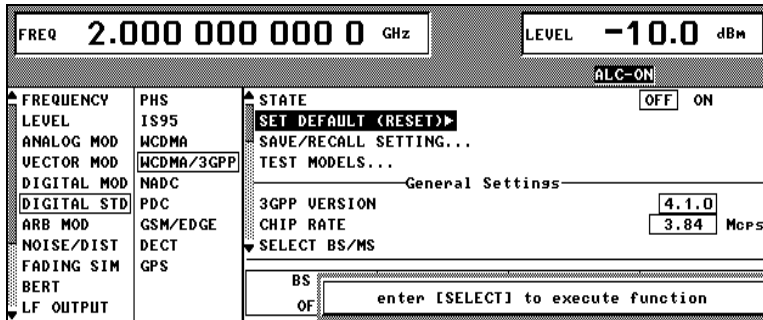


SMIQ power settings and displays in W-CDMA 3GPP

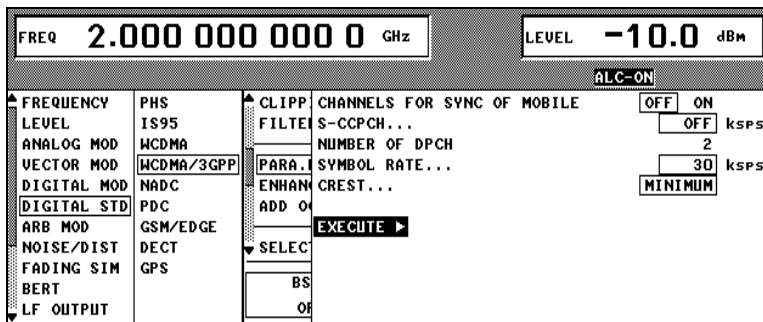
Purpose of „Total Power“ and „Adjust Total Power“

1



1. Start with „preset“
2. Frequency 2 GHz
3. Level -10 dBm
4. W-CDMA/3GPP menu
5. Press „Set Default“

2



Make the settings on the left in the „Para. Predef Setting...“ menu and press „Execute“ (only 2 DPCH's are activated)

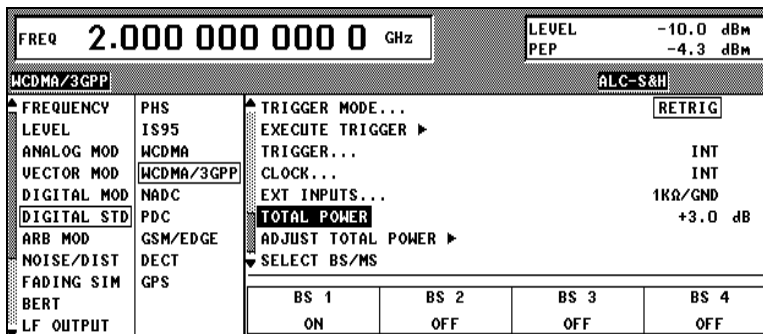
3

CHNO	TYPE	SYM. RATE	CH. COD	POW/DB	DATA	TOFFS	PILOT	TPC	MC	STATE
5	S-CCPCH	15	0	0.0	PN15	0	0			OFF
6	PICH	15	0	0.0	PN15	0				OFF
7	AP-AICH	15	0	0.0				PATT		OFF
8	AICH	15	0	0.0				PATT		OFF
9	PDSCH	15	0	0.0	PN15					OFF
10	DL-DPCH	7.5	0	0.0				PATT		OFF
11	DPCH	30	64	0.0	PN15	0	4	PATT	OFF	ON
12	DPCH	30	0	0.0	PN15	3	4	PATT	OFF	ON
13	DPCH	15	0	0.0	PN15	0	4	PATT	OFF	OFF
14	DPCH	15	0	0.0	PN15	0	4	PATT	OFF	OFF

Select in the „Select BS/MS“ menu „BS 1“. There are two activated DPCH's in the lower part of the menu (channel 11 and 12). Both of them with 0 power in dB.

This stated power is relative to the powers of the other channels and initially does not refer to the RF level.

4



In the top level of the 3GPP W-CDMA menu switch „State“ to on. Calculation will start and afterwards the read only parameter „total power“ is displayed. Two times 0 dB relative power for channel 11 and 12 leads to +3 dB of „Total Power“ (hint: you still have the same channel display as shown in figure 3).

The RF power of these settings are -10 dBm !

5

FREQ		2.000 000 000 0 GHz				LEVEL		-10.0 dBm		
						PEP		-4.3 dBm		
WCDMA/3GPP					ALC-S&H					
CHNO	TYPE	SYM. RATE	CH. COD	POW/DB	DATA	TOFFS	PILOT	TPC	MC	STATE
5	S-CCPCH	15	0	0.0	PN15	0	0			OFF
6	PICH	15	0	0.0	PN15	0				OFF
7	AP-AICH	15	0	0.0				PATT		OFF
8	AICH	15	0	0.0				PATT		OFF
9	PDSCH	15	0	0.0	PN15					OFF
10	DL-DPCCH	7.5	0	0.0				PATT		OFF
11	DPCH	30	64	-3.0	PN15	0	4	PATT	OFF	ON
12	DPCH	30	0	-3.0	PN15	3	4	PATT	OFF	ON
13	DPCH	15	0	0.0	PN15	0	4	PATT	OFF	OFF
14	DPCH	15	0	0.0	PN15	0	4	PATT	OFF	OFF

After activating „Adjust Total Power“ all power settings in the channel table are adjusted to 0 dB „Total Power“ (in figure 4 the „Total Power“ figure changes to 0 dB). The power relation between the active channels will not be influenced by this setting. The absolute power in this example for channel 11 and 12 is:
 (-10 dBm) + (-3 dB) = -13 dBm (each)

Conclusion:

- In the channel table the relative power between the channels is displayed („POW/DB“)
- The absolute power of each active channel after pressing „Adjust Total Power“ can be calculated by:
 (RF level) + („POW/DB“)
- The RF level (in this example -10 dBm) is never influenced by the settings above