMPPSEUDO	Select pseudo-wave as computation method for impedance transformation	CONFIG (Ch 5)
IMPREACT	Enter reactive term for impedance transformation	CONFIG (Ch 5)
IMPREACT?	Output reactiv term for impedance transformation	CONFIG (Ch 5)
IMPRESIST	Enter resistive term for impedance transformation	CONFIG (Ch 5)
IMPRESIST?	Output resistive term for impedance transformation	CONFIG (Ch 5)
IMPTS?	Output impedance transformation mode status	CONFIG (Ch 5)
IMPTS0	Turn impedance transformation mode off	CONFIG (Ch 5)
IMPTS1	Turn impedance transformation mode on	CONFIG (Ch 5)
NP101	Set data points to 101	CONFIG (Ch 5)
NP15	Set data points to 15	CONFIG (Ch 5)
NP1601	Set data points to 1601	CONFIG (Ch 5)
NP201	Set data points to 201	CONFIG (Ch 5)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
NP3	Set data points to 3	CONFIG (Ch 5)
NP401	Set data points to 401	CONFIG (Ch 5)
NP51	Set data points to 51	CONFIG (Ch 5)
NP801	Set data points to 801	CONFIG (Ch 5)
OEDELOG	Output current EDE log	CONFIG (Ch 5)
ONP	Output number of points currently being measured	CONFIG (Ch 5)
PEDELOG	Print current EDE log	CONFIG (Ch 5)
RH0	Select RF off in hold mode	CONFIG (Ch 5)
RH1	Select RF on in hold	CONFIG (Ch 5)
RHX?	Output RF on/off during hold status	CONFIG (Ch 5)
RT?	Output ripples testing enable status	CONFIG (Ch 5)
RT0	Turn ripples testing off	CONFIG (Ch 5)
RT1	Turn ripples testing on	CONFIG (Ch 5)
RTVAL	Enter ripples testing value	CONFIG (Ch 5)
RTVAL?	Output ripples testing value	CONFIG (Ch 5)
SIS0	Turn off simultaneous internal sources mode	CONFIG (Ch 5)
SIS1	Turn on simultaneous internal sources mode	CONFIG (Ch 5)
SIS2CWF	Enter internal source 2 CW frequency and turn CW on	CONFIG (Ch 5)
SIS2CWF?	Output internal source 2 CW frequency	CONFIG (Ch 5)
SIS2CWOFF	Turn internal source 2 CW off	CONFIG (Ch 5)
SIS2CWON	Turn internal source 2 CW on at current CW frequency	CONFIG (Ch 5)
SIS2CWON?	Output internal source 2 CW on/off status	CONFIG (Ch 5)
SIS2OFF	Enter internal source 2 offset from source 1 frequency	CONFIG (Ch 5)
SIS2OFF?	Output internal source 2 offset from source 1 frequency	CONFIG (Ch 5)
SISX?	Output simultaneous internal sources mode on/off	CONFIG (Ch 5)
SRC1AC?	Output source 1 active/inactive status	CONFIG (Ch 5)
SRC2?	Output external source 2 existence information	CONFIG (Ch 5)
SRC2AC	Select source 2 as active	CONFIG (Ch 5)
SRC2AC?	Output source 2 active/inactive status	CONFIG (Ch 5)
SRC2MOD?	Output external source 2 model/version string	CONFIG (Ch 5)
SRC2NA	Select source 2 as not active	CONFIG (Ch 5)
SRC3?	Output external source 3 existence information	CONFIG (Ch 5)
SRC3AC	Select source 3 as active	CONFIG (Ch 5)
SRC3AC?	Output source 3 active/inactive status	CONFIG (Ch 5)
SRC3MOD?	Output external source 3 model/version string	CONFIG (Ch 5)
SRC3NA	Select source 3 as not active	CONFIG (Ch 5)
SRC4?	Output external source 4 existence information	CONFIG (Ch 5)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
SRC4AC	Select source 4 as active	CONFIG (Ch 5)
SRC4AC?	Output source 4 active/inactive status	CONFIG (Ch 5)
SRC4MOD?	Output external source 4 model/version string	CONFIG (Ch 5)
SRC4NA	Select source 4 as not active	CONFIG (Ch 5)
TRS	Trigger/restart sweep	CONFIG (Ch 5)
BD1	Select band 1 for definition	CONFIG - MULTIPLE SOURCE (Ch 5)
BD2	Select band 2 for definition	CONFIG - MULTIPLE SOURCE (Ch 5)
BD3	Select band 3 for definition	CONFIG - MULTIPLE SOURCE (Ch 5)
BD4	Select band 4 for definition	CONFIG - MULTIPLE SOURCE (Ch 5)
BD5	Select band 5 for definition	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDRCW?	Output multiple source band receiver CW flag for specified band	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDRDIV?	Output multiple source band receiver divisor for specified band	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDRMUL?	Output multiple source band receiver multiplier for specified band	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDROFF?	Output multiple source band receiver offset for specified band	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDRSCW?	Output multiple source band receiver source CW flag	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDRSDIV?	Output multiple source band receiver source divisor	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDRSMUL?	Output multiple source band receiver source multiplier	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDRSOFF?	Output multiple source band receiver source offset	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS1CW?	Output multiple source band source 1 CW flag for specified band	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS1DIV?	Output multiple source band source 1 divisor for specified band	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS1MUL?	Output multiple source band source 1 multiplier for specified band	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS1OFF?	Output multiple source band source 1 offset for specified band	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS2CW?	Output multiple source band source 2 CW flag for specified band	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS2DIV?	Output multiple source band source 2 divisor for specified band	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS2MUL?	Output multiple source band source 2 multiplier for specified band	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS2OFF?	Output multiple source band source 2 offset for specified band	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS3CW?	Output multiple source band source 3 CW flag	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS3DIV?	Output multiple source band source 3 divisor	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS3MUL?	Output multiple source band source 3 multiplier	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS3OFF?	Output multiple source band source 3 offset	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS4CW?	Output multiple source band source 4 CW flag	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS4DIV?	Output multiple source band source 4 divisor	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS4MUL?	Output multiple source band source 4 multiplier	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDS4OFF?	Output multiple source band source 4 offset	CONFIG - MULTIPLE SOURCE (Ch 5)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
BNDSRT?	Output multiple source band start frequency for specified band	CONFIG - MULTIPLE SOURCE (Ch 5)
BNDSTP?	Output multiple source band stop frequency for specified band	CONFIG - MULTIPLE SOURCE (Ch 5)
BSP	Enter band stop frequency	CONFIG - MULTIPLE SOURCE (Ch 5)
BSP?	Output band stop frequency	CONFIG - MULTIPLE SOURCE (Ch 5)
BST	Enter band start frequency	CONFIG - MULTIPLE SOURCE (Ch 5)
BST?	Output band start frequency	CONFIG - MULTIPLE SOURCE (Ch 5)
CLB	Clear all multiple source band definitions	CONFIG - MULTIPLE SOURCE (Ch 5)
ECW	Select CW operation for component being edited	CONFIG - MULTIPLE SOURCE (Ch 5)
ED1	Edit source 1 equation	CONFIG - MULTIPLE SOURCE (Ch 5)
ED2	Edit source 2 equation	CONFIG - MULTIPLE SOURCE (Ch 5)
ED3	Edit source 3 equation	CONFIG - MULTIPLE SOURCE (Ch 5)
ED4	Edit source 4 equation	CONFIG - MULTIPLE SOURCE (Ch 5)
EDR	Edit receiver equation	CONFIG - MULTIPLE SOURCE (Ch 5)
EDRS	Edit receiver source equation	CONFIG - MULTIPLE SOURCE (Ch 5)
EDV	Enter divisor value for equation being edited	CONFIG - MULTIPLE SOURCE (Ch 5)
EDV?	Output the divisor value for the equation being edited	CONFIG - MULTIPLE SOURCE (Ch 5)
EDX?	Output equation being edited	CONFIG - MULTIPLE SOURCE (Ch 5)
EML	Enter multiplier value for equation being edited	CONFIG - MULTIPLE SOURCE (Ch 5)
EML?	Output multiplier value for equation being edited	CONFIG - MULTIPLE SOURCE (Ch 5)
EOS	Enter offset frequency for equation being edited	CONFIG - MULTIPLE SOURCE (Ch 5)
EOS?	Output offset frequency for equation being edited	CONFIG - MULTIPLE SOURCE (Ch 5)
ESW	Select sweep operation for component being edited	CONFIG - MULTIPLE SOURCE (Ch 5)
EXW?	Output multiple source sweep flag for equation being edited	CONFIG - MULTIPLE SOURCE (Ch 5)
LTRD	Output response data from the dedicated GPIB bus	CONFIG - MULTIPLE SOURCE (Ch 5)
LTWRT	Send program data to the dedicated GPIB bus	CONFIG - MULTIPLE SOURCE (Ch 5)
MS0	Turn multiple source mode off	CONFIG - MULTIPLE SOURCE (Ch 5)
MS1	Turn multiple source mode on	CONFIG - MULTIPLE SOURCE (Ch 5)
MSD	Select multiple source define mode	CONFIG - MULTIPLE SOURCE (Ch 5)
MSX?	Output multiple source mode on/off/define	CONFIG - MULTIPLE SOURCE (Ch 5)
PSRC	Enter power source as active	CONFIG - MULTIPLE SOURCE (Ch 5)
PSRC?	Output active power source	CONFIG - MULTIPLE SOURCE (Ch 5)
SVB	Save current band definitions	CONFIG - MULTIPLE SOURCE (Ch 5)
CM	Suffix sets distance data type and scales by 1E-2	DATA ENTRY SUFFIXES (Ch 5)
CMT	Suffix sets distance data type and scales by 1E-2	DATA ENTRY SUFFIXES (Ch 5)
DB	Suffix sets power data type	DATA ENTRY SUFFIXES (Ch 5)
DBL	Suffix sets power data type	DATA ENTRY SUFFIXES (Ch 5)
DBM	Suffix sets power data type	DATA ENTRY SUFFIXES (Ch 5)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
DEG	Suffix sets phase data type	DATA ENTRY SUFFIXES (Ch 5)
F	Suffix sets farad data type and scales by 1E0	DATA ENTRY SUFFIXES (Ch 5)
FS	Suffix sets time data type and scales by 1E-15	DATA ENTRY SUFFIXES (Ch 5)
GHZ	Suffix sets frequency data type and scales by 1E9	DATA ENTRY SUFFIXES (Ch 5)
H	Suffix sets farad data type and scales by 1E0	DATA ENTRY SUFFIXES (Ch 5)
HZ	Suffix sets frequency data type	DATA ENTRY SUFFIXES (Ch 5)
IMU	Suffix sets imaginary data type	DATA ENTRY SUFFIXES (Ch 5)
K	Suffix sets degrees Kelvin data type	DATA ENTRY SUFFIXES (Ch 5)
KEL	Suffix sets degrees Kelvin data type	DATA ENTRY SUFFIXES (Ch 5)
KHZ	Suffix sets frequency data type and scales by 1E3	DATA ENTRY SUFFIXES (Ch 5)
M	Suffix sets distance data type	DATA ENTRY SUFFIXES (Ch 5)
MF	Suffix sets farad data type and scales by 1E-3	DATA ENTRY SUFFIXES (Ch 5)
MH	Suffix sets farad data type and scales by 1E-3	DATA ENTRY SUFFIXES (Ch 5)
MHZ	Suffix sets frequency data type and scales by 1E6	DATA ENTRY SUFFIXES (Ch 5)
MM	Suffix sets distance data type and scales by 1E-3	DATA ENTRY SUFFIXES (Ch 5)
MMT	Suffix sets distance data type and scales by 1E-3	DATA ENTRY SUFFIXES (Ch 5)
MS	Suffix sets time data type and scales by 1E-3	DATA ENTRY SUFFIXES (Ch 5)
MTR	Suffix sets distance data type	DATA ENTRY SUFFIXES (Ch 5)
MV	Suffix sets voltage data type and scales by 1E-3	DATA ENTRY SUFFIXES (Ch 5)
NF	Suffix sets farad data type and scales by 1E-9	DATA ENTRY SUFFIXES (Ch 5)
NH	Suffix sets farad data type and scales by 1E-9	DATA ENTRY SUFFIXES (Ch 5)
NS	Suffix sets time data type and scales by 1E-9	DATA ENTRY SUFFIXES (Ch 5)
NSC	Suffix sets time data type and scales by 1E-9	DATA ENTRY SUFFIXES (Ch 5)
OHM	Suffix sets impedance data type	DATA ENTRY SUFFIXES (Ch 5)
PF	Suffix sets farad data type and scales by 1E-12	DATA ENTRY SUFFIXES (Ch 5)
PH	Suffix sets farad data type and scales by 1E-12	DATA ENTRY SUFFIXES (Ch 5)
PS	Suffix sets time data type and scales by 1E02	DATA ENTRY SUFFIXES (Ch 5)
PSC	Suffix sets time data type and scales by 1E02	DATA ENTRY SUFFIXES (Ch 5)
RAD	Suffix sets phase data type and scales by 180/pi	DATA ENTRY SUFFIXES (Ch 5)
REU	Suffix sets real data type	DATA ENTRY SUFFIXES (Ch 5)
S	Suffix sets time data type	DATA ENTRY SUFFIXES (Ch 5)
UF	Suffix sets farad data type and scales by 1E-6	DATA ENTRY SUFFIXES (Ch 5)
UH	Suffix sets farad data type and scales by 1E-6	DATA ENTRY SUFFIXES (Ch 5)
US	Suffix sets time data type and scales by 1E-6	DATA ENTRY SUFFIXES (Ch 5)
USC	Suffix sets time data type and scales by 1E-6	DATA ENTRY SUFFIXES (Ch 5)
V	Suffix sets voltage data type	DATA ENTRY SUFFIXES (Ch 5)
VLT	Suffix sets voltage data type	DATA ENTRY SUFFIXES (Ch 5)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
XM3	Suffix sets unitless data type and scales by 1E-3	DATA ENTRY SUFFIXES (Ch 5)
XX1	Suffix sets unitless data type	DATA ENTRY SUFFIXES (Ch 5)
XX3	Suffix sets unitless data type and scales by 1E3	DATA ENTRY SUFFIXES (Ch 5)
RST	Instrument reset (same as *RST)	DEFAULT (Ch 5)
RST0	Reset instrument front panel memories and reserved parameters	DEFAULT (Ch 5)
RST1	Reset instrument and front panel memories	DEFAULT (Ch 5)
ADD	Select addition as trace math for active channel	DISPLAY (Ch 5)
APR	Enter group delay aperture setting on active channel	DISPLAY (Ch 5)
APR?	Output group delay aperture setting on active channel	DISPLAY (Ch 5)
ASC	Autoscale the active channel display	DISPLAY (Ch 5)
ASP	Enter polar stop sweep position angle	DISPLAY (Ch 5)
ASP?	Output polar stop sweep position angle	DISPLAY (Ch 5)
AST	Enter polar start sweep position angle	DISPLAY (Ch 5)
AST?	Output polar start sweep position angle	DISPLAY (Ch 5)
CHAPR?	Output group delay aperture setting for specified channel	DISPLAY (Ch 5)
CHDAT?	Output trace memory display mode for specified channel	DISPLAY (Ch 5)
CHGRF?	Output graph type for specified channel	DISPLAY (Ch 5)
CHMTH?	Output trace math math type for specified channel	DISPLAY (Ch 5)
CHOFF?	Output offset value for the top graph for specified channel	DISPLAY (Ch 5)
CHOFF2?	Output offset value for the bottom graph for specified channel	DISPLAY (Ch 5)
CHPHO?	Output phase offset for specified channel	DISPLAY (Ch 5)
CHRDD?	Output reference delay in distance for specified channel	DISPLAY (Ch 5)
CHRDT?	Output reference delay in time for specified channel	DISPLAY (Ch 5)
CHREF?	Output reference line for the top graph for specified channel	DISPLAY (Ch 5)
CHREF2?	Output reference line for the bottom graph for specified channel	DISPLAY (Ch 5)
CHSCL?	Output scale resolution for the top graph for specified channel	DISPLAY (Ch 5)
CHSCL2?	Output scale resolution for the bottom graph for specified channel	DISPLAY (Ch 5)
D13	Display channels 1 & 3	DISPLAY (Ch 5)
D14	Display all four channels	DISPLAY (Ch 5)
D24	Select dual channel display with channels 2 & 4	DISPLAY (Ch 5)
DAT	Display data only on active channel	DISPLAY (Ch 5)
DAT?	Output trace memory display mode	DISPLAY (Ch 5)
DD0	Turn data drawing off	DISPLAY (Ch 5)
DD1	Turn data drawing on	DISPLAY (Ch 5)
DD1?	Output data drawing on/off status	DISPLAY (Ch 5)
DIA	Select air as active dielectric	DISPLAY (Ch 5)
DIE	Enter a dielectric value	DISPLAY (Ch 5)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
DIM	Select microporous teflon as active dielectric	DISPLAY (Ch 5)
DIP	Select polyethylene as active dielectric	DISPLAY (Ch 5)
DIT	Select teflon as active dielectric	DISPLAY (Ch 5)
DIV	Select division as trace math for active channel	DISPLAY (Ch 5)
DIX?	Output dielectric constant	DISPLAY (Ch 5)
DLA	Select group delay display for active channel	DISPLAY (Ch 5)
DNM	Display data normalized to trace memory on active channel	DISPLAY (Ch 5)
DSP	Select single channel display	DISPLAY (Ch 5)
DSP?	Output channel display mode	DISPLAY (Ch 5)
DTM	Display measurement data and trace memory on active channel	DISPLAY (Ch 5)
EXTIO0	Disable external output I/O	DISPLAY (Ch 5)
EXTIO1	Enable external output I/O	DISPLAY (Ch 5)
EXTIOX?	Output external output I/O enable/disable status	DISPLAY (Ch 5)
GRF?	Output graph type for active channel	DISPLAY (Ch 5)
GROUP?	Output active group number	DISPLAY (Ch 5)
GROUP1	Select Group 1 to be active group	DISPLAY (Ch 5)
GROUP2	Select Group 2 to be active group	DISPLAY (Ch 5)
GROUP3	Select Group 3 to be active group	DISPLAY (Ch 5)
GROUP4	Select Group 4 to be active group	DISPLAY (Ch 5)
ICM0	Turn interchannel math off	DISPLAY (Ch 5)
ICM1	Turn interchannel math on	DISPLAY (Ch 5)
ICMX?	Output interchannel math on/off status	DISPLAY (Ch 5)
ICOP1	Enter interchannel num for operand 1	DISPLAY (Ch 5)
ICOP1?	Output interchannel num for operand 1	DISPLAY (Ch 5)
ICOP2	Enter interchannel num for operand 2	DISPLAY (Ch 5)
ICOP2?	Output interchannel num for operand 2	DISPLAY (Ch 5)
IMG	Select imaginary display for active channel	DISPLAY (Ch 5)
ISC	Enter scale and select inverted compressed Smith chart display	DISPLAY (Ch 5)
ISE	Enter scale and select inverted expanded Smith chart display	DISPLAY (Ch 5)
ISM	Select normal inverted Smith chart for active channel	DISPLAY (Ch 5)
LIN	Select linear magnitude display for active channel	DISPLAY (Ch 5)
LPH	Select linear magnitude and phase display for active channel	DISPLAY (Ch 5)
MAG	Select log magnitude display for active channel	DISPLAY (Ch 5)
MD0	Turn mean display off	DISPLAY (Ch 5)
MD1	Turn mean display on	DISPLAY (Ch 5)
MDX?	Output mean display status	DISPLAY (Ch 5)
MEM	Display trace memory on active channel	DISPLAY (Ch 5)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
MIN	Select subtraction as trace math for active channel	DISPLAY (Ch 5)
MPH	Select log magnitude and phase display for active channel	DISPLAY (Ch 5)
MTH?	Output trace math math type	DISPLAY (Ch 5)
MUL	Select multiplication as trace math for active channel	DISPLAY (Ch 5)
OFF	Enter offset value for top graph of active channel	DISPLAY (Ch 5)
OFF?	Output offset value for top graph of active channel	DISPLAY (Ch 5)
OFF2	Enter offset value for bottom graph of active channel	DISPLAY (Ch 5)
OFF2?	Output offset value for bottom graph of active channel	DISPLAY (Ch 5)
PCP	Select measurement phase polar chart mode	DISPLAY (Ch 5)
PCS	Select sweep position polar chart mode	DISPLAY (Ch 5)
PCX?	Output polar chart mode	DISPLAY (Ch 5)
PHA	Select phase display for active channel	DISPLAY (Ch 5)
PHO	Enter phase offset for display channel	DISPLAY (Ch 5)
PHO?	Output phase offset for display channel	DISPLAY (Ch 5)
PLG	Select log polar display for active channel	DISPLAY (Ch 5)
PLR	Select linear polar display for active channel	DISPLAY (Ch 5)
POSET	Enter phase offset for active channel	DISPLAY (Ch 5)
POSET?	Output phase offset for active channel	DISPLAY (Ch 5)
POW	Select power out display for active channel	DISPLAY (Ch 5)
RDA	Select automatic reference delay calculation	DISPLAY (Ch 5)
RDD	Enter reference delay in distance for active channel	DISPLAY (Ch 5)
RDD?	Output reference delay in distance for active channel	DISPLAY (Ch 5)
RDDS	Enter reference delay in distance for S-parameters in active channel	DISPLAY (Ch 5)
RDDS?	Output reference delay in distance for S-parameters in active channel	DISPLAY (Ch 5)
RDT	Enter reference delay in time for active channel	DISPLAY (Ch 5)
RDT?	Output reference delay in time for active channel	DISPLAY (Ch 5)
RDTS	Enter reference delay in time for S-parameters in active channel	DISPLAY (Ch 5)
RDTS?	Output reference delay in time for S-parameters in active channel	DISPLAY (Ch 5)
RECALL	Recall a data file from disk to a task	DISPLAY (Ch 5)
REF	Enter reference line for top graph of active channel	DISPLAY (Ch 5)
REF?	Output reference line for top graph of active channel	DISPLAY (Ch 5)
REF2	Enter reference line for bottom graph of active channel	DISPLAY (Ch 5)
REF2?	Output reference line for bottom graph of active channel	DISPLAY (Ch 5)
REL	Select real display for active channel	DISPLAY (Ch 5)
RIM	Select real and imaginary display for active channel	DISPLAY (Ch 5)
RPPORTNUM	Enter reference plane port number	DISPLAY (Ch 5)
RPPORTNUM?	Output active reference plane port number	DISPLAY (Ch 5)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
SCL	Enter scale resolution for top graph of active channel	DISPLAY (Ch 5)
SCL?	Output scale resolution for top graph of active channel	DISPLAY (Ch 5)
SCL2	Enter scale resolution for bottom graph of active channel	DISPLAY (Ch 5)
SCL2?	Output scale resolution for bottom graph of active channel	DISPLAY (Ch 5)
SETBD	Set balanced differential S-parameters setup to be default setup for all channels	DISPLAY (Ch 5)
SETCHANKEY	Setup channel keys on front panel to channel keys	DISPLAY (Ch 5)
SETCHANKEY?	Output channel key setup	DISPLAY (Ch 5)
SETGRPKEY	Setup channel keys on front panel to group keys	DISPLAY (Ch 5)
SETSB	Set single ended/balanced differential S-parameters setup to be default setup for all channels	DISPLAY (Ch 5)
SETSE	Set single ended S-parameters setup to be default setup for all channels	DISPLAY (Ch 5)
SETSPARAM?	Output default S-parameter setup for all channels	DISPLAY (Ch 5)
SMC	Enter scale and select compressed Smith chart display	DISPLAY (Ch 5)
SME	Enter scale and select expanded Smith chart display	DISPLAY (Ch 5)
SMI	Select normal Smith chart for active channel	DISPLAY (Ch 5)
STD	Store trace to memory on active channel	DISPLAY (Ch 5)
SWR	Select SWR display for active channel	DISPLAY (Ch 5)
T13	Select overlaid channel 1 and 3 display	DISPLAY (Ch 5)
T14	Overlay all four channels (Limited to selected Graph types)	DISPLAY (Ch 5)
T24	Select overlaid channel 2 and 4 display	DISPLAY (Ch 5)
ATTN	Attach next segment and make it the active segment	DISPLAY - LIMITS (Ch 7)
BEGN	Begin next segment and make it the active segment	DISPLAY - LIMITS (Ch 7)
CAS	Clear active segmented limit vertical/horizontal definitions	DISPLAY - LIMITS (Ch 7)
CHLFD?	Output limit frequency readout delta value for top graph for specified channel	DISPLAY - LIMITS (Ch 7)
CHLFD2?	Output limit frequency readout delta value for bottom graph for specified channel	DISPLAY - LIMITS (Ch 7)
CHLLO?	Output lower limit value for top graph for specified channel	DISPLAY - LIMITS (Ch 7)
CHLLO2?	Output lower limit value for bottom graph for specified channel	DISPLAY - LIMITS (Ch 7)
CHLON?	Output limits display on/off status for specified channel	DISPLAY - LIMITS (Ch 7)
CHLUP?	Output upper limit value for top graph for specified channel	DISPLAY - LIMITS (Ch 7)
CHLUP2?	Output upper limit value for bottom graph for specified channel	DISPLAY - LIMITS (Ch 7)
CHSLH?	Output segmented limits horizontal offset for specified channel	DISPLAY - LIMITS (Ch 7)
CHSLLX?	Output lower segmented limits display on/off status for specified channel	DISPLAY - LIMITS (Ch 7)
CHSLUX?	Output upper segmented limits display on/off status for specified channel	DISPLAY - LIMITS (Ch 7)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
CHSLV?	Output segmented limits vertical offset for specified channel	DISPLAY - LIMITS (Ch 7)
DIS	Display active segmented limit	DISPLAY - LIMITS (Ch 7)
DIS?	Output active segmented limit on/off status	DISPLAY - LIMITS (Ch 7)
HID	Hide active segmented limit	DISPLAY - LIMITS (Ch 7)
LB0	Turn limits testing beep on failure off	DISPLAY - LIMITS (Ch 7)
LB1	Turn limits testing beep on failure on	DISPLAY - LIMITS (Ch 7)
LBX?	Output limits testing beeper enable status	DISPLAY - LIMITS (Ch 7)
LFD	Enter limit frequency readout delta value	DISPLAY - LIMITS (Ch 7)
LFD?	Output limit frequency readout delta value	DISPLAY - LIMITS (Ch 7)
LFD2	Enter limit frequency readout delta value for bottom graph	DISPLAY - LIMITS (Ch 7)
LFD2?	Output limit frequency readout delta value for bottom graph	DISPLAY - LIMITS (Ch 7)
LFP	Select limit frequency readout for phase displays	DISPLAY - LIMITS (Ch 7)
LFR	Select limit frequency readout for active channel	DISPLAY - LIMITS (Ch 7)
LLM?	Output limit line display mode single or segmented	DISPLAY - LIMITS (Ch 7)
LLO	Enter lower limit value for top graph on active channel	DISPLAY - LIMITS (Ch 7)
LLO?	Output lower limit value for top graph on active channel	DISPLAY - LIMITS (Ch 7)
LLO2	Enter lower limit value for bottom graph on active channel	DISPLAY - LIMITS (Ch 7)
LLO2?	Output lower limit value for bottom graph on active channel	DISPLAY - LIMITS (Ch 7)
LOF	Limits display off	DISPLAY - LIMITS (Ch 7)
LOL0	Turn lower limit off	DISPLAY - LIMITS (Ch 7)
LOL1	Turn lower limit on at current value	DISPLAY - LIMITS (Ch 7)
LOL20	Turn lower limit off for bottom graph	DISPLAY - LIMITS (Ch 7)
LOL21	Turn lower limit on at current value for bottom graph	DISPLAY - LIMITS (Ch 7)
LOL2X?	Output lower limit on/off status for bottom graph	DISPLAY - LIMITS (Ch 7)
LOLX?	Output lower limit on/off status	DISPLAY - LIMITS (Ch 7)
LON	Limits display on	DISPLAY - LIMITS (Ch 7)
LON?	Output limits display on/off status	DISPLAY - LIMITS (Ch 7)
LPF?	Output limit test failure status all channels	DISPLAY - LIMITS (Ch 7)
LPF1?	Output limit test failure status on channel 1	DISPLAY - LIMITS (Ch 7)
LPF2?	Output limit test failure status on channel 2	DISPLAY - LIMITS (Ch 7)
LPF3?	Output limit test failure status on channel 3	DISPLAY - LIMITS (Ch 7)
LPF4?	Output limit test failure status on channel 4	DISPLAY - LIMITS (Ch 7)
LS1	Set lower segmented limit 1 as the active segment	DISPLAY - LIMITS (Ch 7)
LS10	Select lower segmented limit 10 as the active segment	DISPLAY - LIMITS (Ch 7)
LS2	Select lower segmented limit 2 as the active segment	DISPLAY - LIMITS (Ch 7)
LS3	Select lower segmented limit 3 as the active segment	DISPLAY - LIMITS (Ch 7)
LS4	Select lower segmented limit 4 as the active segment	DISPLAY - LIMITS (Ch 7)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
LS5	Select lower segmented limit 5 as the active segment	DISPLAY - LIMITS (Ch 7)
LS6	Select lower segmented limit 6 as the active segment	DISPLAY - LIMITS (Ch 7)
LS7	Select lower segmented limit 7 as the active segment	DISPLAY - LIMITS (Ch 7)
LS8	Select lower segmented limit 8 as the active segment	DISPLAY - LIMITS (Ch 7)
LS9	Select lower segmented limit 9 as the active segment	DISPLAY - LIMITS (Ch 7)
LSEG	Select segmented limit line display mode	DISPLAY - LIMITS (Ch 7)
LSNG	Select single limit line display mode	DISPLAY - LIMITS (Ch 7)
LSX?	Output active segmented limit	DISPLAY - LIMITS (Ch 7)
LT0	Turn limits testing off	DISPLAY - LIMITS (Ch 7)
LT1	Turn limits testing on	DISPLAY - LIMITS (Ch 7)
LT1?	Output limits testing enable status	DISPLAY - LIMITS (Ch 7)
LTST	Display the limits testing menu	DISPLAY - LIMITS (Ch 7)
LUP	Enter upper limit value for top graph on active channel	DISPLAY - LIMITS (Ch 7)
LUP?	Output upper limit value for top graph on active channel	DISPLAY - LIMITS (Ch 7)
LUP2	Enter upper limit value for bottom graph on active channel	DISPLAY - LIMITS (Ch 7)
LUP2?	Output upper limit value for bottom graph on active channel	DISPLAY - LIMITS (Ch 7)
LVH	Select high as limits testing TTL level	DISPLAY - LIMITS (Ch 7)
LVL	Select low as limits testing TTL level	DISPLAY - LIMITS (Ch 7)
LVX?	Output limits testing TTL level status	DISPLAY - LIMITS (Ch 7)
SLC	Clear all segmented limits definitions	DISPLAY - LIMITS (Ch 7)
SLH	Enter segmented limits horizontal offset	DISPLAY - LIMITS (Ch 7)
SLH?	Output segmented limits horizontal offset	DISPLAY - LIMITS (Ch 7)
SLL0	Turn lower segmented limits display off	DISPLAY - LIMITS (Ch 7)
SLL1	Turn lower segmented limits display on	DISPLAY - LIMITS (Ch 7)
SLLX?	Output lower segmented limits display on/off status	DISPLAY - LIMITS (Ch 7)
SLU0	Turn upper segmented limits display off	DISPLAY - LIMITS (Ch 7)
SLU1	Turn upper segmented limits display on	DISPLAY - LIMITS (Ch 7)
SLUX?	Output upper segmented limits display on/off status	DISPLAY - LIMITS (Ch 7)
SLV	Enter segmented limits vertical offset	DISPLAY - LIMITS (Ch 7)
SLV?	Output segmented limits vertical offset	DISPLAY - LIMITS (Ch 7)
SPH	Enter active segmented limit horizontal stop position	DISPLAY - LIMITS (Ch 7)
SPH?	Output active segmented limit horizontal stop position	DISPLAY - LIMITS (Ch 7)
SPV	Enter active segmented limit vertical stop position	DISPLAY - LIMITS (Ch 7)
SPV?	Output active segmented limit vertical stop position	DISPLAY - LIMITS (Ch 7)
STH	Enter active segmented limit horizontal start position	DISPLAY - LIMITS (Ch 7)
STH?	Output active segmented limit horizontal start position	DISPLAY - LIMITS (Ch 7)
STV	Enter active segmented limit vertical start position	DISPLAY - LIMITS (Ch 7)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
STV?	Output active segmented limit vertical start position	DISPLAY - LIMITS (Ch 7)
UPL0	Turn upper limit off	DISPLAY - LIMITS (Ch 7)
UPL1	Turn upper limit on at current value	DISPLAY - LIMITS (Ch 7)
UPL20	Turn upper limit off for bottom graph	DISPLAY - LIMITS (Ch 7)
UPL21	Turn upper limit on at current value for bottom graph	DISPLAY - LIMITS (Ch 7)
UPL2X?	Output upper limit on/off status for bottom graph	DISPLAY - LIMITS (Ch 7)
UPLX?	Output upper limit on/off status	DISPLAY - LIMITS (Ch 7)
US1	Select upper segmented limit 1 as the active segment	DISPLAY - LIMITS (Ch 7)
US10	Select upper segmented limit 10 as the active segment	DISPLAY - LIMITS (Ch 7)
US2	Select upper segmented limit 2 as the active segment	DISPLAY - LIMITS (Ch 7)
US3	Select upper segmented limit 3 as the active segment	DISPLAY - LIMITS (Ch 7)
US4	Select upper segmented limit 4 as the active segment	DISPLAY - LIMITS (Ch 7)
US5	Select upper segmented limit 5 as the active segment	DISPLAY - LIMITS (Ch 7)
US6	Select upper segmented limit 6 as the active segment	DISPLAY - LIMITS (Ch 7)
US7	Select upper segmented limit 7 as the active segment	DISPLAY - LIMITS (Ch 7)
US8	Select upper segmented limit 8 as the active segment	DISPLAY - LIMITS (Ch 7)
US9	Select upper segmented limit 9 as the active segment	DISPLAY - LIMITS (Ch 7)
CNTR	Enter center frequency	FREQ (Ch 5)
CNTR?	Output center frequency	FREQ (Ch 5)
CWF	Enter CW frequency and turn CW on	FREQ (Ch 5)
CWF?	Output CW frequency	FREQ (Ch 5)
CWON	Turn CW on at current CW frequency	FREQ (Ch 5)
CWON?	Output CW on/off status	FREQ (Ch 5)
SETUP	Display frequency menu	FREQ (Ch 5)
SPAN	Enter frequency span	FREQ (Ch 5)
SPAN?	Output frequency span	FREQ (Ch 5)
SRT	Enter start frequency	FREQ (Ch 5)
SRT?	Output start frequency	FREQ (Ch 5)
STP	Enter stop frequency	FREQ (Ch 5)
STP?	Output stop frequency	FREQ (Ch 5)
SWP	Return to normal sweep mode	FREQ (Ch 5)
SWP?	Output sweep mode	FREQ (Ch 5)
DFD	Done specifying discrete frequency ranges	FREQ - DISCRETE FILL (Ch 5)
DFQ	Enter single discrete frequency	FREQ - DISCRETE FILL (Ch 5)
DFQ?	Output discrete fill single discrete frequency	FREQ - DISCRETE FILL (Ch 5)
FIL	Fill defined discrete frequency range	FREQ - DISCRETE FILL (Ch 5)
FRC	Clear all defined discrete frequency ranges	FREQ - DISCRETE FILL (Ch 5)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
FRI	Enter discrete fill increment frequency	FREQ - DISCRETE FILL (Ch 5)
FRI?	Output discrete fill increment frequency	FREQ - DISCRETE FILL (Ch 5)
FRP	Enter discrete fill number of points	FREQ - DISCRETE FILL (Ch 5)
FRP?	Output discrete fill number of points	FREQ - DISCRETE FILL (Ch 5)
FRS	Enter discrete fill start frequency	FREQ - DISCRETE FILL (Ch 5)
FRS?	Output discrete fill start frequency	FREQ - DISCRETE FILL (Ch 5)
BMPB	Select black on white as bitmap type	HARD COPY (Ch 9)
BMPC	Select color on white as bitmap type	HARD COPY (Ch 9)
BMPT	Select true color as bitmap type	HARD COPY (Ch 9)
BMPX?	Output bitmap type	HARD COPY (Ch 9)
DPN	Enter pen number for data	HARD COPY (Ch 9)
DPN?	Output pen number for data	HARD COPY (Ch 9)
FFD	Send form feed to printer and stop print/plot	HARD COPY (Ch 9)
GENS2P	Generate S2P files in hard disk with default name (ntwk_p1.s2p, ..., ntwk_p4.s2p) from disk and calibrate	HARD COPY (Ch 9)
GPN	Enter pen number for graticule	HARD COPY (Ch 9)
GPN?	Output pen number for graticule	HARD COPY (Ch 9)
HD0	Turn off tabular data headers and page formatting	HARD COPY (Ch 9)
HD1	Turn on tabular data headers and page formatting	HARD COPY (Ch 9)
HDX?	Output tabular data headers and page formatting on/off status	HARD COPY (Ch 9)
HPN	Enter pen number for header	HARD COPY (Ch 9)
HPN?	Output pen number for header	HARD COPY (Ch 9)
LAND	Select landscape mode for output plot	HARD COPY (Ch 9)
LCM0	Disable printing comment information	HARD COPY (Ch 9)
LCM1	Enable printing comment information	HARD COPY (Ch 9)
LDT0	Disable printing date/time	HARD COPY (Ch 9)
LDT1	Enable printing date/time	HARD COPY (Ch 9)
LDV0	Disable printing device ID	HARD COPY (Ch 9)
LDV1	Enable printing device ID	HARD COPY (Ch 9)
LID	Enter string for DUT identity	HARD COPY (Ch 9)
LID?	Output string for DUT identity	HARD COPY (Ch 9)
LMD0	Disable printing model information	HARD COPY (Ch 9)
LMD1	Enable printing model information	HARD COPY (Ch 9)
LMS	Enter string for DUT model/serial number	HARD COPY (Ch 9)
LMS?	Output string for DUT model/serial number	HARD COPY (Ch 9)
LNM	Enter string for operator name	HARD COPY (Ch 9)
LNM?	Output string for operator name	HARD COPY (Ch 9)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
LOC	Enter string for operator comment	HARD COPY (Ch 9)
LOC?	Output string for operator comment	HARD COPY (Ch 9)
LOGO?	Output hard copy logo selection standard/user defined	HARD COPY (Ch 9)
LOGO0	Turn hard copy logo off	HARD COPY (Ch 9)
LOGO1	Turn hard copy logo on	HARD COPY (Ch 9)
LOGOS	Select standard hard copy logo	HARD COPY (Ch 9)
LOGOU	Select user defined hard copy logo	HARD COPY (Ch 9)
LOGOX?	Output hard copy logo on/off status	HARD COPY (Ch 9)
LOP0	Disable printing operator information	HARD COPY (Ch 9)
LOP1	Enable printing operator information	HARD COPY (Ch 9)
M3P1?	Query the mixed mode 1st balanced port pair for the M3P setup	HARD COPY (Ch 9)
M3P1P12	Set the mixed mode 1st balanced port pair to 1:2 for the M3P setup	HARD COPY (Ch 9)
M3P1P13	Set the mixed mode 1st balanced port pair to 1:3 for the M3P setup	HARD COPY (Ch 9)
M3P1P14	Set the mixed mode 1st balanced port pair to 1:4 for the M3P setup	HARD COPY (Ch 9)
M3P1P21	Set the mixed mode 1st balanced port pair to 2:1 for the M3P setup	HARD COPY (Ch 9)
M3P1P23	Set the mixed mode 1st balanced port pair to 2:3 for the M3P setup	HARD COPY (Ch 9)
M3P1P24	Set the mixed mode 1st balanced port pair to 2:4 for the M3P setup	HARD COPY (Ch 9)
M3P1P31	Set the mixed mode 1st balanced port pair to 3:1 for the M3P setup	HARD COPY (Ch 9)
M3P1P32	Set the mixed mode 1st balanced port pair to 3:2 for the M3P setup	HARD COPY (Ch 9)
M3P1P34	Set the mixed mode 1st balanced port pair to 3:4 for the M3P setup	HARD COPY (Ch 9)
M3P1P41	Set the mixed mode 1st balanced port pair to 4:1 for the M3P setup	HARD COPY (Ch 9)
M3P1P42	Set the mixed mode 1st balanced port pair to 4:2 for the M3P setup	HARD COPY (Ch 9)
M3P1P43	Set the mixed mode 1st balanced port pair to 4:3 for the M3P setup	HARD COPY (Ch 9)
M3PS?	Query the mixed mode singled ended port for the M3P setup	HARD COPY (Ch 9)
M3PS1	Set the mixed mode single ended port to port 1 for the M3P setup	HARD COPY (Ch 9)
M3PS2	Set the mixed mode single ended port to port 2 for the M3P setup	HARD COPY (Ch 9)
M3PS3	Set the mixed mode single ended port to port 3 for the M3P setup	HARD COPY (Ch 9)
M3PS4	Set the mixed mode single ended port to port 4 for the M3P setup	HARD COPY (Ch 9)
M4P1?	Query the mixed mode 1st balanced port pair for the M4P setup	HARD COPY (Ch 9)
M4P1P12	Set the mixed mode 1st balanced port pair to 1:2 for the M4P setup	HARD COPY (Ch 9)
M4P1P13	Set the mixed mode 1st balanced port pair to 1:3 for the M4P setup	HARD COPY (Ch 9)
M4P1P14	Set the mixed mode 1st balanced port pair to 1:4 for the M4P setup	HARD COPY (Ch 9)
M4P1P21	Set the mixed mode 1st balanced port pair to 2:1 for the M4P setup	HARD COPY (Ch 9)
M4P1P23	Set the mixed mode 1st balanced port pair to 2:3 for the M4P setup	HARD COPY (Ch 9)
M4P1P24	Set the mixed mode 1st balanced port pair to 2:4 for the M4P setup	HARD COPY (Ch 9)
M4P1P31	Set the mixed mode 1st balanced port pair to 3:1 for the M4P setup	HARD COPY (Ch 9)
M4P1P32	Set the mixed mode 1st balanced port pair to 3:2 for the M4P setup	HARD COPY (Ch 9)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
M4P1P34	Set the mixed mode 1st balanced port pair to 3:4 for the M4P setup	HARD COPY (Ch 9)
M4P1P41	Set the mixed mode 1st balanced port pair to 4:1 for the M4P setup	HARD COPY (Ch 9)
M4P1P42	Set the mixed mode 1st balanced port pair to 4:2 for the M4P setup	HARD COPY (Ch 9)
M4P1P43	Set the mixed mode 1st balanced port pair to 4:3 for the M4P setup	HARD COPY (Ch 9)
M4P2?	Query the mixed mode 2nd balanced port pair for the M4P setup	HARD COPY (Ch 9)
M4P2P12	Set the mixed mode 2nd balanced port pair to 1:2 for the M4P setup	HARD COPY (Ch 9)
M4P2P13	Set the mixed mode 2nd balanced port pair to 1:3 for the M4P setup	HARD COPY (Ch 9)
M4P2P14	Set the mixed mode 2nd balanced port pair to 1:4 for the M4P setup	HARD COPY (Ch 9)
M4P2P21	Set the mixed mode 2nd balanced port pair to 2:1 for the M4P setup	HARD COPY (Ch 9)
M4P2P23	Set the mixed mode 2nd balanced port pair to 2:3 for the M4P setup	HARD COPY (Ch 9)
M4P2P24	Set the mixed mode 2nd balanced port pair to 2:4 for the M4P setup	HARD COPY (Ch 9)
M4P2P31	Set the mixed mode 2nd balanced port pair to 3:1 for the M4P setup	HARD COPY (Ch 9)
M4P2P32	Set the mixed mode 2nd balanced port pair to 3:2 for the M4P setup	HARD COPY (Ch 9)
M4P2P34	Set the mixed mode 2nd balanced port pair to 3:4 for the M4P setup	HARD COPY (Ch 9)
M4P2P41	Set the mixed mode 2nd balanced port pair to 4:1 for the M4P setup	HARD COPY (Ch 9)
M4P2P42	Set the mixed mode 2nd balanced port pair to 4:2 for the M4P setup	HARD COPY (Ch 9)
M4P2P43	Set the mixed mode 2nd balanced port pair to 4:3 for the M4P setup	HARD COPY (Ch 9)
MPN	Enter pen number for markers and limits	HARD COPY (Ch 9)
MPN?	Output pen number for markers and limits	HARD COPY (Ch 9)
OMM3P	Output the M3P format data to the GPIB with the current M3P setup	HARD COPY (Ch 9)
OMM4P	Output the M4P format data to the GPIB with the current M4P setup	HARD COPY (Ch 9)
OS1P1	Output S1P1 format data to gpib	HARD COPY (Ch 9)
OS1P2	Output S1P2 format data to gpib	HARD COPY (Ch 9)
OS1P3	Output S1P3 format data to gpib	HARD COPY (Ch 9)
OS2P	Output S2P format data to GPIB	HARD COPY (Ch 9)
OS3P	Output S3P format data to gpib	HARD COPY (Ch 9)
PBL	Select 1/4 size plot bottom left corner	HARD COPY (Ch 9)
PBR	Select 1/4 size plot bottom right corner	HARD COPY (Ch 9)
PFL	Select full-size plot	HARD COPY (Ch 9)
PFS	Print full screen image	HARD COPY (Ch 9)
PGR	Print graph area screen image	HARD COPY (Ch 9)
PGT	Plot graticule	HARD COPY (Ch 9)
PLD	Plot data area only	HARD COPY (Ch 9)
PLH	Plot header	HARD COPY (Ch 9)
PLM	Plot markers and limits	HARD COPY (Ch 9)
PLO?	Output plot mode portrait or landscape	HARD COPY (Ch 9)
PLS	Plot entire screen	HARD COPY (Ch 9)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
PLT	Plot data traces only	HARD COPY (Ch 9)
PMK	Print tabular data for Markers	HARD COPY (Ch 9)
PMN	Plot menu	HARD COPY (Ch 9)
PMT	Print tabular data for traces and markers	HARD COPY (Ch 9)
PORT	Select portrait mode for output plot	HARD COPY (Ch 9)
PRNTYPDJ	Select HP Deskjet printer	HARD COPY (Ch 9)
PRNTYPEP	Select Epson FX printer	HARD COPY (Ch 9)
PRNTYPLJ	Select HP Laserjet printer	HARD COPY (Ch 9)
PRNTYPTJ	Select HP Thinkjet printer	HARD COPY (Ch 9)
PRNTYPX?	Output printer type	HARD COPY (Ch 9)
PST	Stop print/plot	HARD COPY (Ch 9)
PT0	Set tabular printout points skipped to 0	HARD COPY (Ch 9)
PT1	Set tabular printout points skipped to 1	HARD COPY (Ch 9)
PT2	Set tabular printout points skipped to 2	HARD COPY (Ch 9)
PT3	Set tabular printout points skipped to 3	HARD COPY (Ch 9)
PT4	Set tabular printout points skipped to 4	HARD COPY (Ch 9)
PT5	Set tabular printout points skipped to 5	HARD COPY (Ch 9)
PT6	Set tabular printout points skipped to 6	HARD COPY (Ch 9)
PT7	Set tabular printout points skipped to 7	HARD COPY (Ch 9)
PT8	Set tabular printout points skipped to 8	HARD COPY (Ch 9)
PT9	Set tabular printout points skipped to 9	HARD COPY (Ch 9)
PTB	Print tabular data for traces	HARD COPY (Ch 9)
PTL	Select 1/4 size plot top left corner	HARD COPY (Ch 9)
PTR	Select 1/4 size plot top right corner	HARD COPY (Ch 9)
PTX?	Output tabular printout points skipped	HARD COPY (Ch 9)
PXX?	Output plot location	HARD COPY (Ch 9)
SEQOP?	Output sequence operator message mode on/off	HARD COPY (Ch 9)
SEQOP0	Turn off sequence operator message	HARD COPY (Ch 9)
SEQOP1	Turn on sequence operator message	HARD COPY (Ch 9)
SNPDB	Select log magnitude and phase as SnP output format	HARD COPY (Ch 9)
SNPFMTX?	Output SnP output format selection	HARD COPY (Ch 9)
SNPGHZ	Select GHz as SnP frequency units	HARD COPY (Ch 9)
SNPHZ	Select Hz as SnP frequency units	HARD COPY (Ch 9)
SNPKHZ	Select KHz as SnP frequency units	HARD COPY (Ch 9)
SNPMA	Select linear magnitude and phase as SnP output format	HARD COPY (Ch 9)
SNPMHZ	Select MHz as SnP frequency units	HARD COPY (Ch 9)
SNPRI	Select real and imaginary as SnP output format	HARD COPY (Ch 9)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
SNPUNITX?	Output SnP frequency units selection	HARD COPY (Ch 9)
SPD	Enter pen speed percentage	HARD COPY (Ch 9)
SPD?	Output pen speed percentage	HARD COPY (Ch 9)
TPN	Enter pen number for trace overlay data	HARD COPY (Ch 9)
TPN?	Output pen number for trace overlay data	HARD COPY (Ch 9)
CTN	Continue sweeping from current point	HOLD (Ch 5)
HLD	Put sweep into hold mode	HOLD (Ch 5)
HLD?	Output the sweep hold status	HOLD (Ch 5)
AMKR	Select active marker on all channels marker mode	MARKER (Ch 7)
MK3	Enter marker 3 frequency distance or time and turn on	MARKER (Ch 7)
MK3?	Output marker 3 frequency distance or time	MARKER (Ch 7)
MK4	Enter marker 4 frequency distance or time and turn on	MARKER (Ch 7)
MK4?	Output marker 4 frequency distance or time	MARKER (Ch 7)
MK5	Enter marker 5 frequency distance or time and turn on	MARKER (Ch 7)
MK5?	Output marker 5 frequency distance or time	MARKER (Ch 7)
MK6	Enter marker 6 frequency distance or time and turn on	MARKER (Ch 7)
MK6?	Output marker 6 frequency distance or time	MARKER (Ch 7)
MK7	Enter marker 7 frequency distance or time and turn on	MARKER (Ch 7)
MK7?	Output marker 7 frequency distance or time	MARKER (Ch 7)
MK8	Enter marker 8 frequency distance or time and turn on	MARKER (Ch 7)
MK8?	Output marker 8 frequency distance or time	MARKER (Ch 7)
MK9	Enter marker 9 frequency distance or time and turn on	MARKER (Ch 7)
MK9?	Output marker 9 frequency distance or time	MARKER (Ch 7)
MKRC	Select interpolated marker functionality	MARKER (Ch 7)
MKRD	Select discrete marker functionality	MARKER (Ch 7)
BWL3	Set bandwidth loss value to 3 dB	MARKER (Ch 7)
BWLS	Enter bandwidth loss value	MARKER (Ch 7)
BWLS?	Output bandwidth loss value	MARKER (Ch 7)
DR1	Select Marker 1 as delta reference marker	MARKER (Ch 7)
DR10	Select Marker 10 as delta reference marker	MARKER (Ch 7)
DR11	Select Marker 11 as delta reference marker	MARKER (Ch 7)
DR12	Select Marker 12 as delta reference marker	MARKER (Ch 7)
DR2	Select Marker 2 as delta reference marker	MARKER (Ch 7)
DR3	Select Marker 3 as delta reference marker	MARKER (Ch 7)
DR4	Select Marker 4 as delta reference marker	MARKER (Ch 7)
DR5	Select Marker 5 as delta reference marker	MARKER (Ch 7)
DR6	Select Marker 6 as delta reference marker	MARKER (Ch 7)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
DR7	Select Marker 7 as delta reference marker	MARKER (Ch 7)
DR8	Select Marker 8 as delta reference marker	MARKER (Ch 7)
DR9	Select Marker 9 as delta reference marker	MARKER (Ch 7)
DRF	Turn delta reference mode on	MARKER (Ch 7)
DRO	Turn delta reference mode off	MARKER (Ch 7)
DRO?	Output delta reference mode on/off status	MARKER (Ch 7)
DRX?	Output delta reference marker number	MARKER (Ch 7)
DSF0	Disable filter shape factor calculation	MARKER (Ch 7)
DSF1	Enable filter shape factor calculation	MARKER (Ch 7)
DSFX?	Output filter shape factor calculation enable/disable status	MARKER (Ch 7)
DSQ0	Disable filter Q calculation	MARKER (Ch 7)
DSQ1	Enable filter Q calculation	MARKER (Ch 7)
DSQX?	Output filter Q calculation enable/disable status	MARKER (Ch 7)
FLTBW?	Output filter bandwidth	MARKER (Ch 7)
FLTC?	Output filter center frequency	MARKER (Ch 7)
FLTL?	Output filter loss at reference value	MARKER (Ch 7)
FLTQ?	Output filter Q	MARKER (Ch 7)
FLTS?	Output filter shape factor	MARKER (Ch 7)
FMKR	Select filter parameters marker mode	MARKER (Ch 7)
M10C	Set CW mode at marker 10 frequency	MARKER (Ch 7)
M10E	Set sweep/zoom end to marker 10 frequency distance or time	MARKER (Ch 7)
M10S	Set sweep/zoom start to marker 10 frequency distance or time	MARKER (Ch 7)
M11C	Set CW mode at marker 11 frequency	MARKER (Ch 7)
M11E	Set sweep/zoom end to marker 11 frequency distance or time	MARKER (Ch 7)
M11S	Set sweep/zoom start to marker 11 frequency distance or time	MARKER (Ch 7)
M12C	Set CW mode at marker 12 frequency	MARKER (Ch 7)
M12E	Set sweep/zoom end to marker 12 frequency distance or time	MARKER (Ch 7)
M12S	Set sweep/zoom start to marker 12 frequency distance or time	MARKER (Ch 7)
M1C	Set CW mode at marker 1 frequency	MARKER (Ch 7)
M1E	Set sweep/zoom end to marker 1 frequency distance or time	MARKER (Ch 7)
M1S	Set sweep/zoom start to marker 1 frequency distance or time	MARKER (Ch 7)
M2C	Set CW mode at marker 2 frequency	MARKER (Ch 7)
M2E	Set sweep/zoom end to marker 2 frequency distance or time	MARKER (Ch 7)
M2S	Set sweep/zoom start to marker 2 frequency distance or time	MARKER (Ch 7)
M3C	Set CW mode at marker 3 frequency	MARKER (Ch 7)
M3E	Set sweep/zoom end to marker 3 frequency distance or time	MARKER (Ch 7)
M3S	Set sweep/zoom start to marker 3 frequency distance or time	MARKER (Ch 7)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
M4C	Set CW mode at marker 4 frequency	MARKER (Ch 7)
M4E	Set sweep/zoom end to marker 4 frequency distance or time	MARKER (Ch 7)
M4S	Set sweep/zoom start to marker 4 frequency distance or time	MARKER (Ch 7)
M5C	Set CW mode at marker 5 frequency	MARKER (Ch 7)
M5E	Set sweep/zoom end to marker 5 frequency distance or time	MARKER (Ch 7)
M5S	Set sweep/zoom start to marker 5 frequency distance or time	MARKER (Ch 7)
M6C	Set CW mode at marker 6 frequency	MARKER (Ch 7)
M6E	Set sweep/zoom end to marker 6 frequency distance or time	MARKER (Ch 7)
M6S	Set sweep/zoom start to marker 6 frequency distance or time	MARKER (Ch 7)
M7C	Set CW mode at marker 7 frequency	MARKER (Ch 7)
M7E	Set sweep/zoom end to marker 7 frequency distance or time	MARKER (Ch 7)
M7S	Set sweep/zoom start to marker 7 frequency distance or time	MARKER (Ch 7)
M8C	Set CW mode at marker 8 frequency	MARKER (Ch 7)
M8E	Set sweep/zoom end to marker 8 frequency distance or time	MARKER (Ch 7)
M8S	Set sweep/zoom start to marker 8 frequency distance or time	MARKER (Ch 7)
M9C	Set CW mode at marker 9 frequency	MARKER (Ch 7)
M9E	Set sweep/zoom end to marker 9 frequency distance or time	MARKER (Ch 7)
M9S	Set sweep/zoom start to marker 9 frequency distance or time	MARKER (Ch 7)
MK1	Enter marker 1 frequency distance or time and turn on	MARKER (Ch 7)
MK1?	Output marker 1 frequency distance or time	MARKER (Ch 7)
MK10	Enter marker 10 frequency distance or time and turn on	MARKER (Ch 7)
MK10?	Output marker 10 frequency distance or time	MARKER (Ch 7)
MK11	Enter marker 11 frequency distance or time and turn on	MARKER (Ch 7)
MK11?	Output marker 11 frequency distance or time	MARKER (Ch 7)
MK12	Enter marker 12 frequency distance or time and turn on	MARKER (Ch 7)
MK12?	Output marker 12 frequency distance or time	MARKER (Ch 7)
MK2	Enter marker 2 frequency distance or time and turn on	MARKER (Ch 7)
MK2?	Output marker 2 frequency distance or time	MARKER (Ch 7)
MKRX?	Output interpolated/discrete marker functionality	MARKER (Ch 7)
MKSL	Marker search left	MARKER (Ch 7)
MKSR	Marker search right	MARKER (Ch 7)
MKT0	Turn marker tracking off	MARKER (Ch 7)
MKT1	Turn marker tracking on	MARKER (Ch 7)
MKTX?	Output marker tracking on/off status	MARKER (Ch 7)
MMN	Move active marker to minimum trace value	MARKER (Ch 7)
MMX	Move active marker to maximum trace value	MARKER (Ch 7)
MO1	Turn off marker 1	MARKER (Ch 7)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
MO10	Turn off marker 10	MARKER (Ch 7)
MO11	Turn off marker 11	MARKER (Ch 7)
MO12	Turn off marker 12	MARKER (Ch 7)
MO2	Turn off marker 2	MARKER (Ch 7)
MO3	Turn off marker 3	MARKER (Ch 7)
MO4	Turn off marker 4	MARKER (Ch 7)
MO5	Turn off marker 5	MARKER (Ch 7)
MO6	Turn off marker 6	MARKER (Ch 7)
MO7	Turn off marker 7	MARKER (Ch 7)
MO8	Turn off marker 8	MARKER (Ch 7)
MO9	Turn off marker 9	MARKER (Ch 7)
MOF	Turn marker display off	MARKER (Ch 7)
MON	Turn marker display on	MARKER (Ch 7)
MON?	Output marker display on/off status	MARKER (Ch 7)
MR1	Turn marker 1 on and make it the active marker	MARKER (Ch 7)
MR1?	Output marker 1 on/off status	MARKER (Ch 7)
MR10	Turn marker 10 on and make it the active marker	MARKER (Ch 7)
MR10?	Output marker 10 on/off status	MARKER (Ch 7)
MR11	Turn marker 11 on and make it the active marker	MARKER (Ch 7)
MR11?	Output marker 11 on/off status	MARKER (Ch 7)
MR12	Turn marker 12 on and make it the active marker	MARKER (Ch 7)
MR12?	Output marker 12 on/off status	MARKER (Ch 7)
MR2	Turn marker 2 on and make it the active marker	MARKER (Ch 7)
MR2?	Output marker 2 on/off status	MARKER (Ch 7)
MR3	Turn marker 3 on and make it the active marker	MARKER (Ch 7)
MR3?	Output marker 3 on/off status	MARKER (Ch 7)
MR4	Turn marker 4 on and make it the active marker	MARKER (Ch 7)
MR4?	Output marker 4 on/off status	MARKER (Ch 7)
MR5	Turn marker 5 on and make it the active marker	MARKER (Ch 7)
MR5?	Output marker 5 on/off status	MARKER (Ch 7)
MR6	Turn marker 6 on and make it the active marker	MARKER (Ch 7)
MR6?	Output marker 6 on/off status	MARKER (Ch 7)
MR7	Turn marker 7 on and make it the active marker	MARKER (Ch 7)
MR7?	Output marker 7 on/off status	MARKER (Ch 7)
MR8	Turn marker 8 on and make it the active marker	MARKER (Ch 7)
MR8?	Output marker 8 on/off status	MARKER (Ch 7)
MR9	Turn marker 9 on and make it the active marker	MARKER (Ch 7)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
MR9?	Output marker 9 on/off status	MARKER (Ch 7)
MRM	Display the Marker Readout menu	MARKER (Ch 7)
MRX?	Output active marker number	MARKER (Ch 7)
MSFH	Enter high loss value for shape factor calculation	MARKER (Ch 7)
MSFH?	Output high loss value for shape factor calculation	MARKER (Ch 7)
MSFL	Enter low loss value for shape factor calculation	MARKER (Ch 7)
MSFL?	Output low loss value for shape factor calculation	MARKER (Ch 7)
MSR0	Select 0 as reference for marker search and bandwidth calculation	MARKER (Ch 7)
MSRD	Select delta reference marker as reference for marker search and bandwidth calculation	MARKER (Ch 7)
MSRM	Select maximum as reference for marker search and bandwidth calculation	MARKER (Ch 7)
MSRMIN	Select min as ref for marker search and bandwidth calculation	MARKER (Ch 7)
MSRMR	Select maximum return as ref for marker search and bandwidth calculation	MARKER (Ch 7)
MSRMRA	Select auto mode of maximum return as ref for marker search and bandwidth calculation	MARKER (Ch 7)
MSRMRM	Select manual mode of maximum return as ref for marker search and bandwidth calculation	MARKER (Ch 7)
MSRMRV	Enter maximum return value for marker search and bandwidth calculation	MARKER (Ch 7)
MSRMRV?	Output maximum return value for marker search and bandwidth calculation	MARKER (Ch 7)
MSRMRX?	Output maximum return mode for marker search and bandwidth calculation	MARKER (Ch 7)
MSRX?	Output reference selection for marker search and bandwidth calculation	MARKER (Ch 7)
NMKR	Select normal markers on active channel marker mode	MARKER (Ch 7)
OAM1	Output channel 1 active marker value	MARKER (Ch 7)
OAM2	Output channel 2 active marker value	MARKER (Ch 7)
OAM3	Output channel 3 active marker value	MARKER (Ch 7)
OAM4	Output channel 4 active marker value	MARKER (Ch 7)
SD0	Turn marker screen display off	MARKER (Ch 7)
SD1	Turn marker screen display on	MARKER (Ch 7)
SDP0	Turn the power sweep marker screen display OFF	MARKER (Ch 7)
SDP1	Turn the power sweep marker screen display ON	MARKER (Ch 7)
SDPX?	Output the power sweep marker screen display status	MARKER (Ch 7)
SDX?	Output marker screen display status	MARKER (Ch 7)
SMKR	Select marker search marker mode	MARKER (Ch 7)
SMKRMAX	Select marker search maximum	MARKER (Ch 7)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
SMKRMIN	Select marker search minimum	MARKER (Ch 7)
SMKRX	Select the marker search x-axis marker mode	MARKER (Ch 7)
SRCH	Enter marker search value	MARKER (Ch 7)
SRCH?	Output marker search value	MARKER (Ch 7)
SRCHFX?	Output the marker search x-value in GHz and the marker failure status	MARKER (Ch 7)
SRCHFXP?	Output the marker search x-value in dBm and the marker failure status in the power sweep mode	MARKER (Ch 7)
SRCHP	Enter marker search value in power sweep mode	MARKER (Ch 7)
SRCHP?	Output marker search value in power sweep mode	MARKER (Ch 7)
SRCHX?	Output the marker search x-value	MARKER (Ch 7)
SRCHXP?	Output the marker search x-value in the power sweep mode	MARKER (Ch 7)
XMKR?	Output marker mode	MARKER (Ch 7)
XMKRP?	Output the power sweep marker mode	MARKER (Ch 7)
CHSXX?	Output parameter or user defined parameter for specified channel	MEAS (Ch 5)
DA1	Select a1 = Ra as denominator for parameter being defined	MEAS (Ch 5)
DA2	Select a2 = Rb as denominator for parameter being defined	MEAS (Ch 5)
DA3	Select a3 = Rc as denominator for parameter being defined	MEAS (Ch 5)
DA4	Select a4 = Rd as denominator for parameter being defined	MEAS (Ch 5)
DB1	Select b1 = Ta as denominator for parameter being defined	MEAS (Ch 5)
DB2	Select b2 = Tb as denominator for parameter being defined	MEAS (Ch 5)
DB3	Select b3 = Tc as denominator for parameter being defined	MEAS (Ch 5)
DB4	Select b4 = Td as denominator for parameter being defined	MEAS (Ch 5)
DE1	Select unity as denominator for parameter being defined	MEAS (Ch 5)
DEN?	Output denominator selection for parameter being defined	MEAS (Ch 5)
EANAIN	Measure EXT. ANALOG IN on active channel	MEAS (Ch 5)
MM1P?	Query the mixed mode 1st balanced port pair for the active channel S-parameter	MEAS (Ch 5)
MM1P12	Set the mixed mode 1st balanced port pair to 1:2 for the active channel S-parameter	MEAS (Ch 5)
MM1P13	Set the mixed mode 1st balanced port pair to 1:3 for the active channel S-parameter	MEAS (Ch 5)
MM1P14	Set the mixed mode 1st balanced port pair to 1:4 for the active channel S-parameter	MEAS (Ch 5)
MM1P21	Set the mixed mode 1st balanced port pair to 2:1 for the active channel S-parameter	MEAS (Ch 5)
MM1P23	Set the mixed mode 1st balanced port pair to 2:3 for the active channel S-parameter	MEAS (Ch 5)
MM1P24	Set the mixed mode 1st balanced port pair to 2:4 for the active channel S-parameter	MEAS (Ch 5)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
MM1P31	Set the mixed mode 1st balanced port pair to 3:1 for the active channel S-parameter	MEAS (Ch 5)
MM1P32	Set the mixed mode 1st balanced port pair to 3:2 for the active channel S-parameter	MEAS (Ch 5)
MM1P34	Set the mixed mode 1st balanced port pair to 3:4 for the active channel S-parameter	MEAS (Ch 5)
MM1P41	Set the mixed mode 1st balanced port pair to 4:1 for the active channel S-parameter	MEAS (Ch 5)
MM1P42	Set the mixed mode 1st balanced port pair to 4:2 for the active channel S-parameter	MEAS (Ch 5)
MM1P43	Set the mixed mode 1st balanced port pair to 4:3 for the active channel S-parameter	MEAS (Ch 5)
MM2P?	Query the mixed mode 2nd balanced port pair for the active channel S-parameter	MEAS (Ch 5)
MM2P12	Set the mixed mode 2nd balanced port pair to 1:2 for the active channel S-parameter	MEAS (Ch 5)
MM2P13	Set the mixed mode 2nd balanced port pair to 1:3 for the active channel S-parameter	MEAS (Ch 5)
MM2P14	Set the mixed mode 2nd balanced port pair to 1:4 for the active channel S-parameter	MEAS (Ch 5)
MM2P21	Set the mixed mode 2nd balanced port pair to 2:1 for the active channel S-parameter	MEAS (Ch 5)
MM2P23	Set the mixed mode 2nd balanced port pair to 2:3 for the active channel S-parameter	MEAS (Ch 5)
MM2P24	Set the mixed mode 2nd balanced port pair to 2:4 for the active channel S-parameter	MEAS (Ch 5)
MM2P31	Set the mixed mode 2nd balanced port pair to 3:1 for the active channel S-parameter	MEAS (Ch 5)
MM2P32	Set the mixed mode 2nd balanced port pair to 3:2 for the active channel S-parameter	MEAS (Ch 5)
MM2P34	Set the mixed mode 2nd balanced port pair to 3:4 for the active channel S-parameter	MEAS (Ch 5)
MM2P41	Set the mixed mode 2nd balanced port pair to 4:1 for the active channel S-parameter	MEAS (Ch 5)
MM2P42	Set the mixed mode 2nd balanced port pair to 4:2 for the active channel S-parameter	MEAS (Ch 5)
MM2P43	Set the mixed mode 2nd balanced port pair to 4:3 for the active channel S-parameter	MEAS (Ch 5)
MMS?	Query the mixed mode single ended port for the active channel S-parameter	MEAS (Ch 5)
MMS1	Set the mixed mode single ended port to Port 1 for the active channel S-parameter	MEAS (Ch 5)
MMS2	Set the mixed mode single ended port to Port 2 for the active channel S-parameter	MEAS (Ch 5)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
MMS3	Set the mixed mode single ended port to Port 3 for the active channel S-parameter	MEAS (Ch 5)
MMS4	Set the mixed mode single ended port to Port 4 for the active channel S-parameter	MEAS (Ch 5)
MMSC1C1	Set the S-parameter to mixed mode SC1C1 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSC1C2	Set the S-parameter to mixed mode SC1C2 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSC1D1	Set the S-parameter to mixed mode SC1D1 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSC1D2	Set the S-parameter to mixed mode SC1D2 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSC2C1	Set the S-parameter to mixed mode SC2C1 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSC2C2	Set the S-parameter to mixed mode SC2C2 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSC2D1	Set the S-parameter to mixed mode SC2D1 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSC2D2	Set the S-parameter to mixed mode SC2D2 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSCC	Set the S-parameter to mixed mode SCC with the current port pair/singleton selection for the active channel	MEAS (Ch 5)
MMSCD	Set the S-parameter to mixed mode SCD with the current port pair/singleton selection for the active channel	MEAS (Ch 5)
MMSCS	Set the S-parameter to mixed mode SCS with the current port pair/singleton selection for the active channel	MEAS (Ch 5)
MMSD1C1	Set the S-parameter to mixed mode SD1C1 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSD1C2	Set the S-parameter to mixed mode SD1C2 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSD1D1	Set the S-parameter to mixed mode SD1D1 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSD1D2	Set the S-parameter to mixed mode SD1D2 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSD2C1	Set the S-parameter to mixed mode SD2C1 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSD2C2	Set the S-parameter to mixed mode SD2C2 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSD2D1	Set the S-parameter to mixed mode SD2D1 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSD2D2	Set the S-parameter to mixed mode SD2D2 with the current port pair selections for the active channel	MEAS (Ch 5)
MMSDC	Set the S-parameter to mixed mode SDC with the current port pair/singleton selection for the active channel	MEAS (Ch 5)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
MMSDD	Set the S-parameter to mixed mode SDD with the current port pair/singleton selection for the active channel	MEAS (Ch 5)
MMSDS	Set the S-parameter to mixed mode SDS with the current port pair/singleton selection for the active channel	MEAS (Ch 5)
MMSSC	Set the S-parameter to mixed mode SSC with the current port pair/singleton selection for the active channel	MEAS (Ch 5)
MMSSD	Set the S-parameter to mixed mode SSD with the current port pair/singleton selection for the active channel	MEAS (Ch 5)
MS1C	Set the balanced port pair and singleton selection to (2:3)1 and S-parameter to S1C/SSC for the active channel	MEAS (Ch 5)
MS1D	Set the balanced port pair and singleton selection to (2:3)1 and S-parameter to S1D/SSD for the active channel	MEAS (Ch 5)
MSC1	Set the balanced port pair and singleton selection to (2:3)1 and S-parameter to SC1/SCS for the active channel	MEAS (Ch 5)
MSC1C1	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SC1C1 for the active channel	MEAS (Ch 5)
MSC1C2	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SC1C2 for the active channel	MEAS (Ch 5)
MSC1D1	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SC1D1 for the active channel	MEAS (Ch 5)
MSC1D2	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SC1D2 for the active channel	MEAS (Ch 5)
MSC2C1	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SC2C1 for the active channel	MEAS (Ch 5)
MSC2C2	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SC2C2 for the active channel	MEAS (Ch 5)
MSC2D1	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SC2D1 for the active channel	MEAS (Ch 5)
MSC2D2	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SC2D2 for the active channel	MEAS (Ch 5)
MSCC	Set the balanced port pair and singleton selection to (2:3)1 and S-parameter to SCC for the active channel	MEAS (Ch 5)
MSCD	Set the balanced port pair and singleton selection to (2:3)1 and S-parameter to SCD for the active channel	MEAS (Ch 5)
MSD1	Set the balanced port pair and singleton selection to (2:3)1 and S-parameter to SD1/SDS for the active channel	MEAS (Ch 5)
MSD1C1	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SD1C1 for the active channel	MEAS (Ch 5)
MSD1C2	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SD1C2 for the active channel	MEAS (Ch 5)
MSD1D1	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SD1D1 for the active channel	MEAS (Ch 5)
MSD1D2	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SD1D2 for the active channel	MEAS (Ch 5)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
MSD2C1	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SD2C1 for the active channel	MEAS (Ch 5)
MSD2C2	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SD2C2 for the active channel	MEAS (Ch 5)
MSD2D1	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SD2D1 for the active channel	MEAS (Ch 5)
MSD2D2	Set the balanced port pair selection to (1:2)(3:4) and S-parameter to SD2D2 for the active channel	MEAS (Ch 5)
MSDC	Set the balanced port pair and singleton selection to (2:3)1 and S-parameter to SDC for the active channel	MEAS (Ch 5)
MSDD	Set the balanced port pair and singleton selection to (2:3)1 and S-parameter to SDD for the active channel	MEAS (Ch 5)
NA1	Select a1 as numerator for parameter being defined	MEAS (Ch 5)
NA2	Select a2 as numerator for parameter being defined	MEAS (Ch 5)
NA3	Select a3 = Rc as numerator for parameter being defined	MEAS (Ch 5)
NA4	Select a4 = Rd as numerator for parameter being define	MEAS (Ch 5)
NB1	Select b1 as numerator for parameter being defined	MEAS (Ch 5)
NB2	Select b2 as numerator for parameter being defined	MEAS (Ch 5)
NB3	Select b3 = Tc as numerator for parameter being defined	MEAS (Ch 5)
NB4	Select b4 = Td as numerator for parameter being define	MEAS (Ch 5)
NU1	Select unity as numerator for parameter being defined	MEAS (Ch 5)
NUM?	Output numerator selection for parameter being defined	MEAS (Ch 5)
S11	Measure S11 on active channel	MEAS (Ch 5)
S12	Measure S12 on active channel	MEAS (Ch 5)
S13	Measure S13 on active channel	MEAS (Ch 5)
S14	Measure S14 on active channel	MEAS (Ch 5)
S21	Measure S21 on active channel	MEAS (Ch 5)
S22	Measure S22 on active channel	MEAS (Ch 5)
S23	Measure S23 on active channel	MEAS (Ch 5)
S24	Measure S24 on active channel	MEAS (Ch 5)
S31	Measure S31 on active channel	MEAS (Ch 5)
S32	Measure S32 on active channel	MEAS (Ch 5)
S33	Measure S33 on active channel	MEAS (Ch 5)
S34	Measure S34 on active channel	MEAS (Ch 5)
S41	Measure S41 on active channel	MEAS (Ch 5)
S42	Measure S42 on active channel	MEAS (Ch 5)
S43	Measure S43 on active channel	MEAS (Ch 5)
S44	Measure S44 on active channel	MEAS (Ch 5)
SXX?	Output S-parameter or user defined parameter of active channel	MEAS (Ch 5)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
UDP11	Select the S11 user defined parameter	MEAS (Ch 5)
UDP12	Select the S12 user defined parameter	MEAS (Ch 5)
UDP13	Select the S13 user defined parameter	MEAS (Ch 5)
UDP14	Select the S14 User Defined parameter	MEAS (Ch 5)
UDP21	Select the S21 user defined parameter	MEAS (Ch 5)
UDP22	Select the S22 user defined parameter	MEAS (Ch 5)
UDP23	Select the S23 user defined parameter	MEAS (Ch 5)
UDP24	Select the S24 User Defined parameter	MEAS (Ch 5)
UDP31	Select the S31 user defined parameter	MEAS (Ch 5)
UDP32	Select the S32 user defined parameter	MEAS (Ch 5)
UDP33	Select the S33 user defined parameter	MEAS (Ch 5)
UDP34	Select the S34 User Defined parameter	MEAS (Ch 5)
UDP41	Select the S41 User Defined parameter	MEAS (Ch 5)
UDP42	Select the S42 User Defined parameter	MEAS (Ch 5)
UDP43	Select the S43 User Defined parameter	MEAS (Ch 5)
UDP44	Select the S44 User Defined parameter	MEAS (Ch 5)
UDPX?	Output User Defined parameter for active channel	MEAS (Ch 5)
USL	Enter label string for user parameter being defined	MEAS (Ch 5)
USL?	Output label string for the user parameter being defined	MEAS (Ch 5)
USR1	Measure the user parameter 1 on active channel	MEAS (Ch 5)
USR10	Measure user parameter 10 on active channel	MEAS (Ch 5)
USR11	Measure user parameter 11 on active channel	MEAS (Ch 5)
USR12	Measure user parameter 12 on active channel	MEAS (Ch 5)
USR13	Measure user parameter 13 on active channel	MEAS (Ch 5)
USR14	Measure user parameter 14 on active channel	MEAS (Ch 5)
USR15	Measure user parameter 15 on active channel	MEAS (Ch 5)
USR16	Measure user parameter 16 on active channel	MEAS (Ch 5)
USR2	Measure user parameter 2 on active channel	MEAS (Ch 5)
USR3	Measure user parameter 3 on active channel	MEAS (Ch 5)
USR4	Measure user parameter 4 on active channel	MEAS (Ch 5)
USR5	Measure user parameter 5 on active channel	MEAS (Ch 5)
USR6	Measure user parameter 6 on active channel	MEAS (Ch 5)
USR7	Measure user parameter 7 on active channel	MEAS (Ch 5)
USR8	Measure user parameter 8 on active channel	MEAS (Ch 5)
USR9	Measure user parameter 9 on active channel	MEAS (Ch 5)
FTP1?	Output the target frequency for linear power correction	POWER (Ch 5)
FTP3	Enter the target frequency for linear power correction	POWER (Ch 5)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
FTP3?	Output the target frequency for linear power correction	POWER (Ch 5)
FTP1	Enter the target frequency for linear power correction	POWER (Ch 5)
P1P?	Output approximate power level at port 1	POWER (Ch 5)
P3P?	Output approximate power level at port 3	POWER (Ch 5)
PW2	Enter source 2 power level	POWER (Ch 5)
PW2?	Output source 2 power level	POWER (Ch 5)
PW3	Enter external source 3 power level	POWER (Ch 5)
PW3?	Output external source 3 power level	POWER (Ch 5)
PW4	Enter external source 4 power level	POWER (Ch 5)
PW4?	Output external source 4 power level	POWER (Ch 5)
PWR	Enter internal source power level	POWER (Ch 5)
PWR?	Output internal source power level	POWER (Ch 5)
SA1	Enter port 1 source attenuator value	POWER (Ch 5)
SA1?	Output port 1 source attenuator value	POWER (Ch 5)
SA3	Enter port 3 source attenuator value	POWER (Ch 5)
SA3?	Output port 3 source attenuator value	POWER (Ch 5)
FP0	Turn flat power correction off	POWER - FLAT POWER (Ch 5)
FP1	Turn flat power correction on	POWER - FLAT POWER (Ch 5)
FP1DONE?	Output port 1 flat power correction done status	POWER - FLAT POWER (Ch 5)
FP30	Turn port 3 flat power correction off	POWER - FLAT POWER (Ch 5)
FP31	Turn port 3 flat power correction on	POWER - FLAT POWER (Ch 5)
FP3DONE?	Output port 3 flat power correction done status	POWER - FLAT POWER (Ch 5)
FP3X?	Output port 3 flat power correction on/off status	POWER - FLAT POWER (Ch 5)
FPX?	Output flat power correction on/off status	POWER - FLAT POWER (Ch 5)
PTP	Enter the target power for flat power correction	POWER - FLAT POWER (Ch 5)
PTP?	Output the target power for flat power correction	POWER - FLAT POWER (Ch 5)
PTP3	Enter the target power for flat power correction for source 2	POWER - FLAT POWER (Ch 5)
PTP3?	Output the target power for flat power correction for	POWER - FLAT POWER (Ch 5)
PTS	Enter number of points to be skipped during flat power correction	POWER - FLAT POWER (Ch 5)
PTS3	Enter number of points to be skipped during flat power correction for source 2	POWER - FLAT POWER (Ch 5)
PTS3?	Output number of points to be skipped during flat power correction for source 2	POWER - FLAT POWER (Ch 5)
SFC	Perform flat test port calibration	POWER - FLAT POWER (Ch 5)
TP1	Select port 1 for flat power correction	POWER - FLAT POWER (Ch 5)
TP3	Select port 3 for flat power correction	POWER - FLAT POWER (Ch 5)
TPX?	Output selected port for flat power correction	POWER - FLAT POWER (Ch 5)
BEGR	Begin receiver calibration	POWER - RECEIVER CAL (Ch 5)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
EXRCALP1	Select Port 1 as the extended receiver port	POWER - RECEIVER CAL (Ch 5)
EXRCALP2	Select Port 2 as the extended receiver port	POWER - RECEIVER CAL (Ch 5)
EXRCALP3	Select Port 3 as the extended receiver port	POWER - RECEIVER CAL (Ch 5)
EXRCALPX?	Output the extended receiver port selection	POWER - RECEIVER CAL (Ch 5)
EXRCALTYPE?	Output the receiver type for extended receiver operation	POWER - RECEIVER CAL (Ch 5)
EXRRCALTYPE	Select the receiver type REFERENCE for the extended receiver operation	POWER - RECEIVER CAL (Ch 5)
EXTRCALTYPE	Select the receiver type TEST for extended receiver operation	POWER - RECEIVER CAL (Ch 5)
EXTRCLR	Clear all of the extended receiver calibrations	POWER - RECEIVER CAL (Ch 5)
RCALLOG	Output the receiver calibration log	POWER - RECEIVER CAL (Ch 5)
RCALP10	Turn off port 1receiver calibration for receiver type TEST	POWER - RECEIVER CAL (Ch 5)
RCALP11	Turn on port 1 receiver calibration for receiver type TEST	POWER - RECEIVER CAL (Ch 5)
RCALP1DONE?	Output port 1 receiver calibration done status for receiver type TEST	POWER - RECEIVER CAL (Ch 5)
RCALP1X?	Output port 1 receiver calibration on/off status for receiver type TEST	POWER - RECEIVER CAL (Ch 5)
RCALP20	Turn off port 2 receiver calibration for receiver type TEST	POWER - RECEIVER CAL (Ch 5)
RCALP21	Turn on port 2 receiver calibration for receiver type TEST	POWER - RECEIVER CAL (Ch 5)
RCALP2DONE?	Output port 2 receiver calibration done status for receiver type TEST	POWER - RECEIVER CAL (Ch 5)
RCALP2X?	Output port 2 receiver calibration on/off status for receiver type TEST	POWER - RECEIVER CAL (Ch 5)
RCALP30	Turn off port 3 receiver calibration for receiver type TEST	POWER - RECEIVER CAL (Ch 5)
RCALP31	Turn on port 3 receiver calibration for receiver type TEST	POWER - RECEIVER CAL (Ch 5)
RCALP3DONE?	Output port 3 receiver calibration done status for receiver type TEST	POWER - RECEIVER CAL (Ch 5)
RCALP3X?	Output port 3 receiver calibration on/off status for receiver type TEST	POWER - RECEIVER CAL (Ch 5)
RCALRP1	Set receiver calibration receive to port 1	POWER - RECEIVER CAL (Ch 5)
RCALRP2	Set receiver calibration receive to port 2	POWER - RECEIVER CAL (Ch 5)
RCALRP3	Set receiver calibration receive to port 3	POWER - RECEIVER CAL (Ch 5)
RCALRPX?	Output receiver calibration receive port	POWER - RECEIVER CAL (Ch 5)
RCALSP1	Set receiver calibration source to port 1	POWER - RECEIVER CAL (Ch 5)
RCALSP2	Set receiver calibration source to port 2	POWER - RECEIVER CAL (Ch 5)
RCALSP3	Set receiver calibration source to port 3	POWER - RECEIVER CAL (Ch 5)
RCALSPX?	Output receiver calibration source port	POWER - RECEIVER CAL (Ch 5)
RCALTYPE?	Output the receiver type	POWER - RECEIVER CAL (Ch 5)
RRCALP10	Turn Off the Port 1 receiver calibration for the receiver type REFERENCE	POWER - RECEIVER CAL (Ch 5)
RRCALP11	Turn On the Port 1 receiver calibration for the receiver type REFERENCE	POWER - RECEIVER CAL (Ch 5)
RRCALP1DONE?	Output the Port 1 receiver calibration Done status for the receiver type REFERENCE	POWER - RECEIVER CAL (Ch 5)
RRCALP1X?	Output the Port 1 receiver calibration On/Off status for the receiver type REFERENCE	POWER - RECEIVER CAL (Ch 5)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
RRCALP20	Turn Off the Port 2 receiver calibration for the receiver type REFERENCE	POWER - RECEIVER CAL (Ch 5)
RRCALP21	Turn On the Port 2 receiver calibration for the receiver type REFERENCE	POWER - RECEIVER CAL (Ch 5)
RRCALP2DONE?	Output the Port 2 receiver calibration Done status for the receiver type REFERENCE	POWER - RECEIVER CAL (Ch 5)
RRCALP2X?	Output the Port 2 receiver calibration On/Off status for the receiver type REFERENCE	POWER - RECEIVER CAL (Ch 5)
RRCALP30	Turn Off the Port 3 receiver calibration for the receiver type REFERENCE	POWER - RECEIVER CAL (Ch 5)
RRCALP31	Turn On the Port 3 receiver calibration for the receiver type REFERENCE	POWER - RECEIVER CAL (Ch 5)
RRCALP3DONE?	Output the Port 3 receiver calibration Done status for the receiver type REFERENCE	POWER - RECEIVER CAL (Ch 5)
RRCALP3X?	Output the Port 3 receiver calibration On/Off status for the receiver type REFERENCE	POWER - RECEIVER CAL (Ch 5)
RRCALTYPE	Select the receiver type REFERENCE	POWER - RECEIVER CAL (Ch 5)
TRCALTYPE	Select the receiver type TEST	POWER - RECEIVER CAL (Ch 5)
IC29	Enter calibration coefficient 29	REMOTE - CAL (Ch 8)
IC3	Enter calibration coefficient 3	REMOTE - CAL (Ch 8)
IC30	Enter calibration coefficient 30	REMOTE - CAL (Ch 8)
IC31	Enter calibration coefficient 31	REMOTE - CAL (Ch 8)
IC32	Enter calibration coefficient 32	REMOTE - CAL (Ch 8)
IC33	Enter calibration coefficient 33	REMOTE - CAL (Ch 8)
IC34	Enter calibration coefficient 34	REMOTE - CAL (Ch 8)
IC35	Enter calibration coefficient 35	REMOTE - CAL (Ch 8)
IC36	Enter calibration coefficient 36	REMOTE - CAL (Ch 8)
IC37	Enter calibration coefficient 37	REMOTE - CAL (Ch 8)
IC38	Enter calibration coefficient 38	REMOTE - CAL (Ch 8)
IC39	Enter calibration coefficient 39	REMOTE - CAL (Ch 8)
IC4	Enter calibration coefficient 4	REMOTE - CAL (Ch 8)
IC40	Enter calibration coefficient 40	REMOTE - CAL (Ch 8)
IC5	Enter calibration coefficient 5	REMOTE - CAL (Ch 8)
IC6	Enter calibration coefficient 6	REMOTE - CAL (Ch 8)
IC7	Enter calibration coefficient 7	REMOTE - CAL (Ch 8)
IC8	Enter calibration coefficient 8	REMOTE - CAL (Ch 8)
IC9	Enter calibration coefficient 9	REMOTE - CAL (Ch 8)
ICA	Enter calibration coefficient 10	REMOTE - CAL (Ch 8)
ICB	Enter calibration coefficient 11	REMOTE - CAL (Ch 8)
IC1	Enter calibration coefficient 1	REMOTE - CAL (Ch 8)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
IC10	Enter calibration coefficient 10	REMOTE - CAL (Ch 8)
IC11	Enter calibration coefficient 11	REMOTE - CAL (Ch 8)
IC12	Enter calibration coefficient 12	REMOTE - CAL (Ch 8)
IC13	Enter calibration coefficient 13	REMOTE - CAL (Ch 8)
IC14	Enter calibration coefficient 14	REMOTE - CAL (Ch 8)
IC15	Enter calibration coefficient 15	REMOTE - CAL (Ch 8)
IC16	Enter calibration coefficient 16	REMOTE - CAL (Ch 8)
IC17	Enter calibration coefficient 17	REMOTE - CAL (Ch 8)
IC18	Enter calibration coefficient 18	REMOTE - CAL (Ch 8)
IC19	Enter calibration coefficient 19	REMOTE - CAL (Ch 8)
IC2	Enter calibration coefficient 2	REMOTE - CAL (Ch 8)
IC20	Enter calibration coefficient 20	REMOTE - CAL (Ch 8)
IC21	Enter calibration coefficient 21	REMOTE - CAL (Ch 8)
IC22	Enter calibration coefficient 22	REMOTE - CAL (Ch 8)
IC23	Enter calibration coefficient 23	REMOTE - CAL (Ch 8)
IC24	Enter calibration coefficient 24	REMOTE - CAL (Ch 8)
IC25	Enter calibration coefficient 25	REMOTE - CAL (Ch 8)
IC26	Enter calibration coefficient 26	REMOTE - CAL (Ch 8)
IC27	Enter calibration coefficient 27	REMOTE - CAL (Ch 8)
IC28	Enter calibration coefficient 28	REMOTE - CAL (Ch 8)
ICC	Enter calibration coefficient 12	REMOTE - CAL (Ch 8)
ICL	Enter all applicable calibration coefficients for cal type	REMOTE - CAL (Ch 8)
ICL3P	Enter additional 12 calibration coefficients for 3-port	REMOTE - CAL (Ch 8)
OC1	Output calibration coefficients 1	REMOTE - CAL (Ch 8)
OC10	Output calibration coefficients 10	REMOTE - CAL (Ch 8)
OC11	Output calibration coefficients 11	REMOTE - CAL (Ch 8)
OC12	Output calibration coefficients 12	REMOTE - CAL (Ch 8)
OC13	Output calibration coefficients 13	REMOTE - CAL (Ch 8)
OC14	Output calibration coefficients 14	REMOTE - CAL (Ch 8)
OC15	Output calibration coefficients 15	REMOTE - CAL (Ch 8)
OC16	Output calibration coefficients 16	REMOTE - CAL (Ch 8)
OC17	Output calibration coefficients 17	REMOTE - CAL (Ch 8)
OC18	Output calibration coefficients 18	REMOTE - CAL (Ch 8)
OC19	Output calibration coefficients 19	REMOTE - CAL (Ch 8)
OC2	Output calibration coefficients 2	REMOTE - CAL (Ch 8)
OC20	Output calibration coefficients 20	REMOTE - CAL (Ch 8)
OC21	Output calibration coefficients 21	REMOTE - CAL (Ch 8)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
OC22	Output calibration coefficients 22	REMOTE - CAL (Ch 8)
OC23	Output calibration coefficients 23	REMOTE - CAL (Ch 8)
OC24	Output calibration coefficients 24	REMOTE - CAL (Ch 8)
OC25	Output calibration coefficient 25	REMOTE - CAL (Ch 8)
OC26	Output calibration coefficient 26	REMOTE - CAL (Ch 8)
OC27	Output calibration coefficient 27	REMOTE - CAL (Ch 8)
OC28	Output calibration coefficient 28	REMOTE - CAL (Ch 8)
OC29	Output calibration coefficient 29	REMOTE - CAL (Ch 8)
OC3	Output calibration coefficients 3	REMOTE - CAL (Ch 8)
OC30	Output calibration coefficient 30	REMOTE - CAL (Ch 8)
OC31	Output calibration coefficient 31	REMOTE - CAL (Ch 8)
OC32	Output calibration coefficient 32	REMOTE - CAL (Ch 8)
OC33	Output calibration coefficient 33	REMOTE - CAL (Ch 8)
OC34	Output calibration coefficient 34	REMOTE - CAL (Ch 8)
OC35	Output calibration coefficient 35	REMOTE - CAL (Ch 8)
OC36	Output calibration coefficient 36	REMOTE - CAL (Ch 8)
OC37	Output calibration coefficient 37	REMOTE - CAL (Ch 8)
OC38	Output calibration coefficient 38	REMOTE - CAL (Ch 8)
OC39	Output calibration coefficient 39	REMOTE - CAL (Ch 8)
OC4	Output calibration coefficients 4	REMOTE - CAL (Ch 8)
OC40	Output calibration coefficient 40	REMOTE - CAL (Ch 8)
OC5	Output calibration coefficients 5	REMOTE - CAL (Ch 8)
OC6	Output calibration coefficients 6	REMOTE - CAL (Ch 8)
OC7	Output calibration coefficients 7	REMOTE - CAL (Ch 8)
OC8	Output calibration coefficients 8	REMOTE - CAL (Ch 8)
OC9	Output calibration coefficients 9	REMOTE - CAL (Ch 8)
OCA	Output calibration coefficient 10	REMOTE - CAL (Ch 8)
OCB	Output calibration coefficient 11	REMOTE - CAL (Ch 8)
OCC	Output calibration coefficient 12	REMOTE - CAL (Ch 8)
OCL	Output all applicable calibration coefficients for calibration type	REMOTE - CAL (Ch 8)
OCL3P	Output additional 12 calibration coefficients for 3-port	REMOTE - CAL (Ch 8)
ONCP	Output number of points for current calibration	REMOTE - CAL (Ch 8)
ONCT	Output number of calibration terms for current calibration	REMOTE - CAL (Ch 8)
OEL	Output error list	REMOTE - ERROR REPORTING (Ch 8)
OGE	Output extended description of current GPIB error	REMOTE - ERROR REPORTING (Ch 8)
OGL	Output extended description of previous GPIB error	REMOTE - ERROR REPORTING (Ch 8)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
ONE	Output number of lines in the error list	REMOTE - ERROR REPORTING (Ch 8)
FDH0	Select variable length arbitrary block headers	REMOTE - FORMATTING (Ch 8)
FDH1	Select fixed length arbitrary block headers	REMOTE - FORMATTING (Ch 8)
FDH2	Select zero length arbitrary block headers	REMOTE - FORMATTING (Ch 8)
FDHX?	Output arbitrary block header length selection	REMOTE - FORMATTING (Ch 8)
FMA	Select ASCII data transfer format	REMOTE - FORMATTING (Ch 8)
FMB	Select IEEE754 64 bit data transfer format	REMOTE - FORMATTING (Ch 8)
FMC	Select IEEE754 32 bit data transfer format	REMOTE - FORMATTING (Ch 8)
FMT0	Select normal ASCII data element delimiting	REMOTE - FORMATTING (Ch 8)
FMT1	Select enhanced ASCII data element delimiting	REMOTE - FORMATTING (Ch 8)
FMTX?	Output ASCII data element delimiting mode	REMOTE - FORMATTING (Ch 8)
FMX?	Output data output mode FMA FMB or FMC	REMOTE - FORMATTING (Ch 8)
LSB	Select least significant byte first binary transfer	REMOTE - FORMATTING (Ch 8)
MSB	Select most significant byte first binary transfer	REMOTE - FORMATTING (Ch 8)
XSB?	Output byte order for output data LSB or MSB	REMOTE - FORMATTING (Ch 8)
*CLS	Clear status bytes and structures	REMOTE - IEEE 488.2 (Ch 8)
*DDT	Enter the 488.2 define device trigger command string	REMOTE - IEEE 488.2 (Ch 8)
*ESE	Enter the 488.2 standard event status enable mask	REMOTE - IEEE 488.2 (Ch 8)
*ESE?	Output the 488.2 standard event status enable mask	REMOTE - IEEE 488.2 (Ch 8)
*ESR?	Output the 488.2 standard event status register value	REMOTE - IEEE 488.2 (Ch 8)
*IDN?	Output the 488.2 instrument identification string	REMOTE - IEEE 488.2 (Ch 8)
*IST?	Output the value of the *ist* message	REMOTE - IEEE 488.2 (Ch 8)
*OPC	Initiate the 488.2 operation complete sequence	REMOTE - IEEE 488.2 (Ch 8)
*OPC?	Initiate the 488.2 operation complete query sequence	REMOTE - IEEE 488.2 (Ch 8)
*OPT?	Output the 488.2 options installed string	REMOTE - IEEE 488.2 (Ch 8)
*PRE	Enter the 488.2 parallel poll register enable mask	REMOTE - IEEE 488.2 (Ch 8)
*PRE?	Output the 488.2 parallel poll register enable mask	REMOTE - IEEE 488.2 (Ch 8)
*RST	Resets the instrument	REMOTE - IEEE 488.2 (Ch 8)
*SRE	Enter the 488.2 service request enable mask	REMOTE - IEEE 488.2 (Ch 8)
*SRE?	Output the 488.2 service request enable mask	REMOTE - IEEE 488.2 (Ch 8)
*STB?	Output the 488.2 status byte value	REMOTE - IEEE 488.2 (Ch 8)
*TRG	Initiate a group execute trigger sequence	REMOTE - IEEE 488.2 (Ch 8)
*TST?	Perform self test and output status	REMOTE - IEEE 488.2 (Ch 8)
*WAI	Wait to continue	REMOTE - IEEE 488.2 (Ch 8)
TST	Perform self test and output status (same as *TST?)	REMOTE - IEEE 488.2 (Ch 8)
CFD	Collect final data in an internal buffer	REMOTE - MEASURED DATA (Ch 8)
CXD?	Output internal buffer data collection mode	REMOTE - MEASURED DATA (Ch 8)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
DCCTN	Resume internal buffer data collection	REMOTE - MEASURED DATA (Ch 8)
DCCTN?	Output internal buffer data collection resume/suspend status	REMOTE - MEASURED DATA (Ch 8)
DCHLD	Suspend internal buffer data collection	REMOTE - MEASURED DATA (Ch 8)
DCMRK	Insert the mark value into the internal buffer	REMOTE - MEASURED DATA (Ch 8)
DCOFF	Turn internal buffer data collection mode off	REMOTE - MEASURED DATA (Ch 8)
DCPCUR?	Output data collection buffer current point count	REMOTE - MEASURED DATA (Ch 8)
DCPMAX?	Output data collection buffer maximum number of points	REMOTE - MEASURED DATA (Ch 8)
DPR0	Visible data only OFD format	REMOTE - MEASURED DATA (Ch 8)
DPR1	Data pair always OFD format	REMOTE - MEASURED DATA (Ch 8)
DPRX?	Output data pair mode visible only or pair always	REMOTE - MEASURED DATA (Ch 8)
ICD	Enter corrected data for active channel parameter	REMOTE - MEASURED DATA (Ch 8)
IFD	Enter final data for active channel parameter	REMOTE - MEASURED DATA (Ch 8)
INRM	Enter normalization data from GPIB	REMOTE - MEASURED DATA (Ch 8)
OCD	Output corrected data for active channel parameter	REMOTE - MEASURED DATA (Ch 8)
OCFEDE	Output the front panel setup, calibration, and EDE data	REMOTE - MEASURED DATA (Ch 8)
OCFSG	Output the segmented sweep data	REMOTE - MEASURED DATA (Ch 8)
OCS	Output the internal buffer collected data	REMOTE - MEASURED DATA (Ch 8)
ODAT	Output hard copy tabular data to GPIB	REMOTE - MEASURED DATA (Ch 8)
OFD	Output final data for active channel parameter	REMOTE - MEASURED DATA (Ch 8)
OGCFD	Output gain compression final data to GPIB	REMOTE - MEASURED DATA (Ch 8)
OGCTXT	Output text format gain compression data to GPIB	REMOTE - MEASURED DATA (Ch 8)
OM1	Output marker 1 value	REMOTE - MEASURED DATA (Ch 8)
OM10	Output marker 10 value	REMOTE - MEASURED DATA (Ch 8)
OM11	Output marker 11 value	REMOTE - MEASURED DATA (Ch 8)
OM12	Output marker 12 value	REMOTE - MEASURED DATA (Ch 8)
OM2	Output marker 2 value	REMOTE - MEASURED DATA (Ch 8)
OM3	Output marker 3 value	REMOTE - MEASURED DATA (Ch 8)
OM3P	Output M3P format data to GPIB with M3P setup set to (2:3)1	REMOTE - MEASURED DATA (Ch 8)
OM4	Output marker 4 value	REMOTE - MEASURED DATA (Ch 8)
OM4P	Output M4P format data to GPIB with M4P setup set to (1:2)(3:4)	REMOTE - MEASURED DATA (Ch 8)
OM5	Output marker 5 value	REMOTE - MEASURED DATA (Ch 8)
OM6	Output marker 6 value	REMOTE - MEASURED DATA (Ch 8)
OM7	Output marker 7 value	REMOTE - MEASURED DATA (Ch 8)
OM8	Output marker 8 value	REMOTE - MEASURED DATA (Ch 8)
OM9	Output marker 9 value	REMOTE - MEASURED DATA (Ch 8)
ONRM	Output stored normalization data to GPIB	REMOTE - MEASURED DATA (Ch 8)
OPSV	Output power sweep power values	REMOTE - MEASURED DATA (Ch 8)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
ORD	Output raw data for active channel parameter	REMOTE - MEASURED DATA (Ch 8)
OS11C	Output corrected S11 data	REMOTE - MEASURED DATA (Ch 8)
OS11R	Output raw S11 data	REMOTE - MEASURED DATA (Ch 8)
OS12C	Output corrected S12 data	REMOTE - MEASURED DATA (Ch 8)
OS12R	Output raw S12 data	REMOTE - MEASURED DATA (Ch 8)
OS13C	Output corrected S13 data	REMOTE - MEASURED DATA (Ch 8)
OS13R	Output raw S13 data	REMOTE - MEASURED DATA (Ch 8)
OS14C	Output corrected S14 data	REMOTE - MEASURED DATA (Ch 8)
OS14R	Output raw S14 data	REMOTE - MEASURED DATA (Ch 8)
OS1P4	Output S1P4 format data to GPIB	REMOTE - MEASURED DATA (Ch 8)
OS21C	Output corrected S21 data	REMOTE - MEASURED DATA (Ch 8)
OS21R	Output raw S21 data	REMOTE - MEASURED DATA (Ch 8)
OS22C	Output corrected S22 data	REMOTE - MEASURED DATA (Ch 8)
OS22R	Output raw S22 data	REMOTE - MEASURED DATA (Ch 8)
OS23C	Output corrected S23 data	REMOTE - MEASURED DATA (Ch 8)
OS23R	Output raw S23 data	REMOTE - MEASURED DATA (Ch 8)
OS24C	Output corrected S24 data	REMOTE - MEASURED DATA (Ch 8)
OS24R	Output raw S24 data	REMOTE - MEASURED DATA (Ch 8)
OS31C	Output corrected S31 data	REMOTE - MEASURED DATA (Ch 8)
OS31R	Output raw S31 data	REMOTE - MEASURED DATA (Ch 8)
OS32C	Output corrected S32 data	REMOTE - MEASURED DATA (Ch 8)
OS32R	Output raw S32 data	REMOTE - MEASURED DATA (Ch 8)
OS33C	Output corrected S33 data	REMOTE - MEASURED DATA (Ch 8)
OS33R	Output raw S33 data	REMOTE - MEASURED DATA (Ch 8)
OS34C	Output corrected S34 data	REMOTE - MEASURED DATA (Ch 8)
OS34R	Output raw S34 data	REMOTE - MEASURED DATA (Ch 8)
OTXT	Output text format data to GPIB	REMOTE - MEASURED DATA (Ch 8)
ODV	Output distance values for time domain	REMOTE - MEASURED POINTS (Ch 8)
OFV	Output frequency values	REMOTE - MEASURED POINTS (Ch 8)
OGCFV	Output gain compression frequency values to GPIB	REMOTE - MEASURED POINTS (Ch 8)
ONDF	Output number of discrete frequencies	REMOTE - MEASURED POINTS (Ch 8)
ONPV	Output the number of power sweep power values	REMOTE - MEASURED POINTS (Ch 8)
OTV	Output time values for time domain	REMOTE - MEASURED POINTS (Ch 8)
HIGHF?	Output the highest frequency	REMOTE - MISC (Ch 8)
IHDW	Enter hardware cal data from GPIB	REMOTE - MISC (Ch 8)
IKIT	Enter calkit data from GPIB	REMOTE - MISC (Ch 8)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
NOP	No operation	REMOTE - MISC (Ch 8)
OBMP	Output the display as a bitmap	REMOTE - MISC (Ch 8)
ODR	Output directory listing of the floppy drive	REMOTE - MISC (Ch 8)
ODRH	Output directory listing of the hard drive	REMOTE - MISC (Ch 8)
OHDR	Output hard copy header information to GPIB	REMOTE - MISC (Ch 8)
OHDW	Output hardware cal data to GPIB	REMOTE - MISC (Ch 8)
OHGL	Output HPGL format data to GPIB	REMOTE - MISC (Ch 8)
OI	Output instrument identification string with serial number	REMOTE - MISC (Ch 8)
OID	Output instrument identification string	REMOTE - MISC (Ch 8)
OMOD	Output instrument model number	REMOTE - MISC (Ch 8)
OSER	Output instrument serial number	REMOTE - MISC (Ch 8)
RK?	Output RK mode on/off status	REMOTE - MISC (Ch 8)
RKOFF	Turn off RK mode	REMOTE - MISC (Ch 8)
RKON	Turn on RK mode	REMOTE - MISC (Ch 8)
ICF	Enter front panel setup and calibration data	REMOTE - SETUP (Ch 8)
ICFEDE	Enter the front panel setup, calibration, and EDE data	REMOTE - SETUP (Ch 8)
ICFSG	Enter the segmented sweep data	REMOTE - SETUP (Ch 8)
IFP	Enter current front panel setup	REMOTE - SETUP (Ch 8)
IS1	Enter front panel setup 1	REMOTE - SETUP (Ch 8)
IS10	Enter front panel setup 10	REMOTE - SETUP (Ch 8)
IS2	Enter front panel setup 2	REMOTE - SETUP (Ch 8)
IS3	Enter front panel setup 3	REMOTE - SETUP (Ch 8)
IS4	Enter front panel setup 4	REMOTE - SETUP (Ch 8)
IS5	Enter front panel setup 5	REMOTE - SETUP (Ch 8)
IS6	Enter front panel setup 6	REMOTE - SETUP (Ch 8)
IS7	Enter front panel setup 7	REMOTE - SETUP (Ch 8)
IS8	Enter front panel setup 8	REMOTE - SETUP (Ch 8)
IS9	Enter front panel setup 9	REMOTE - SETUP (Ch 8)
OCF	Output front panel setup and calibration data	REMOTE - SETUP (Ch 8)
OFP	Output current front panel setup	REMOTE - SETUP (Ch 8)
OS1	Output front panel setup number 1	REMOTE - SETUP (Ch 8)
OS10	Output front panel setup number 10	REMOTE - SETUP (Ch 8)
OS2	Output front panel setup number 2	REMOTE - SETUP (Ch 8)
OS3	Output front panel setup number 3	REMOTE - SETUP (Ch 8)
OS4	Output front panel setup number 4	REMOTE - SETUP (Ch 8)
OS41C	Output corrected S41 data	REMOTE - SETUP (Ch 8)
OS41R	Output raw S41 data	REMOTE - SETUP (Ch 8)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
OS42C	Output corrected S42 data	REMOTE - SETUP (Ch 8)
OS42R	Output raw S42 data	REMOTE - SETUP (Ch 8)
OS43C	Output corrected S43 data	REMOTE - SETUP (Ch 8)
OS43R	Output raw S43 data	REMOTE - SETUP (Ch 8)
OS44C	Output corrected S44 data	REMOTE - SETUP (Ch 8)
OS44R	Output raw S44 data	REMOTE - SETUP (Ch 8)
OS4P	Output S3P format data to GPIB	REMOTE - SETUP (Ch 8)
OS5	Output front panel setup number 5	REMOTE - SETUP (Ch 8)
OS6	Output front panel setup number 6	REMOTE - SETUP (Ch 8)
OS7	Output front panel setup number 7	REMOTE - SETUP (Ch 8)
OS8	Output front panel setup number 8	REMOTE - SETUP (Ch 8)
OS9	Output front panel setup number 9	REMOTE - SETUP (Ch 8)
CSB	Clear status bytes and structures (same as *CLS)	REMOTE - STATUS REPORTING (Ch 8)
IEM	Enter extended status byte mask	REMOTE - STATUS REPORTING (Ch 8)
ILM	Enter limits status byte mask	REMOTE - STATUS REPORTING (Ch 8)
IPM	Enter the 488.2 service request enable mask	REMOTE - STATUS REPORTING (Ch 8)
OEB	Output extended status byte	REMOTE - STATUS REPORTING (Ch 8)
OEM	Output extended status byte mask	REMOTE - STATUS REPORTING (Ch 8)
OLB	Output limits status byte	REMOTE - STATUS REPORTING (Ch 8)
OLM	Output limits status byte mask	REMOTE - STATUS REPORTING (Ch 8)
OPB	Output the 488.2 status byte value (same as *STB?)	REMOTE - STATUS REPORTING (Ch 8)
REBOOT	Reboots the instrument	REMOTE - SYNC (Ch 8)
SWPDIR?	Output instantaneous sweep direction forward/reverse	REMOTE - SYNC (Ch 8)
WFS	Wait full sweep until all display data is valid	REMOTE - SYNC (Ch 8)
UMDIS0	Turn off user message display	REMOTE - USER MESSAGE (Ch 8)
UMDIS1	Turn on user message display	REMOTE - USER MESSAGE (Ch 8)
UMDISX?	Output user message display on/off status	REMOTE - USER MESSAGE (Ch 8)
UMRST	Reset all user message display parameters	REMOTE - USER MESSAGE (Ch 8)
UMSTR	Enter the user message display string	REMOTE - USER MESSAGE (Ch 8)
UMSTR?	Output the user message display string	REMOTE - USER MESSAGE (Ch 8)
UMXLOC	Enter the user message display starting X location	REMOTE - USER MESSAGE (Ch 8)
UMXLOC?	Output the user message display starting X location	REMOTE - USER MESSAGE (Ch 8)
UMYLOC	Enter the user message display starting Y location	REMOTE - USER MESSAGE (Ch 8)
UMYLOC?	Output the user message display starting Y location	REMOTE - USER MESSAGE (Ch 8)
RC1	Recall front panel setup number 1 from memory	SAVE/RECALL (Ch 9)
RC10	Recall front panel setup number 10 from memory	SAVE/RECALL (Ch 9)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
RC2	Recall front panel setup number 2 from memory	SAVE/RECALL (Ch 9)
RC3	Recall front panel setup number 3 from memory	SAVE/RECALL (Ch 9)
RC4	Recall front panel setup number 4 from memory	SAVE/RECALL (Ch 9)
RC5	Recall front panel setup number 5 from memory	SAVE/RECALL (Ch 9)
RC6	Recall front panel setup number 6 from memory	SAVE/RECALL (Ch 9)
RC7	Recall front panel setup number 7 from memory	SAVE/RECALL (Ch 9)
RC8	Recall front panel setup number 8 from memory	SAVE/RECALL (Ch 9)
RC9	Recall front panel setup number 9 from memory	SAVE/RECALL (Ch 9)
RCCM1	Fast recall cal data from memory 1	SAVE/RECALL (Ch 9)
RCCM2	Fast recall cal data from memory 2	SAVE/RECALL (Ch 9)
RCCM3	Fast recall cal data from memory 3	SAVE/RECALL (Ch 9)
RCCM4	Fast recall cal data from memory 4	SAVE/RECALL (Ch 9)
RCCM5	Fast recall cal data from memory 5	SAVE/RECALL (Ch 9)
RCCM6	Fast recall cal data from memory 6	SAVE/RECALL (Ch 9)
RCCM7	Fast recall cal data from memory 7	SAVE/RECALL (Ch 9)
RCCM8	Fast recall cal data from memory 8	SAVE/RECALL (Ch 9)
SAVDAC	Save 10 MHz DAC number into BBRAM	SAVE/RECALL (Ch 9)
SAVE	Save a data file to disk	SAVE/RECALL (Ch 9)
SV1	Save front panel setup number 1 to memory	SAVE/RECALL (Ch 9)
SV10	Save front panel setup number 10 to memory	SAVE/RECALL (Ch 9)
SV2	Save front panel setup number 2 to memory	SAVE/RECALL (Ch 9)
SV3	Save front panel setup number 3 to memory	SAVE/RECALL (Ch 9)
SV4	Save front panel setup number 4 to memory	SAVE/RECALL (Ch 9)
SV5	Save front panel setup number 5 to memory	SAVE/RECALL (Ch 9)
SV6	Save front panel setup number 6 to memory	SAVE/RECALL (Ch 9)
SV7	Save front panel setup number 7 to memory	SAVE/RECALL (Ch 9)
SV8	Save front panel setup number 8 to memory	SAVE/RECALL (Ch 9)
SV9	Save front panel setup number 9 to memory	SAVE/RECALL (Ch 9)
SVCM1	Save cal data in internal memory 1	SAVE/RECALL (Ch 9)
SVCM2	Save cal data in internal memory 2	SAVE/RECALL (Ch 9)
SVCM3	Save cal data in internal memory 3	SAVE/RECALL (Ch 9)
SVCM4	Save cal data in internal memory 4	SAVE/RECALL (Ch 9)
SVCM5	Save cal data in internal memory 5	SAVE/RECALL (Ch 9)
SVCM6	Save cal data in internal memory 6	SAVE/RECALL (Ch 9)
SVCM7	Save cal data in internal memory 7	SAVE/RECALL (Ch 9)
SVCM8	Save cal data in internal memory 8	SAVE/RECALL (Ch 9)
POP	Enter parallel output port 8-bit decimal word (0-255)	SEQ (Ch 10)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
POP?	Output parallel output port 8-bit decimal word (0-255)	SEQ (Ch 10)
POPBC0	Clear parallel output port bit 0	SEQ (Ch 10)
POPBC1	Clear parallel output port bit 1	SEQ (Ch 10)
POPBC2	Clear parallel output port bit 2	SEQ (Ch 10)
POPBC3	Clear parallel output port bit 3	SEQ (Ch 10)
POPBC4	Clear parallel output port bit 4	SEQ (Ch 10)
POPBC5	Clear parallel output port bit 5	SEQ (Ch 10)
POPBC6	Clear parallel output port bit 6	SEQ (Ch 10)
POPBC7	Clear parallel output port bit 7	SEQ (Ch 10)
POPBS0	Set parallel output port bit 0	SEQ (Ch 10)
POPBS1	Set parallel output port bit 1	SEQ (Ch 10)
POPBS2	Set parallel output port bit 2	SEQ (Ch 10)
POPBS3	Set parallel output port bit 3	SEQ (Ch 10)
POPBS4	Set parallel output port bit 4	SEQ (Ch 10)
POPBS5	Set parallel output port bit 5	SEQ (Ch 10)
POPBS6	Set parallel output port bit 6	SEQ (Ch 10)
POPBS7	Set parallel output port bit 7	SEQ (Ch 10)
SEQDEL1	Delete sequence 1	SEQ (Ch 10)
SEQDEL2	Delete sequence 2	SEQ (Ch 10)
SEQDEL3	Delete sequence 3	SEQ (Ch 10)
SEQDEL4	Delete sequence 4	SEQ (Ch 10)
SEQDEL5	Delete sequence 5	SEQ (Ch 10)
SEQDEL6	Delete sequence 6	SEQ (Ch 10)
SEQDEL7	Delete sequence 7	SEQ (Ch 10)
SEQDGMSG?	Output saving sequence display message to service log status	SEQ (Ch 10)
SEQDGMSG0	Turn saving sequence display message to service log off	SEQ (Ch 10)
SEQDGMSG1	Turn saving sequence display message to service log on	SEQ (Ch 10)
SEQEXE1	Execute sequence 1	SEQ (Ch 10)
SEQEXE2	Execute sequence 2	SEQ (Ch 10)
SEQEXE3	Execute sequence 3	SEQ (Ch 10)
SEQEXE4	Execute sequence 4	SEQ (Ch 10)
SEQEXE5	Execute sequence 5	SEQ (Ch 10)
SEQEXE6	Execute sequence 6	SEQ (Ch 10)
SEQEXE7	Execute sequence 7	SEQ (Ch 10)
SEQHELP?	Output sequence help message mode on/off	SEQ (Ch 10)
SEQHELP0	Turn off sequence help message	SEQ (Ch 10)
SEQHELP1	Turn on sequence help message	SEQ (Ch 10)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
SEQLOA1	Recall sequence 1 from floppy disk	SEQ (Ch 10)
SEQLOA2	Recall sequence 2 from floppy disk	SEQ (Ch 10)
SEQLOA3	Recall sequence 3 from floppy disk	SEQ (Ch 10)
SEQLOA4	Recall sequence 4 from floppy disk	SEQ (Ch 10)
SEQLOA5	Recall sequence 5 from floppy disk	SEQ (Ch 10)
SEQLOA6	Recall sequence 6 from floppy disk	SEQ (Ch 10)
SEQLOA7	Recall sequence 7 from floppy disk	SEQ (Ch 10)
SEQLOAH1	Recall sequence 1 from hard disk	SEQ (Ch 10)
SEQLOAH2	Recall sequence 2 from hard disk	SEQ (Ch 10)
SEQLOAH3	Recall sequence 3 from hard disk	SEQ (Ch 10)
SEQLOAH4	Recall sequence 4 from hard disk	SEQ (Ch 10)
SEQLOAH5	Recall sequence 5 from hard disk	SEQ (Ch 10)
SEQLOAH6	Recall sequence 6 from hard disk	SEQ (Ch 10)
SEQLOAH7	Recall sequence 7 from hard disk	SEQ (Ch 10)
SEQNAM1	Enter sequence 1 name	SEQ (Ch 10)
SEQNAM1?	Output sequence 1 name	SEQ (Ch 10)
SEQNAM2	Enter sequence 2 name	SEQ (Ch 10)
SEQNAM2?	Output sequence 2 name	SEQ (Ch 10)
SEQNAM3	Enter sequence 3 name	SEQ (Ch 10)
SEQNAM3?	Output sequence 3 name	SEQ (Ch 10)
SEQNAM4	Enter sequence 4 name	SEQ (Ch 10)
SEQNAM4?	Output sequence 4 name	SEQ (Ch 10)
SEQNAM5	Enter sequence 5 name	SEQ (Ch 10)
SEQNAM5?	Output sequence 5 name	SEQ (Ch 10)
SEQNAM6	Enter sequence 6 name	SEQ (Ch 10)
SEQNAM6?	Output sequence 6 name	SEQ (Ch 10)
SEQNAM7	Enter sequence 7 name	SEQ (Ch 10)
SEQNAM7?	Output sequence 7 name	SEQ (Ch 10)
SEQSAV1	Save sequence 1 to floppy disk	SEQ (Ch 10)
SEQSAV2	Save sequence 2 to floppy disk	SEQ (Ch 10)
SEQSAV3	Save sequence 3 to floppy disk	SEQ (Ch 10)
SEQSAV4	Save sequence 4 to floppy disk	SEQ (Ch 10)
SEQSAV5	Save sequence 5 to floppy disk	SEQ (Ch 10)
SEQSAV6	Save sequence 6 to floppy disk	SEQ (Ch 10)
SEQSAV7	Save sequence 7 to floppy disk	SEQ (Ch 10)
SEQSAVH1	Save sequence 1 to hard disk	SEQ (Ch 10)
SEQSAVH2	Save sequence 2 to hard disk	SEQ (Ch 10)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
SEQSAVH3	Save sequence 3 to hard disk	SEQ (Ch 10)
SEQSAVH4	Save sequence 4 to hard disk	SEQ (Ch 10)
SEQSAVH5	Save sequence 5 to hard disk	SEQ (Ch 10)
SEQSAVH6	Save sequence 6 to hard disk	SEQ (Ch 10)
SEQSAVH7	Save sequence 7 to hard disk	SEQ (Ch 10)
SEQSAVT1	Save sequence 1 text to floppy disk	SEQ (Ch 10)
SEQSAVT2	Save sequence 2 text to floppy disk	SEQ (Ch 10)
SEQSAVT3	Save sequence 3 text to floppy disk	SEQ (Ch 10)
SEQSAVT4	Save sequence 4 text to floppy disk	SEQ (Ch 10)
SEQSAVT5	Save sequence 5 text to floppy disk	SEQ (Ch 10)
SEQSAVT6	Save sequence 6 text to floppy disk	SEQ (Ch 10)
SEQSAVT7	Save sequence 7 text to floppy disk	SEQ (Ch 10)
SEQSAVTH1	Save sequence 1 text to hard disk	SEQ (Ch 10)
SEQSAVTH2	Save sequence 2 text to hard disk	SEQ (Ch 10)
SEQSAVTH3	Save sequence 3 text to hard disk	SEQ (Ch 10)
SEQSAVTH4	Save sequence 4 text to hard disk	SEQ (Ch 10)
SEQSAVTH5	Save sequence 5 text to hard disk	SEQ (Ch 10)
SEQSAVTH6	Save sequence 6 text to hard disk	SEQ (Ch 10)
SEQSAVTH7	Save sequence 7 text to hard disk	SEQ (Ch 10)
ALTS0	Turn alternate sweep mode off	SWEEP (Ch 5)
ALTS1	Turn alternate sweep mode on	SWEEP (Ch 5)
ALTSX?	Output alternate sweep mode on/off status	SWEEP (Ch 5)
CHOPMODE?	Output chop mode type status	SWEEP (Ch 5)
FCW0	Turn fast CW measurement mode off	SWEEP (Ch 5)
FCW1	Turn fast CW measurement mode 1 on	SWEEP (Ch 5)
FCWX?	Output fast CW measurement mode	SWEEP (Ch 5)
FLICK0	Turn flickering off	SWEEP (Ch 5)
FLICK1	Turn flickering on	SWEEP (Ch 5)
FLICKX?	Output flickering on/off status	SWEEP (Ch 5)
FSWP	Select frequency sweep	SWEEP (Ch 5)
HC0	Disable internal IF calibration	SWEEP (Ch 5)
HC1	Enable internal IF calibration and trigger an IF calibration	SWEEP (Ch 5)
HCT	Trigger an IF calibration	SWEEP (Ch 5)
HCX?	Output internal IF calibration enable/disable status	SWEEP (Ch 5)
PERPORT	Select per port as chop mode type	SWEEP (Ch 5)
RSTFSWP	Restore full sweep	SWEEP (Ch 5)
SPA0	Spur avoidance mode off	SWEEP (Ch 5)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
SPA1	Spur avoidance mode on	SWEEP (Ch 5)
SPARAM	Select All S-parameters as chop mode type	SWEEP (Ch 5)
SPAX?	Output spur avoidance mode on/off status	SWEEP (Ch 5)
SWPC0	Turn off chop sweep mode	SWEEP (Ch 5)
SWPC1	Turn on chop sweep mode	SWEEP (Ch 5)
SWPCX?	Output chop sweep mode on/off	SWEEP (Ch 5)
SWPT	Enter sweep time	SWEEP (Ch 5)
SWPT?	Output sweep time	SWEEP (Ch 5)
SWPT0	Turn off sweep time measurement	SWEEP (Ch 5)
SWPT1	Turn on sweep time measurement	SWEEP (Ch 5)
SWPTMA	Set auto sweep time mode	SWEEP (Ch 5)
SWPTMM	Set manual sweep time mode	SWEEP (Ch 5)
SWPTMX?	Output sweep time mode	SWEEP (Ch 5)
SWPTX?	Output sweep time measurement on/off status	SWEEP (Ch 5)
SWPX?	Output sweep type selection	SWEEP (Ch 5)
TEB	Select external trigger executes *DDT definition	SWEEP (Ch 5)
TEX	Select external measurement triggering	SWEEP (Ch 5)
TEXS	Select external measurement sweep triggering	SWEEP (Ch 5)
TEXSB	Select external measurement sweep triggering and execute trigger buffer	SWEEP (Ch 5)
TIB	Select GPIB measurement triggering	SWEEP (Ch 5)
TIBS	Select GPIB measurement sweep triggering	SWEEP (Ch 5)
TIBSB	Select GPIB measurement sweep triggering and execute trigger buffer	SWEEP (Ch 5)
TIN	Select internal measurement triggering	SWEEP (Ch 5)
TUNE0	Turn tune mode off	SWEEP (Ch 5)
TUNE1	Turn tune mode on	SWEEP (Ch 5)
TUNESWP	Enter number of sweeps in tune mode	SWEEP (Ch 5)
TUNESWP?	Output number of sweeps in tune mode	SWEEP (Ch 5)
TUNEX?	Output tune mode on/off status	SWEEP (Ch 5)
TXX?	Output trigger source	SWEEP (Ch 5)
P1CW?	Output port 1 CW mode in linear cal on/off status	SWEEP - POWER SWEEP (Ch 5)
P1CW0	Turn off port 1 CW mode in linear cal	SWEEP - POWER SWEEP (Ch 5)
P1CW1	Turn on port 1 CW mode in linear cal	SWEEP - POWER SWEEP (Ch 5)
P1LCOR?	Output port 1 linear cal correction on/off status	SWEEP - POWER SWEEP (Ch 5)
P1LCOR0	Turn off port 1 linear cal correction	SWEEP - POWER SWEEP (Ch 5)
P1LCOR1	Turn on port 1 linear cal correction	SWEEP - POWER SWEEP (Ch 5)
P1LDONE?	Output port 1 linear power correction Done status	SWEEP - POWER SWEEP (Ch 5)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
P3CW?	Output port 3 CW mode in linear cal on/off status	SWEEP - POWER SWEEP (Ch 5)
P3CW0	Turn off port 3 CW mode in linear cal	SWEEP - POWER SWEEP (Ch 5)
P3CW1	Turn on port 3 CW mode in linear cal	SWEEP - POWER SWEEP (Ch 5)
P3LCOR?	Output port 3 linear cal correction on/off status	SWEEP - POWER SWEEP (Ch 5)
P3LCOR0	Turn off port 3 linear cal correction	SWEEP - POWER SWEEP (Ch 5)
P3LCOR1	Turn on port 3 linear cal correction	SWEEP - POWER SWEEP (Ch 5)
P3LDONE?	Output port 1 linear power correction done status	SWEEP - POWER SWEEP (Ch 5)
PSDP	Enter number of points drawn in power sweep mode	SWEEP - POWER SWEEP (Ch 5)
PSDP?	Output number of points drawn in power sweep	SWEEP - POWER SWEEP (Ch 5)
PSFP1	Enter number of frequency points to be skipped during linear power correction for source 1	SWEEP - POWER SWEEP (Ch 5)
PSFP1?	Output number of frequency points to be skipped during linear power correction for source 1	SWEEP - POWER SWEEP (Ch 5)
PSFP3	Enter number of frequency points to be skipped during linear power correction for source 2	SWEEP - POWER SWEEP (Ch 5)
PSFP3?	Output number of frequency points to be skipped during linear power correction for source 2	SWEEP - POWER SWEEP (Ch 5)
PSLC	Perform power sweep linearity calibration	SWEEP - POWER SWEEP (Ch 5)
PSLCP10	Turn power sweep linearity calibration off	SWEEP - POWER SWEEP (Ch 5)
PSLCP11	Turn power sweep linearity calibration on	SWEEP - POWER SWEEP (Ch 5)
PSLCP1DONE?	Output power sweep linearity calibration done status	SWEEP - POWER SWEEP (Ch 5)
PSLCP1X?	Output power sweep linearity calibration on/off status	SWEEP - POWER SWEEP (Ch 5)
PSLCP30	Turn power sweep linearity calibration off	SWEEP - POWER SWEEP (Ch 5)
PSLCP31	Turn power sweep linearity calibration on	SWEEP - POWER SWEEP (Ch 5)
PSLCP3DONE?	Output power sweep linearity calibration done status	SWEEP - POWER SWEEP (Ch 5)
PSLCP3X?	Output power sweep linearity calibration on/off status	SWEEP - POWER SWEEP (Ch 5)
PSNOP1	Enter port 1 nominal offset in power sweep mode	SWEEP - POWER SWEEP (Ch 5)
PSNOP1?	Output port 1 nominal offset in power sweep mode	SWEEP - POWER SWEEP (Ch 5)
PSNOP3	Enter port 3 nominal offset in power sweep mode	SWEEP - POWER SWEEP (Ch 5)
PSNOP3?	Output port 3 nominal offset in power sweep mode	SWEEP - POWER SWEEP (Ch 5)
PSWP	Select power sweep	SWEEP - POWER SWEEP (Ch 5)
SINP	Enter single power	SWEEP - POWER SWEEP (Ch 5)
SINP?	Output single power	SWEEP - POWER SWEEP (Ch 5)
SINP0	Turn off single power mode	SWEEP - POWER SWEEP (Ch 5)
SINP1	Turn on single power mode	SWEEP - POWER SWEEP (Ch 5)
SINPX?	Output single power mode on/off status	SWEEP - POWER SWEEP (Ch 5)
STEPP	Enter power step	SWEEP - POWER SWEEP (Ch 5)
STEPP?	Output power step	SWEEP - POWER SWEEP (Ch 5)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
STOPP	Enter stop power	SWEEP - POWER SWEEP (Ch 5)
STOPP?	Output stop power	SWEEP - POWER SWEEP (Ch 5)
STRTP	Enter start power	SWEEP - POWER SWEEP (Ch 5)
STRTP?	Output start power	SWEEP - POWER SWEEP (Ch 5)
ADDNDSG	Add the next defined segment or go to the next segment	SWEEP - SEGMENTED SWEEP (Ch 5)
CLRDSG	Clear all the defined segments of the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DELLDSG	Delete the last defined segment of the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSG?	Output the active defined segment flag ON/OFF status	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGAVG	Enter the averaging count for the active defined segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGAVG?	Output the averaging count of the active defined segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGDFD	Done specifying discrete frequency ranges for the active discrete segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGDFQ	Enter a single discrete frequency for the active discrete segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGDFQ?	Output the discrete fill single discrete frequency for the active discrete segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGFIL	Fill the defined discrete frequency range for the active discrete segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGFRC	Clear all of the defined discrete frequency ranges for the active discrete segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGFRI	Enter the segmented sweep discrete fill increment frequency for the active discrete segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGFRI?	Output the segmented sweep discrete fill increment frequency for the active discrete segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGFRP	Enter the segmented sweep discrete fill number of points for the active discrete segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGFRP?	Output the discrete fill number of points for the active discrete segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGFRS	Enter the discrete fill start frequency for the active discrete segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGFRS?	Output the discrete fill start frequency for the active discrete segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGIFBW10	Set the IFBW to 10 Hz for the active defined segment in the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGIFBW100	Set the IFBW to 100 Hz for the active defined segment in the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGIFBW10K	Set the IFBW to 10 kHz for the active defined segment in the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGIFBW1K	Set the IFBW to 1 kHz for the active defined segment in the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGIFBW30	Set the IFBW to 30 Hz for the active defined segment in the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGIFBW300	Set the IFBW to 300 Hz for the active defined segment in the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
DSGIFBW30K	Set the IFBW to 30 kHz for the active defined segment in the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGIFBW3K	Set the IFBW to 3 kHz for the active defined segment in the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGIFBWX?	Output the active defined segment IF bandwidth in the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGNO	Set the active defined segment number for the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGNO?	Output the active defined segment number for the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGOFF	Turn the active defined segment flag OFF	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGON	Turn the active define segment flag ON	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGONDF	Output the number of discrete frequencies	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGPTS	Enter the number of points for the active defined segment for the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGPTS?	Output the number of points of the active defined segment for the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGPWR1	Enter the Source 1 power level for the active segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGPWR1?	Output the Source 1 power level of the active segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGPWR2	Enter the Source 2 power level for the active segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGPWR2?	Output the Source 2 power level of the active segment	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGSTP	Enter the stop frequency of the active defined segment for the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGSTP?	Output the start frequency of the active defined segment for the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGSTRT	Enter the start frequency of the active defined segment for the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
DSGSTRT?	Output the start frequency of the active define segment for the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
OSGLOG	Output the current segmented sweep log	SWEEP - SEGMENTED SWEEP (Ch 5)
PSGLOG	Print the current segmented sweep log	SWEEP - SEGMENTED SWEEP (Ch 5)
SG?	Output the segmented sweep flag on/off status	SWEEP - SEGMENTED SWEEP (Ch 5)
SGAPL	Apply the current define definition of the segmented sweep	SWEEP - SEGMENTED SWEEP (Ch 5)
SGMODE?	Query the segmented sweep define mode	SWEEP - SEGMENTED SWEEP (Ch 5)
SGOFF	Turn the segmented sweep flag OFF	SWEEP - SEGMENTED SWEEP (Ch 5)
SGON	Turn the segmented sweep flag ON	SWEEP - SEGMENTED SWEEP (Ch 5)
SGPTS?	Output the total number of points of all of the applied segments	SWEEP - SEGMENTED SWEEP (Ch 5)
SGSTP?	Output the stop frequency of the last applied segment	SWEEP - SEGMENTED SWEEP (Ch 5)
SGSTRT?	Output the start frequency of the first applied segment	SWEEP - SEGMENTED SWEEP (Ch 5)
ADDGP?	Output instrument GPIB address	UTILITY (Ch 5)
ADDIP?	Output instrument network IP address	UTILITY (Ch 5)
ADDPLT	Enter plotter GPIB address	UTILITY (Ch 5)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
ADDPLT?	Output plotter GPIB address	UTILITY (Ch 5)
ADDPM	Enter power meter GPIB address	UTILITY (Ch 5)
ADDPM?	Output power meter GPIB address	UTILITY (Ch 5)
ANNCOL	Enter the color number for annotation and menu text	UTILITY (Ch 9)
ANNCOL?	Output the color number for annotation and menu text	UTILITY (Ch 9)
BC0	Turn LCD display off (disabled)	UTILITY (Ch 9)
BC1	Turn LCD display on (enabled)	UTILITY (Ch 9)
BCKCOL	Enter the color number for background	UTILITY (Ch 9)
BCKCOL?	Output the color number for background	UTILITY (Ch 9)
BCX?	Output LCD display on/off status	UTILITY (Ch 9)
BEEP0	Disable the instrument beeper on GPIB errors	UTILITY (Ch 9)
BEEP1	Enable the instrument beeper on GPIB errors	UTILITY (Ch 9)
BEEPX?	Output GPIB beep on error enable/disable status	UTILITY (Ch 9)
MKRCOL	Enter the color number for the markers	UTILITY (Ch 9)
MKRCOL?	Output the color number for the markers	UTILITY (Ch 9)
DAC	Enter DAC number of 10 MHz calibration	UTILITY (Ch 9)
DAC?	Output DAC number of 10 MHz calibration	UTILITY (Ch 9)
DATCOL	Enter the color number for data	UTILITY (Ch 9)
DATCOL?	Output the color number for data	UTILITY (Ch 9)
DATE	Enter the system date	UTILITY (Ch 9)
DATE?	Output the system date	UTILITY (Ch 9)
DC1	Display channel 1 and 2 operating parameters	UTILITY (Ch 9)
DC3	Display channel 3 and 4 operating parameters	UTILITY (Ch 9)
DCP	Display calibration parameters 1st page	UTILITY (Ch 9)
DCP1	Display calibration parameters 1st page	UTILITY (Ch 9)
DF2	Display 2.4mm female connector information	UTILITY (Ch 9)
DF3	Display GPC-3.5 female connector information	UTILITY (Ch 9)
DF716	Display 7/16 female connector information	UTILITY (Ch 9)
DFK	Display K female connector information	UTILITY (Ch 9)
DFN	Display N female connector information	UTILITY (Ch 9)
DFN75	Display N Female 75-Ohm connector information	UTILITY (Ch 9)
DFP	Display front panel instrument state	UTILITY (Ch 9)
DFS	Display SMA female connector information	UTILITY (Ch 9)
DFSP	Display special female connector information	UTILITY (Ch 9)
DFT	Display TNC female connector information	UTILITY (Ch 9)
DFV	Display female V Connector information	UTILITY (Ch 9)
DG7	Display GPC-7 male connector information	UTILITY (Ch 9)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
DGS	Display GPIB status information	UTILITY (Ch 9)
DM2	Display 2.4mm male connector information	UTILITY (Ch 9)
DM3	Display GPC-3.5 male connector information	UTILITY (Ch 9)
DM716	Display 7/16 male connector information	UTILITY (Ch 9)
DMK	Display K male connector information	UTILITY (Ch 9)
DMN	Display N male connector information	UTILITY (Ch 9)
DMN75	Display N Male 75-Ohm connector information	UTILITY (Ch 9)
DMS	Display SMA male connector information	UTILITY (Ch 9)
DMSP	Display Special Male connector information	UTILITY (Ch 9)
DMT	Display TNC male connector information	UTILITY (Ch 9)
DMV	Display V male connector information	UTILITY (Ch 9)
DWG	Display waveguide parameters	UTILITY (Ch 9)
GRTCOL	Enter the color number for the graticule	UTILITY (Ch 9)
GRTCOL?	Output the color number for the graticule	UTILITY (Ch 9)
LANG	Enable the specified language support	UTILITY (Ch 9)
LANG?	Query the current language support	UTILITY (Ch 9)
LAYCOL	Enter the color number for overlay data	UTILITY (Ch 9)
LAYCOL?	Output the color number for overlay data	UTILITY (Ch 9)
MNUCOL	Enter the color number for the menu headers	UTILITY (Ch 9)
MNUCOL?	Output the color number for the menu headers	UTILITY (Ch 9)
RSTCOL	Reset color configuration to default	UTILITY (Ch 9)
RSTDAC	Restore frequency from 10 MHz calibration and not save DAC number into BBRAM	UTILITY (Ch 9)
TIME	Enter the system time	UTILITY (Ch 9)
TIME?	Output the system time	UTILITY (Ch 9)
TRCCOL	Enter the color number for memory data	UTILITY (Ch 9)
TRCCOL?	Output the color number for memory data	UTILITY (Ch 9)
WIDE	Use entire display width for graphs	UTILITY (Ch 9)
ALC	Perform ALC loop internal calibration	UTILITY - DIAGNOSTICS (Ch 9)
BAC	Perform backend attenuator calibration	UTILITY - DIAGNOSTICS (Ch 9)
DGT	Display first LCD test pattern	UTILITY - DIAGNOSTICS (Ch 9)
DGT1	Display first LCD test pattern	UTILITY - DIAGNOSTICS (Ch 9)
DGT2	Display second LCD test pattern	UTILITY - DIAGNOSTICS (Ch 9)
DGT3	Display third LCD test pattern	UTILITY - DIAGNOSTICS (Ch 9)
DRL	Diagnostic read latch	UTILITY - DIAGNOSTICS (Ch 9)
DVM	Enter DVM channel number	UTILITY - DIAGNOSTICS (Ch 9)
DWL	Diagnostic write latch	UTILITY - DIAGNOSTICS (Ch 9)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
EDG	End diagnostics mode	UTILITY - DIAGNOSTICS (Ch 9)
EKT	Select external keyboard testing	UTILITY - DIAGNOSTICS (Ch 9)
EXD	Display external A/D input	UTILITY - DIAGNOSTICS (Ch 9)
FPT	Select front panel keypad testing	UTILITY - DIAGNOSTICS (Ch 9)
NFV	Start noise figure verification	UTILITY - DIAGNOSTICS (Ch 9)
NFVNB?	Output noise figure verification NB data	UTILITY - DIAGNOSTICS (Ch 9)
NFVNC?	Output noise figure verification NC data	UTILITY - DIAGNOSTICS (Ch 9)
NFVND?	Output noise figure verification ND data	UTILITY - DIAGNOSTICS (Ch 9)
NFVSB?	Output noise figure verification SB data	UTILITY - DIAGNOSTICS (Ch 9)
NFVSC?	Output noise figure verification SC data	UTILITY - DIAGNOSTICS (Ch 9)
NFVSD?	Output noise figure verification SD data	UTILITY - DIAGNOSTICS (Ch 9)
PRT?	Perform printer test and output status	UTILITY - DIAGNOSTICS (Ch 9)
SDG	Start diagnostics mode	UTILITY - DIAGNOSTICS (Ch 9)
TSALCMS1	Source 1 ALC modulator drive voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSALCMS2	Source 2 ALC modulator drive voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSALCS1	Select source 1 for ALC verification	UTILITY - DIAGNOSTICS (Ch 9)
TSALCS2	Select source 2 for ALC verification	UTILITY - DIAGNOSTICS (Ch 9)
TSALCV	Start source ALC verification	UTILITY - DIAGNOSTICS (Ch 9)
TSBEG	Start diagnostics mode - same as SDG	UTILITY - DIAGNOSTICS (Ch 9)
TSDDSS1	Source 1 reference DDS voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSDDSS2	Source 2 reference DDS voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSDRAM	Start DRAM test	UTILITY - DIAGNOSTICS (Ch 9)
TSDSPSRAM	Start DSP SRAM test	UTILITY - DIAGNOSTICS (Ch 9)
TSDVMC	Enter DVM channel number - same as DVM	UTILITY - DIAGNOSTICS (Ch 9)
TSEFMEM	Start extended FLASH memory test	UTILITY - DIAGNOSTICS (Ch 9)
TSEND	End diagnostics mode - same as EDG	UTILITY - DIAGNOSTICS (Ch 9)
TSEXTI	Display external A/D input - same as EXD	UTILITY - DIAGNOSTICS (Ch 9)
TSFMEM	Start FLASH memory test	UTILITY - DIAGNOSTICS (Ch 9)
TSGDRAM	Start graphic DRAM test	UTILITY - DIAGNOSTICS (Ch 9)
TSGVRAM	Start graphic VRAM test	UTILITY - DIAGNOSTICS (Ch 9)
TSHETO	Het oscillator voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSLATR?	Diagnostic read latch - same as DRL	UTILITY - DIAGNOSTICS (Ch 9)
TSLATW	Diagnostic write latch - same as DWL	UTILITY - DIAGNOSTICS (Ch 9)
TSLEVAS1	Source 1 level amplifier voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSLEVAS2	Source 2 level amplifier voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSLOGAS1	Source 1 logarithmic amplifier voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSLOGAS2	Source 2 logarithmic amplifier voltage	UTILITY - DIAGNOSTICS (Ch 9)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
TSMAIVLO1	LO1 main VCO voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSMAIVS1	Source 1 main VCO voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSMAIVS2	Source 2 main VCO voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSMCOO0	Common offset mode off	UTILITY - DIAGNOSTICS (Ch 9)
TSMCOO1	Common offset mode on	UTILITY - DIAGNOSTICS (Ch 9)
TSMHAR0	Harmonic mode off	UTILITY - DIAGNOSTICS (Ch 9)
TSMHAR1	Harmonic mode on	UTILITY - DIAGNOSTICS (Ch 9)
TSMSPA0	Spur avoidance mode off	UTILITY - DIAGNOSTICS (Ch 9)
TSMSPA1	Spur avoidance mode on	UTILITY - DIAGNOSTICS (Ch 9)
TSMSPU0	Speed up circuit mode off	UTILITY - DIAGNOSTICS (Ch 9)
TSMSPU1	Speed up circuit mode on	UTILITY - DIAGNOSTICS (Ch 9)
TSOFFVLO1	LO1 offset VCO voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSOFFVS1	Source 1 offset VCO voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSOFFVS2	Source 2 offset VCO voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSPWRLS1	Source 1 power level DAC voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSPWRLS2	Source 2 power level DAC voltage	UTILITY - DIAGNOSTICS (Ch 9)
TSSRAM	Start SRAM test	UTILITY - DIAGNOSTICS (Ch 9)
TSSRAMD	Start SRAM disk test	UTILITY - DIAGNOSTICS (Ch 9)
TSTRENF	Noise figure measurement	UTILITY - DIAGNOSTICS (Ch 9)
ADRIVE	Select the floppy drive as the default drive	UTILITY - DISK (Ch 9)
CD	Change default directory	UTILITY - DISK (Ch 9)
CDRIVE	Select the hard disk as the default drive	UTILITY - DISK (Ch 9)
COPY	Copy a files contents to another file	UTILITY - DISK (Ch 9)
CPYALLFH	Copy combined hardware cal file from floppy to hard disk	UTILITY - DISK (Ch 9)
CPYALLHF	Copy combined hardware cal file from hard to floppy disk	UTILITY - DISK (Ch 9)
CWD?	Output current working directory string	UTILITY - DISK (Ch 9)
DEL	Delete a file from disk	UTILITY - DISK (Ch 9)
DELALL	Delete combined hardware cal file from floppy disk	UTILITY - DISK (Ch 9)
DELALLH	Delete combined hardware cal file from hard disk	UTILITY - DISK (Ch 9)
DIR	Output a directory listing to the GPIB	UTILITY - DISK (Ch 9)
DISKRD	Output disk file data to the GPIB	UTILITY - DISK (Ch 9)
DISKWR	Write GPIB data to a disk file	UTILITY - DISK (Ch 9)
EXISTD?	Output directory existence information	UTILITY - DISK (Ch 9)
EXISTF?	Output file existence information	UTILITY - DISK (Ch 9)
INT	Initialize (format) floppy disk	UTILITY - DISK (Ch 9)
LKT	Load calibration kit information from floppy disk	UTILITY - DISK (Ch 9)
MD	Create a new disk directory	UTILITY - DISK (Ch 9)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
PDR	Print directory listing of the floppy drive	UTILITY - DISK (Ch 9)
PDRH	Print directory listing of the hard drive	UTILITY - DISK (Ch 9)
RCLALL	Recall combined hardware calibration file from floppy disk	UTILITY - DISK (Ch 9)
RCLALLH	Recall combined hardware calibration file from hard disk	UTILITY - DISK (Ch 9)
RD	Remove a disk directory	UTILITY - DISK (Ch 9)
SAVALL	Save combined hardware cal to floppy disk	UTILITY - DISK (Ch 9)
SAVALLH	Save combined hardware cal to hard disk	UTILITY - DISK (Ch 9)
SAVEGC	Save text format gain compression data to disk	UTILITY - DISK (Ch 9)
RVA1	Enter rear panel output voltage value when port 1 is driving	UTILITY - REAR PANEL (Ch 10)
RVA1?	Output rear panel output voltage value when port 1 is driving	UTILITY - REAR PANEL (Ch 10)
RVA2	Enter rear panel output voltage value when port 2 is driving	UTILITY - REAR PANEL (Ch 10)
RVA2?	Output rear panel output voltage value when port 2 is driving	UTILITY - REAR PANEL (Ch 10)
RVA3	Enter rear panel output voltage value when port 3 is driving	UTILITY - REAR PANEL (Ch 10)
RVA3?	Output rear panel output voltage value when port 3 is driving	UTILITY - REAR PANEL (Ch 10)
RVA4	Enter rear panel output voltage value when Port 4 is driving	UTILITY - REAR PANEL (Ch 10)
RVA4?	Output rear panel output voltage value when Port 4 is driving	UTILITY - REAR PANEL (Ch 10)
RVD	Set rear panel output mode to dc value	UTILITY - REAR PANEL (Ch 10)
RVH	Set rear panel output mode to horizontal	UTILITY - REAR PANEL (Ch 10)
RVL	Set rear panel output mode to lock direction	UTILITY - REAR PANEL (Ch 10)
RVP	Set rear panel output mode to driven port	UTILITY - REAR PANEL (Ch 10)
RVSP	Enter rear panel stop voltage value	UTILITY - REAR PANEL (Ch 10)
FREFE	Select external frequency reference	UTILITY - REAR PANEL (Ch 10)
FREFI	Select internal frequency reference	UTILITY - REAR PANEL (Ch 10)
FREFX?	Output frequency reference internal/external setting	UTILITY - REAR PANEL (Ch 10)
RPO	Enter rear panel DC voltage value	UTILITY - REAR PANEL (Ch 10)
RPO?	Output rear panel DC voltage value	UTILITY - REAR PANEL (Ch 10)
RV0	Turn rear panel output voltage off	UTILITY - REAR PANEL (Ch 10)
RV1	Turn rear panel output voltage on	UTILITY - REAR PANEL (Ch 10)
RV1?	Output rear panel output voltage on/off status	UTILITY - REAR PANEL (Ch 10)
RVSP?	Output rear panel stop voltage value	UTILITY - REAR PANEL (Ch 10)
RVST	Enter rear panel start voltage value	UTILITY - REAR PANEL (Ch 10)
RVST?	Output rear panel start voltage value	UTILITY - REAR PANEL (Ch 10)
RVT	Set rear panel output mode to TTL	UTILITY - REAR PANEL (Ch 10)
RVTP1	Select port 1 for TTL rear panel output voltage	UTILITY - REAR PANEL (Ch 10)
RVTP1HL	Set TTL rear panel output voltage type to TTL active high level	UTILITY - REAR PANEL (Ch 10)
RVTP1HP	Set TTL rear panel output voltage type to TTL active high pulse	UTILITY - REAR PANEL (Ch 10)
RVTP1LL	Set TTL rear panel output voltage type to TTL active low level	UTILITY - REAR PANEL (Ch 10)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
RVTP1LP	Set TTL rear panel output voltage type to TTL active low pulse	UTILITY - REAR PANEL (Ch 10)
RVTP1X?	Output TTL rear panel output voltage type	UTILITY - REAR PANEL (Ch 10)
RVTP2	Select port 2 for TTL rear panel output voltage	UTILITY - REAR PANEL (Ch 10)
RVTP2HL	Set TTL rear panel output voltage type on port 2 to TTL active high level.	UTILITY - REAR PANEL (Ch 10)
RVTP2HP	Set TTL rear panel output voltage type on port 2 to TTL active high pulse.	UTILITY - REAR PANEL (Ch 10)
RVTP2LL	Set TTL rear panel output voltage type on port 2 to TTL active low level.	UTILITY - REAR PANEL (Ch 10)
RVTP2LP	Set TTL rear panel output voltage type on port 2 to TTL active low pulse.	UTILITY - REAR PANEL (Ch 10)
RVTP2X?	Output TTL rear panel output voltage type on port 2.	UTILITY - REAR PANEL (Ch 10)
RVTP3	Select port 3 for TTL rear panel output voltage	UTILITY - REAR PANEL (Ch 10)
RVTP3HL	Set TTL rear panel output voltage type on port 3 to TTL active high level.	UTILITY - REAR PANEL (Ch 10)
RVTP3HP	Set TTL rear panel output voltage type on port 3 to TTL active high pulse.	UTILITY - REAR PANEL (Ch 10)
RVTP3LL	Set TTL rear panel output voltage type on port 3 to TTL active low level.	UTILITY - REAR PANEL (Ch 10)
RVTP3LP	Set TTL rear panel output voltage type on port 3 to TTL active low pulse.	UTILITY - REAR PANEL (Ch 10)
RVTP3X?	Output TTL rear panel output voltage type on port 3.	UTILITY - REAR PANEL (Ch 10)
RVTP4	Select Port 4 for TTL rear panel output voltage.	UTILITY - REAR PANEL (Ch 10)
RVTP4HL	Set TTL rear panel output voltage type on port 4 to TTL active high level	UTILITY - REAR PANEL (Ch 10)
RVTP4HP	Set TTL rear panel output voltage type on port 4 to TTL active high pulse	UTILITY - REAR PANEL (Ch 10)
RVTP4LL	Set TTL rear panel output voltage type on port 4 to TTL active low level	UTILITY - REAR PANEL (Ch 10)
RVTP4LP	Set TTL rear panel output voltage type on port 4 to TTL active low pulse	UTILITY - REAR PANEL (Ch 10)
RVTP4X?	Output TTL rear panel output voltage type on port 4	UTILITY - REAR PANEL (Ch 10)
RVTPX?	Output TTL rear panel output voltage type	UTILITY - REAR PANEL (Ch 10)
RVV	Set rear panel output mode to vertical	UTILITY - REAR PANEL (Ch 10)
RVX?	Output rear panel output mode	UTILITY - REAR PANEL (Ch 10)
VSP	Enter rear panel stop voltage value	UTILITY - REAR PANEL (Ch 10)
VSP?	Output rear panel stop voltage value	UTILITY - REAR PANEL (Ch 10)
VST	Enter rear panel start voltage value	UTILITY - REAR PANEL (Ch 10)
VST?	Output rear panel start voltage value	UTILITY - REAR PANEL (Ch 10)
CSL	Clear service log	UTILITY - SERVICE LOG (Ch 9)
OSL	Output service log	UTILITY - SERVICE LOG (Ch 9)

Table 2. *Functional Listing of Programming Codes (Mnemonics)*

Command	Description	Function
PEL	Print the error list	UTILITY - SERVICE LOG (Ch 9)
PSL	Print the service log	UTILITY - SERVICE LOG (Ch 9)


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