ASTRO

Programmable Video Signal Generator

VG-881

Instruction Manual

Ver 1.01

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Instruction Manual

2010.2

Ver.1.01

ASTRODESIGN,Inc

Contents

Before Use iii

Chapter 1. **CONCERNING THE VG-881** 1

1.1 General descriptions 1

1.2 Features 1

1.3 Product specifications 2

1.3.1 General specifications 2

1.3.2 Unit specifications 2

1.4 Parts and their functions 3

1.4.1 VG-881 Front Panel 3

1.4.2 VG-881 Rear Panel 4

1.4.3 Output Interface 5

1.4.3.1 HDMI BOARD 5

1.4.3.2 TV ANALOG BOARD 5

1.4.3.3 SCART BOARD 5

1.5 Data structures 6

1.6 CF Card 7

1.6.1 CF Card insert 7

1.6.2 Taking out the CF Card 7

1.7 External Interface 8

1.7.1 RS-232C Connector 8

Chapter 2. **Output Board** 9

2.1 HDMI Board 9

2.1.1 Output specifications 9

2.1.2 Connector and pin assignment 10

2.2 TV ANALOG Board 11

2.2.1 Output specifications 11

2.2.2 Connector and pin assignment 12

2.2.2.1 Composite 12

2.2.2.2 Y/C (S connector) 12

2.2.2.3 D5 (D connector) 13

2.2.2.4 Component (RCA) 13

2.2.2.5 VGA (D-Sub) 13

2.2.2.6 Analog Audio 14

2.3 SCART Board 15

2.3.1 Output specifications 15

2.3.2 Connector and pin assignment 16

2.3.2.1 SCART 16

Chapter 3. **Operations** 17
3.1 Menu selection 17
3.2 Manual Test 18
3.2.1 Large group selection 18
3.2.2 Sample Program 18
3.2.3 Large group execution 19
3.3 Automatic Test 20
3.3.1 Operations 20
3.3.1.1 All interface execution. 20
3.3.1.2 One interface execution 21
3.4 Configuration 22
3.5 Copy / Erase / Format 24
3.6 Information 25
3.7 TV/SCART Adjust 26
3.8 Editing 27
3.8.1 Register the internal patterns. 27
3.8.2 Register the user timings 27
3.8.3 Make the program data. 28
3.8.4 Group data 28
3.8.5 USER KEY BLOCK data 28
Chapter 4. Cautions 29
4.1 Concerning the DDC power supply 29

Before Use

Introduction

Thank you for very much purchasing the model Video Signal Generator VG-881.
This manual contains details on the operation procedures to be followed when the VG-881 is used, the checkpoints and precautions to be observed, and so on.
Before using the VG-881, please read through these instructions.
After reading the manual, keep it in a safe place for future reference.

Safety Precautions

⚠ Warning

Concerning the generator

- **Do not subject the generator to impact or throw it. Doing so may cause the generator to malfunction, explode or generate abnormally high levels of heat, possibly resulting in a fire.**
- **Do not use the generator where there is a danger of ignition or explosions.**
- **Do not place the generator inside a microwave oven or other heating kitchen appliance or inside a high pressure vessel. Doing so may heat up the generator to abnormally high levels, cause smoking, running the risk of the generator's catching fire and/or damaging the circuit components.**
- **This generator contains some high-voltage parts. If you touch them, you may receive an electric shock and burn yourself so do not attempt to disassemble, repair or remodel the generator.**
- **If there is a thunderstorm while the generator is being used outdoors, immediately turn off its power, disconnect the power cable from the main unit, and move the generator to a safe place.**

Concerning the power cord

- **Always take hold of the molded part of the plug when disconnecting the power cable.**
- **Do not use force to bend the power cable or bunch it up for use. Doing so may cause a fire.**
- **Do not place heavy objects on top of the power cable. Doing so may damage the cord, causing a fire or electrical shock.**

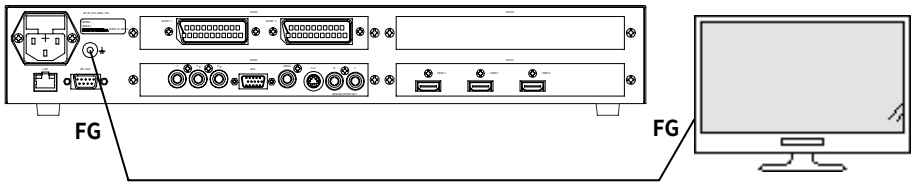
Concerning foreign matter

- **Do not spill liquids inside the monitor or drop inflammable objects or metal parts into it. Operating the switcher under these conditions may cause a fire, electric shocks and/or malfunctioning.**

⚠ Caution

Concerning the generator

■ **When connecting the generator to a display unit, use the FG cable provided to connect the frame ground (FG) terminal on the generator to the frame ground terminal on the display unit. If these terminals are not connected together, the generator may fail. Take special care when connecting the generator to a display unit which is under development.**



■ **When disconnecting the VG-881 from the display unit, first disconnect the connecting cables, and then disconnect the FG cable.**

■ **When the generator's power is to be turned ON or OFF, be absolutely sure to use the POWER switch on the front panel. Turning the power on and off by plugging in and unplugging the AC power cable may damage the PC card.**

■ **Do not start using the generator straight away: instead, turn on the power of the VG-881 and allow it to warm up for about 10 to 15 minutes before use so as to ensure that the VG-881 will operate stably.**

■ **During accessing to the CF Card, LED besides the CF card slot blinks. During it is blinking, do not take off the card. Otherwise, it will damage the unit.**

Concerning impact

■ **This is a precision instrument and, as such, subjecting it to impact may cause malfunctioning. Take special care when moving the generator.**

■ **Do not drop the generator.**

Concerning installation

■ **Install the generator in a stable location. Do not stand it on either of its side panels. Doing so may cause the generator's temperature to rise due to heat generation, possibly resulting in malfunctioning.**

When trouble or malfunctioning has occurred

■ **In the unlikely event that trouble or malfunctioning should occur, disconnect the generator's power cable, and contact your dealer or an ASTRODESIGN sales representative.**

What is packed with the generator

The generator comes with the following items.

- VG-881 Main unit
- VG-881 instruction manual (what you are now reading) : 1 disc
- Compact Flash (CF) card : 1 pc
- Compact Flash (CF) card case : 1 pc
- Power cable : 1 pc *1
- FG cable (1.5m) : 1 pc *1

*1) These cables are designed to be used exclusively with the VG-881.

1 CONCERNING THE VG-881

1.1 General descriptions

The VG-881 video signal generator supports applications in every field of display test and measuring.
The output that supports various kinds of display, such as CRT, LCD, PDP and digital TV can be used for R&D, production line, inspection and maintenance.
Each interface can output different patterns and timings independently.

1.2 Features

- **Dot Clock165MHz, Output level 12-bit**
- **Simultaneous output colors 256. (Only Linear RAMP can output in the full level)**
- **Maximum resolution 1920 x 1200 (WUXGA)**
- **Different pattern and timings can be output from the different interface.**
- **Various TV interfaces are supported, HDMI, Composite, S-terminal, D-terminal, Component, VGA and SCART.**
- **Easy operation by using the front keys.**
- **Program edit is done by PC only.**
- **LAN / RS-232C communication**
- **Memory storage is in the CF card.**

1.3 Product specifications

1.3.1 General specifications

Table 1.3.1 General specifications

Power supply voltage	AC100 to 120V, AC200 to 240V
Frequency	50Hz/ 60Hz
Power consumption	50W
Outer dimensions	430 (W) ×66 (H) ×320 (D) mm (excluding the projected parts.)
Weight	Max 5 Kgs (when TV ANALOG board x 4 are installed.)
Operating temperature	5 to 40°C
Storage humidity	−10 to 60°C
Humidity	30 to 85%RH (no condensation)

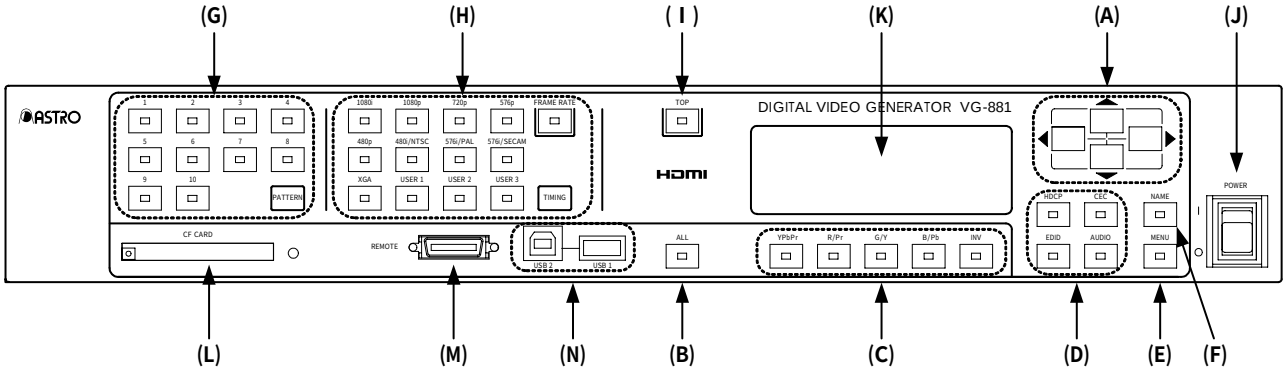
1.3.2 Unit specifications

Table 1.3.2 Unit specifications

Item		Descriptions
Resolution		1920 x 1200
Color Space		RGB/YPbPr (4:4:4, 4:2:2)
Simultaneous output colors	standard	256 colors
	Linear Ramp	Output level is based on the BIT width. (Horizontal direction ramp only)
Capable output colors (output level)		65535 x RGB (16bit) (In the current version, HDMI mux is 12-bit)
Dot Clock		25 to 165MHz (except NTSC, PAL, SECAM output)
External interface		RS-232C USB (under development) LAN
Storage media		CF Card

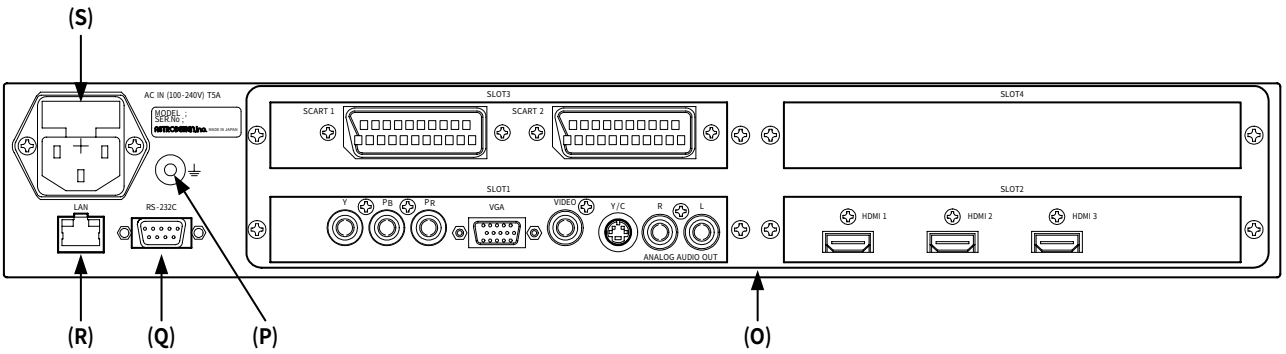
1.4 Parts and their functions

1.4.1 VG-881 Front Panel



(A)	Cross key	Select up, down, right, and left.
(B)	ALL key	Apply the program No. change to all interfaces.
(C)	RGB On/Off key	RGB On/Off
	YPbPr key	Switch YPbPr and RGB.
	INV key	White-black inverse the video level
(D)	HDCP key	HDCP On/Off
	CEC key	Send CEC commands.
	EDID key	The EDID of the connected display is displayed on the screen.
	AUDIO key	AUDIO On/Off (MUTE)
(E)	MENU key	Select the mode
(F)	NAME key	Display the information of each display (port, timing, pattern etc) * Font size and display content can be edited by the software.
(G)	PATTERN select key	Select patterns
(H)	TIMING select key	Select timings
(I)	TOP key	Select the first program number of the group. (While selecting MENU, L-Group, it goes back to the top of each item)
(J)	Power button	Power on/off
(K)	VFD Panel	140×32 dot VFD panel
(L)	CF Card Slot	Insert CF Card. When taking out the CF card, use the EJECT button on the left of the slot.
	Caution: Pay attention treating CF card. Please see “1.6 CF card” about inserting / taking off the CF card.	
(M)	Connector for the remote box	* Remote box is not available now.
(N)	USB terminal	USB terminal (A/B Type) (USB communication is under development)

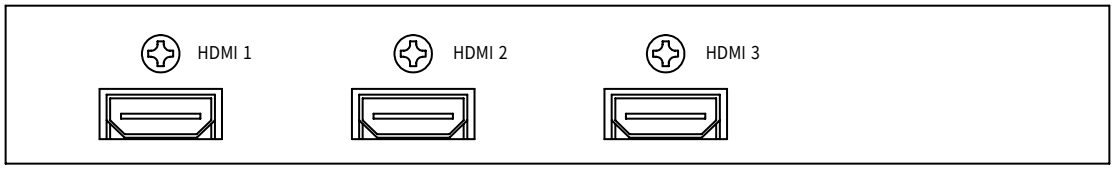
1.4.2 VG-881 Rear Panel



(O)	Output interface	Max. 4 boards can be installed.
(P)	Frame ground (FG)	Set the same FG between VG-881 and connecting devices.
(Q)	RS-232C connector	Connect with PC by RS-232C.
(R)	LAN connector	Connect with PC by LAN
(S)	AC input connector	Connect the power cable. 100 to 240V power voltage is supported.
	Caution User power switch when you turn off power. If you take off power cable during power on, CF card may be damaged.	

1.4.3 Output Interface

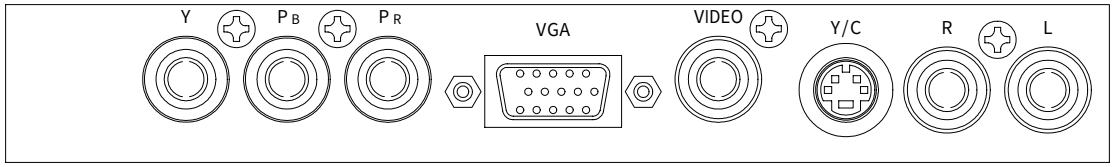
1.4.3.1 HDMI BOARD



HDMI output	**3 outputs**

Please refer to 2.1 HDMI board about the output specifications.

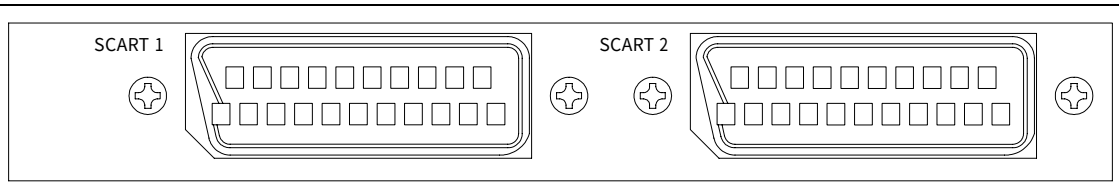
1.4.3.2 TV ANALOG BOARD



Video (Composite) output	RCA connectors	1 output
Y/C output	S connectors	1 output
VGA output	D-sub connectors	1 output
Component output	RCA connectors	User can select either one. (The figure shows the component RCA output as example.)
D-5 output	D connector	
Analog Audio output	RCA connectors	1 output

Please refer to 2.2 TV ANALOG board about the output specifications.

1.4.3.3 SCART BOARD



SCART output	**2 outputs**

Please refer to 2.3 SCART board about the output specifications.

1.5 Data structures

Group data is based on the program data (timing data and pattern data combination).

Each interface has small group data. In the below figure, A, B …L indicates each interface.

These small groups are combined to be a large group. In the below figure, Group 1, … 99 indicates big groups.

USER KEY BLOCK data stands for PATTERN and TIMING data assigned to PATTERN Select Key and TIMING Select Key.

* As for the way to make and arrange USER KEY BLOCK data, see SP-8870 operating manual. As for the way to register data from CF card to the VG main unit, see the section 3.5 “Copy / Erase / Format”

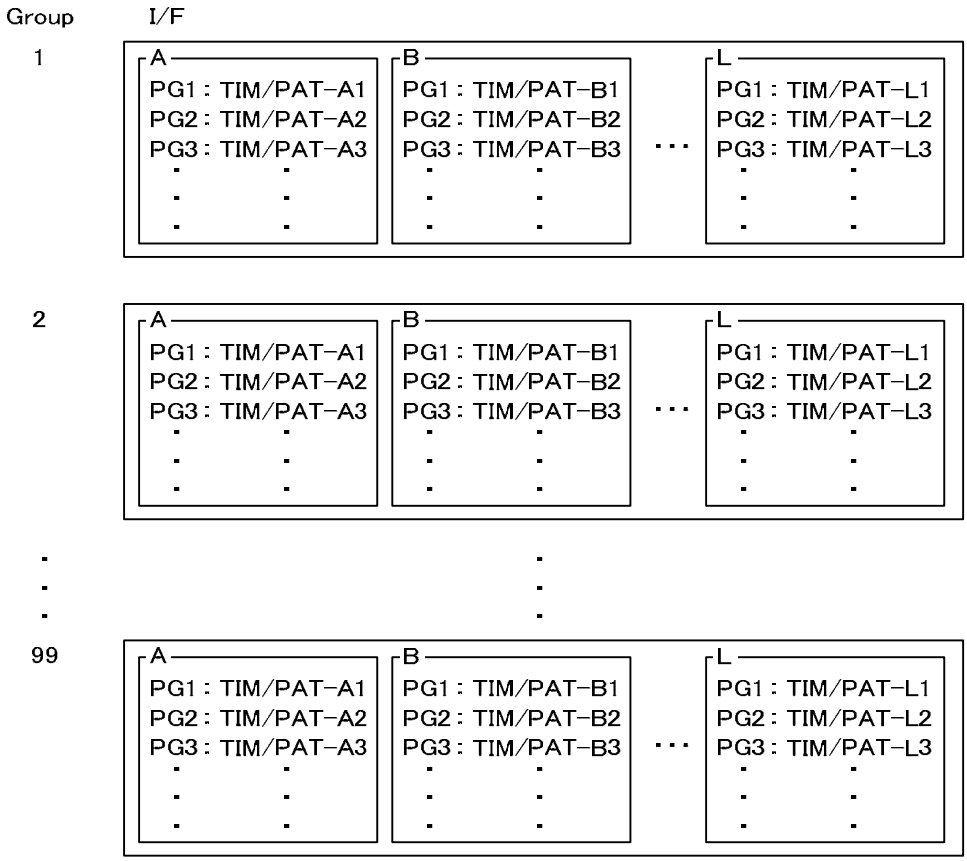


Fig. 1.5.1 Example of Large groups (test program)

Table 1.5.1 Each data register numbers

Item	Numbers
Program data	1000
Group (large group)	99
Small groups in a large group	12
Small group	99
Program data in a small group	98
USER KEY BLOCK data *	1

1.6 CF Card

CF Card can execute the following functions

Table 1.6.1 CF Card usage

Function	Description
Data storage	Save the following data ・Program data ・User Option data ・Bitmap data
Version up	Update the firmware and FPGA

1.6.1 CF Card insert

(1) Insert the CF Card as the direction that is shown on the surface of the card.

Insert it firmly.

You hear the beep sound.

If the CF card is locked correctly, LED becomes green after beep sound.

1.6.2 Taking out the CF Card

(1) Press the EJECT button besides the card slot lightly.

EJECT button is coming out.

(2) Push the EJECT button strongly, and take out the card.

LED lights off.

1) Please use the CF card that is attached to the unit. ASTRODESIGN does not guarantee the abnormal operation that is caused by using other cards.

2) Please keep instruction of CF card insertion. Otherwise, the card will be damaged.

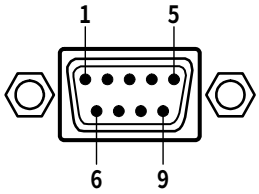
3) During accessing to the CF card, the LED blinks. During blinking, please do not take off the card. Otherwise, it may damage the unit.

1.7 External Interface

Table 1.7.1 External I/F

Function	Description
Remote Box	Remote control (not supporting now)
RS-232C	Communication with SP software
LAN	10/100BASE-T
USB	Under development

1.7.1 RS-232C Connector



Pin No.	I/O	Signal
1	–	NC
2	O	TXD (Transmitted data)
3	I	RXD (Received data)
4	–	Shorted with pin6
5	–	FG
6	–	Shorted with pin 4
7	I	CTS (Clear to Send)
8	O	RTS (Request to Send)
9	–	NC

2 Output Board

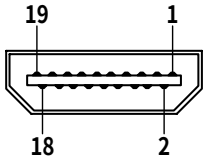
2.1 HDMI Board

2.1.1 Output specifications

Table 2.1.1 HDMI output specifications

Item		Specifications
HDMI output	Output numbers	3 port
	Standard	HDMI Ver1.3a CEA-861-E
	Dot Clock	25 to 165MHz（12bit: 25 to 150MHz）
	TMDS Clock	225MHz（MAX）
	TMDS Data	2.25GHz (MAX)
	Video Format	RGB, YPbPr 4:4:4 / 4:2:2
	resolution	8, 10. 12 bit (RGB、YPbPr 4:4:4, YPbPr 4:2:2)
	HDCP	HDCP Ver1.1 compliant
Audio	Channel numbers	8ch
	Sampling frequency	32, 48kHz
	Resolution	16, 20, 24 bit
	Frequency	100Hz to 20kHz (100Hz unit)
	Audio Source	Internal audio : sine wave

2.1.2 Connector and pin assignment



Pin No.	Signal
1	TMDS DATA2＋
2	TMDS DATA2 SHIELD
3	TMDS DATA2－
4	TMDS DATA1＋
5	TMDS DATA1 SHIELD
6	TMDS DATA1－
7	TMDS DATA0＋
8	TMDS DATA0 SHIELD
9	TMDS DATA0－
10	TMDS CLK＋
11	TMDS CLK SHIELD
12	TMDS CLK－
13	CEC
14	RESERVE
15	DDC CLK
16	DDC DATA
17	GROUND (for +5V)
18	+5V (DDC power supply *1)
19	HOT PLUG DETECT
Shell	FG

* Restrictions apply to the supply current of the DDC power supply. Refer to 4.1 Concerning the Maximum current consumption of the DDC power supply.

2.2 TV ANALOG Board

2.2.1 Output specifications

Table 2.2.1 Output format

Output connectors	Format
RCA connectors	CVBS (Composite), YPbPr (Component)
S connectors	Y/C (S-VIDEO)
VGA connectors	RGB
D connectors	YPbPr

*** Either RCA connector (YPbPr) or D connector (YPbPr) is selected to install.**

Table 2.2.2 Supported Timing

Item	Standard, Function
Output signal	1080i/p (SMPTE 274M) 720p (SMPTE 296M) 525p (SMPTE 293M)、625p (ITU-R BT.1358) NTSC-M/J/443, PAL-B/D/G/H/I/M/N/Nc/60, SECAM
Output level	Compliant with each standard (users can not adjust) D-sub, D connectors (can be adjusted) (0.3 to 1.2V)
Sync signal level	Compliant with each standard (users can not adjust)
Setup	Compliant with each standard (users can not adjust)
Video format	YPbPr (4:2:2/4:4:4), RGB
Output Impedance	75Ω
Others	Closed Caption, V chip, TeleText, WSS, ID1 Macrovision, CGMS-A * D connectors (component output) does not support it.

Table 2.2.3 Audio specifications

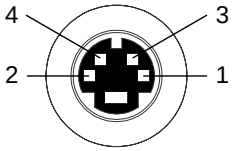
Item	Standard, Function
Output connectors	RCA x 2 (L/R)
Frequency	100Hz to 20KHz *100Hz step
Audio Source	Internal audio : sine wave
Output level	0 to 4000mV * 50mV step
Output Impedance	600Ω

2.2.2 Connector and pin assignment

2.2.2.1 Composite

Connector Name	Signal Name
VIDEO	Composite Video

2.2.2.2 Y/C (S connector)



Pin No.	Signal Name
1	GND
2	GND
3	Y
4	C

■ **Output signal**

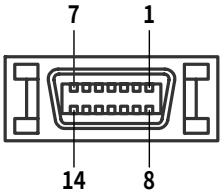
From the Vide (Composite) and Y/C, the following signal can only be output.

- NTSC-M, NTSC-J, NTSC-443
- PAL-60PAL, PAL-M, PAL-N, PAL-Nc,
- SECAM

Caution

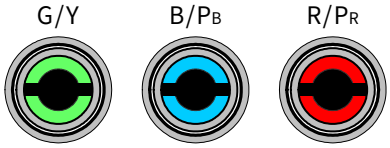
● If you edit the timing of the internal program (period, sync width), Composite and Y/C signal may not output the signal correctly.

2.2.2.3 D5 (D connector)



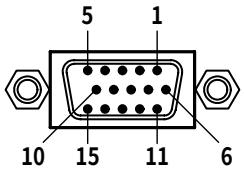
Pin No.	Signal Name	Pin No.	Signal Name
1	Y	8	Line 1
2	GND (Y)	9	Line 2
3	Pb	10	NC
4	GND (Pb)	11	Line 3
5	Pr	12	NC
6	GND (Pr)	13	NC
7	NC	14	NC

2.2.2.4 Component (RCA)



Connector Name	Signal Name
G/Y	Y
B/PB	Pb
R/PR	Pr

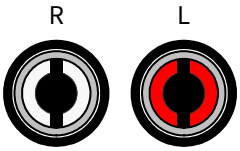
2.2.2.5 VGA (D-Sub)



Pin No.	Signal Name	Pin No.	Signal Name
1	R	9	+5V (DDC power supply *1)
2	G	10	GND
3	B	11	GND
4	NC	12	DDC DATA
5	NC	13	HS
6	GND (R)	14	VS
7	GND (G)	15	DDC CLK
8	GND (B)		

***1** Restrictions apply to the supply current of the DDC power supply. Refer to 4.1 Concerning the Maximum current consumption of the DDC power supply.

2.2.2.6 Analog Audio



ANALOG AUDIO OUT

Connector Name	Signal Name
R	Audio R
L	Audio L

It outputs analog audio.

Procedure is as below.

a) Activate analog audio

b) Set the audio source, frequency and level.

2.3 SCART Board

2.3.1 Output specifications

Table 2.3.1 Output format

Output connectors	Format
SCART connectors	CVBS, Y/C, RGB

Table 2.3.2 Supported Timing

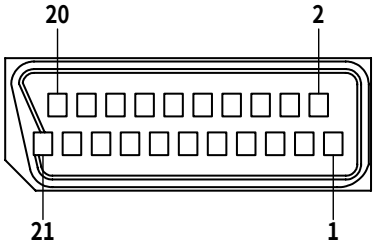
Item	Standard, Functions
Output signal	1080i/p (SMPTE 274M) 720p (SMPTE 296M) 525p (SMPTE 293M), 625p (ITU-R BT.1358) NTSC-M/J/443, PAL-B/D/G/H/I/M/N/Nc/60, SECAM
Output level	Compliant with each standard (users can not adjust it)
Sync signal level	Compliant with each standard (users can not adjust it)
Setup	Compliant with each standard (users can not adjust it)
Video Format	RGB
Output Impedance	75Ω
Others	Closed Caption, V-chip, TeleText, WSS, ID1, Macrovision, CGMS-A

Table 2.3.3 Audio specifications

Item	Standard, Functions
Output connectors	RCA x 2 (L/R)
Frequency	100 to 20KHz *100Hz step
Audio Source	Internal audio : sine wave
Output Level	0 to 4000mV *50mV step
Output Impedance	600Ω

2.3.2 Connector and pin assignment

2.3.2.1 SCART



Pin No.	Signal Name	Pin No.	Signal Name
1	Audio R output	11	Component G output
2	N.C.	12	N.C.
3	Audio L output	13	GND
4	GND	14	GND
5	GND	15	Component R output /C output
6	GND	16	RGB Status
7	Component B output	17	GND
8	Video Status	18	GND
9	GND	19	Composite / Y output /CS
10	N.C.	20	N.C
		21	GND

3 Operations

3.1 Menu selection

Menu List is described in table 3.1.1.

Table 3.1.1 Menu List

Menu	Function
Manual Test	Manual test mode
Automatic Test	Automatic test mode
Configuration	Config confirmation, setting
Copy / Erase / Fornat	Copy, erase, or format Program data, Group data, User Key Block data
Information	Version confirmation
Key Check	Key check

<Operation>

1. Press MENU key. Model selection menu is displayed.

Fig 3.1.1 Menu selection display

2. Use up/down key, and make the preferred mode active. Press the right key for selection.

3.2 Manual Test

Manual Test is a mode to operate the unit manually by the front panel.
Select Manual Test in the fig 3.1.1.

3.2.1 Large group selection

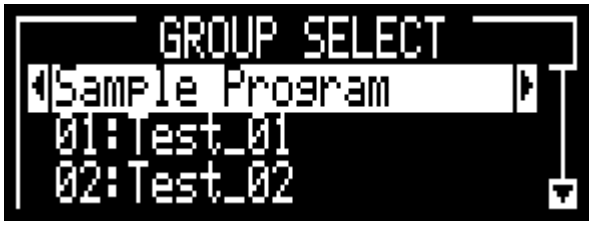


Fig. 3.2.1 Large group selection display

<Operation>

1. Move cursor by up/down key. Select the group by right key.
   Note) the program is executed from No. 1 of each output.

2. By pressing left key, the screen is back to the large group execution. (Fig. 3.2.3 Display (Large group executions).
   Note) the previous program remains in each interface.

3.2.2 Sample Program

Internal timing and pattern is selected and output.
Note) Just after selecting a group, nothing is output.

Fig. 3.2.2 Display (Sample Program)

<Operations>

1. Using up/down key to activate the interface. Select the interface by right/left key.

2. Select Timing by Timing selection key.

3. Select the Pattern by Pattern selection key.

Note) When ALL Key is pressed, (ALL) is displayed on the VFD, and the setting is reflected on all interface.

3.2.3 Large group execution

Fig. 3.2.3 Display (Large group execution)

Item	Description
Group No. / Name	Group No. and Name are displayed.
Active I/F(Slot)	Active I/F is displayed. If the same interface is existing in several slots, the slot number is displayed in the parenthesis.
Program No.	Program No. is displayed.
Timing	Timing is displayed. In the program mode, it can not be selected individually.
Pattern	Pattern is displayed. In the program mode, it can not be selected individually.

<Operations>

1. Using up/down key to activate the group. Select the group by right/left key.
2. Using up/down key to activate the interface. Select the interface by right/left key.
3. Using up/down key to activate the program No.. Select the program No. by right/left key.

Note1) When [ALL] Key is pressed, (ALL) is displayed on the VFD, and the setting is reflected on all interface.
Note2) When the CF card is inserted, (CF) is displayed on the VFD.

3.3 Automatic Test

Select、 Automatic Test in the Fig 3.1.1

3.3.1 Operations

3.3.1.1 All interface execution.

Fig. 3.3.1 Display (Automatic Test setting)

Item	Description
STOP / START	Set STOP/START of the Automatic Test.
Group	Set the L-Group No.
I/F(Slot)	Set the output interface of Automatic Test. (set as ALL)
Interval	Set the Interval (0 to 999 S)

<Operations>

1. Use up/down key to activate the STOP/START.. Select it by right/left key.
2. Use up/down key to activate the Group. Select the Group by right/left key.
3. Use up/down key to activate the interface. Select the interface by right/left key.
4. Using up/down key to activate the interval setting. Select the interval by right/left key.

Fig. 3.3.2 Display (Automatic Test execution)

Note) If you change the selected I/F(Slot), the current program that is output from the selected interface can be confirmed.

3.3.1.2 One interface execution

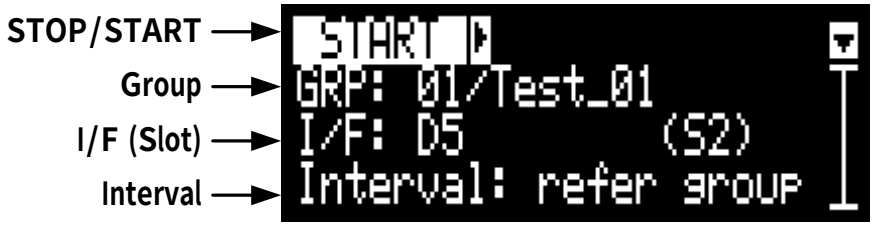


Fig. 3.3.3 Display (Automatic Test setting)

Item	Description
STOP / START	Set STOP/START of the Automatic Test.
Group	Set the L-Group No.
I/F(Slot)	Set the output interface of Automatic Test.
Interval	Set the Interval (refer group / 0 to 999 S)

<Operations>

1. Use up/down key to activate the STOP/START. Select it by right/left key.
2. Use up/down key to activate the Group. Select the Group by right/left key.
3. Use up/down key to activate the interface. Select the interface by right/left key.
4. Using up/down key to activate the interval setting. Select the interval by right/left key.

Fig. 3.3.4 Display (Automatic Test execution)

3.4 Configuration

In Configuration you can change or confirm the current settings.

Select Configuration in the Fig, 3.1.1 Menu selection screen.

Fig. 3.4.1 Display (Config setting)

Category	Item	Details
RS-232C	Baud Rate	**9600 / 19200 / 38400 / 57600 / 115200** Set the baud rate. The value may not be always same in all units.
	Data Bits	**8 bit /7bit** Set the bit length of the data.
	Parity	**None / Even / Odd** Set the parity bit.
	Stop Bits	**1 / 2bit** Set the stop bit.
LAN	IP	**"0 , 0 , 0 , 0" to "255 , 255 , 255 , 255"** Set the IP address of VG. Set it according to the network environment.
	SUBNETMASK	**"0 , 0 , 0 , 0" to "255 , 255 , 255 , 255"** Set the sub net mask.
	GATEWAY	**"0 , 0 , 0 , 0" to "255 , 255 , 255 , 255"** Set the default gate way of the VG.
	Port No.	**1024 to 65535** Set the port number of the VG.
OTHERS	Beep	**ON / OFF** Set if the beep sound is active or not during operation.
	DDC Clock	**20 to 100kHz (20kHz step)** Set the DDC transfer clock.
Data Save	-	Save the setting data.

<Operations>

1. Use up/down key to activate the category selection. Select the category by right/left key.

2. Use up/down key to activate the setting item. Select the setting value by right/left key.

<How to save the setting>

1. Use up/down key to activate the category selection. Select the Data Save by right/left key.

Fig. 3.4.2 Display (Data Save(1))

2. Press the down key, and the below screen is displayed.

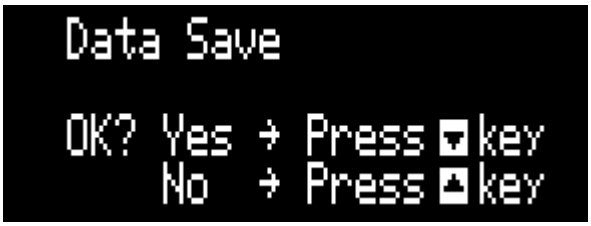


Fig. 3.4.3 Display (Data Save(2))

3. Press the down key again, and save the setting.

3.5 Copy / Erase / Format

In Copy / Erase / Format, you can copy, erase or format PROGRAM data, GROUP data, or US ER KEY BLOCK data.

Select Copy / Erase / Format in the Fig, 3.1.1 Menu selection screen.

Fig. 3.5.1 Display (Copy / Erase / Format)

Category	Item	Details
ALL COPY	Source / Dest.	**CF → Internal / Internal → CF** Set the copy source and the destination.
USER KEY COPY	Source / Dest.	**CF BLOCK No. →Internal / Default →Internal / Internal →CF BLOCK No.** Set the the copy source and the destination of USER KEY BLOCK data. Select the USER KEY BLOCK data number (0-100).
ALL ERASE	Media.	**CF Key Block Erase / Internal** Choose the media whose data you want to erase completely. Select if you'll erase all the USER KEY BLOCK data in a CF card.
CF FORMAT	-	**No selecting items**

<Operations>

1. Use up/down key to activate the category selection. Select the category by right/left key.
2. Use up/down key to activate the setting item. Select the setting value by right/left key.
3. Use up/down key to activate "EXECUTE", and execute it by the right key.

3.6 Information

In Information, you can confirm the serial number and the license available.

Fig 3.1.1 Menu selection Information in the Fig 3.1.1.

Fig 3.6.1 Display (Information)

<Operations>

1. Scroll the screen by up/down keys. Then confirm each item.

3.7 TV/SCART Adjust

Adjust the analog output.

Select TV/SCART Adjust in the Fig. 3.1.1.

Fig. 3.7.1 Display (Config setting)

Setting item	Description
Category	**Adjust / Data Save**
	Select the adjustment and data save.
Active I/F (Slot)	Select the interface to adjust.
Adjusting Output	Select the output to adjust.
Adjust Value	Set the adjusting value.

<Operations>

1. Use up/down key to activate the category selection. Select the category by right/left key.

2. Use up/down key to activate the setting item. Select the setting value by right/left key.

<How to save the setting>

1. Use up/down key to activate the category selection. Select the Data Save by right/left key.

Fig. 3.7.2 Display (Data Save(1))

2. Press the down key, and the below screen is displayed.

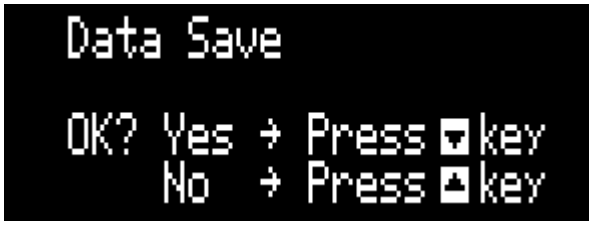


Fig. 3.7.3 Display (Data Save (2))

3. Press the down key again, and save the setting.

3.8 Editing

With software SP-8870, you can edit Internal Pattern Register, User Timing Register, Program Data Making and Group Data Making. The main unit alone is not capable of editing these parameters, except for copying data from CF card.

3.8.1 Register the internal patterns.

Max. 10 internal patterns can be registered.

Table 3.8.1 Default Patterns

Key	Default patterns
PAT1	Color bar 100/100H
PAT2	Gray Scale H-16 step
PAT3	Ramp Linear – H
PAT4	SMPTE RP – 133+color
PAT5	Monosocope
PAT6	China Monoscope
PAT7	Raster White
PAT8	SMPTE RP-27.1
PAT9	Over scanning
PAT10	Philips pattern

3.8.2 Register the user timings

Max 3 User timing data can be registered.

3.8.3 Make the program data.

Program data contains the internal timing, internal pattern and output interface information.

Max 1000 programs are registered.

3.8.3.1 Supported timings

Table 3.8.2 Supported timings

No.	Timing	Frame Rate or Format(For Analog TV Timing)	
1	1080i	59.94 / 60 / 50 / 100 / 119.88 / 120 [Hz]	
2	1080p	59.94 / 60 / 50 / 23.97 / 24 / 25 / 29.97 / 30 [Hz]	
3	720p	59.94 / 60 / 50 / 100 / 120 / 119.88 / 24 / 25 / 30 [Hz]	
4	576p	50 / 100 / 200 [Hz]	
5	480p	59.94 / 60 / 119.88 / 120 / 239.76 / 240 [Hz]	
6	480i/NTSC*1	480i	59.94 / 60 / 59.94(W) / 60(W) [Hz]
		NTSC	NTSC-J 4:3 / NTSC-M / NTSC-443
7	576i/PAL*1	576i	50 / 50(W) [Hz]
		PAL	PAL 4:3/ PAL-M / PAL-60 / PAL-N / PAL-Nc
8	576i/SECAM*1	576i	50 / 50(W) [Hz]
		SECAM	SECAM 4:3
9	XGA	60 / 70 / 75 / 85 / 120CVT	
10	USER1		
11	USER2		
12	USER3		

*1 in case of Video (composite) and SCART output, NTSC/PAL/SECAM are supported.

Note) By pressing [Frame Rate] Key , the setting can be changed.

3.8.4 Group data

Max 99 group data can be registered.

3.8.5 USER KEY BLOCK data

Max 1 USER KEY BLOCK data can be registered. As for the way to register USER KEY BLOCK data from CF card to the main unit, see “3.5 Copy / Erase / Format.”

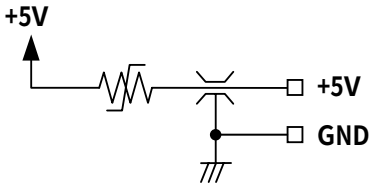
4 Cautions

4.1 Concerning the DDC power supply

The supply voltage from the DDC power supply is supplied to each output of the VG-881.
The maximum current supplied by the DDC power supply is described below.

- HDMI Output‥‥‥‥‥‥‥‥‥‥‥‥‥‥‥‥Total 0.5A in 2CH
- TV ANALOG Output‥‥‥‥‥‥‥‥Total 0.5A in all outputs.

The DDC supply voltage is output as shown in the figure below.



DDC power supply circuit

1) The supply voltage differs by the output connector,

- HDMI Output‥‥‥‥‥‥‥‥‥‥‥‥‥‥ 5V fixed.
- TV ANALOG Output ‥‥‥‥‥‥ 5V fixed.

Caution

- The DDC power supply incorporates an overcurrent protection device, but do not use a current which exceeds the rating.
- Do NOT supply power to the DDC power supply from the device connected to the VG-881. If such the voltage of such a power supply is connected, both the VG-881 and the connected device may fail.

VG-881 Instruction Manual

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