FOR.A®

**INNOVATIONS IN VIDEO
and AUDIO TECHNOLOGY**

OPERATION MANUAL

FA-10RU for FA-505

Remote Control Unit

5th Edition

Softwarer Version 4.20 - higher

FOR-A COMPANY LIMITED

Edition Revision History

Edit.	Rev.	Date	Description	Section/Page
1	-	2013/12/18	First edition	
2	-	2014/06/25	Supported Video Process Y Level Supported Color Corrector Split Supported Color Corrector Bypass	6-1 6-7 6-13
3	-	2014/12/18	Supported FA-505 units	
4	-	2015/03/05	Added 3G Level-B Dual-Stream. Supported 4KFS. Added Video Payload ID.	6-15 6-45 6-54
5	-	2015/05/29	Process Amp and Color Corrector setting copy Supported FA GPIO Editor	6-11 11-1

Software Version and Supported Options

FA-10RU version	Newly supported Feature/Option	Note
FPGA1: 1.00 FPGA2: 1.00 Software: **3.00**	FA-505 (FA-505UD) FA-50PS	Compatible **FA-505** versions: FPGA1-FPGA4: 1.00 or higher FPGA5: 3.00 or higher Software: 1.00 or higher
FPGA1: 1.00 FPGA2: 1.00 **Soft: 4.10**		Compatible **FA-505** versions: FPGA1-FPGA4: **1.10** or higher FPGA5: 3.00 or higher Soft: **1.10** or higher
FPGA1: 1.00 FPGA2: 1.00 **Soft: 4.20**	GPIO Editor 2.0 or higher	Compatible **FA-505** versions: FPGA1-FPGA4: **1.20** or higher FPGA5: 3.00 or higher Soft: **1.20** or higher

FA-10RU versions can be seen in the "FA-10RU INFORMATION" menu (see section 9-1-7).

Precautions

Important Safety Warnings

[Power]

⚠ Caution	Operate unit **only** at the specified supply voltage.
(plug icon)	Disconnect the power cord via the power plug only. **Do not** pull on the cable portion.
🚫 Stop	**Do not** place or drop heavy or sharp-edged objects on the power cord. A damaged cord can cause fire or electrical shock hazards. Regularly check the power cord for excessive wear or damage to avoid possible fire / electrical hazards.

[Grounding]

❗ Caution	**Ensure** the unit is properly grounded at all times to prevent electrical shock.
⚠ Hazard	**Do not** ground the unit to gas lines, units, or fixtures of an explosive or dangerous nature.
❗ Caution	**Ensure** the power cord is firmly plugged into the AC outlet.

[Operation]

⚠ Hazard	**Do not** operate the unit under hazardous or potentially explosive atmospheric conditions. Doing so could result in fire, explosion, or other hazardous results.
⚠ MHazard	**Do not** allow liquids, metal pieces, or other foreign materials to enter the unit. Doing so could result in fire, other hazards, or a unit malfunction.
(plug icon)	If a foreign material does enter the unit, turn the power off and **immediately** disconnect the power cord. Remove the material and contact an authorized service representative if damage has occurred.

[Transportation]

❗ Caution	**Handle** with care to avoid impact shock during transit, which may cause malfunction. When you need to transport the unit, use the original or suitable alternative packing material.

[Circuitry Access]

	Do not remove covers, panels, casing, or access the circuitry with power applied to the unit. Turn the power off and disconnect the power cord prior to removal. Internal servicing / adjustment of unit should only be performed by qualified personnel.
Stop	**Do not** touch any parts / circuitry with a high heat factor. Capacitors can retain enough electric charge to cause mild to serious shock, even after the power has been disconnected. Capacitors associated with the power supply are especially hazardous.
Hazard	Unit **should not** be operated or stored with cover, panels, and / or casing removed. Operating the unit with circuitry exposed could result in electric shock / fire hazards or a unit malfunction.

[Potential Hazards]

Caution	If abnormal odors or noises are noticed coming from the unit, immediately turn the power off and disconnect the power cord to avoid potentially hazardous conditions. If problems similar to the above occur, contact an authorized service representative **before** attempting to operate the unit again.

[Rack Mount Brackets, Ground Terminal, and Rubber Feet]

Caution	To rack-mount or ground the unit, or to install rubber feet, **do not** use screws or materials other than those supplied. Doing so may cause damage to the internal circuits or components of the unit. If you remove the rubber feet that are attached to the unit, **do not** reinsert the screws that secure the rubber feet.

[Consumables]

Caution	Consumable items that are used in the unit must be periodically replaced. For further details on which parts are consumables and when they should be replaced, refer to the specifications at the end of the Operation Manual. Since the service life of the consumables varies greatly depending on the environment in which they are used, such items should be replaced at an early date. For details on replacing consumable items, contact your dealer.

Upon Receipt

Unpacking

FA-10RU units and their accessories are fully inspected and adjusted prior to shipment. Operation can be performed immediately upon completing all required connections and operational settings.

Check your received items against the packing lists below. Check to ensure no damage has occurred during shipment. If damage has occurred, or items are missing, inform your supplier immediately.

ITEM	QTY	REMARKS
FA-10RU	1	
AC Cord	1 set	(Including AC cord retaining clip)
Rack Mount Brackets	1 set	EIA standard type
CD-ROM	1	FA GPIO Editor installation disc User manual (PDF) included
Quick Setup Guide	1	
Colored Light Indication Label	1	

Trademarks

Microsoft, **Windows, Internet Explorer,** and **Windows Media** are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
Firefox is a registered trademark of the Mozilla Foundation.
Dolby is a trademark of Dolby Laboratories.

*   All other trademarks are trademarks or registered trademarks of their respective owners.

Installing the AC Cord Retaining Clip

Secure the AC cord with the supplied ladder strap/retaining clip assembly to prevent accidental removal from the FA-10RU.

◆   **Installing the clip**
1) Wrap the retaining clip around the AC cord. (with the anchor of the ladder strap toward the unit.)
2) Insert the anchor into the hole next to the AC IN socket.
3) Lightly fasten the clip around the AC cord.
4) Plug in the power cord.
5) Slide the clip on the ladder strap toward the plug.
6) Fasten the clip tightly.
7) Gently pull on the AC cord to ensure it is secured.
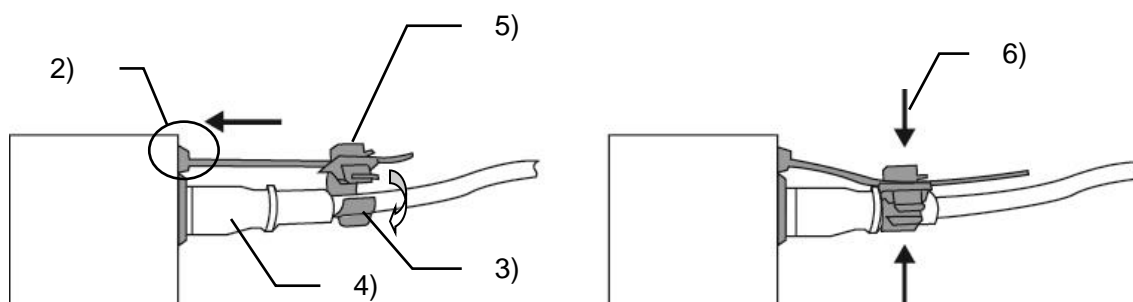
◆ **Unpluging the AC cord**
1) Push the tab on the retaining up to unfasten the clip.
2) Push the tab on the ladder strap up and slide the clip back.
3) Unplug the AC cord.
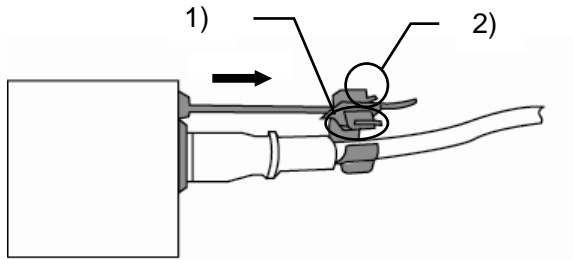
Colored Light Identification Label

The colored light identification label can be attached to the front panel to assist in identifying colored light indication.
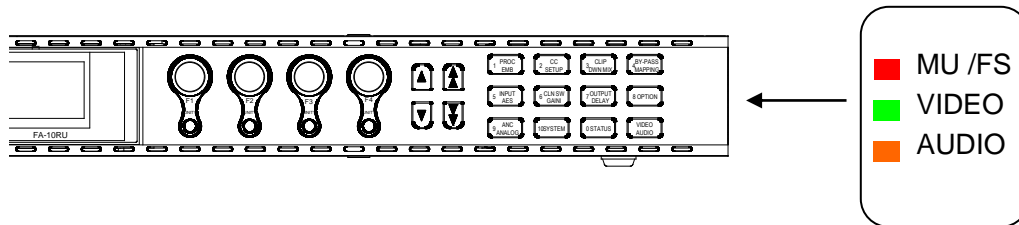
Table of Contents

1. Prior to Starting

1-1. Welcome

Congratulations! By purchasing an FA-10RU Remote Control Unit you have entered the world of FOR-A and its many innovative products. Thank you for your patronage and we hope you will turn to FOR-A products again and again to satisfy your video and audio needs.

FOR-A provides a wide range of products, from basic support units to complex system controllers, which have been increasingly joined by products for computer video-based systems. Whatever your needs, talk to your FOR-A representative. We will do our best to be of continuing service to you.

1-2. Features

The FA-10RU is a remote control unit that allows you to control FA-1010 / FA-505 Frame Synchronizer units via network. (This manual explains the FA-505 operations from FA-10RU units. Refer to "FA-10RU for FA-1010 Operation Manual" for the FA-1010 operations.)

➢ Control over FA-505 via ethernet
➢ Up to 100 FA-505 units can be connected to be selected for control
➢ IP address FA-505 selection and control
➢ Simultaneous control over one FA-505 from five FA-10RU units
➢ Storage and recall of up to 100 events
➢ Storage and recall of up to 100 clean switch settings
➢ GPI control with 30 input and output functions
➢ FA-AUX30 option for additional control buttons

1-3. About This Manual

This manual is intended to help the user easily operate this product and make full use of its functions during operation. Before connecting or operating your unit, read this operation manual thoroughly to ensure you understand the product. Afterwards, it is important to keep this manual in a safe place and available for reference.

2. Panel Descriptions

2-1. Front Panel

No.	Name	Description			Ref.
1	POWER switch	Used to turn the unit ON / OFF. Pressing the " ⏽ " side turns on the power.			
2	MU SELECT LOCK button	Pressing the button opens a menu to select an FA-505 to control. Holding down the button locks front panel buttons. Lit orange when LOCK is on. To release LOCK, hold down the button again.			5-2
3	FS SEL FS LINK button	Used to switch menu button (9) functions after the FA-10RU is connected to an FA-505. **Unlit**: Allows you to select menu items. **Lit red:** Allows you to select FS 1-5 using menu buttons. **Flashing red:** Allows you to select FS 1-5 for LINK settings that simultaneously set settings for multiple FSs.* *FS LINK settings are enabled for certain menus. See section 5-3-8. "FS Link" for details.			5-3-7 5-3-8
4	EVENT button	Used to save and load events.			8
5	Status indicator	GENLOCK	Lit green	An external reference signal input is present in the FA-505.	
			Unlit Flashing green *1	No external reference signal input is present in the FA-505.	
		FREEZE	Lit green Flashing green *1	FREEZE is turned On for at least one FS in the FA-505.	6-48
			Unlit	FREEZE is turned Off for all FSs 1-5 in the FA-505.	
		TEST SIGNAL	Lit green Flashing green *1	VIDEO or AUDIO TEST SIGNAL is turned On for at least one FS in the FA-505.	6-51 7-31 7-34
			Unlit	VIDEO and AUDIO TEST SIGNAL is turned Off for all FSs 1-5 in the FA-505.	
		BY-PASS	Lit green Flashing green *1	SDI VIDEO BY-PASS or COLOR CORRECTION BY-PASS is turned On (process bypassed) for at least one FS in the FA-505.	6-13
			Unlit	SDI VIDEO BY-PASS and COLOR CORRECTION BY-PASS are turned Off for all FSs 1-5 in the FA-505.	
		FAN ALARM	Lit red Flashing red *1	Fan(s) on FA-10RU and/or FA-505 have failed. Turn the power of the unit OFF, and replace the failed fan(s) if needed.	9-1-7 6-56
			Unlit	All fans are operating normally.	

No.	Name		Status	Description	Ref.
5	Status indicator	DC POWER	Lit red / Flashing red [*1]	A power failure has occurred. Power Off the unit and consult your FOR-A reseller.	6-56
			Unlit	Power supply is normal.	

*1 The combination of Unlit/Flashing or Lit/Flashing is selectable. Refer to section "9-1-6. STATUS LED MODE SETTINGS" for details. The default setting is Lit.

No.	Name	Description	Ref.
6	Menu display	Used to display menus and make operational settings.	5-3
7	Controls (F1-F4) UNITY buttons	Used to change operational settings. Turn and select values. The Unity buttons return the settings to the default values.	5-3
8	Arrow buttons	Single-arrow button: Used to move between parameters. (Indicators light up to indicate the accessible direction.)	5-3
		Double-arrow button: Used to move between menus. (Indicators light up to indicate the accessible direction.))	5-3
9	Menu buttons	Used to select menus.	5-3-1 5-3-2

2-2. Rear Panel
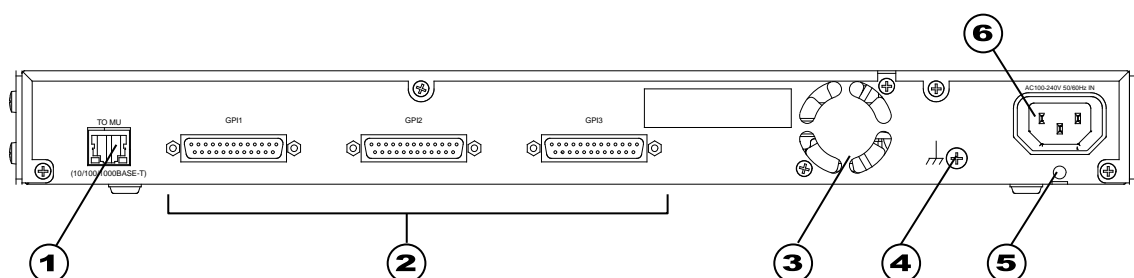
No.	Name	Description	Ref.
1	TO MU	A LAN connector for FA-505 control. Set the unique IP address and connect to the network.	3
2	GPI 1-GPI 3	Used to connect an FA-AUX30 or external expansion switch panel(s).	3-2 9-1-1 9-1-2 9-1-3 11
3	FAN	Used to air-cool the unit to prevent overheating. Do not block the ventilation with other equipment or objects. The FAN ALARM on the front panel lights up if the fan fails.	9-1-7
4	Ground Terminal	Used to ground the unit to protect operators against static electricity and electrical shock.	
5	AC cord retaining clip anchor hole	Used to anchor the AC cord retaining clip.	
6	AC IN	Used to connect the unit to an AC power source. (AC100V-240V 50/60Hz)	

2-3. Internal Settings

<table>
<tr><td colspan="1">IMPORTANT</td></tr>
</table>

IMPORTANT

Note that internal switch settings should not be changed from factory defaults. If you have accidentally changed the settings, return them to the factory default settings as shown in this section.

Be sure to have qualified technical personnel perform the settings and adjustments in the interior, or contact your dealer.

CAUTION

Do not access any internal cards while the unit is powered ON. Always power OFF all connected units / disconnect power cords prior to accessing the interior. To protect boards from electrostatic damage, do not touch the components on the boards.

2-3-1. Dipswitch Settings

◆ **Dipswitch S3 Settings**

Pin No.	Default setting	Setting
1	OFF	Do not change.
2	OFF	Do not change.
3	OFF	Do not change.
4	OFF	Do not change.
5	OFF	Do not change.
6	OFF	Do not change.
7	OFF	Do not change.
8	OFF	Do not change.

◆ **Dipswitch S101 Settings**

Pin No.	Default setting	Setting
1	OFF	**OFF**: Sets GPI OUT1 to open collector output. **ON**: Sets GPI OUT1 to +5V TTL level output.
2	OFF	**OFF**: Sets GPI OUT2 to open collector output. **ON**: Sets GPI OUT2 to +5V TTL level output.
3	OFF	**OFF**: Sets GPI OUT3 to open collector output. **ON**: Sets GPI OUT3 to +5V TTL level output.
4	OFF	**OFF**: Sets GPI OUT4 to open collector output. **ON**: Sets GPI OUT4 to +5V TTL level output.
5	OFF	**OFF**: Sets GPI OUT5 to open collector output. **ON**: Sets GPI OUT5 to +5V TTL level output.
6	OFF	**OFF**: Sets GPI OUT6 to open collector output. **ON**: Sets GPI OUT6 to +5V TTL level output.
7	OFF	**OFF**: Sets GPI OUT7 to open collector output. **ON**: Sets GPI OUT7 to +5V TTL level output.
8	OFF	**OFF**: Sets GPI OUT8 to open collector output. **ON**: Sets GPI OUT8 to +5V TTL level output.

*   Refer to section 11-3. "GPI 1-GP I3 Pin Assignments" for details on GPI OUT 1-8.

◆ Dipswitch S102 Settings

Pin No.	Default setting	Setting
1	OFF	**OFF**: Sets GPI OUT9 to open collector output. **ON**: Sets GPI OUT9 to +5V TTL level output.
2	OFF	**OFF**: Sets GPI OUT10 to open collector output. **ON**: Sets GPI OUT10 to +5V TTL level output.
3	OFF	**OFF**: Sets GPI OUT11 to open collector output. **ON**: Sets GPI OUT11 to +5V TTL level output.
4	OFF	**OFF**: Sets GPI OUT12 to open collector output. **ON**: Sets GPI OUT12 to +5V TTL level output.
5	OFF	**OFF**: Sets GPI OUT13 to open collector output. **ON**: Sets GPI OUT13 to +5V TTL level output.
6	OFF	**OFF**: Sets GPI OUT14 to open collector output. **ON**: Sets GPI OUT14 to +5V TTL level output.
7	OFF	**OFF**: Sets GPI OUT15 to open collector output. **ON**: Sets GPI OUT15 to +5V TTL level output.
8	OFF	**OFF**: Sets GPI OUT16 to open collector output. **ON**: Sets GPI OUT16 to +5V TTL level output.

*   Refer to section 11-3. "GPI 1-GP I3 Pin Assignments" for details on GPI OUT 9-16.

◆ Dipswitch S103 Settings

Pin No.	Default setting	Setting
1	OFF	**OFF**: Sets GPI OUT17 to open collector output. **ON**: Sets GPI OUT17 to +5V TTL level output.
2	OFF	**OFF**: Sets GPI OUT18 to open collector output. **ON**: Sets GPI OUT18 to +5V TTL level output.
3	OFF	**OFF**: Sets GPI OUT19 to open collector output. **ON**: Sets GPI OUT19 to +5V TTL level output.
4	OFF	**OFF**: Sets GPI OUT20 to open collector output. **ON**: Sets GPI OUT20 to +5V TTL level output.
5	OFF	**OFF**: Sets GPI OUT21 to open collector output. **ON**: Sets GPI OUT21 to +5V TTL level output.
6	OFF	**OFF**: Sets GPI OUT22 to open collector output. **ON**: Sets GPI OUT22 to +5V TTL level output.
7	OFF	**OFF**: Sets GPI OUT23 to open collector output. **ON**: Sets GPI OUT23 to +5V TTL level output.
8	OFF	**OFF**: Sets GPI OUT24 to open collector output. **ON**: Sets GPI OUT24 to +5V TTL level output.

*   Refer to section 11-3. "GPI 1-GP I3 Pin Assignments" for details on GPI OUT 17-24.

◆ **Dipswitch S104 Settings**

Pin No.	Default setting	Setting
1	OFF	**OFF**: Sets GPI OUT25 to open collector output. **ON**: Sets GPI OUT25 to +5V TTL level output.
2	OFF	**OFF**: Sets GPI OUT26 to open collector output. **ON**: Sets GPI OUT26 to +5V TTL level output.
3	OFF	**OFF**: Sets GPI OUT27 to open collector output. **ON**: Sets GPI OUT27 to +5V TTL level output.
4	OFF	**OFF**: Sets GPI OUT28 to open collector output. **ON**: Sets GPI OUT28 to +5V TTL level output.
5	OFF	**OFF**: Sets GPI OUT29 to open collector output. **ON**: Sets GPI OUT29 to +5V TTL level output.
6	OFF	**OFF**: Sets GPI OUT30 to open collector output. **ON**: Sets GPI OUT30 to +5V TTL level output.
7	OFF	Do not change.
8	OFF	Do not change.

* Refer to section 11-3. "GPI 1-GPI 3 Pin Assignments" for details on GPI OUT 25-30.

3. Connections

3-1. Basic Connections
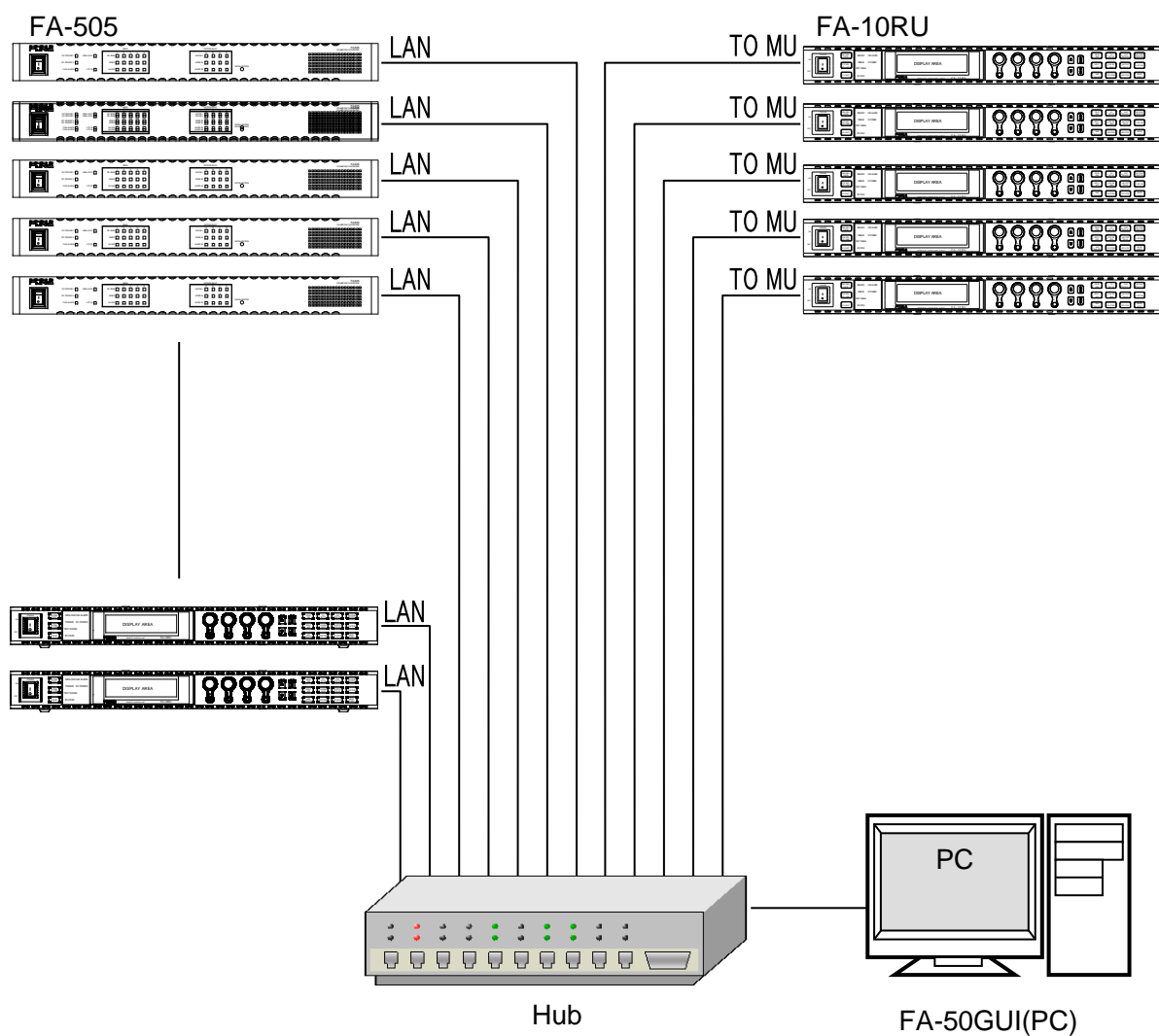
Specify unique IP addresses for all devices connected to the network.
See section 10-2. Network Settings for details on setting IP addresses.
One FA-505 unit can be controlled by up to 5 units of FA-10RU/FA-50GUI maximum.
An attempted 6th connection will not be accepted.

3-2. Connection with Option/Expansion Units

◆ **Connection with the FA-AUX30 option**

FA-AUX30

FA-AUX30 supplied cables x 3
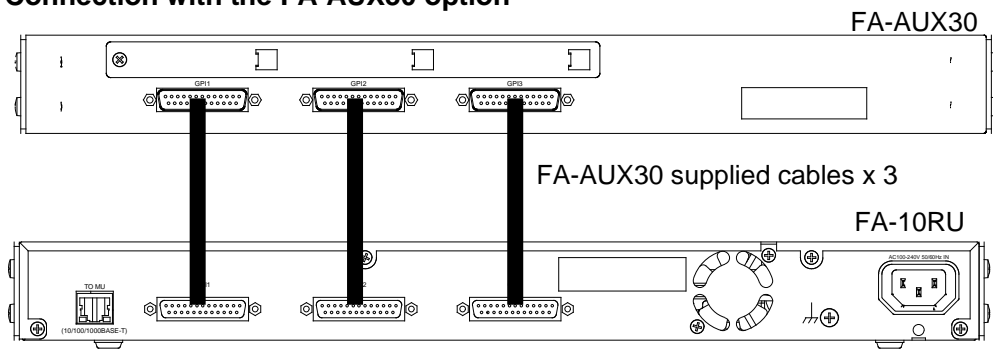
FA-10RU

◆ **Connection with a user-made switch box**

FS1	**FS2**	**FS3**	**FS4**	**FS5**
FS6	**FS7**	**FS8**	**FS9**	**FS10**

Connect to GPI1-GPI3 connector
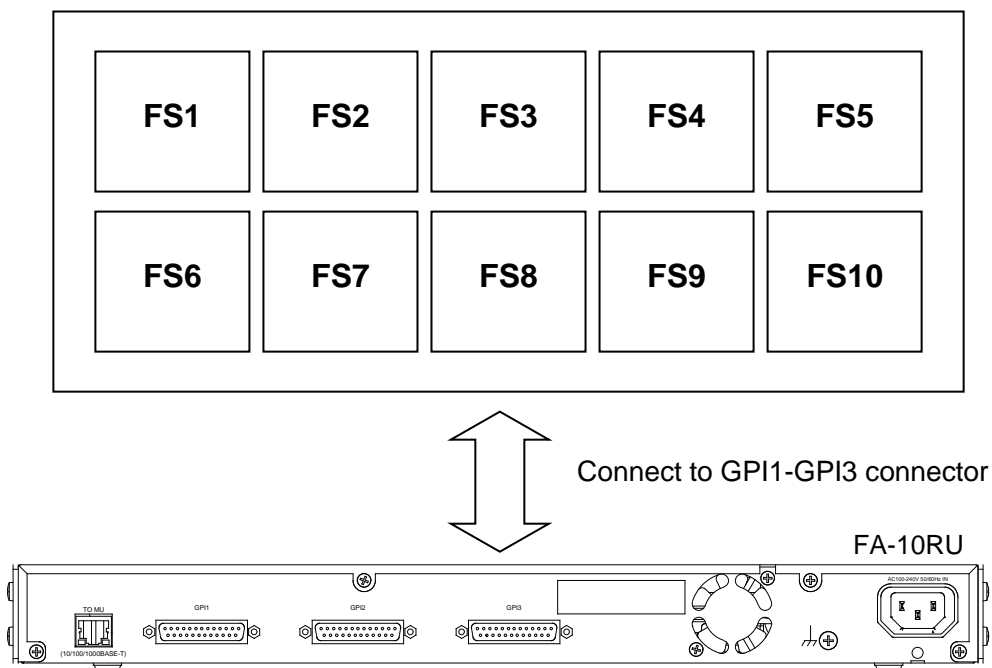
FA-10RU

* See section 11. "GPI Interface" for details on GPI connectors.

4. Setup

4-1. System Requirements

To utilize the FA-10RU, your computer must meet the following requirements.

OS	Windows® XP SP2 operating system or later Professional (32bit)	Windows Vista® SP1 operating system Business (32bit)	Windows® 7 /8 operating system Professional (32/64bit)
CPU	Pentium® 4 processor 1.3GHz or more	Intel® Core™ 2 Duo processor 2GHz or more	Intel® Core™ 2 Duo processor 2GHz or more
Web browser	Firefox®24	Firefox®24	Internet Explorer® 10, Firefox®24
Memory	512MB or more	2GB or more	2GB or more
Display	Resolution of 1024×768pixels or higher Must be capable of full color (24-bit) display		
Network port	Ethernet, at least one port 100BASE-TX/1000BASE-T		
Network cable	100BASE-TX: Category 5 or better 1000BASE-T: Category 6, or enhanced category 5		

* They system may not work with an older version (older than Ver. 9) of Internet Explorer. In such case, use Firefox.

5. Front Panel Operations

5-1. Powering ON

Turn the power ON after all system connections are complete. The indicators on the front panel light up during startup. When startup is complete, the indicators will go off.
The "UNIT ID MU SELECT" menu will appear if no FA-505 is connected.

```
--- UNIT ID MU SELECT ---                 P801
F1 Main Unit ID:  2
IP Address:192.168.  0. 10    Port:50011
NAME:FA-505  Default


Push F3 Unity SW Connect to Main Unit
Push F4 Unity SW Cancel
```

5-2. Connecting FA-505 Units

The FA-10RU is inoperative until an FA-505 is connected.
There are two ways to connect to the FA-505; one is in Unit ID Selection mode, which allows you to connect an FA-505 by selecting an ID from among 100 ID numbers, and the other is in IP Address Selection mode, which allows you to connect an FA-505 by specifying an IP address.

5-2-1. Connecting in Unit ID Selection Mode

Pressing the MU SEL button opens the UNIT ID MU SELECT menu.

```
--- UNIT ID MU SELECT ---                 P801
F1 Main Unit ID:  2
IP Address:192.168.  0. 10    Port:50011
NAME:FA-505  Default


Push F3 Unity SW Connect to Main Unit
Push F4 Unity SW Cancel
```

Turn F1 and select the FA-505 to be connected from Main Unit IDs 1 through 100.
The IP address, TCP port number and unit name will be displayed for the selected Main Unit ID.
(See section 10-4. "Unit ID Assignment" for details on IP address and unit name settings.)
Press the UNITY button under F3 (SET) to establish a connection with the selected FA-505 using F1.
The MU CONNECT STATE menu appears when connection is initiated.
To cancel the selection, press the UNITY button under F4 (CANCEL). Cancelling the connection returns the settings to their last state before change.
Select Disconnect by F1 and press the UNITY button under F3 to disable the connection of FA-10RU to any FA-505. (The connected FA-505 will also be disconnected.)

5-2-2. Connecting in IP Address Selection Mode

Press the MU SEL button. The UNIT ID SEL menu appears.
Then, press the double down-arrow button. The IP ADDRESS MU SELECT menu appears.

```
--- IP ADDRESS MU SELECT ---                P802
F1-F4 IP Address:192.168.0.10
      TCP Port  :50011
      NAME      : FA-505  Default

F1 to F4 IP Address set
Push F3 Unity SW Connect to Main Unit
Push F4 Unity SW Cancel
```

Enter the IP address of the FA-505 to be connected using control knobs F1 to F4. (If the IP address assigned as in section 10-4. "Unit ID Assignment" is selected, the assigned unit name will be displayed under NAME.)
Go to the second line to specify the FA-505 TCP port number using F1 and F2 (F1 and F2 can change the number in 100's and 1's increments respectively.)
Press the UNITY button under F3 to establish connection with the FA-505 of the selected IP address. The MU CONNECT STATE menu will then appear. To cancel the selection, press the UNITY button under F4 (CANCEL). Cancelling the connection returns the settings to their last state before change.
The MU ID name will be displayed under NAME if there is a name assigned to the IP address.

5-2-3. CONNECT STATE Menu

Connections with FA-505 units can be viewed in the CONNECT STATE menu.

```
--- MU CONNECT STATE ---              P803
IP Address:192.168.  0. 10    Port:50011
State:Connected
ID:FA-505  Default
Unit Name:FA-505
```

Item	Description
IP Address	Shows the IP address of the connected FA-505.
Port	Shows the FA-505 TCP port number.
STATE	**Disconnect**: Connection is disabled. **Connected**: The FA-505 of the selected IP address is connected. **No Connection**: Connection with the selected FA-505 could not be established. **Over Limit**: A maximum 5 FA-505 units are already connected. No more units can be connected.
ID	Shows the unit name registered as described in section 10-4. "Unit ID Assignment." "NO NAME" is displayed if no unit name is set for the unit.
Unit Name	Shows the unit name set for the FA-505. *

* Refer to the FA-505 Operation Manual for details on Unit name settings.

5-3. Basic Operations

This section explains how to select menus and set parameters.
Most of the menus can be controlled by these basic operations. However, some menus work differently. See the descriptions given for each menu for details.

The FA-10RU has two menu operation modes: Normal mode, in which setting changes immediately take effect, and Live Safe mode, in which some settings request confirmation before changes take effect. Normal and Live Safe modes can be selected in the OPERATION SETTINGS menu (sec. 6-20). Factory default is Normal mode. Menus that request setting confirmation are shown in the menu list in section 5-3-2. "Menu Buttons" with an asterisk (*).

IMPORTANT
Make sure that the LOCK indicator on the front panel is turned off before starting an operation. If the LOCK indicator is lit orange, all operations on the front panel except the LOCK button are disabled. Press and hold the MU SEL/LOCK button to enable operation.
The description in Basic Operation starts based on an established connection. To establish a connection with the FA-505, see section 5-2. "Connecting FA-505."

LOCK button

5-3-1. Accessing Menus

Menu Buttons
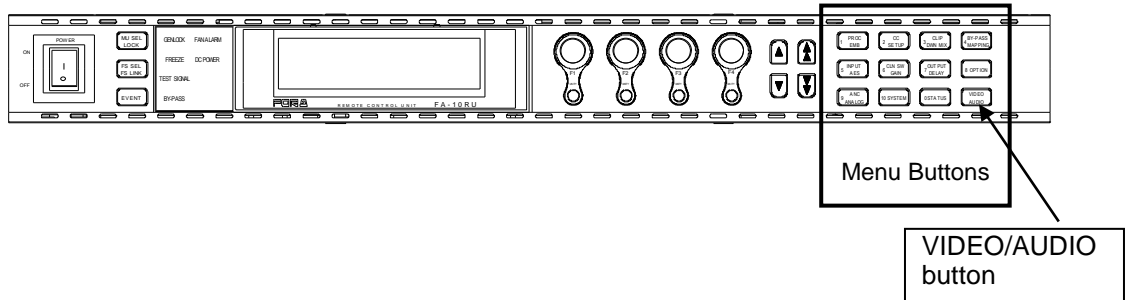
VIDEO/AUDIO button

Every press of the VIDEO/AUDIO button alternates the menu button assignments between video menus and audio menus. The button indicators light up green when the buttons are accessible to video menus that are indicated on the top row of each menu button. They light up orange when they are accessible to audio menus that are indicated on the bottom row of each menu button.

Pressing a menu button displays the corresponding menu on the menu display. Menus are divided into categories. The single-arrow buttons allow you to move between menus if the selected menu button has multiple menu pages in the category. The double-arrow button lights up when there are more menus to be accessed in the direction. If the double-arrow button is unlit, the direction is not accessible.

The single-arrow buttons light up if there are multiple parameters that can be changed using controls F1 to F4 in the page.

◆ **Menu Buttons**


```
FS1 Name:FS 1
--- VIDEO PROCESS AMPLIFIER ---            P501
F1-F3 Video:100.0%     Y:100.0%     C:100.0%
      Setup/Black :   0.0%  Hue:    0.0deg.




FORA       REMOTE CONTROL UNIT      FA-10RU
```
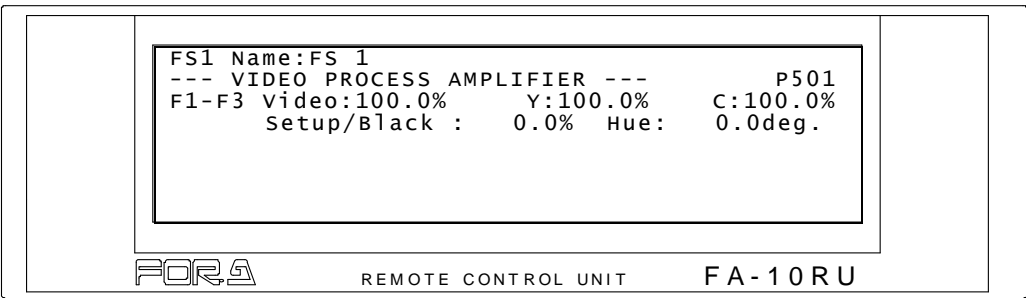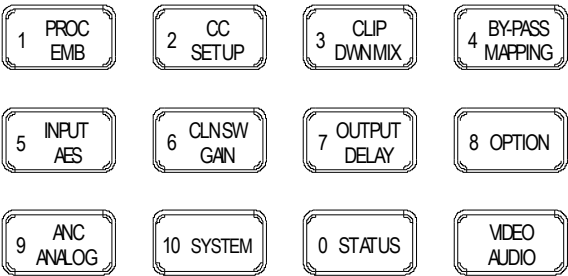
In the above example, the 1 PROC/EMB button is pressed, displaying the VIDEO PROCESS AMPLIFIER menu.

5-3-2. Menu Buttons

The VIDEO/AUDIO button at the bottom right switches between the video and audio-related menus.
Pressing the button alternates the button to work as video menu buttons (lit green) and audio menu buttons (lit orange). The menus at the top of each button label are video menus (lit green), and the menus at the bottom are audio menus (lit orange).

Menu Button	VIDEO menus (lit green)	AUDIO menus (lit orange)
1 PROC EMB	■ VIDEO PROCESS AMPLIFIER ■ VIDEO LEVEL ■ Y LEVEL ■ CHROMA LEVEL ■ SETUP/BLACK LEVEL ■ HUE	► EMBEDDED AUDIO DEMULTIPLEX ► EMBEDDED AUDIO ERROR SENSE ► FADE IN/OUT ► EMBEDDED AUDIO MULTIPLEX
2 CC SETUP	■ COLOR CORRECTION ■ COLOR CORRECTION WHITE LEVEL ■ COLOR CORRECTION BLACK LEVEL ■ COLOR CORRECTION GAMMA LEVEL	► EMBEDDED AUDIO SRC MODE ► AES AUDIO SRC MODE [3] ► EMBEDDED AUDIO IN POLARITY ►AES AUDIO IN POLARITY ► ANALOG AUDIO IN POLARITY SDI EMBEDDED AUDIO MONO SUM AES AUDIO MONO SUM [3] ANALOG AUDIO MONO SUM [4]
3 CLIP DWN MIX	■ VIDEO CLIP	► AUDIO DOWN MIX MODE ► AUDIO DOWN MIX ASSIGN
4 BY-PASS MAPPING	►SDI VIDEO BY-PASS ►COLOR CORRECTION BY-PASS	► EMBEDDED AUDIO GROUP1/2 MAPPING ► EMBEDDED AUDIO GROUP3/4 MAPPING ► AES AUDIO OUTPUT MAPPING [3] ► ANALOG AUDIO OUTPUT MAPPING [4]
5 INPUT AES	►FS VIDEO IN SETTINGS ► FS SYNC FORMAT SETTINGS	AES AUDIO HYSTERESIS [3] ►FA-10AES-UBL TERMINAL IN/OUT [5]
6 CLN SW GAIN	► CLEAN SWITCH SETTINGS SALVO LOAD SALVO SAVE OPERATION SETTINGS	EMBEDDED AUDIO OUTPUT GAIN AES AUDIO OUTPUT GAIN [3] ANALOG AUDIO OUTPUT GAIN [4] ► AUDIO MASTER MUTE
7 OUTPUT DELAY	► SDI VIDEO OUTPUT PORT ASSIGN	EMBEDDED AUDIO OUTPUT DELAY AES AUDIO OUTPUT DELAY ANALOG AUDIO OUTPUT DELAY
8 OPTION	UP/DOWN CONVERTER MODE [1] UP/DOWN CONVERTER SIZE/POS [1] UP/DOWN CONVERTER CROPPING [1] IMPROVEMENT IN CONVERTER [1] UP/DOWN CONVERTER SIDE COLOR [1] SLOT A GPI FUNCTION SETTINGS [2] SLOT B GPI FUNCTION SETTINGS [2] SLOT C GPI FUNCTION SETTINGS [2] SLOT D GPI FUNCTION SETTINGS [2]	Not functioning

(Continued to next page)

Menu Button	VIDEO menus (lit green)	AUDIO menus (lit orange)
9 ANC ANALOG	CLOSED CAPTION SETTINGS AFD DETECT SETTINGS AFD LOSS SETTINGS TIMECODE DETECT SETTINGS INPUT ANCILLARY STATUS1 INPUT ANCILLARY STATUS2 ► SDI MULTIPLEXER EMBEDDED AUDIO MULTIPLEXER CLOSED CAPTION EMBEDDED S2016-3 AFD EMBEDDED RP186 VI AFD EMBEDDED BT1119-2 WSS AFD AMBEDDED S12M-1 VITC EMBEDDED S12M-1 ATC VITC EMBEDDED S12M-1 ATC LTC EMBEDDED ► EMBEDDED TIMECODE TIME CODE GENERATOR BT1119-2 WSS AFD AMBEDDED	ANALOG AUDIO INPUT/OUTPUT [*4] ► MICROPHONE SETTINGS [*4]
10 SYSTEM	►VIDEO INPUT LOSS MODE ►FS MODE SETTINGS VIDEO SYSTEM PHASE/POSITION VIDEO FREEZE SD TV LINE MASK ►3G SDI OUTPUT LEVEL ►VIDEO TEST SIGNAL ►VIDEO SYSTEM FRAME RATE	►AUDIO SYSTEM ►EMBEDDED AUDIO TEST SIGNAL ►AES AUDIO TEST SIGNAL [*3] ►ANALOG AUDIO TEST SIGNAL [*4] ►ALL AUDIO TEST SIGNAL
0 STATUS	VIDEO INPUT STATUS SDI VIDEO OUTPUT STATUS PAYLOAD ID INPUT STATUS MAIN UNIT ALARM INFORMATION MAIN UNIT VERSION INFORMATION OPTION VERSION INFORMATION OTHER OPTION INFORMATION	EMBEDDED AUDIO INPUT STATUS AES AUDIO INPUT STATUS [*3] ANALOG AUDIO INPUT STATUS [*4] EMBEDDED AUDIO OUTPUT STATUS AES AUDIO OUTPUT STATUS [*3] ANALOG AUDIO OUTPUT STATUS [*4]
VIDEO AUDIO	VIDEO menus	AUDIO menus

■ Menus in which settings can be changed for FS1 and FS2 simultaneously in FS Link mode.
► Menus that request confirmation when a setting is changed in LIVE SAFE mode.
*1 FA-505UD is used.
*2 Displayed if the FA-10GPI option is installed in an option slot on the FA-505.
*3 Displayed if the FA-10AES-BL/ FA-10AES-UBL option is installed in an option slot on the FA-505.
*4 Displayed if the FA-10ANA-AUD option is installed in an option slot on the FA-505.
*5 Displayed if the FA-10AES-UBL option is installed in an option slot on the FA-505.

5-3-3. Arrow Buttons

◆ Double-arrow buttons (up and down)
<Normal mode>
The double-arrow buttons allow you to move between menus.

<Live Safe mode>
Button functions are the same as those in Normal mode, however, double-arrow buttons are inoperative while blinking (indicating the FA-505 is requesting user change confirmation, because a menu parameter has been changed in the menu that requires confirmation for changes). Pressing the double down-arrow button while double-arrow buttons are blinking finalizes the setting change. Pressing the double up-arrow button cancels the change and returns the settings to their last state before change.

◆ Single-arrow buttons (up and down)
The single-arrow buttons allow you to move between items in the menu.
The single-arrow button light goes off when it reaches the last item in the direction.

IMPORTANT
See section 6-20. OPERATION SETTINGS for details on Normal and Live Safe mode switching.

5-3-4. Consecutive Viewing of Settings

Holding down the double up- or down-arrow button enables you to sequentially display menus accross menu categories assigned to menu buttons.

Order of Consecutive Menu Display

◆ VIDEO Menus (Lit green)
Holding down the double down-arrow button consecutively displays menu pages in the menu list from VIDEO PROCESS AMPLIFIER under 1 PROC/EMB to OTHER OPTION INFORMATION under 0 STATUS.
Conversely, holding down the double up-arrow button consecutively displays menu pages in the menu list from OTHER OPTION INFORMATION under 0 STATUS to VIDEO PROCESS AMPLIFIER under 1 PROC/EMB.

◆ AUDIO Menus (Lit orange)
Holding down the double down-arrow button consecutively displays menu pages in the menu list from EMBEDDED AUDIO DEMULTIPLEX under 1 PROC/EMB to EMBEDDED AUDIO OUTPUT STATUS under 0 STATUS.
Conversely, holding down the double up-arrow button consecutively displays menu pages in the menu list from EMBEDDED AUDIO OUTPUT STATUS under 0 STATUS to EMBEDDED AUDIO DEMULTIPLEX under 1 PROC/EMB.

5-3-5. Changing Setting Values

Once the desired menu is displayed, use the controls (F1-F4) to change the setting values.

Control
F1 - F4

Selected FS   Menu title   Menu page number

```
FS1 Name:FS 1
--- VIDEO PROCESS AMPLIFIER ---         P501
F1-F3 Video:100.0%      Y:100.0%     C:100.0%
        Setup/Black :   0.0%  Hue:    0.0deg.
```

FORA   REMOTE CONTROL UNIT   F A - 1 0 R U

Assigned control   Parameter   Value
F1 - F4.
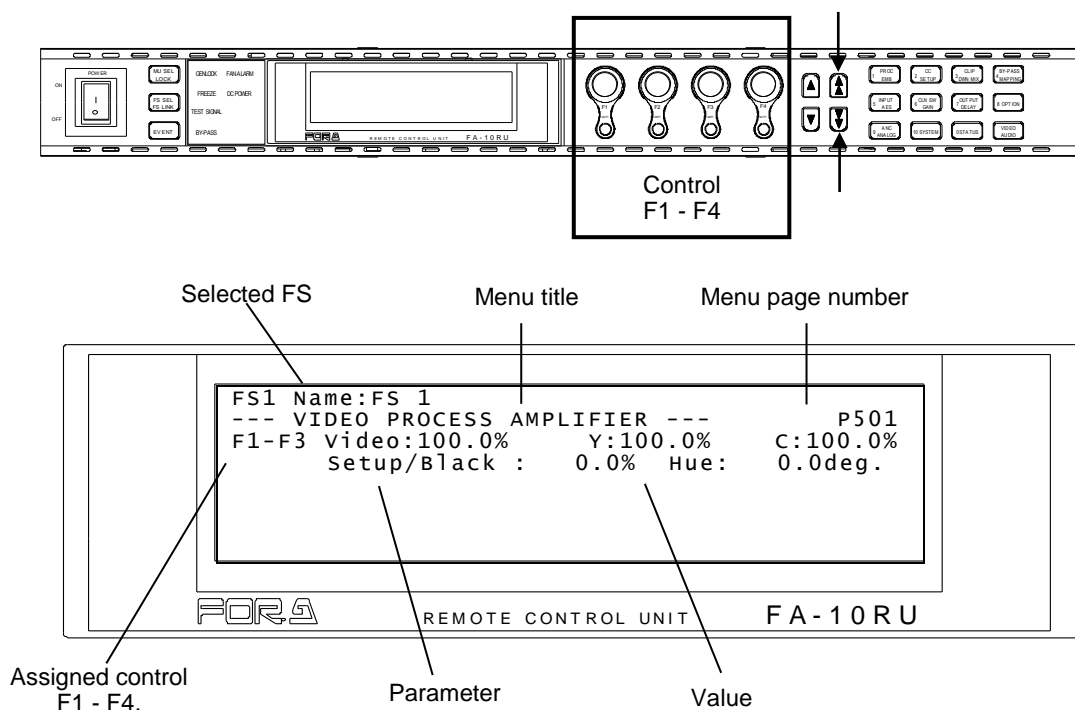
<Normal mode>
In the above example, the 1 PROC/EMB button is pressed while the menu buttons turn to video menus (lit green) by pressing the VIDEO/AUDIO button, to display the VIDEO PROCESS AMPLIFIER menu.
(If the LEDs around control knobs F1 through 4 are lit, the setting value corresponding to the lit control knob can be changed.)
Turn F1 to change the Video Level setting value. Turn F2 to change the Chroma Level setting value. Turn F3 for Setup/Black, and turn F4 for Hue. To go to other menus assigned to the menu button, press the double down-arrow button. To return to the previous menu, press the double up-arrow button.

<Live Safe mode>
Menus that do not require user change confirmation (such as VIDEO PROCESS AMPLIFIER) are used the same as in Normal mode.
Menus that require user change confirmation (such as FS VIDEO IN SETTINGS) will request confirmation when the parameter is changed.

Example procedure:
Pressing the 6 INPUT /AES button while the button is in VIDEO menu selection mode (lit green) by pressing the VIDEO/AUDIO button displays the FS VIDEO IN SETTING menu.
To change the input video to FS1, turn F1. To change the input video to FS2, turn F2. If any menu item is changed, the double-arrow buttons and menu item will blink, indicating the FA-505 is requesting user change confirmation.
Pressing the double down-arrow button finalizes the setting change. Pressing the double up-arrow button cancels the change and returns the setting to its last state before the change. Until changes are either entered or cancelled, all buttons except the single-arrow and double-arrow buttons, control knobs F1-F4, and their Unity buttons are disabled. To go to other menus, press either single-arrow button to finalize the change and exit the change confirmation state.

5-3-6. Resetting to Default

<Normal mode>
The UNITY indicator light goes off when the setting value is changed from the default value. Pressing the UNITY button while the light is off returns the corresponding setting value to the default value. Then the light turns on. Pressing the button again returns the value to the previous value before resetting to the default value.

Press the UNITY button to reset the value. The indicator lights up orange.
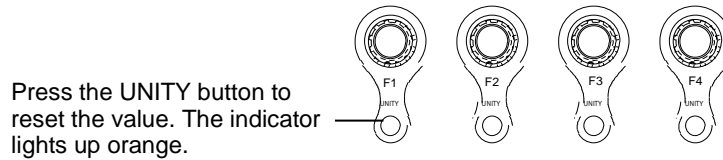
<Live Safe mode>
The UNITY indicator light goes off when the setting value has changed from default. If the UNITY button is pressed while the light is off, double-arrow buttons and the changed menu item start to blink to request confirmation. Pressing the double down-arrow button will resets the value to default, and the UNITY indicator lights up. Pressing the double up arrow button cancels the reset, the setting returns to the value before it was reset, and the UNITY indicator lights up.

5-3-7. Selecting 5-channel Frame Synchronizers

If "FS1 Name: FS 1" is displayed in the top row of the menu display as shown below, settings can be set for FSs 1 to 5. The number and name of the selected FS are displayed. Names can be set for each FS in the FA-505.

```
FS1 Name:FS 1
--- VIDEO PROCESS AMPLIFIER ---          P501
F1-F3 Video:100.0%      Y:100.0%    C:100.0%
Setup/Black :   0.0%  Hue:   0.0deg
```

Pressing the FS SEL/FS LINK button when "FS1 Name:FS 1" is displayed in the top row turns menu buttons 1 to 5, and the red light of the VIDEO/AUDIO button.
Menu buttons 1 to 5 serve as FSs 1 to 5 to be selected. Select an FS number using the buttons, then "FS1 Name: FS 1" changes to show the selected FS. Settings for the selected FS can be changed using control knobs FS1 to FS4.
FS Name List as shown below can be viewed while pressing the VIDEO/AUDIO button.

```
FS1 Name:FS 1
--- FS1 VIDEO PROCESS AMPLIFIER ---     P501
FS Name List
FS1:FS 1
FS2:FS 2
FS3:FS 3
FS4:FS 4
FS5:FS 5
```

* Pressing either double-arrow button to go to another menu page terminates the FS selection and opens another page.

☞ Menus that allow you to select an FS for which to change settings from FS1 to FS5 are shown with "■" in the menu list in section 5-3-2. "Menu Buttons." For the FS Name settings, see the FA-505 Operation Manual, section 4-1. "Main Unit" for details.

5-3-8. FS Link Function

This function allows settings of multiple FSs to be changed simultaneously.

5-3-8-1. Menus Allowing Simultaneous Setting Change

The below menus can be changed their settings for multiple FSs simultaneously.

    VIDEO PROCESS AMPLIFIER
    VIDEO LEVEL
    Y LEVEL
    CHROMA LEVEL
    SETUP/BLACK LEVEL
    HUE
    COLOR CORRECTION
    COLOR CORRECTION WHITE LEVEL
    COLOR CORRECTION BLACK LEVEL
    COLOR CORRECTION GAMMA LEVEL
    VIDEO CLIP

5-3-8-2. Enabling FS Link for Multi-FS Simultaneous Setting Changes

Display a menu from which multiple FS settings can be simultaneously changed.
Press the FS SEL/FS LINK button so that the button LED lights up.
If the FS Link function has not yet set, the top row of the menu will appear blank.

```
--- VIDEO PROCESS AMPLIFIER ---    P501
```

Select an FS to be the key FS.
In this example, set FS1 to be the key FS. (Press menu button 1.)

```
1  PROC
   EMB
```

```
FS1
--- VIDEO PROCESS AMPLIFIER ---    P501
```

FS1 is set to be the key FS and the blinking FS1 is displayed in the menu display.
Selectable menu buttons 2 to 5 (FS2 to FS5) also blink.
Menu buttons that corresponds to FSs that cannot be linked are unlit.
In the below example, FS2 and FS3 are linked to FS1. (* FS names set for each FS are
displayed only while buttons FS1 to FS5 are pressed.) Linked FSs are displayed.
(The below example is the linked setting in the VIDEO PROCESS AMPLIFIER menu.

```
◆FS1 FS2 FS3
--- FS1 VIDEO PROCESS AMPLIFIER ---    P501
F1-F3 Video:100.0% Y:100.0% C: 100.0%
       Setup/Black :  0.0%  Hue:  0.0deg
```

The ◆ mark indicates that the settings for FS1 are being displayed.
The above menu display example shows: Video Level, Chroma Level, Setup/Black, and Hue
settings for FS1 being displayed. The key FS for the Link setting is FS1 (blinking). Settings for
FS1, FS2 and FS3 are simultaneously changed. The mount changed using the control knob
F1 to F4 will simultaneously be applied to FSs 1 through 3. To display another FS, press the
FS SEL/FS LINK button a few times to enter the FS selection mode (menu buttons 1 to 5 are
lit). Then select an FS to be displayed. In the below example, the FS display is changed to
FS2.

```
  FS1◆FS2 FS3
--- FS1 VIDEO PROCESS AMPLIFIER ---      P501
F1-F3 Video:100.0% Y:100.0% C: 100.0%
      Setup/Black :  0.0%  Hue:  0.0deg
```

In the above example, Video Level, Chroma Level, Setup/Black, and Hue settings of FS2 are displayed. The key FS of the Link setting is FS1 (blinking). Settings for FS1, FS2 and FS3 are simultaneously changed.

To verify FS names, press the FS SEL/FS LINK button to enter the FS selection mode (menu buttons 1 through 5 will light). Also FS Name List is displayed only while pressing the VIDEO/AUDIO button in Link mode (menu buttons 1 through 5 should be lit).

```
   FS1◆FS2 FS3
--- FS1 VIDEO PROCESS AMPLIFIER ---      P501
FS Name List
FS1:FS 1
FS2:FS 2
FS3:FS 3
FS4:FS 4
FS5:FS 5
```

IMPORTANT
Note that the FS Link function remains effective until it is turned off. The FS Link function will be terminated if a double-arrow button is pressed to open another menu page in FS Link mode.

5-3-8-3. Unity Function during Link Mode

The Unity function during Link mode can be set to either affect only the displayed FS, or all linked FSs.

Setting to **Unlinked Unity** under Unity as described in section 6-20. OPERATION SETTINGS sets the Unity function to be effective only for the displayed FS. Conversely, setting to **Linked Unity** sets it to be effective on all linked FSs.

5-3-8-4. Conditions to Enable Link Settings

The FS to be linked must have the below modes set the same as those for the key FS. IF the mode settings are not set the same as those of the key FS, such FSs do not link and corresponding menu buttons remain unlit while other menu buttons are blinking in Link mode.

- Correction Mode in the COLOR CORRECTION menu
- Clip Mode in the VIDEO CLIP menu
- COLOR CORRECTION BY-PASS

5-3-8-5. Releasing Link Settings

Press the FS SEL/FS LINK button a few times to enable Link setting (menu buttons 1 through 5 should be blinking). Then press the menu button corresponding to the linked FS displayed in the top row.

To release all link settings, press the 0 STATUS button.

When releasing the link setting of the key FS, set the FS of the smallest FS number to be the key FS.

5-3-9. FS Name List Display

```
--- SDI VIDEO BY-PASS ---              P515
  SDI1-I/O:OFF        SDI2-I/O:OFF
```

The FS NAME List as shown below can be displayed by pressing the FS SEL/FS LINK button while displaying a menu for which the FS selection is not displayed in the top row,

```
--- SDI VIDEO BY-PASS ---              P515
FS Name List
FS1:FS 1
FS2:FS 2
FS3:FS 3
FS4:FS 4
FS5:FS 5
```

6. VIDEO Menus

Make the menu buttons light up green using the VIDEO/AUDIO button.
(Pressing the button while the buttons are lit orange turns the lights green.)
Then the menus displayed on the upper row on each menu button can be selected.

```
  VIDEO
  AUDIO
```

6-1. VIDEO PROCESS AMPLIFIER

VIDEO PROCESS AMPLIFIER settings can be copied between FSs. Refer to Sec. 6-11. "Copying Video Process / Color Corrector Settings" for more details.

```
FS1 Name:FS 1
--- VIDEO PROCESS AMPLIFIER ---          P501
F1-F3 Video:100.0%     Y:100.0%    C:100.0%
      Setup/Black :   0.0%  Hue:   0.0deg.
```

```
  1  PROC
     EMB
```

Parameter	Default	Setting range (Steps)	Description
Video	100.0%	0.0 - 200.0% (0.1%)	Allows you to adjust the video level for the selected FS.
Y	100.0%	0.0 - 200.0% (0.1%)	Allows you to adjust the Y level for the selected FS.
C	100.0%	0.0 - 200.0% (0.1%)	Allows you to adjust the chrominance level for the selected FS.
Setup/Black	0.0%	-20.0 - 100.0% (0.1%)	Allows you to adjust the black level for the selected FS.
Hue	0.0 deg.	-179.8 - 180.0 deg. (0.2 deg.)	Allows you to adjust the color phase for the selected FS.

To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

To simultaneously change settings of multiple FSs, refer to section 5-3-8. "FS Link Function."

* If the selected FS bypasses the Color Correction process, this menu is disabled. Change **COLOR CORRECTION BY-PASS** to **Operate**, then reset the parameter. (See section 6-14.)

6-2. VIDEO LEVEL

```
FS1 Name:FS 1
--- VIDEO LEVEL ---                      P502
F1 FS1:100.0%
   FS2:100.0%
   FS3:100.0%
   FS4:100.0%
   FS5:100.0%
```

```
  1  PROC
     EMB
```

Parameter	Default	Setting range (Steps)	Description
FS1 - FS5	100.0%	0.0 - 200.0% (0.1%)	Allows you to adjust the video level for the selected FS.

F1 is displayed for the selected FS. In Link setting mode, F1 is displayed for the key FS of the link setting.

To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

To simultaneously change settings of multiple FSs, refer to section 5-3-8. "FS Link Function."

* If the selected FS bypasses the Color Correction process, this menu is disabled. Change **COLOR CORRECTION BY-PASS** to **Operate**, then reset the parameter. (See section 6-14.)

6-3. Y LEVEL

```
FS1 Name:FS 1
--- Y LEVEL ---                              P503
F1 FS1:100.0%
   FS2:100.0%
   FS3:100.0%
   FS4:100.0%
   FS5:100.0%
```

```
1  PROC
   EMB
```

Parameter	Default	Setting range (Steps)	Description
FS1 - FS5	100.0%	0.0 - 200.0% (0.1%)	Allows you to adjust the Y level for the selected FS.

F1 is displayed for the selected FS. In Link setting mode, F1 is displayed for the key FS of the link setting.

To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

To simultaneously change settings of multiple FSs, refer to section 5-3-8. "FS Link Function."

* If the selected FS bypasses the Color Correction process, this menu is disabled. Change **COLOR CORRECTION BY-PASS** to **Operate**, then reset the parameter. (See section 6-14.)

6-4. CHROMA LEVEL

```
FS1 Name:FS 1
--- CHROMA LEVEL ---                         P504
F1 FS1:100.0%
   FS2:100.0%
   FS3:100.0%
   FS4:100.0%
   FS5:100.0%
```

```
1  PROC
   EMB
```

Parameter	Default	Setting range (Steps)	Description
FS1 - FS5	100.0%	0.0 - 200.0% (0.1%)	Allows you to adjust the chrominance level for the selected FS.

F1 is displayed for the selected FS. In Link setting mode, F1 is displayed for the key FS of the link setting.

To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

To simultaneously change settings of multiple FSs, refer to section 5-3-8. "FS Link Function."

* If the selected FS bypasses the Color Correction process, this menu is disabled. Change **COLOR CORRECTION BY-PASS** to **Operate**, then reset the parameter. (See section 6-14.)

6-5. SETUP/BLACK LEVEL

```
FS1 Name:FS 1
--- SETUP/BLACK LEVEL ---                    P505
F1 FS1:  0.0%
   FS2:  0.0%
   FS3:  0.0%
   FS4:  0.0%
   FS5:  0.0%
```

```
1  PROC
   EMB
```

Parameter	Default	Setting range (Steps)	Description
FS1 - FS5	0.0%	-20.0 - 100.0% (0.1%)	Allows you to adjust the black level for the selected FS.

F1 is displayed for the selected FS. In Link setting mode, F1 is displayed for the link setting key FS of the link setting.

To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

To simultaneously change settings of multiple FSs, refer to section 5-3-8. "FS Link Function."

* If the selected FS bypasses the Color Correction process, this menu is disabled. Change **COLOR CORRECTION BY-PASS** to **Operate**, then reset the parameter. (See section 6-14.)

6-6. HUE

```
FS1 Name:FS 1
--- HUE ---                          P506
F1 FS1:   0.0degree
   FS2:   0.0degree
   FS3:   0.0degree
   FS4:   0.0degree
   FS5:   0.0degree
```

```
  PROC
1
  EMB
```

Parameter	Default	Setting range (Steps)	Description
FS1 - FS5	0.0 degree	-179.8 - 180.0 degree (0.2 degree)	Allows you to adjust the color phase for the selected FS.

F1 is displayed for the selected FS. In Link setting mode, F1 is displayed for the link setting key FS of the link setting.

To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

To simultaneously change settings of multiple FSs, refer to section 5-3-8. "FS Link Function."

* If the selected FS bypasses the Color Correction process, this menu is disabled. Change **COLOR CORRECTION BY-PASS** to **Operate**, then reset the parameter. (See section 6-14.)

6-7. COLOR CORRECTION

COLOR CORRECTION settings can be copied between FSs. Refer to Sec. 6-11. "Copying Video Process / Color Corrector Settings" for more details.

```
FS1 Name:FS 1
--- COLOR CORRECTION ---                      P507
F1-F4 white R:100.0% G:100.0% B:100.0%
      Black R:100.0% G:100.0% B:100.0%
      Gamma R:100.0% G:100.0% B:100.0%
   Gamma Curve:Center      Split:off
   Correction Mode:Balance
   Sepia LVL:-----%        Color:-----deg.
```

```
 2   CC
     SETUP
```

Parameter	Default	Setting range (Steps)	Description
White (RGB)	100.0%	0.0 - 200.0% (0.5%)	Allows you to adjust R, G, and B components of the white level separately for the selected FS. F4 allows you to adjust R, G, and B components simultaneously.
Black (RGB)	100.0%	0.0 - 200.0% (0.5%)	Allows you to adjust R, G, and B components of the black level separately for the selected FS. F4 allows you to adjust R, G, and B components simultaneously.
Gamma (RGB)	100.0%	0.0 - 200.0% (0.5%)	Allows you to adjust R, G, and B components of the gamma level separately for the selected FS. F4 allows you to adjust R, G, and B components simultaneously.
Gamma Curve	Center	Center Black White	Allows you to select a gamma curve from 3 types for the selected FS.
Split *	Off	Off Mode1 Mode2 Mode3	Allows you to select a split display mode for comparing images before and after correction. (See "Split mode display" in the next page for more details.)
Correction Mode	Balance	Balance Differential Sepia	Allows you to select a correction mode for the selected FS. **Balance:** RGB signal correction mode Allows you to adjust the white balance. Gray scale can be changed by adjusting R, G and B levels. **Differential:** Color difference signal mode Allows you to adjust contrast without changing white balance. R, G and B levels can be changed without affecting gray scale. This adjustment is effective for images with different color saturation levels. **Sepia:** Sepia mode Useful for creating black and white images.
Sepia LVL	25.0%	0.0 - 100.0% (0.1%)	Allows you to adjust the color level in the Sepia mode for the selected FS.
Color	-160.0 deg.	-179.8 - 180.0 deg. (0.2 deg.)	Allows you to adjust the color in the Sepia mode for the selected FS.

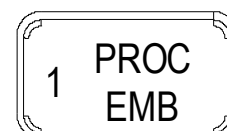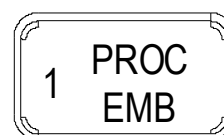Displays "---" if the parameter setting cannot be changed due to the Correction Mode setting.
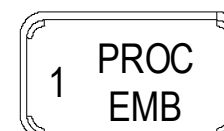To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."
To simultaneously change settings of multiple FSs, refer to section 5-3-8. "FS Link Function."

◆ **Split mode display**
OFF: Displays the image after correction.
MODE1: Splits the screen vertically and displays images before and after correction.
MODE2: Splits the screen horizontally and displays images before and after correction.
MODE3: Displays the image before correction.

| Mode: OFF | Mode: 1 | Mode: 2 | Mode: 3 |

☐ Image before correction
▨ Image after correction

Color-corrected images are processed through VIDEO PROCESS AMPLIFIER (see section 6-1), COLOR CORRECTION (see section 6-7) and VIDEO CLIP (see section 6-7).

* If the selected FS bypasses the Color Correction process, this menu is disabled. Change **COLOR CORRECTION BY-PASS** to **Operate**, then reset the parameter. (See section 6-14.)

6-8. COLOR CORRECTION WHITE LEVEL

```
FS1 Name:FS 1
--- COLOR CORRECTION WHITE LEVEL---        P508
FS1 R:100.0%  G:100.0%   B:100.0%
FS2 R:100.0%  G:100.0%   B:100.0%
FS3 R:100.0%  G:100.0%   B:100.0%
FS4 R:100.0%  G:100.0%   B:100.0%
FS5 R:100.0%  G:100.0%   B:100.0%
```

```
   CC
2
 SETUP
```

Parameter	Default	Setting range (Steps)	Description
White Level(RGB)	100.0%	0.0 - 200.0% (0.5%)	Allows you to adjust R, G, and B components of the white level separately for the selected FS. F4 allows you to adjust R, G, and B components simultaneously.

The FS number of the selected FS blinks. FS numbers of linked FSs also blink.
Displays "---" if the parameter setting cannot be changed due to the Correction Mode setting.
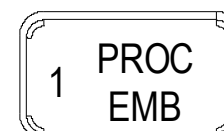To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."
To simultaneously change settings of multiple FSs, refer to section 5-3-8. "FS Link Function."
* If the selected FS bypasses the Color Correction process, this menu is disabled. Change **COLOR CORRECTION BY-PASS** to **Operate**, then reset the parameter. (See section 6-14.)

6-9. COLOR CORRECTION BLACK LEVEL

```
FS1 Name:FS 1
--- COLOR CORRECTION BLACK LEVEL---          P509
FS1 R:100.0%  G:100.0%   B:100.0%
FS2 R:100.0%  G:100.0%   B:100.0%
FS3 R:100.0%  G:100.0%   B:100.0%
FS4 R:100.0%  G:100.0%   B:100.0%
FS5 R:100.0%  G:100.0%   B:100.0%
```

```
2   CC
    SETUP
```

Parameter	Default	Setting range (Steps)	Description
Black Level(RGB)	100.0%	0.0 - 200.0% (0.5%)	Allows you to adjust R, G, and B components of the black level separately for the selected FS. F4 allows you to adjust R, G, and B components simultaneously.

The FS number of the selected FS blinks. FS numbers of linked FSs also blink.
Displays "---" if the parameter setting cannot be changed due to the Correction Mode setting.
To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."
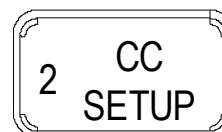To simultaneously change settings of multiple FSs, refer to section 5-3-8. "FS Link Function."
* If the selected FS bypasses the Color Correction process, this menu is disabled. Change **COLOR CORRECTION BY-PASS** to **Operate**, then reset the parameter. (See section 6-14.)

6-10. COLOR CORRECTION GAMMA LEVEL

```
FS1 Name:FS 1
--- COLOR CORRECTION GAMMA LEVEL---          P510
FS1 R:100.0%  G:100.0%   B:100.0%
FS2 R:100.0%  G:100.0%   B:100.0%
FS3 R:100.0%  G:100.0%   B:100.0%
FS4 R:100.0%  G:100.0%   B:100.0%
FS5 R:100.0%  G:100.0%   B:100.0%
```

```
2   CC
    SETUP
```
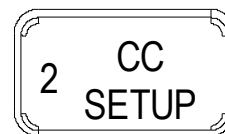
Parameter	Default	Setting range (Steps)	Description
Gamma Level(RGB)	100.0%	0.0 - 200.0% (0.5%)	Allows you to adjust R, G, and B components of the gamma level separately for the selected FS. F4 allows you to adjust R, G, and B components simultaneously.

The FS number of the selected FS blinks. FS numbers of linked FSs also blink.
Displays "---" if the parameter setting cannot be changed due to the Correction Mode setting.
To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."
To simultaneously change settings of multiple FSs, refer to section 5-3-8. "FS Link Function."
* If the selected FS bypasses the Color Correction process, this menu is disabled. Change **COLOR CORRECTION BY-PASS** to **Operate**, then reset the parameter. (See section 6-14.)

6-11. Copying Video Process / Color Corrector Settings

The following two submenu settings can be copied between FSs using an extra menu page, FS DATA COPY.

◆ **FS DATA COPY menu**

To open the FS DATA COPY menu, press and hold the PROC EMB button (with lit green) or the CC SETUP button (with lit green). The menu button flashes green while this menu is displayed.

```
--- FS DATA COPY ---                COPY
F1 Mode:Color Corrector+Video Process
F2 Source    :FS1
F3 Destination:FS2
F4 Unity Copy Start
```

PROC EMB 1

CC SETUP 2

Parameter	Default	Setting range	Description
MODE	Color Corrector	Color Corrector Video Process Color Corrector+Video Process	Selects a submenu to be copied.
Source	FS1	FS1 - FS10	Selects an FS for copy source.
Destination	FS2	FS1 - FS10	Selects an FS for copy destination.

Press **F4 Unity** to execute data copy.

Parameters to be copied

MODE setting	Parameters
Video Process	Video Level Y Level Chroma Level Setup/Black Level Hue
Color Corrector	White (RGB) Black (RGB) Gamma (RGB) Gamma Curve Correction Mode Sepia Level Sepia Color

6-12. VIDEO CLIP

◆ If Mode is Off

```
FS1 Name:FS 1
--- VIDEO CLIP ---                        P511
F1 Mode:Off
```

```
  ┌────────────────┐
  │   3   CLIP     │
  │     DWN MIX     │
  └────────────────┘
```

Parameter	Default	Setting range (Steps)	Description
Mode	Off	Off YPbPr Video Clip RGB Video Clip	Allows you to select a video clip mode.

◆ In YPbPr Video Clip mode

```
FS1 Name:FS 1
--- VIDEO CLIP ---                        P511
F1 Mode:YPbPr Video Clip
F2 Y White Level:109.0%
F3 Y Black Level: -7.5%
F4 Chroma Level:111.0%
```

Parameter	Default	Setting range (Steps)	Description
Mode	Off	Off YPbPr Video Clip RGB Video Clip	Allows you to select a video clip mode.
White Level (Y White Clip)	109.0%	50.0 - 109.0% (0.5%)	Allows you to set the Y signal upper threshold.
Black Level (Y Black Clip)	-7.5%	-7.5 - 50.0% (0.5%)	Allows you to set the Y signal lower threshold.
Chroma Level (PbPr Chroma Clip)	111.0%	50.0 - 111.0% (0.5%)	Allows you to set both the upper and lower thresholds of PbPr signals.

◆ In RGB Clip mode

```
FS1 Name:FS 1
--- VIDEO CLIP ---                        P511
F1 Mode:RGB Video Clip
F2 White Level: 300.0%
F3 Black Level:-200.0%
```

Parameter	Default	Setting range (Steps)	Description
White Level (RGB White Clip)	300.0%	50.0 - 300.0% (0.5%)	Allows you to set the upper threshold of RGB color space.
Black Level (RGB Black Clip)	-200.0%	-200.0 - 50.0% (0.5%)	Allows you to set the lower threshold of RGB color space.

To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

To simultaneously change settings of multiple FSs, refer to section 5-3-8. "FS Link Function."
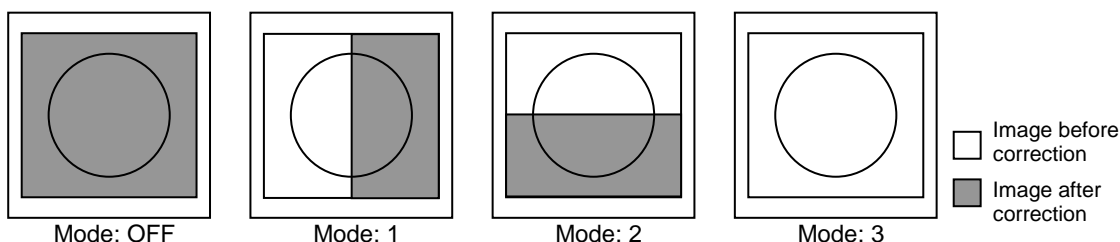
* If the selected FS bypasses the Color Correction process, this menu is disabled. Change **COLOR CORRECTION BY-PASS** to **Operate**, then reset the parameter. (See section 6-14.)

6-13. SDI VIDEO BY-PASS

```
--- SDI VIDEO BY-PASS---                    P515
F1 SDI1a-I/O:Off
   SDI2a-I/O:Off
   SDI3a-I/O:Off
   SDI4a-I/O:Off
   SDI5a-I/O:Off
   ALL SDI I/O:OFF
```
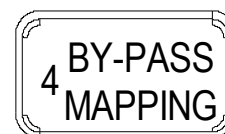
4 BY-PASS
   MAPPING

Parameter	Default	Setting range	Description
SDI1a - 5a-I/O	Off	Off On	Allows you to set BY-PASS for each SDI channel. Displays "---" if BY-PASS cannot be set.
ALL SDI I/O	Off	Off On	**On:** Sets all SDI input channels to bypass signals.

Move the F1/F2 indication to the item to be changed using the single-arrow buttons.

6-14. COLOR CORRECTION BY-PASS

```
--- COLOR CORRECTION BY-PASS---             P516
F1 FS1 CC:Operate
   FS2 CC:Operate
   FS3 CC:Operate
   FS4 CC:Operate
   FS5 CC:Operate
 F4 Unity resets all settings to default
```
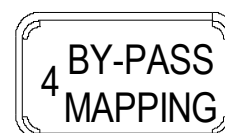
4 BY-PASS
   MAPPING

Parameter	Default	Setting range	Description
FS1 CC to FS5 CC	Operate	Operate By-pass	Allows you to bypass an FS from the Color Correction process. If an FS module bypasses the Color Correction process, no color correction is applied to the FS output video.

Move the F1/F2 indication to the item to be changed using the single-arrow buttons.

6-15. FS VIDEO IN SETTINGS

```
--- FS VIDEO IN SETTINGS ---                P519
F1 FS1:SDI1 Input
   FS2:SDI2 Input
   FS3:SDI3 Input
   FS4:SDI4 Input
   FS5:SDI5 Input
F4 Unity resets all settings to default
```
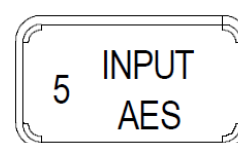
5 INPUT
   AES

Parameter	Default	Setting range	Description
FS1 - FS5	(Respective FSs 1 - 5) SDI1 Input - SDI5 Input	SDI1 Input - SDI5 Input	Allows you to assign input video signals to respective FSs. The F4 Unity button allows you to reset all FS inputs to default.

Move the F1/F2 indication to the item to be changed using the single-arrow buttons.
To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

41

6-16. FS SYNC FORMAT SETTINGS

```
--- FS SYNC FORMAT SETTINGS ---              P520
F1 FS1:Auto Detect
   FS2:Auto Detect
   FS3:Auto Detect
   FS4:Auto Detect
   FS5:Auto Detect
```

```
 ┌─────────────┐
 │   INPUT     │
 │ 5           │
 │   AES       │
 └─────────────┘
```
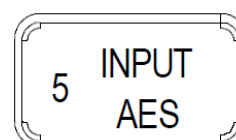
Parameter	Default	Setting range		Description
FS1 - FS5	Auto Detect	If VIDEO SYSTEM FRAME RATE is 23.98/29.97/59.94fps *1	Auto Detect 525/60 1080/59.94i 1080/23PsF 1080/59p Level A 1080/59p Level B 2x1080/59i LVLB *2 720/59.94p	Allows you to select a system format for each FS.
		If VIDEO SYSTEM FRAME RATE is 24/25/50 fps *1	625/50 1080/50i 1080/24PsF 1080/59p Level A 1080/59p Level B 2x1080/59i LVLB *2 720/50p	

Move the F1/F2 indication to the item to be changed using the single-arrow buttons.
*1 VIDEO SYSTEM FRAME RATE can be set in the VIDEO SYSTEM FRAME RATE menu (see section 6-52).
*2 Available if FA-505 Soft Version is 1.10 or higher.

6-17. CLEAN SWITCH SETTINGS

```
--- CLEAN SWITCH SETTINGS ---                P525
F1 Destination1:Source FS1(output)
   Destination2:Source FS2(output)
   Destination3:Source FS3(output)
   Destination4:Source FS4(output)
   Destination5:Source FS5(output)
   Timing Mode:Normal
F4 Unity resets all settings default
```

```
 ┌─────────────┐
 │   CLN SW    │
 │ 6           │
 │   GAIN      │
 └─────────────┘
```

Parameter	Default	Setting range	Description
Destination 1 - 5	(Respective Destinations 1 - 5) Source FS1 - Source FS5	Source FS1 - Source FS5	Allows you to assign a source (FS output) to respective CLEAN SWITCH Destinations (outputs). The F4 Unity button allows you to rest all Destination settings to default.
Timing Mode	Normal	Normal Quick	Allows you to select Clean switching mode. **Normal**: Normal switchover **Quick (No Audio Fade):** Switches signals 1 frame quicker than Normal mode without audio fade.

Move the F1/F2 indication to the item to be changed using the single-arrow buttons.
Set all matrices, then set Front Operation to Live Safe in the OPERATION SETTINGS menu to apply the settings.

6-18. SALVO LOAD

```
--- SALVO LOAD ---                          P526
Destination1:Source FS1(Output)
Destination2:Source FS2(Output)
Destination3:Source FS3(Output)
Destination4:Source FS4(Output)
Destination5:Source FS5(Output)
F1 No.  1 Name:Salvo1
F2 Unit:FA-10RU   Press F3 Unity to start
```

```
  ┌─────────────┐
  │   CLN SW    │
 6│   GAIN      │
  └─────────────┘
```

Param eter	Default	Setting range	Description
No.	1	1 - 100	Allows you to select a Salvo from registered 100 Salvo settings. The selected Salvo matrices are displayed for Destination1 to Destination5. Destination1 - Destination5 blinks if the destination displayed for the DEST differs from the actual output (see section 6-17. CLEAN SWITCH SETTINGS), The registered Salvo Name is also displayed.
Unit	FA-10RU	FA-10RU FA-505	Allows you to select a unit from which to load the Salvo.
/	/	/	Set No and Unit, then press the F3 Unity button to load the registered matrices. Displays "Loading salvo data" while loading a Salvo setting.

6-19. SALVO SAVE

```
--- SALVO SAVE ---                          P527
F1 Destination1:Source FS1(output)
   Destination2:Source FS2(output)
   Destination3:Source FS3(output)
   Destination4:Source FS4(output)
   Destination5:Source FS5(output)
   No.  1 Name:Salvo1
   Unit:FA-10RU   Press F3 Unity to start
```

```
  ┌─────────────┐
  │   CLN SW    │
 6│   GAIN      │
  └─────────────┘
```

Parameter	Default	Setting range	Description
Destination 1 - 5	(Respective Destinations 1 - 5) Source FS1 - Source FS5	Source FS1 - Source FS5	Allows you to assign a source (FS output) to each CLEAN SWITCH Destination (output). (This setting does not immediately switch video signals.)
No.	1	1 - 100	Allows you to select a Salvo number, from 1 to 100, to save the setting to. The set matrices are displayed for Destination1 - 5. Destination1 - 5 blinks if the destination displayed for the Destination differs from the actual output (see section 6-17. CLEAN SWITCH SETTINGS), The registered Salvo Name is also displayed.
Unit	FA-10RU	FA-10RU FA-505	Allows you to select a unit to which to save the Salvo setting.
/	/	/	Set Destination1 - 5, No, and Unit, then press the F3 Unity button to save the matrices. Displays "Saving salvo data" while the Salvo setting is being saved.

Move the F1/F2 indication to the item to be changed using the single-arrow buttons.
*   When the SALVO SAVE menu is accessed, Destination1 - 5display the current output matrices. (See section 6-17. CLEAN SWITCH SETTINGS.)

43

6-20. OPERATION SETTINGS

```
--- OPERATION SETTINGS ---                P528
F1 Front Operation:Normal
F2 Unity:Unlinked Unity
```

```
  CLN SW
6  GAIN
```

Parameter	Default	Setting range	Description
Front Operation	Normal	Normal Live Safe	Allows you to select a front panel operation mode. **Normal:** Changes will be applied immediately to the unit. **Live Safe:** Requires confirmation before changes are applied.
Unity	Unlinked Unity	Unlinked Unity Linked Unity	Allows you to select a Unity mode in FS Link mode. **Unlinked Unity**: Resets settings of only the displayed FS to default. **Linked Unity**: Resets settings of all linked FSs to default.

6-21. SDI VIDEO OUTPUT PORT ASSIGN

```
--- SDI VIDEO OUTPUT PORT ASSIGN ---
P530
F1 OUT1a/b:Router Out1
   OUT2a/b:Router Out2
   OUT3a/b:Router Out3
   OUT4a/b:Router Out4
   OUT5a/b:Router Out5
F4 Unity resets all settings default
```

Parameter	Default	Setting range	Description
OUT1a/b - OUT5a/b	(Respective OUTs: 1a/b - 5a/b) Router Out1 - Router Out5	Router Out1 - 5	Allows you to assign Clean SW ROUTE output signals to SDI connectors OUT1a/1b - SDI OUT 5a/5b, respectively. The F4 Unity button allows you to reset all FS inputs to default.

Move the F1/F2 indication to the item to be changed using the single-arrow buttons.
To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

6-22. UP/DOWN CONVERTER MODE

```
FS1 Name:FS 1
--- UP/DOWN CONVERTER MODE ---                    P535
F1 Converter Mode:By-pass
F2 SD Aspect:Unadjustable
F3 HD Aspect:Unadjustable
F4 SD Input :Unadjustable
Converter In      Converter Out
1080/59i       >>>1080/59i
```

```
8 OPTION
```

See section 4-2-6-1 "Converter Mode" in the "FA-505 Operation Manual" for details.

Parameter	Default	Setting range	Description
Converter Mode	By-pass	By-pass SD 1080i 720p 1080PsF 1080p(3G)	Selects a mode for FS1-FS5 UP/DOWN Converter to convert the input signal. **BY-pass**: Outputs the signal without converting. **SD**: Converts signals to a standard definition format. **1080i**: Converts signals to a 1080i format. **720p**: Converts signals to a 720p format. **1080PsF**: Converts signals to a 1080PsF format. **1080P(3G)**: Converts signals to a 3G-SDI 1080p format.
SD Aspect	Unadjustable	Unadjustable AFD(4:3) AFD-ALT(4:3) AFD(16:9) AFD-ALT(16:9) 4:3 L 16:9 T 4:3 L 14:9 T 4:3 L>16:9 4:3 F 4:3 4:3 L16:9PRTD 4:3 L 14:9 4:3 F ALT14:9 4:3 L ALT14:9 4:3 L ALT 4:3 16:9 L >16:9 16:9 F 16:9 16:9 P 4:3 16:9 F PRTD 16:9 P 14:9 16:9P ALT 14:9 16:9F ALT14:9 16:9F ALT4:3	Selectable aspect ratio settings when Converter Mode is set to **SD**. (4:3)AFD, (4:3) AFD-ALT, (16:9)AFD and (16:9)AFD-ALT automatically select an aspect ratio according to the AFD data in the input signal.
HD Aspect	Unadjustable	Unadjustable AFD AFD-ALT 16:9 L>16:9 16:9 F 16:9 16:9 P 4:3 16:9 F PRTD 16:9 P 14:9 16:9P ALT14:9 16:9F ALT14:9 16:9F ALT4:3	Selectable aspect ratio settings when Converter Mode is set to "**1080i**, **720p**, **1080PsF** or **1080p(3G)**, and an SD signal is input.
SD Input	4:3	4:3 16:9	Specifies an aspect ratio for SD inputs.

Converter In displays the signal format before conversion.
Converter Out displays the signal format after conversion.
To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."
Note that the converter is disabled (automatically set to By-pass) if a 2x1080/59.94i(Level-B) or 2x1080/50i(Level-B) signal is input.

◆ **Conversion Table**

Possible Conversions for Input Signal Formats and Mode Selections

Input signal		Convert Mode setting				
		SD	1080i	720p	1080PsF	1080p(3G)
NTSC formats	525/60	525/60	1080/59i	720/59p	1080/23PsF	1080/59p
	1080/59i	525/60	1080/59i	720/59p	1080/59i (BY-PASS)	1080/59p
	720/59p	525/60	1080/59i	720/59p	720/59p (BY-PASS)	1080/59p
	1080/59p	525/60	1080/59i	720/59p	1080/59p (BY-PASS)	1080/59p
PAL formats	625/50	625/50	1080/50i	720/50p	1080/24PsF	1080/50p
	1080/50i	625/50	1080/50i	720/50p	1080/50i (BY-PASS)	1080/50p
	720/50p	625/50	1080/50i	720/50p	720/50p (BY-PASS)	1080/50p
	1080/50p	625/50	1080/50i	720/50p	1080/50p (BY-PASS)	1080/50p
Other formats	1080/23PsF	525/60	1080/23PsF (BY-PASS)	1080/23PsF (BY-PASS)	1080/23PsF	1080/23PsF (BY-PASS)
	1080/24PsF	625/50	1080/24PsF (BY-PASS)	1080/24PsF (BY-PASS)	1080/24PsF	1080/24PsF (BY-PASS)

In the conversions to the formats indicated as (BY-PASS), the Resize, Position, Cropping or Side Color settings cannot be changed.

6-23. UP/DOWN CONVERTER SIZE/POS

```
FS1 Name:FS 1
--- UP/DOWN CONVERTER SIZE/POS  ---        P536
F1 H Size:100.0%
F2 V Size:100.0%
F3 H POS :    0Pixel
F4 V POS :    0Pixel
```

8 OPTION
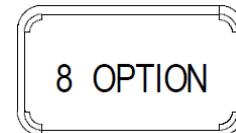
Parameter	Default	Setting range (Steps)	Description
H SIZE (Horizontal Size)	100.0%	50.0 - 150.0% (0.1%)	Adjusts the width of the video displayed on the monitor. [1]
V SIZE (Vertical Size)	100.0%	50.0 - 150.0% (0.1%)	Adjusts the height of the video displayed on the monitor. [1]
H POS (Horizontal Position)	0 Pixel	(Variable) [2] (2 Pixel)	Adjusts the horizontal position of the video displayed on the monitor.
V POS (Vertical Position)	0 Line	(Variable) [2] (1 Line)	Adjusts the vertical position of the video displayed on the monitor.

[1] If the size is made smaller than the original size, set the background color under **UP/DOWN CONVERTER SIDE COLOR** (see section 6-26.).

[2] The following parameters interact with each other. When you change one of their setting values, setting ranges of other parameters will also change.
> **FS SYNC FORMAT SETTINGS** (see section 6-16.)
> **CU/DOWN Converter Mode** (see section 6-22.)

If the **Convert Mode** is set to **BY-PASS**, Resize and Position cannot be changed and the "Unadjustable" is displayed.

Also, it cannot be changed if the conversion is set to the formats indicated as (BY-PASS) in the Conversion Table (see the previous section).

To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

6-24. UP/DOWN CONVERTER CROPPING

```
FS1 Name:FS 1
--- UP/DOWN CONVERTER CROPPING ---        P537
F1 Left   Cropping :    0 Pixel
F2 Right  Cropping :    0 Pixel
F3 Top    Cropping :    0 Pixel
F4 Bottom Cropping :    0 Pixel
```

8 OPTION

Parameter	Default	Setting range (Steps)	Description
Left Cropping	0 Pixel	Variable (2 Pixel)	Crops the left side of the video.
Right Cropping	0 Pixel	Variable (2 Pixel)	Crops the right side of the video.
Top Cropping	0 Pixel	Variable (1 Line)	Crops the top of the video.
Bottom Cropping	0 Pixel	Variable (1 Line)	Crops the bottom of the video.

6-25. IMPROVEMENT IN CONVERTER

```
FS1 Name:FS 1
--- IMPROVEMENT CONVERTER   ---        P538
F1 Motion Sense:Adaptive
F2 Antialias H :Normal
F3 Antialias V :Normal
F4 Enhance     :Level0
```

8 OPTION

Parameter	Default	Setting range	Description
Motion Sense	Adaptive	Field Adaptive Frame(ODD 1st) Frame(EVEN 1st)	**Field**: Generates a progressive scan image from one field of an interlaced scan image. The created image has no motion artifacts, but vertical resolution will be reduced. **Adaptive**: Detects whether there is motion or no motion in the scene, and generates an optimal progressive scan image. **Frame (Odd 1st)**: Generates a progressive scan image from two fields (odd/even) of an interlaced scan image. Suitable for the progressive segment frame input of progressive scan signals. **Frame (Even 1st)**: Generates a progressive scan image from two fields (even/odd) of and interlaced scan image.
Antialias H *	Normal	Weak 8 - 1 Normal Strong 1 - 8	Performs horizontal anti-aliasing for the output video image. **Weak 8 to Strong 8** (low to high)
Antialias V *	Normal	Weak 8 - 1 Normal Strong 1 - 8	Performs vertical anti-aliasing for the output video image. **Weak 8 to Strong 8** (low to high)
Enhance *	Level0	Level 0 - 8	Sharpens the output video image. **Level 0 to 8** (low to high)

*   The **Antialias** cannot be changed if **Converter Mode** is set to **BY-PASS** (p 46).

To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

6-26. UP/DOWN CONVERTER SIDE COLOR

```
FS1 Name:FS 1
--- UP/DPWN CONVERTER SIDE COLOR---       P539
F1 Red  :0
F2 Green:0
F3 Blue :0
F4 Group Adjust
```

```
8 OPTION
```
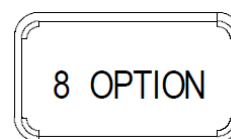
Parameter	Default	Setting range	Description
RED, GREEN, BLUE (Side Color)	0	0 - 255	Sets background color that will be visible if the converted image is set smaller than original in Resize/Position (see section 6-23. UP/DOWN CONVERTER SIZE/POS). R, G, and B components can be adjusted separately
Group Adjust	-	-	Allows you to change all three components accordingly while retaining the proportion.

6-27. SLOT A-D GPI FUNCTION SETTINGS

```
--- SLOT A GPI FUNCTION SETTINGS ---       P550
F1 Port No.         :Port1
   Input Level1 :None
   Input Level2 :---
   Output LEVEL1:None
   Output LEVEL2:---
   Polarity     :---
Push F2 Unity Apply
```

Parameter	Default	Setting range	Description
Port No	Port1	Port1 - 10	Allows you to select a port of the GPI option installed into FA-505 SLOT A-D.
Input Level1	None	*1	Allows you to assign a function to the GPI input port installed into FA-505 SLOT A-D.
Input Level2	---		
Output Level1	None	*2	Allows you to assign a function to the GPI output port installed into FA-505 SLOT A-D.
Output Level2	---		
Polarity	---	Normal Invert	Allows you to select the polarity for outputs for the Unit Alarm selected under Level 1. **Normal:** The Output signal level is Low in an Alarm state. **Invert:** The Output signal level is High in an Alarm state.

Move the F1 indication to the item to be changed using the single-arrow buttons. Changes will be applied to the FA-505 when the F2 Unity button is pressed. This menu is displayed if the FA-10GPI option is installed into FA-505 SLOT A-D.

*1 See the GPI Input settings list for details.
*2 See the GPI Output settings list for details.
Also, see the FA-505 Operation Manual for details on GPI functions.

◆ **GPI Input Settings List**

Level 1	Level 2
None	-
Video Freeze	All Freeze Mode Frame
	All Freeze Mode Odd
	All Freeze Mode Even
	FS 1-5 Freeze On/Off [*1]
	All Freeze On/Off
SDI Relay By-pass	SDI 1-5 By-pass On/Off [*1]
	All By-pass On/Off

Time Code	Time Code Start
	Time Code Stop
	Time Code Reset
	Time Code Preset
Clean Switch System	Direct Mode
	Take Mode
	Take
Clean Switch Destination	Destination 1-5
Clean Switch Source	Source 1-5
Salvo Recall	Salvo 1-100
Event Load	Default
	Event 1-100
Video Test Signal	FS1-5, All Off
	FS1-5, All 100% Color Bar
	FS1-5, All 75% Color Bar
	FS1-5, All SMPTE Color Bar
	FS1-5, All Ramp
Audio Test Signal	FS1-5, AES A-D, Analog, All Off [2], [3]
	FS1-5 AES A-D, Analog, All 500Hz Tone [2], [3]
	FS1-5 AES A-D, Analog, All 1kHz Tone [2], [3]
Other	GPI Lock

1 Displays an "" at the beginning of text strings if the function is ineffective due to other settings.
*2 AES A-D functions are displayed if the FA-10AES-BL/UBL/UBLC option is installed in the corresponding SLOT A-D.
*3 Analog audio functions are displayed if the FA-10ANA-AUD option is installed in Slot D.

◆ **GPI Output Settings List**

Level 1	Level 2
None	-
Unit Alarm	FAN 1/2/3/4 Alarm
	FAN 1-4 Alarm
	DC Power 1/2 [1]
	DC Power 1-2 [1]
	Any Alarm
Video In	FS 1-5 Video In
	Reference In
Audio In	FS 1-5 Audio In
	OP A-D Audio In [2]
Other	Input Function [3]

*1 DC Power 2 is displayed if the FA-10PS option is installed.
*2 OP A-D Audio In is displayed if the FA-10AES-BL/UBL/UBLC/ANA-AUD option is installed into SLOT A-D.
*3 The output function varies depending on the Input setting of the port. Refer to the "Input Function Operation Characteristics of GPI Output" for details.

◆ **Input Function Operation Characteristics of GPI Output**

Input setting	Output Behavior (under Input Function)
All Freeze Frame	Outputs when Freeze Mode is set to Frame for all FSs 1-5.
All Freeze Odd	Outputs when Freeze Mode is set to Odd for all FSs 1-5.
All Freeze Even	Outputs when Freeze Mode is set to Even for all FSs 1-5.
FS 1-5 Freeze On/Off	Outputs when Freeze is set to On for the subject FS.
All Freeze On/Off	Outputs when Freeze is set to On for all FSs 1-5.
SDI 1-5 By-pass On/Off	Outputs when By-pass is set to On for the subject FS.
All By-pass On/Off	Outputs when By-pass is set to On for all FSs 1-5.
Time Code Start	Outputs when Time Code Starts.
Time Code Stop	Outputs when Time Code Stops.
Time Code Reset	No action.
Time Code Preset	No action.
Direct Mode	Outputs when Clean Switch is set to Direct Mode.

Take Mode	Outputs when Clean Switch is set to Take Mode.
Take	Outputs and does not output alternately when a Source is selected for a Destination in Take Mode so that Clean Switch is in the Take stand-by state.
Destination 1-5	Outputs when the subject Destination is selected.
Source 1-5	Outputs when the subject Source is selected.
Salvo 1-100	No action.
Event Load Default	Outputs and does not output alternately for about 3 seconds when an Event Load is performed.
Event 1-100	Outputs and does not output alternately for about 3 seconds when an Event Load is performed.
Video Test Signal FS1-5 Off	Outputs when Video Test Signal is set to Off for the subject FS.
Video Test Signal FS1-5 100% Color Bar	Outputs when Video Test Signal is set to 100% Color Bar for the subject FS.
Video Test Signal FS1-5 SMPTE Color Bar	Outputs when Video Test Signal is set to SMPTE Color Bar for the subject FS.
Video Test Signal FS1-5 Ramp	Outputs when Video Test Signal is set to RAMP for the subject FS.
Video Test Signal All Off	Outputs when Video Test Signal All is set to Off.
Video Test Signal All 100% Color Bar	Outputs when Video Test Signal All is set to 100% Color Bar.
Video Test Signal All SMPTE Color Bar	Outputs when Video Test Signal All is set to SMPTE Color Bar.
Video Test Signal All Ramp	Outputs when Video Test Signal All is set to RAMP.
Audio Test Signal FS1-5 Off	Outputs when Audio Test Signal is set to Off for the subject FS.
Audio Test Signal FS1-5 500Hz	Outputs when Audio Test Signal is set to 500Hz for the subject FS.
Audio Test Signal FS1-5 1kHz	Outputs when Audio Test Signal is set to 1kHz for the subject FS.
Audio Test Signal AES A-D Off	Outputs when Audio Test Signal is set to Off for the subject AES.
Audio Test Signal AES A-D 500Hz	Outputs when Audio Test Signal is set to 500Hz for the subject AES.
Audio Test Signal AES A-D 1kHz	Outputs when Audio Test Signal is set to 1kHz for the subject AES.
Audio Test Signal Analog Off	Outputs when Audio Test Signal is set to Off for the Analog audio.
Audio Test Signal Analog 500Hz	Outputs when Audio Test Signal is set to 500Hz for the Analog audio.
Audio Test Signal Analog 1kHz	Outputs when Audio Test Signal is set to 1kHz for the Analog audio.
Audio Test Signal All Off	Outputs when Audio Test Signal All is set to Off.
Audio Test Signal All 500Hz	Outputs when Audio Test Signal All is set to 500Hz.
Audio Test Signal All 1kHz	Outputs when Audio Test Signal All is set to 1kHz.
GPI Lock	Outputs when GPI Lock is enabled.

6-28. CLOSED CAPTION SETTINGS

```
--- SDI MULTIPLEXER ---                       P556
F1 FS1 SD Caption:CEA-608CC(Lne21)
   FS2 SD Caption:CEA-608CC(Lne21)
   FS3 SD Caption:CEA-608CC(Lne21)
   FS4 SD Caption:CEA-608CC(Lne21)
   FS5 SD Caption:CEA-608CC(Lne21)
```

```
  ┌─────────────┐
  │    ANC      │
  │ 9           │
  │   ANALOG    │
  └─────────────┘
```
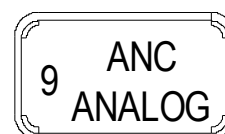
This menu helps you to detect Closed Caption ancillary data for extracting it from SDI inputs.

Parameter	Default	Setting range	Description
FS1 to FS5 SD Caption :	CEA-608 CC(Line21)	CEA-608 CC(Line21) ST334-1 CC	Allows you to select a closed caption standard for detecting closed caption in 525/60i SDI inputs.

To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

6-29. AFD DETECT SETTINGS

```
FS1 Name:FS 1
--- AFD DETECT SETTINGS ---                   P557
F1    SD SDI:S2016-3 AFD
      VI(525/60)  F1:Line14      F2:Line277
      VI(625/60)  F1:Line11      F2:Line324
      WSS(625/60) F1:Line23
```

```
  ┌─────────────┐
  │    ANC      │
  │ 9           │
  │   ANALOG    │
  └─────────────┘
```
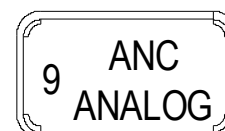
This menu helps you to detect AFD ancillary data for extracting it from SDI inputs.

Parameter		Default	Setting range	Description
SD SDI		S2016-3 AFD	S2016-3 AFD RP 186 VI BT1119-2 WSS	Allows you to select an AFD standard for detecting AFD data.
VI(525/60)	F1	Line14	Line12 to 19	Specify the line(s) in which AFD data is embedded. Use F1 for the line in Field 1 and F2 for the line in Field2.
	F2	Line277	Line275 to 282	
VI(625/50)	F1	Line11	Line8 to 22	
	F2	Line324	Line321 to 335	
WSS(625/50)	F1	Line23	Line8 to 23	

To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

51

6-30. AFD LOSS SETTINGS

```
FS1 Name:FS 1
--- AFD DETECT SETTINGS ---                    P558
F1 S2016-3(SD) :Remove
   S2016-3(HD) :Remove
   RP186 VI(SD):Remove
   WSS(SD)     :Remove
```

```
    ANC
9
    ANALOG
```
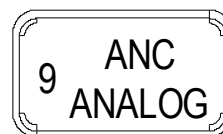
This menu allows you to specify an aspect-ratio processing for use if AFD data cannot be detected.

Parameter	Default	Setting range	Description
S2016-3(SD)	Remove	Remove Hold 4:3 L 16:9 T 4:3 L 14:9 T 4:3 L>16:9 4:3 F 4:3 4:3 L 16:9 PRTD 4:3 L 14:9 4:3 F ALT 14:9 4:3 L ALT 14:9 4:3 L ALT 4:3 16:9 L>16:9 16:9 F 16:9 16:9 P 4:3 16:9 F PRTD 16:9 P 14:9 16:9 P ALT 14:9 16:9 F ALT 14:9 16:9 F ALT 4:3	Select an AFD code if S2016-3 data cannot be detected in SD-SDI inputs. The selected AFD code is used for conversion process. **Remove**: If the automatic aspect ratio processing is enabled in the built-in converter (FA-505UD), **4:3 F 4:3** is applied. But no S2016-3 AFD data is embedded in SDI outputs.
S2016-3(HD)	Remove	Remove Hold 16:9 L>16:9 16:9 F 16:9 16:9 P 4:3 16:9 F PRTD 16:9 P 14:9 16:9 P ALT 14:9 16:9 F ALT 14:9 16:9 F ALT 4:3	Select an AFD code if S2016-3 data cannot be detected in HD-SDI inputs. The selected AFD code is used for conversion process. **Remove**: If the automatic aspect ratio processing is enabled in the built-in converter (FA-505UD), **16:9 F 16:9** is applied. But no S2016-3 AFD data is embedded in SDI outputs.
RP186 VI(SD)	Remove	Remove Hold 4:3 L 16:9 T 4:3 L 14:9 T 4:3 L>16:9 4:3 F 4:3 4:3 L 16:9 PRTD 4:3 L 14:9 4:3 F ALT 14:9 4:3 L ALT 14:9 4:3 L ALT 4:3 16:9 L>16:9 16:9 F 16:9 16:9 P 4:3 16:9 F PRTD 16:9 P 14:9 16:9 P ALT 14:9 16:9 F ALT 14:9 16:9 F ALT 4:3	Select an AFD code if RP186 VI data cannot be detected in SD-SDI inputs. The selected AFD code is used for conversion process. **Remove**: If the automatic aspect ratio processing is enabled in the built-in converter (FA-505UD), **4:3 F 4:3** is applied. But no VI AFD data is embedded in SDI outputs.

		Remove Hold 4:3 BOX 16:9 T 4:3 BOX 14:9 T 4:3 BOX>16:9 C 4:3 F 4:3 4:3 BOX 4:3 C 4:3 BOX 16:9 C 4:3 F 14:9 16:9 F 16:9 Anamorphic	Select an AFD code if BT1119-2 WSS data cannot be detected in SD-SDI inputs. The selected AFD code is used for conversion process. **Remove**: If the automatic aspect ratio processing is enabled in the built-in converter (FA-505UD), **4:3 F 4:3** is applied. But no WSS AFD data is embedded in SDI outputs.
WSS(SD)	Remove		

6-31. TIMECODE DETECT SETTINGS

```
FS1 Name:FS 1
--- TIMECODE DETECT SETTINGS ---        P559
     S12M-1 VITC SETTINGS
F1-F2 VITC(525/60) F1:Line14      F2:Line277
      VITC(625/50) F1:Line19      F2:Line332
```

```
   ANC
9
   ANALOG
```

This menu helps you to detect Timecode ancillary data for extracting it from SDI inputs.

Parameter		Default	Setting range	Description
VITC(525/60)	F1	Line14	Line12 to 19	Specify the line(s) in which AFD data is embedded. Use F1 for the line in Field 1 and F2 for the line in Field2.
	F2	Line277	Line275 to 282	
VITC(625/50)	F1	Line19	Line8 to 22	
	F2	Line332	Line321 to 335	

6-32. INPUT ANCILLARY STATUS 1

```
FS1 Name:FS 1
--- INPUT ANCILLARY STATUS1 ---        P561
Standard     Status   Line
CEA-608    :---       ---
Video Index:---       ---
WSS        :---       ---
```

```
   ANC
9
   ANALOG
```
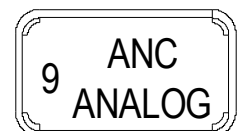
This menu displays the input ancillary data status for each FS.
To change an FS to be monitored, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

6-33. INPUT ANCILLARY STATUS 2

```
FS1 Name:FS 1
--- INPUT ANCILLARY STATUS2 ---        P562
No,DID,SDID, Standard              ,Line No
1:--- ,--- ,    ----              ,----
2:--- ,--- ,    ----              ,----
3:--- ,--- ,    ----              ,----
4:--- ,--- ,    ----              ,----
5:--- ,--- ,    ----              ,----
```

```
   ANC
9
   ANALOG
```

This menu displays input ancillary data packets by their Data ID number.
Move up and down pages (No1 to 50) by using the single-arrow buttons.
Up to 48 ancillary data packets can be displayed.
To change an FS to be monitored, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

6-34. SDI MULTIPLEXER

This menu allows you to select ancillary data output mode for each FS.
Refer to Sec 4-2-3. "SDI Multiplexer" in "FA-505 Operation Manual."

```
--- SDI MULTIPLEXER ---                P564
F1-F3 FS1 Mode:H/V      H:Overwrite V:Pass
      FS2 Mode:H/V      H:Overwrite V:Pass
      FS3 Mode:H/V      H:Overwrite V:Pass
      FS4 Mode:H/V      H:Overwrite V:Pass
      FS5 Mode:H/V      H:Overwrite V:Pass
```

```
  9   ANC
      ANALOG
```

Parameter	Default	Setting range	Description
FS1 to FS5 Mode	H/V	H/V Detail	Allows you to select a processing mode for ancillary data for each FS. **H/V**: Allows you to select overwrite, pass or blank the HANC and VANC spaces on output signals. **Detail**: Deletes all exiting H/V ANC data sources from SDI inputs and embeds the processed data or new audio or other sources into SDI output.
H	Overwrite	Overwrite Pass Blank	If **H/V** is selected for **ANC** Mode, select a processing type for the HANC space (mainly audio) on SDI output. **Overwrite:** Removes the embedded HANC data from input signals, then embeds the processed data or new audio or other sources into output signals. Other data than audio is inserted after audio data. **Pass:** Passes through the HANC data space "as is" without processing and allows to pass or delete each audio group in the **Embedded Audio** menu (see sec. 6-35). **Blank:** Blanks all HANC data space except audio sources. (Audio is passed through from SDI output.)
V	Overwrite	Pass Blank	Select a processing type for the VANC space on SDI output. **Pass**: Passes through the VANC data space "as is." **Blank**: Blanks all VANC data space.

6-35. EMBEDDED AUDIO MULTIPLEXER

```
FS1 Name:FS 1
--- EMBEDDED AUDIO MULTIPLEXER ---     P565
F1 Group1:Enable
F2 Group2:Enable
F3 Group3:Enable
F4 Group4:Enable
```

```
  9   ANC
      ANALOG
```
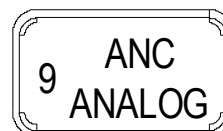
Parameter	Default	Setting range	Description
Group1 to Group4	Enable	Disable Enable	Allows you to select or unselect each Embedded Audio Group to enable or disable embedded audio insertion.

To change an FS to be monitored, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

6-36. CLOSED CAPTION EMBEDDED

```
FS1 Name:FS 1
--- CLOSED CAPTION EMBEDDED ---        P566
CEA608 525/60    Line21/284 F1 EMB:Disable
S334-1 525/60    Line12/275 F1 EMB:Disable
CEA708 1080i/PsF   Line9       EMB:Disable
CEA708 720p        Line9       EMB:Disable
CEA708 3G-LevelA   Line9       EMB:Disable
CEA708 3G-LevelB   Line9       EMB:Disable
```

```
 ┌─────────────┐
 │    ANC      │
 │ 9           │
 │   ANALOG    │
 └─────────────┘
```
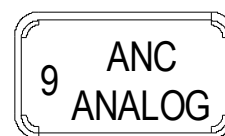
This menu allows you to specify the line(s) for embedding Closed Caption data onto SDI output. This page is enabled only when **ANC Mode** (P564) is set to **Detail**.

Parameter		Default	Setting range	Description
CEA605(525/60)	Line	Line21/284	-	To embed data source, set EMB to **Enable**. Speciry the line(s) within the setting range for each format.
	EMB	Disable	Disable, Enable	
S334-1(525/60)	Line	Line12/275	Line12/275-19/282	
	EMB	Disable	Disable, Enable	
CEA708(1080i/PsF)	Line	Line9	Line9 to 20	
	EMB	Disable	Disable, Enable	
CEA708(720p)	Line	Line9	Line9 to 25	
	EMB	Disable	Disable, Enable	
CEA708(3G Level-A)	Line	Line9	Line9 to 25	
	EMB	Disable	Disable, Enable	
CEA708(3G Level-B)	Line	Line9	Line9 to 41	
	EMB	Disable	Disable, Enable	

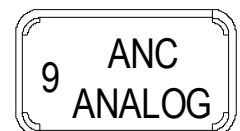To change an FS to be monitored, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

6-37. S2016-3 AFD EMBEDDED

```
FS1 Name:FS 1
--- S2016-3 AFD EMBEDDED ---          P567
525/60        F1:Line12/275   F2 EMB:Disable
625/50        F1:Line8/321    F2 EMB:Disable
1080i/PsF     F1:Line9/571    F2 EMB:Disable
720p          F1:Line9        F2 EMB:Disable
3G-LevelA     F1:Line9        F2 EMB:Disable
3G-LevelB     F1:Line9/571    F2 EMB:Disable
```

```
 ┌─────────────┐
 │    ANC      │
 │ 9           │
 │   ANALOG    │
 └─────────────┘
```

This menu allows you to specify the line(s) for embedding S2016-3 AFD data onto SDI output. This page is enabled only when **ANC Mode** (P564) is set to **Detail**.

Parameter		Default	Setting range	Description
525/60	Line	12/275	12/275 to 19/282	To embed data source, set EMB to **Enable**. Speciry the line(s) within the setting range for each format.
	Embedded	Disable	Disable, Enable	
625/50	Line	8/321	8/321 to 22/335	
	Embedded	Disable	Disable, Enable	
1080i/PsF	Line	9/571	9/571 to 20/582	
	Embedded	Disable	Disable, Enable	
720p	Line	9	9 to 25	
	Embedded	Disable	Disable, Enable	
3G Level-A	Line	9	9 to 41	
	Embedded	Disable	Disable, Enable	
3G Level-B	Line	9/571	9/571 to 20/582	
	Embedded	Disable	Disable, Enable	

To change an FS to be monitored, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

6-38. RP186 VI AFD EMBEDDED

```
FS1 Name:FS 1
--- RP186 VI AFD EMBEDDED ---              P568
525/60  F1 Field1:Line14   F2 Field2:Line277
525/60      Embedded:Disable
625/50  F1 Field1:Line11   F2 Field2:Line324
625/50      Embedded:Disable
```

```
9   ANC
    ANALOG
```

This menu allows you to specify the line(s) for embedding RP186 VI AFD data onto SDI output.
This page is enabled only when **ANC Mode** (P564) is set to **Detail**.

Parameter		Default	Setting range	Description
525/60	Field1	Line14	Line12 to 19	To embed data source, set EMB to **Enable**.
	Field2	Line277	Line275 to 282	
	Embedded	Disable	Disable, Enable	
625/50	Field1	Line11	Line8 to 22	Speciry the line(s) within the setting range for each format.
	Field2	Line324	Line321 to 335	
	Embedded	Disable	Disable, Enable	

To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

6-39. BT1119-2 WSS AFD EMBEDDED

```
FS1 Name:FS 1
--- BT1119-2 WSS AFD EMBEDDED ---      P569
F1 Line    :Line23
F2 Embedded:Disable
F3 Conversion Error:Remove
```

```
9   ANC
    ANALOG
```

This menu allows you to specify the line(s) for embedding BT1119-2 WSS AFD data onto SDI output. (625/50 only)
This page is enabled only when **ANC Mode** (P564) is set to **Detail**.

Parameter	Default	Setting range	Description
Line	Line23	Line8 to 23	To embed data source, set EMB to **Enable**.
Embedded	Disable	Disable, Enable	Speciry the line(s) within the setting range for each format.
Conversion Error	Remove	Remove Full Format 4:3	This setting is applied if a specified aspect ratio is not supported by the BT1119-2 WSS standard: **Remove**: No data is embedded. **Full format 4:3**: **Full format 4:3** is embedded instead of the unsupported aspect ratio.

To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

6-40. S12M-1 VITC EMBEDDED

```
FS1 Name:FS 1
--- S12M-1 VITC EMBEDDED ---                P570
525/60 F1  Line14/277 F2 Embedded:Disable
625/50     Line19/332    Embedded:Disable
```
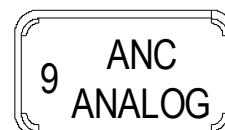
```
  ANC
9
  ANALOG
```
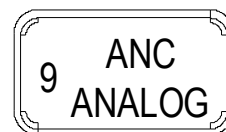
This menu allows you to specify the line(s) for embedding S12M-1 VITC data onto SDI output.

This page is enabled only when **ANC Mode** (P564) is set to **Detail**.

Parameter	Default	Setting range	Description
Line (625/50)	Line14/277	Line12/275 to 19/282	To embed data source, set EMB to **Enable**.
Embedded	Disable	Disable, Enable	
Line (525/60)	Line19/332	Line8/321 to 22/335	Speciry the line(s) within the setting range for each format.
Embedded	Disable	Disable, Enable	

To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

6-41. S12M-1 ATC VITC EMBEDDED

```
FS1 Name:FS 1
--- S12M-1 ATC VITC EMBEDDED ---          P571
525/60      F1:Line12/275   EMB:Disable
625/50         Line8/321    EMB:Disable
1080i/PsF      Line9/571     EMB:Disable
720p           Line9         EMB:Disable
3G-LevelA      Line9         EMB:Disable
3G-LevelB      Line9/571     EMB:Disable
```

```
  ANC
9
  ANALOG
```
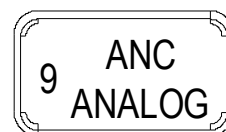
This menu allows you to specify the line(s) for embedding S12M-1 ATC VITC data onto SDI output.

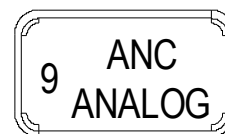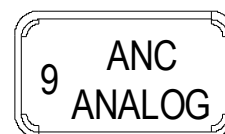This page is enabled only when **ANC Mode** (P564) is set to **Detail**.

Parameter		Default	Setting range	Description
525/60	Line	12/275	12/275 to 19/282	
	Embedded	Disable	Disable, Enable	
625/50	Line	8/321	8/321 to 22/335	
	Embedded	Disable	Disable, Enable	
1080i/PsF	Line	9/571	-	To embed data source, set EMB to **Enable**.
	Embedded	Disable	Disable, Enable	
720p	Line	9	-	Speciry the line(s) within the setting range for each format.
	Embedded	Disable	Disable, Enable	
3G-LevelA	Line	9	-	
	Embedded	Disable	Disable, Enable	
3G-LevelB	Line	9/571	-	
	Embedded	Disable	Disable, Enable	

To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

6-42. S12M-1 ATC LTC EMBEDDED

```
FS1 Name:FS 1
--- S12M-1 ATC LTC EMBEDDED ---          P572
525/60        F1:Line12   F2 Embedded:Disable
625/50        F1:Line8    F2 Embedded:Disable
1080i/PsF        Line10       Embedded:Disable
720p             Line10       Embedded:Disable
3G-LevelA        Line10       Embedded:Disable
3G-LevelB        Line10       Embedded:Disable
```

```
   ┌─────────────┐
   │      ANC    │
   │  9          │
   │    ANALOG   │
   └─────────────┘
```

This menu allows you to specify the line(s) for embedding S12M-1 ATC LTC data onto SDI output.
This page is enabled only when **ANC Mode** (P564) is set to **Detail**.

Parameter		Default	Setting range	Description
525/60	Line	12	12 to 19	To embed data source, set EMB to **Enable**. Specify the line within the setting range for each format.
	Embedded	Disable	Disable, Enable	
625/50	Line	8	8 to 22	
	Embedded	Disable	Disable, Enable	
1080i/PsF	Line	10	-	
	Embedded	Disable	Disable, Enable	
720p	Line	10	-	
	Embedded	Disable	Disable, Enable	
3G-LevelA	Line	10	-	
	Embedded	Disable	Disable, Enable	
3G-LevelB	Line	10	-	
	Embedded	Disable	Disable, Enable	

To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

6-43. EMBEDDED TIME CODE

```
--- EMBEDDED TIME CODE ---               P575
FS1 F1  VITC:ATC(VITC)    F2 LTC:ATC(VITC)
FS2     VITC:ATC(VITC)       LTC:ATC(VITC)
FS3     VITC:ATC(VITC)       LTC:ATC(VITC)
FS4     VITC:ATC(VITC)       LTC:ATC(VITC)
FS5     VITC:ATC(VITC)       LTC:ATC(VITC)
   LTC Port:Input
    Time 00:00:00:00
```

```
   ┌─────────────┐
   │      ANC    │
   │  9          │
   │    ANALOG   │
   └─────────────┘
```

This menu allows you to specify a timecode source for VITC and/or LTC to be embedded in SDI output for each FS.

Parameter		Default	Setting range	Description
FS1-FS5	VITC	ATC(VITC)	ATC(VITC) ATC(LTC) DVITC LTC In TCG	**ATC(VITC)**: Timecode embedded in the SDI input (S12M-1 ATC (VITC)) **ATC(LTC)**: Timecode embedded in the SDI input (S12M-1 ATC (LTC)) **DVITC**: Timecode embedded in the SDI input (S12M-VITC) * SD signals only **LTC In**: Timecode input from LTC In on the rear panel. **TCG**: Internally generated timecode. Use Timecode Generator menu to generate a new timecode.
	LTC	ATC(LTC)	(Same as above)	(Same as above)
LTC Port		Input	Input Output	Allows you to configure the **LTC IN/OUT** connector on the rear panel as an **input** or **output**.

			If LTC Port is set to **Input**, the current status of timecode input to the connector is displayed.
Time	―	―	If LTC Port is set to **Output**, the counter of the built-in Timecode Generator is displayed.

Move the F1/F2 indication to the item to be changed using the single-arrow buttons.

6-44. TIMECODE GENERATOR

```
--- TIMECODE GENERATOR ---              P576
Time 00:00:00:00
F1 Start,F2 Stop,F3 Reset F4 Preset
   Preset Time  0: 0: 0: 0
   Drop Frame:Off
```

```
9  ANC
   ANALOG
```
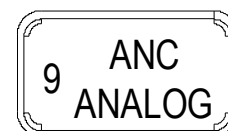
This menu allows you to generate a timecode to be embedded onto SDI outputs.
Select **TCG** in the EMBEDDED TIME CODE menu.
Use the following four buttons to generate a new timecode.

    Start (F1 Unity button)
    Stop (F2 Unity button)
    Reset (F3 Unity button)
    Preset (F4 Unity button)

Parameter	Default	Setting range	Description
Preset Time	0	―	Sets the Preset Time using F1 (hour), F2 (minute), F3 (second) and F4 (frame).
Drop Frame	Off	Off On	Allows you to select Drop frame timecode (**On**) or Non-drop frame timecode (**Off**).

Move the F1/F2 indication to the item to be changed using the single-arrow buttons.

6-45. VIDEO INPUT LOSS MODE

```
--- VIDEO INPUT LOSS MODE ---           P578
F1 FS1:Black
   FS2:Black
   FS3:Black
   FS4:Black
   FS5:Black
```

```
10 SYSTEM
```

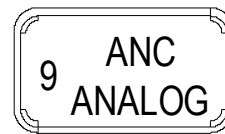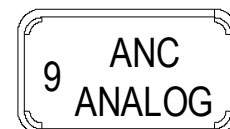| Parameter	Default	Setting range	Description
FS1 - FS5	Black	Black Blue Red Magenta Green Cyan Yellow Color Bar Auto Freeze Out Disable	Allows you to select an operation for the time the video signal input disappears for each FS. **Black – Yellow:** Outputs the selected back color. **Color Bar:** Outputs the SMPTE color bar. **Auto Freeze:** Continues to output the image from one frame before the input signal loss. **Out Disable:** No signal output. (Sets the output video signal to high impedance.)

To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

6-46. FS MODE SETTINGS

```
FS2 Name:FS 2
--- FS MODE SETTINGS ---                    P579
F1 Sync Mode   :Frame
F2 Frame Delay :Off
F3 Payload ID  :Overwrite
F4 4KFS(FS2-5) :Disable
```

```
10 SYSTEM
```

Parameter	Default	Setting range	Description
Sync Mode	Frame	Frame Line AVDL Line(Minimum)	**Frame**: Enables horizontal and vertical alignment of video signals to a genlock signal. Effective on both synchronous and asynchronous signals. **Line**: Locks the video signal (within ±1/2H) to a genlock signal and outputs with 1H delay. Effective only when video signal is synchronous to the genlock signal. **AVDL**: Locks the input video signal to a genlock signal with 1H delay. Effective only when video signal is synchronous to the genlock signal. **Line(Minimum)** : Locks the input video signal to a genlock signal and outputs with a minimum amount of delay based on the input signal video format. Delay amounts based on formats are shown in the "AVDL (Minimum) Delay vs. Format" table below.
Frame Delay	Off	Off 1 to 8 Frames	Allows you to set the amount of Frame Delay for each FS. Displays Unadjustable if Sync Mode is not set to Frame.
Payload ID *1	Overwrite	Overwrite Pass	Allows you to select which Payload ID is inserted into G SDI output. (See Sec.6-55. Payload ID Input Status.) **Overwrite**: Inserts a new Payload ID that matches to the output signal of 3G Level-A, 1080/59p(50p) Level-B or 2x1080/59i(50i) Level B, according to input signal and settings. **Pass**: Inserts the Payload ID of input signal.
4KFS (FS2-FS5 only) *2	Disable	Enable Disable	Allows you to enable/disable 4KFS mode. 4 input signals are simultaneously phase-adjusted within 2 lines (1 line for Level B) for horizontal and 1 frame for vertical timings. **Enable**: Processes the FS2, FS3, FS4 and FS5 video signals as a 4K video. Purple light indicates 4KFS mode is active. Frame dropping and repeating may occur in 4K video because these four signals are processed as synchronous video even if they are not synched with the genlock signal. To avoid this problem, set as below for FS2 to FS5. -Set **Sync Mode** to **Frame**. -Set **System Phase** to the **same** settings for FS2-FS5. **Disable**: Processes the FS2, FS3, FS4 and FS5 signals independently.

To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

*1 Unavailable if FA-505 software version is less than 1.01.

*2 If FA-505 software version is less than 1.01 the 4KFS group is set to FS1-4.
    If FA-505 software version is 1.10 or higher, the 4KFS group is set to FS2-5

◆ Line(Minimum) Delay vs. Format

Format	Delay		
	Line	AVDL	AVDL (Minimum)
1080/59i	1H	1H	Approx. 0.3 H (700 clk)
720/59p	1H	1H	Approx. 0.4 H (700 clk)
1080/59p Level A	1H	1H	Approx. 0.3 H (700 clk)
1050/50i	1H	1H	Approx. 0.25 H (700 clk)
720/50p	1H	1H	Approx. 0.35 H (700 clk)
1080/50p Level A	1H	1H	Approx. 0.25 H (700 clk)
1080/23.98PsF	1H	1H	Approx. 0.25 H (700 clk)
1080/24PsF	1H	1H	Approx. 0.25 H (700 clk)
1080/59p Level B	2H	2H	Approx. 0.3 H (700 clk)
1080/50p Level B	2H	2H	Approx. 0.25 H (700 clk)
2x1080/59i Level B	2H	2H	Approx. 0.3 H (700 clk)
2x1080/50i Level B	2H	2H	Approx. 0.25 H (700 clk)
1080/59p Level A→B	3H	3H	2H + approx. 0.3 H (700 clk)
1080/50p Level A→B	3H	3H	2H + approx. 0.43 H (1150 clk)
1080/59p Level B→A	1H	1H	Approx. 0.3 H (700 clk)
1080/50p Level B→A	1H	1H	Approx. 0.25 H (700 clk)
525/60	1H	1H	Approx. 0.4 H (700 clk)
625/50	1H	1H	Approx. 0.4 H (700 clk)

IMPORTANT

Note that 1080/59p or 1080/50p Level B output signal that is converted from Level A requires more delay than other output signal formats. In such case, 3H delay is present in Line or AVDL Sync Mode, and 2H+400clk or 2H+850clk in AVDL (Minimum) Sync mode.

6-47. VIDEO SYSTEM PHASE/POSITION

```
FS1 Name:FS 1
--- VIDEO SYSTEM PHASE/POSITION ---      P580
F1 Horizontal Phase   : 0 Clock
F2 Vertical   Phase   : 0 Line
F3 Horizontal Position: 0 Pixel
F4 Vertical   Position: 0 Line
REF:525/60
Synchronous is Frame mode
```

10 SYSTEM

Parameter	Default	Setting range (Steps)	Description
Horizontal Phase	*1	± 1400 (1 Clock)	Allows you to adjust the horizontal and vertical phases of the system referring to genlock signal.
Vertical Phase	*2	± 600 (1 Line)	
Horizontal Position	0	± 200 (HD 2 Pixel) ± 200 (SD 4 Pixel)	Adjusts the horizontal/vertical position of output videos.
Vertical Position	0	± 100 (1 Line)	

* An "Unadjustable" message is displayed and the settings disabled, if no reference signal input is present.

To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

The sync mode of the FS is displayed in the bottom line.

*1 The Horizontal Phase default value varies depending on Sync Mode and the 3G Level A/B conversion. See the "Horizontal Phase Default Values" table, below, for details.

*2 The Vertical Phase default value varies depending on Sync Mode and the 3G Level A/B conversion. See the "Vertical Phase Default Values" table, below, for details.

◆ **Horizontal Phase Default Values**

Sync Mode	Default
Frame	0
Line	0
AVDL	0
Line(Minimum)	400
Line(Minimum)[1080/50p LevelA to 1080/50p LevelB conversion]	850

◆ **Vertical Phase Default Values**

Sync Mode	Default
Frame	0
Line	1
Line [3G LevelA to 1080/50p LevelB conversion]	3
AVDL	1
AVDL [3G LevelA to 1080/50p LevelB conversion]	3
Line(Minimum)	0
Line(Minimum) [3G LevelA to 1080/50p LevelB conversion]	2

6-48. VIDEO FREEZE

```
FS1 Name:FS 1
--- VIDEO FREEZE ---                    P582
F1 Freeze On/Off:Off
F2 Freeze Mode  :Frame
F3 Strobe Freeze:Off
F4 All FS Freeze:Off

Input Video:1080/59i
```

```
10 SYSTEM
```
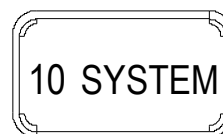
Parameter	Default	Setting range	Description
Freeze	Off	Off, On	Allows you to turn Freeze **On/Off** for each FS.
Freeze Mode	Frame	Frame Odd Even	Allows you to select an operation mode for Freeze. Displays "Unadjustable", if no signal or a progressive signal is input to the FS.
Strobe Freeze	Off	Off 1 - 255	Allows you to set the interval to refresh the images by the number of fields for the field or frame freeze. Off: Images will not be refreshed.
All FS Freeze	Off	On Off	Allows you to turn Freeze **On/Off** for all FSs 1-5. Freeze mode for each FS varies depending on the respective Freeze Mode settings.
Input Video	—	—	Displays the input video format of the FS.

To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

6-49. SD TV LINE MASK

```
FS1 Name:FS 1
--- SD TV LINE MASK ---                 P583
F1-F4 L6 :Off  L7 :Off  L8 :Off  L9 :Off
      L10:Off  L11:Off  L12:Off  L13:Off
      L14:Off  L15:Off  L16:Off  L17:Off
      L18:Off  L19:Off  L20:Off  L21:Off
      L22:Off  L23:Off
```

```
10 SYSTEM
```
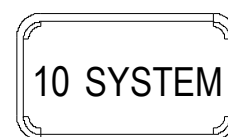
Parameter	Default	Setting range	Description
L6-23 (Line6 – 23)	Off	Off On	Allows you to set whether to mask the line for line 6 - 23 of SD-SDI signals in each FS. **Off**: Outputs the signal without processing. **On**: Masks the selected SD-SDI output signal line.

Move the F1/F2/F3/F4 indication to the item to be changed using the single-arrow buttons. To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

6-50. 3G SDI OUTPUT LEVEL

```
--- 3G SDI OUTPUT LEVEL ---                P584
F1 FS1:Follow Input
   FS2:Follow Input
   FS3:Follow Input
   FS4:Follow Input
   FS5:Follow Input
```

10 SYSTEM

Parameter	Default	Setting range	Description
FS1 - FS5	Follow Input	Follow Input Level A Level B	Allows you to select a 3G Level (Level A / B) for each FS. **Follow Input**: The 3G-SDI input signal Level will not be changed and output level will be the same. **Follow Input** converts video to 3G Level A if it is other format than 3G Level B. **Level A**: Always outputs 3G-SDI Level A signals. * If input signal is 3G-SDI Level B, the signal will automatically be converted to 3G-SDI Level A. **Level B**: Always outputs 3G-SDI Level B signals. * If input signal is 3G-SDI Level A, the signal will automatically be converted to 3G-SDI Level B.

Move the F1/F2 indication to the item of which setting to be changed using the single-arrow buttons.

6-51. VIDEO TEST SIGNAL

```
--- VIDEO TEST SIGNAL ---                  P585
F1 FS1:Off
   FS2:Off
   FS3:Off
   FS4:Off
   FS5:Off
   FS1-FS5:Off
```

10 SYSTEM
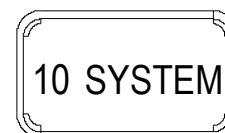
Parameter	Default	Setting range	Description
FS1-FS5	Off	Off Full CB 75% CB SMPTE CB Ramp	Allows you to set each FS to generate the selected video test signal. (Effective when **FS1-FS5** is set to Off.)
FS1-FS5	Off	Off Full CB 75% CB SMPTE CB Ramp	Allows you to set all FSs to generate the selected video test signal.

*   Different video test signals cannot be set for each FS, unless FS1-FS5 is set to Off.
Move the F1/F2 indication to the item to be changed using the single-arrow buttons.

6-52. VIDEO SYSTEM FRAME RATE

```
--- VIDEO SYSTEM FRAME RATE ---          P586
F1 Frame Rate:23.98/29.97/59.94 fps
 _____
|                                        |
|Carefully change "Frame Rate"           |
|                      |                 |
|                      |                 |
|_____|
```

Parameter	Default	Setting range	Description
Frame Rate	23.98/29.97/59.94 fps	23.98/29.97/59.94 fps 24/25/50 fps	Allows you to select a video system frame rate. Note: Carefully adjust the setting to prevent the input/output video system settings from completely changing.

* A confirmation message appears regardless of the OPERATION SETTINGS menu (see sec. 6-20), Front Operation settings.

6-53. VIDEO INPUT STATUS

```
--- VIDEO INPUT STATUS ---               P591
FS1:525/60
FS2:1080/23PsF
FS3:1080/59p LevelB
FS4:Loss
FS5:Loss
REF:525/60
```

```
0 STATUS
```
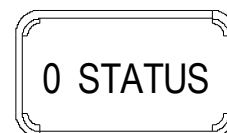
Parameter	Default	Setting range	Description
FS1-FS5	—	—	Displays the input signal format for each FS, and the reference signal format.

6-54. SDI VIDEO OUTPUT STATUS

```
--- SDI VIDEO OUTPUT STATUS ---          P593
SDI1a/1b:525/60
SDI2a/2b:1080/23PsF
SDI3a/3b:1080/59p LevelA
SDI4a/4b:1080/59i
SDI5a/5b:1080/59i
```

```
0 STATUS
```

Parameter	Default	Setting range	Description
SDI1a/1b-SDI5a/5b	—	—	Displays the output format for each SDI output connector.

6-55. Display Payload ID Status

```
FS1 Name:FS 1
--- PAYLOAD ID INPUT STATUS  ---       P596
Byte :   1 /  2 /  3 /  4 |Check Sum
LinkA:  --- / --- / --- / --- | ---
LinkB:  --- / --- / --- / --- | ---
```

```
0 STATUS
```

Payload ID and checksum values are 10-bit data (including parity bit) and displayed as three hexadecimal digits.

Display	Input signal format	Description
Link A	SD/HD	No information display
	3G Level A	Displays the Payload ID embedded in Y signal.
	3G Level B	Displays the Payload ID embedded in Link A.
Link B	SD/HD	No information display
	3G Level A	Displays the Payload ID embedded in C signal.
	3G Level B	Displays the Payload ID embedded in Link B.

*1 Unavailable if FA-505 software version is less than 1.01.

6-56. MAIN UNIT ALARM INFORMATION

```
--- MAIN UNIT ALARM INFORMATION ---
P601
FAN1:Normal
FAN2:Normal
FAN3:Normal
FAN4:Normal
DC POWER1:Normal*
DC POWER2:Normal*
```

```
0 STATUS
```

Parameter	Default	Setting range	Description
FAN1 - FAN4	—	—	Displays the FAN status of the connected FA-505. **Normal**: All fans are operating normally. **Stopped**: One or more fans have failed. Power Off the unit and consult your reseller.
DC POWER1 DC POWER2	—	—	Displays the status of Power Supply unit 1 and 2. **Normal**: Power supply is normal. **Abnormal**: A power failure has occurred. Power Off the unit and consult your reseller.

* No indication if an FA-505PS is not installed.

6-57. MAIN UNIT VERSION INFORMATION

```
--- MAIN UNIT VERSION  INFORMATION ---
P602
FPGA1: 1.00
FPGA2: 1.00
FPGA3: 1.00
FPGA4: 1.00
FPGA5: 2.10
SOFT : 1.00
FA-505 Ser No.15780001
```

0 STATUS
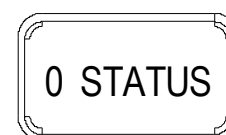
Parameter	Default	Setting range	Description
FPGA1 - FPGA5 SOFT Ser No.	—	—	Displays the software versions and serial number of the connected FA-505.

6-58. OPTION VERSION INFORMATION

```
Slot(A)
--- UNIT VERSION INFORMATION ---        P603
Option Type:Not installed
FPGA1:--.--
FPGA2:--.--
SOFT :--.--
```

0 STATUS

Parameter	Default	Setting range	Description
FPGA1 - FPGA2 SOFT	—	—	Displays version information for options installed in option slots A to D of the connected FA-505. Slots A to D to be displayed can be selected with the same procedure as that to select FS 1 to 5.

6-59. OTHER OPTION INFORMATION

```
--- UNIT VERSION INFORMATION ---        P604
FA-505PS:Installed
FA-505UD:Installed
```

0 STATUS
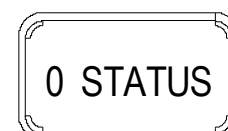
Parameter	Default	Setting range	Description
FA-505PS	—	—	Displays whether the FA-505PS is installed or not.
FA-505UD	—	—	Displays whether the FA-505UD is installed or not.

7. AUDIO Settings

Make the menu buttons light up orange using the VIDEO/AUDIO button.
(Pressing the button while the buttons are lit green turns the lights orange.)
Afterwards, the audio menus displayed on the lower row on each menu
button can be selected.

```
VIDEO

AUDIO
```

7-1. EMBEDDED AUDIO DEMULTIPLEX

```
FS1 Name:FS 1
--- EMBEDDED AUDIO DEMULTIPLEX ---        P611
F1 Audio Group Alignments:Enable
F2 HD-SDI Audio Clock:Auto
```

```
1   PROC

    EMB
```

Parameter	Default	Setting range	Description
Audio Group Alignments	Disable	Enable Disable	Allows you to enable or disable automatic phase adjustment for FS1-10 input embedded audio groups. **Enable:** Automatic adjustment **Disable:** No adjustment (normal setting)
HD-SDI Audio Clock	Auto	Auto Sync SDI Audio Clock	Allows you to select audio clock signal to use for de-embedding and processing audio data in HD-SDI input signal. **Auto**: De-embeds HD-SDI embedded audio data using the audio clock phase data in the embedded audio. Synchronous and asynchronous embedded audio signals from 4 audio groups can be de-embedded separately. Audio data will be processed as synchronous data if the audio clock phase data is incorrect, or jitter is too great. **Sync SDI**: All audio data in 4 audio groups are always processed as synchronous data without referring to the respective audio clock phase data. (*1) **AUD Clock**: Always uses audio clock phase data in HD-SDI embedded audio data to de-embed the audio data.

To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

(*1) Asynchronous audio cannot be processed correctly.

7-2. EMBEDDED AUDIO ERROR SENSE

```
--- EMBEDDED AUDIO ERROR SENSE ---          P612
F1 FS1:Normal
   FS2:Normal
   FS3:Normal
   FS4:Normal
   FS5:Normal
```

```
  1   PROC
      EMB
```

Parameter	Default	Setting range	Description
FS1 - FS5	Normal	Disable Normal Sensitive	Allows you to select how to treat the audio error detected in each FS. **Disable**: Disables mute function when change in audio status is detected. Normally not selected. **Normal**: Mutes when a change on an SDI signal, ADP (Audio Data Packet), or DBN (Data Block Number) is detected. Normally selected. **Sensitive**: Mutes when a change on channel status, or EDP (Extended Data Packet) presence (only for SD-SDI), as well as the above items, is detected.

Move the F1/F2 indication to the item to be changed using the single-arrow buttons.

7-3. FADE IN/OUT

```
--- FADE IN/OUT ---                         P613
F1 FS1:Disable
   FS2:Disable
   FS3:Disable
   FS4:Disable
   FS5:Disable
```

```
  1   PROC
      EMB
```
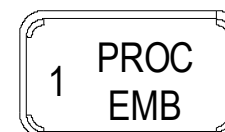
Parameter	Default	Setting range	Description
FS1 - FS5	Disable	Disable Enable	**Disable:** Always outputs input audio signals without adding any effect such as Fade or Mute. **Enable:** Sets an audio to mute with fade out if an audio error is detected, and make it fade in when recovered.

Move the F1/F2 indication to the item to be changed using the single-arrow buttons.

7-4. EMBEDDED AUDIO MULTIPLEX

```
FS1 Name:FS 1
--- EMBEDDED AUDIO MULTIPLEX ---          P614
F1 Audio Group1:Auto
F2 Audio Group2:Auto
F3 Audio Group3:Auto
F4 Audio Group4:Auto
```

```
   PROC
1
   EMB
```

Parameter	Default	Setting range	Description
Audio Group 1	Auto	Auto Reference Input CH 1/2 Input CH 3/4	Allows you to select an audio clock per group for SDI embedded audio output for each FS. **Auto:** Automatically selects audio clock input in the NON-PCM signal channel, if an input NON-PCM signal is in the selected SDI embedded audio group. Automatically selects audio clock signal in the smallest numbered channel, if all signals in the audio group are NON-PCM. Automatically selects audio clock signal synchronized to the output video signal, if all signals in the audio group are PCM. **Reference**: Uses an audio clock synchronized with the output video signal. (Used to synchronize audio with the video signals processed in the SRC.) C**H 1/2 - 15/16:** An input audio clock in channels 1/2 to 15/16. An input audio clock in channels 1/2 to 15/16. To output asynchronous audio signals, select one input channel pair for each group. For SD-SDI outputs, **Reference clock** is automatically selected regardless of the setting.
Audio Group 2	Auto	Auto Reference Input CH 5/6 Input CH 7/8	
Audio Group 3	Auto	Auto Reference Input CH 9/10 Input CH 11/12	
Audio Group 4	Auto	Auto Reference Input CH 13/14 Input CH 15/16	

To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

7-5. EMBEDDED AUDIO SRC MODE

```
FS1 Name:FS 1
--- EMBEDDED AUDIO SRC MODE ---          P616
F1 CH 1/2 :Auto     F2 CH 3/4 :Auto
   CH 5/6 :Auto        CH 7/8 :Auto
   CH 9/10:Auto        CH11/12:Auto
   CH13/14:Auto        CH15/16:Auto
```

```
   CC
2
   SETUP
```

Parameter	Default	Setting range	Description
CH1/2 - CH15/16	Auto	Auto SRC In By-pass	Allows you to se the SRC circuit to pass or by-pass audio signals per channel pair for each FS. **Auto:** Sets the SRC circuit to pass signals. However, NON-PCM audio signals will be by-passed. **By-pass:** Sets the SRC circuit to by-pass signals. Set to **By-pass** to output asynchronous audio signals. To embed the asynchronous audio signals to SDI video signals, an audio clock must be selected under SDI Output Clock Select in the SDI Audio Output Setting menu (sec. 9-3-10) for the respective audio groups. **SRC In:** Sets the SRC circuit to pass both PCM or NON-PCM signals. Useful for the irregular PCM signal with the NON-PCM audio channel status indication. However, real NON-PCM signals cannot be output properly.

Move the F1/F2 indication to the item to be changed using the single-arrow buttons.
To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

7-6. AES AUDIO SRC MODE

```
AES(A)
--- AES AUDIO SRC MODE ---              P617
F1 CH 1/2:Auto
F2 CH 3/4:Auto
F3 CH 5/6:Auto
F4 CH 7/8:Auto
```

```
2   CC
    SETUP
```

Parameter	Default	Setting range	Description
CH1/2 - CH7/8	Auto	Auto SRC In By-pass	Allows you to set the SRC circuit to pass or by-pass audio signals per channel pair for the AES card installed in slot A - D. **Auto:** Sets the SRC circuit to pass signals. However, NON-PCM audio signals will be by-passed. **By-pass:** Sets the SRC circuit to by-pass signals. Set to **By-pass** to output asynchronous audio signals. To embed the asynchronous audio signals to SDI video signals, an audio clock must be selected under SDI Output Clock Select in the SDI Audio Output Setting menu (sec. 9-3-10) for the respective audio groups. **SRC In:** Sets the SRC circuit to pass both PCM or NON-PCM signals. Useful for the irregular PCM signal with the NON-PCM audio channel status indication. However, real NON-PCM signals cannot be output properly.

To change the slot selection to set settings, select a slot from A to D (AES(A) to AES(D)) in the same procedure described in section 5-3-7. "Selecting 5-channel Frame Synchronizers."
* Displayed if an FA-10AES-BL/ FA-10AES-UBL is installed in slot A-D.

7-7. EMBEDDED AUDIO IN POLARITY

```
FS1 Name:FS 1
--- EMBEDDED AUDIO POLARITY ---           P618
    CH      CH      CH       CH
F1-F4  1:NORM   2:NORM   3: NORM   4: NORM
       5:NORM   6:NORM   7: NORM   8: NORM
       9:NORM 10:NORM 11: NORM 12: NORM
      13:NORM 14:NORM 15: NORM 16: NORM
```

```
2   CC
    SETUP
```

Parameter	Default	Setting range	Description
CH1 - CH16	NORM	NORM (Normal) INV (Invert)	Allows you to set polarity per audio channel for each FS. **INV (Invert):** Reverses polarity.

Move the F1/F2/F3/F4 indication to the item to be changed using the single-arrow buttons. To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

7-8. AES AUDIO IN POLARITY

```
AES(A)
--- AES AUDIO IN POLARITY ---              P619
F1 CH1:Normal   F2 CH2:Normal
   CH3:Normal      CH4:Normal
   CH5:Normal      CH6:Normal
   CH7:Normal      CH8:Normal
```

```
   CC
2
   SETUP
```

Parameter	Default	Setting range	Description
CH1 - CH8	Normal	Normal Invert	Allows you to set polarity per audio channel for the AES card installed in slot A-D. **INV (Invert):** Reverses polarity.

Move the F1/F2 indication to the item to be changed using the single-arrow buttons.
To change the slot selection to set settings, select a slot from A to D (AES(A) to AES(D)) in the same procedure described in section 5-3-7. "Selecting 5-channel Frame Synchronizers."
* Displayed if an FA-10AES-BL/ FA-10AES-UBL is installed in slot A-D.

7-9. ANALOG AUDIO IN POLARITY

```
--- ANALOG AUDIO IN POLARITY ---           P620
F1 CH1:Normal
F2 CH2:Normal
F3 CH3:Normal
F4 CH4:Normal
```

```
   CC
2
   SETUP
```
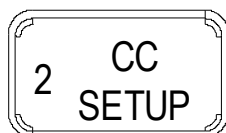
Parameter	Default	Setting range	Description
CH1 - CH4	Normal	Normal Invert	Allows you to set polarity per analog audio channel for the FA-10ANA-AUD card installed in slot A-D. **INV (Invert):** Reverses polarity.

* Displayed if the FA-10ANA-AUD is installed in slot A-D.

7-10. SDI EMBEDDED AUDIO MONO SUM

```
FS1 Name:FS 1
--- SDI EMBEDDED AUDIO MONO SUM ---        P622
F1 CH 1/2 :Stereo    F2 CH 3/4 :Stereo
   CH 5/6 :Stereo       CH 7/8 :Stereo
   CH 9/10:Stereo       CH11/12:Stereo
   CH13/14:Stereo       CH15/16:Stereo
```

```
   CC
2
   SETUP
```

Parameter	Default	Setting range	Description
CH 1/2 – CH 15/16	Stereo	Stereo Monaural	**Monaural**: Outputs each FS's embedded audio channel pair in mono sum mode.

Move the F1/F2 indication to the item to be changed using the single-arrow buttons.
To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

7-11. AES AUDIO MONO SUM

```
AES(A)
--- AES AUDIO MONO SUM ---                 P623
F1 CH 1/2:Stereo
F2 CH 3/4:Stereo
F3 CH 5/6:Stereo
F4 CH 7/8:Stereo
```

```
     CC
  2
   SETUP
```
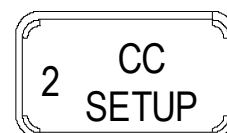
Parameter	Default	Setting range	Description
CH 1/2 – CH 7/8	Stereo	Stereo Monaural	**Manaural**: Outputs each AES audio channel pair in mono sum mode.

To change the slot selection to set settings, select a slot from A to D (AES(A) to AES(D)) in the same procedure described in section 5-3-7. "Selecting 5-channel Frame Synchronizers."
* Displayed if an FA-10AES-BL/ FA-10AES-UBL is installed in slot A-D.

7-12. ANALOG AUDIO MONO SUM

```
--- ANALOG AUDIO MONO SUM ---              P624
F1 CH 1/2:Stereo
F2 CH 3/4:Stereo
```

```
     CC
  2
   SETUP
```

Parameter	Default	Setting range	Description
CH 1/2 – CH 3/4	Stereo	Stereo Monaural	**Monaural**: Outputs each FA-10ANA-AUD analog audio channel pair in mono sum mode.

* Displayed if the FA-10ANA-AUD is installed in slot A-D.

7-13. AUDIO DOWN MIX MODE

```
FS1 Name:FS 1
--- AUDIO DOWN MIX MODE ---              P626
F1 Mode
F2 Surround Mix Level: -3dB
F3 Center Mix Level  : -3dB
F4 Master Level      : -3dB
```

```
   CLIP
3
   DWN MIX
```

Allows you to set the down mix mode for Down Mix 1-10 (one Down Mix in each FS).

Parameter	Default	Setting range	Description
Down Mix Mode	Stereo	Stereo Surround Monaural	Allows you to select a mode to downmix audio signals.
Surround Mix Level	-3dB	-3dB -6dB -9dB Off	Allows you to set the Ls/Rs (surround channels) level. **Off**: Excludes surround channels from the downmix.
Center Mix Level	-3dB	-3dB -4.5 dB -6dB	Allows you to set the C (center channel) level. **-3dB**: The output level after the downmix retains the original center channel level. **-4.5dB, -6dB:** Used to reduce the audio level in case it becomes too loud due to the center channel audio mixing to both the right and left channels.
Master Level	-3dB	-3dB 0dB Auto	Allows you to set the level for the downmixed audio signals as a whole. If set to **Auto**, Down MIX Master Level changes according to the Downmix Mode and Surround Mix level selections.*

To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

* Audio levels when Master Level is set to **Auto**:

Surround Mix Level Downmix Mode	-3dB	-6dB	-9dB	0 (-∞dB)
Stereo	Approx. -7.7dB	Approx. -6.9dB	Approx. -6.3dB	Approx. -4.6dB
Surround	Approx. -9.9dB	Approx. -8.7dB	Approx. -7.7dB	Approx. -4.6dB
Monaural	Approx. -12.9dB	Approx. -12.0dB	Approx. -11.4dB	Approx. -9.5dB

7-14. AUDIO DOWN MIX ASSIGN

```
FS1 Name:FS 1
--- AUDIO DOWN MIX ASSIGN ---            P627
F1 Left   CH         :FS1 In-CH1
   Right  CH         :FS1 In-CH2
   Center CH         :FS1 In-CH3
   Surround Left  CH:FS1 In-CH5
   Surround Right CH:FS1 In-CH6
```

```
   CLIP
3
   DWN MIX
```

Parameter	Default	Setting range	Description
Left CH Right CH Center CH Surround Left CH Surround Right CH	Left: FS* IN-CH1 Right: FS* IN-CH2 Center: FS* IN-CH3 Surround Left: FS* IN-CH5 Surround Right: FS* IN-CH6	FS* CH1 - 16 Silence	Allows you to select an audio signal to downmix.

* Displays the FS number (FS1 to FS5) of the selected FS.

Move the F1 indication to the item to be changed using the single-arrow buttons.

To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

All channels must be unique to each other. A colon will flash to warn you if the channel is already used.

7-15. EMBEDDED AUDIO GROUP1/2 MAPPING

```
FS1 Name:FS 1
--- EMBEDDED AUDIO GROUP1/2 MAPPING --- P630
   CH Assign Source  CH Assign Source
F1  1:FS1 In-CH1   F3 2:FS1 In-CH2
    3:FS1 In-CH1      4:FS1 In-CH2
    5:FS1 In-CH1      6:FS1 In-CH2
    7:FS1 In-CH1      8:FS1 In-CH2
```

4 BY-PASS MAPPING

Parameter	Default	Setting range	Description
CH1 - CH8	FS*-CH1-8	FS1 In Ch1-16 | FS5 In Ch1-16 Silence 500Hz Tone 1KHz Tone Down Mix1-L Down Mix1-R | Down Mix5-L Down Mix5-R AES(A) In-CH1 | AES(A) In-CH8 AES(B) In-CH1 | AES(B) In-CH8 AES(C) In-CH1 | AES(C) In-CH8 AES(D) In-CH1 | AES(D) In-CH8 Analog In-CH1 | Analog In-CH4	Allows you to select audio channels to embed to embedded audio group 1/2 for each FS.

* Displays the FS number (FS1 to FS5) of the selected FS.
Control knobs F1 and F3 allow you to navigate audio channels one by one. Control knobs F2 and F4 allow you to navigate audio channels in block units.
Move the F1/F3 indication to the item to be changed using the single-arrow buttons.
To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."
AES(A) In-CH1 - AES(D) In-CH8 are displayed if an FA-10AES-BL/ FA-10AES-UBL is installed in slot A-D.
Analog In-CH1 - Analog In-CH4 are displayed if an FA10ANA-AUD is installed.

7-16. EMBEDDED AUDIO GROUP3/4 MAPPING

```
FS1 Name:FS 1
--- EMBEDDED AUDIO GROUP1/2 MAPPING --- P131
   CH Assign Source    CH Assign Source
F1  9:FS1 In-CH1   F3 10:FS1 In-CH2
   11:FS1 In-CH1      12:FS1 In-CH2
   13:FS1 In-CH1      14:FS1 In-CH2
   15:FS1 In-CH1      16:FS1 In-CH2
```

4 BY-PASS MAPPING

Parameter	Default	Setting range	Description
CH9 - CH16	FS*-CH9-16	FS1 In Ch1-16 | FS5 In Ch1-16 Silence 500Hz Tone 1KHz Tone Down Mix1-L Down Mix1-R | Down Mix5-L Down Mix5-R AES(A) In-CH1 | AES(A) In-CH8 AES(B) In-CH1 | AES(B) In-CH8 AES(C) In-CH1 | AES(C) In-CH8 AES(D) In-CH1 | AES(D) In-CH8 Analog In-CH1 | Analog In-CH4	Allows you to select audio channels to embed to embedded audio group 3/4 for each FS.

* Displays the FS number (FS1 to FS5) of the selected FS.
Control knobs F1 and F3 allow you to navigate audio channels one by one. Control knobs F2 and F4 allow you to navigate audio channels in block units.
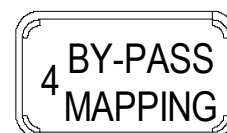Move the F1/F3 indication to the item to be changed using the single-arrow buttons.
To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."
AES(A) In-CH1 - AES(D) In-CH8 are displayed if an FA-10AES-BL/ FA-10AES-UBL is installed in slot A-D.
Analog In-CH1 - Analog In-CH4 are displayed if an FA10ANA-AUD is installed.

7-17. AES AUDIO OUTPUT MAPPING

```
AES(A)
--- AES AUDIO OUTPUT MAPPING ---          P632
   CH Assign Source    CH Assign Source
F1  1:FS1 In-CH1   F3  2:FS1 In-CH2
    3:FS1 In-CH1       4:FS1 In-CH2
    5:FS1 In-CH1       6:FS1 In-CH2
    7:FS1 In-CH1       8:FS1 In-CH2
```

```
 4  BY-PASS
    MAPPING
```

Parameter	Default	Setting range	Description
CH1 - CH8	FS*-CH1-8	FS1 In Ch1-16 | FS5 In Ch1-16 Silence 500Hz Tone 1KHz Tone Down Mix1-L Down Mix1-R | Down Mix5-L Down Mix5-R AES(A) In-CH1 | AES(A) In-CH8 AES(B) In-CH1 | AES(B) In-CH8 AES(C) In-CH1 | AES(C) In-CH8 AES(D) In-CH1 | AES(D) In-CH8 Analog In-CH1 | Analog In-CH4	Allows you to select audio channels to output to AES output in option slot A-D.

* Displays the FS number (FS1 to FS5) of the selected FS.
Control knobs F1 and F3 allow you to navigate audio channels one by one. Control knobs F2 and F4 allow you to navigate audio channels in block units.
Move the F1/F3 indication to the item to be changed using the single-arrow buttons.
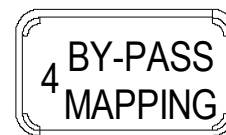To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."
AES(A) In-CH1 - AES(D) In-CH8 are displayed if an FA-10AES-BL/ FA-10AES-UBL is installed in slot A-D.
Analog In-CH1 - Analog In-CH4 are displayed if an FA10ANA-AUD is installed.

7-18. ANALOG AUDIO OUTPUT MAPPING

```
--- ANALOG AUDIO OUTPUT MAPPING ---        P633
   CH Assign Source   CH Assign Source
F1  1:FS1 In-CH1    F3  2:FS1 In-CH2
    3:FS1 In-CH1        4:FS1 In-CH2
```

4 BY-PASS MAPPING

Parameter	Default	Setting range	Description
CH1 - CH4	FS*-CH1-4	FS1 In Ch1-16 FS5 In Ch1-16 Silence 500Hz Tone 1KHz Tone Down Mix1-L Down Mix1-R Down Mix5-L Down Mix5-R AES(A) In-CH1 AES(A) In-CH8 AES(B) In-CH1 AES(B) In-CH8 AES(C) In-CH1 AES(C) In-CH8 AES(D) In-CH1 AES(D) In-CH8 Analog In-CH1 Analog In-CH4	Allows you to select an audio channel to output to the FA-10ANA-AUD analog audio output.

* Displays the FS number (FS1 to FS5) of the selected FS.
Control knobs F1 and F3 allow you to navigate audio channels one by one. Control knobs F2 and F4 allow you to navigate audio channels in block units.
Move the F1/F3 indication to the item to be changed using the single-arrow buttons.
To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."
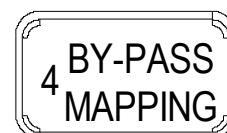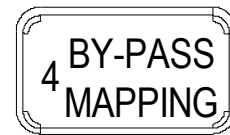AES(A) In-CH1 - AES(D) In-CH8 are displayed if an FA-10AES-BL/ FA-10AES-UBL is installed in slot A-D.
Analog In-CH1 - Analog In-CH4 are displayed if an FA10ANA-AUD is installed.

7-19. AES AUDIO HYSTERESIS

```
AES(A)
--- AES AUDIO HYSTERESIS ---            P636
F1 CH1/2:Off
F2 CH3/4:Off
F3 CH5/6:Off
F4 CH7/8:Off
```
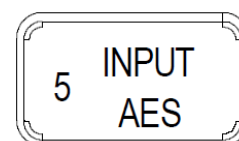
Parameter	Default	Setting range	Description
CH1/2 to CH7/8	Off	Off Group A Group B	Synchronizes the AES input signals in group A or B per group. These settings are effective when using AES audio signals to output multi-channel audio signals such as surround sound.

To change the slot selection to set settings, select a slot from A to D (AES(A) to AES(D)) in the same procedure described in section 5-3-7. "Selecting 5-channel Frame Synchronizers."
* Displayed if the an FA-10AES-BL/ FA-10AES-UBL is installed in slot A-D.

7-20. FA-10AES-UBL TERMINAL IN/OUT

```
--- FA-10AES-UBL TERMINAL IN/OUT ---    P637
  OP CH1/2-CH3/4        OP CH5/6-CH7/8
F1  A:Input          F2 A:Input
   B:Not Installed      B:Not Installed
   C:Not Installed      C:Not Installed
   D:Not Installed      D:Not Installed
```

Parameter	Default	Setting range	Description
OP A to OP D	Input	Input Output	Allows you to set the AES connectors on the FA-10AES-UBL, if installed, for input or output use. Displays "Uninstalled" if no FA-10AES-UBL is installed in the slot.

Move the F1/F2 indication to the item to be changed using the single-arrow buttons.
* Displayed if an FA-10AES-UBL is installed in slot A-D.

7-21. EMBEDDED AUDIO OUTPUT GAIN

```
FS1 Name:FS 1
--- EMBEDDED AUDIO OUTPUT GAIN ---          P641
     CH(dB)   CH(dB)   CH(dB)   CH(dB)
F1-F4  1: 0.0   2: 0.0   3: 0.0   4: 0.0
       5: 0.0   6: 0.0   7: 0.0   8: 0.0
       9: 0.0  10: 0.0  11: 0.0  12: 0.0
      13: 0.0  14: 0.0  15: 0.0  16: 0.0
      Master Gain: 0.0dB    Mute:Off
```

```
   6   CLN SW
       GAIN
```
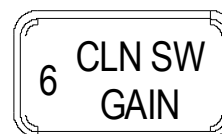
Item	Default	Setting range (Steps)	Description
CH1 - 16	0.0dB	-20.0 - +20.0 dB (0.1 dB)	Allows you to set audio gain for embedded audio channels on each FS.
Master Gain	0.0dB	-20.0 - +20.0 dB (0.1 dB)	Allows you to set an output offset for all embedded audio channels in FS1-FS10.
Mute	Off	Off On	**On**: Mutes all embedded audio channels of the selected FS.

*   The ":" of the audio channel of which the sum of Master Gain and the CH gain exceeds the setting range blinks. In this case, the setting range indicates the relative limits.

Move the F1/F2/F3/F4 indication to the item to be changed using the single-arrow buttons.

To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

7-22. AES AUDIO OUTPUT GAIN

```
AES(A)
--- AES AUDIO OUTPUT GAIN ---               P642
F1 Ch1:  0.0dB   F2 CH2:  0.0dB
   Ch3:  0.0dB   F2 CH4:  0.0dB
   Ch5:  0.0dB   F2 CH6:  0.0dB
   Ch7:  0.0dB   F2 CH8:  0.0dB
   Master Gain: 0.0dB   Mute:Off
```

```
   6   CLN SW
       GAIN
```

Item	Default	Setting range (Steps)	Description
CH1-8	0.0dB	-20.0 - +20.0 dB (0.1 dB)	Allows you to set audio gain for AES audio channels in the selected slot.
Master Gain	0.0dB	-20.0 - +20.0 dB (0.1 dB)	Allows you to set an output offset for all AES audio channels in the selected slot.
Mute	Off	Off On	**On**: Mutes all AES audio channels in the selected slot.

*   The ":" of the audio channel of which the sum of Master Gain and the CH gain exceeds the setting range blinks. In this case, the setting range indicates the relative limits.

Move the F1/F2 indication to the item to be changed using the single-arrow buttons.

To change the slot selection to set settings, select a slot from A to D (AES(A) to AES(D)) in the same procedure described in section 5-3-7. "Selecting 5-channel Frame Synchronizers."

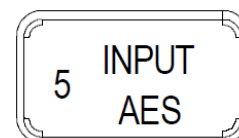* Displayed if an FA-10AES-BL/ FA-10AES-UBL is installed in slot A-D.

7-23. ANALOG AUDIO OUTPUT GAIN

```
--- ANALOG AUDIO OUTPUT GAIN ---          P643
F1 Ch1:  0.0dB   F2 CH2: 0.0dB
   Ch3:  0.0dB   F2 CH4: 0.0dB
   Master Gain: 0.0dB   Mute:Off
```
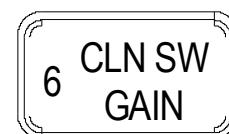
```
    CLN SW
 6
     GAIN
```

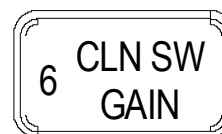| Item	Default	Setting range (Steps)	Description
CH1-8	0.0dB	-20.0 - +20.0 dB (0.1 dB)	Allows you to set audio gain for analog audio channels.
Master Gain	0.0dB	-20.0 - +20.0 dB (0.1 dB)	Allows you to set an output offset for all analog audio channels.
Mute	Off	Off On	**On**: Mutes all analog audio channels.

*   The ":" of the audio channel of which the sum of Master Gain and the CH gain exceeds the setting range blinks. In this case, the setting range indicates the relative limits.
Move the F1/F2 indication to the item to be changed using the single-arrow buttons.
*   Displayed if an FA-10ANA-AUD is installed.

7-24. AUDIO MASTER MUTE

```
--- AUDIO MASTER MUTE ---                 P650
Mute:Off
 _____
|                                        |
|Carefully change "AUDIO MASTER MUTE"    |
|                                        |
|                                        |
|_____|
```

```
    CLN SW
 6
     GAIN
```
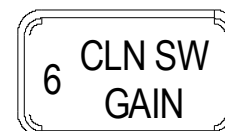
Item	Default	Setting range	Description
Mute	Off	Off On	**On**: Mutes all FS-1-FS5, AES, and analog audio channels

*   Carefully turn Audio Master Mute On. All audio channels will be muted.

7-25. EMBEDDED AUDIO OUTPUT DELAY

```
FS1 Name:FS 1
--- EMBEDDED AUDIO OUTPUT DELAY ---        P651
     CH(msec)  CH(msec)  CH(msec)  CH(msec)
F1-F4  1:   2     2:   2     3:   2     4:   2
       5:   2     6:   2     7:   2     8:   2
       9:   2    10:   2    11:   2    12:   2
      13:   2    14:   2    15:   2    16:   2
     Master Delay: 2msec
```

```
   7  OUTPUT
      DELAY
```

Item	Default	Setting range (Steps)	Description
CH1-CH16	5	5ms - 1000ms	Allows you to set delay for each audio channel of the selected FS.
Master	5	5ms - 1000ms	Allowsyou to set a delay offset for all audio channels of the selected FS.

*   The ":" of the audio channel of which the sum of Master delay and the CH delay exceeds the setting range blinks. In this case, the setting range indicates the relative limits.
Move the F1/F2/F3/F4 indication to the item to be changed using the single-arrow buttons.
To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

7-26. AES AUDIO OUTPUT DELAY

```
AES(A)
--- AES AUDIO OUTPUT DELAY ---             P652
F1 Ch1:    5msec     F2 CH2:    5msec
   Ch3:    5msec     F2 CH4:    5msec
   Ch5:    5msec     F2 CH6:    5msec
   Ch7:    5msec     F2 CH8:    5msec
   Master Delay:   5msec
```

```
   7  OUTPUT
      DELAY
```

Item	Default	Setting range (Steps)	Description
CH1 - CH8	5	5ms - 1000ms	Allows you to set delay for each AES audio chanel in the selected slot.
Master	5	5ms - 1000ms	Allows you to set a delay offset for all AES audio channels in the selected slot.

*   The ":" of the audio channel of which the sum of Master Delay and the CH delay exceeds the setting range blinks. In this case, the setting range indicates the relative limits.
Move the F1/F2 indication to the item to be changed using the single-arrow buttons.
To change the slot selection to set settings, select a slot from A to D (AES(A) to AES(D)) in the same procedure described in section 5-3-7. "Selecting 5-channel Frame Synchronizers."
*   Displayed if an FA-10AES-BL/ FA-10AES-UBL is installed in slot A-D.

7-27. ANALOG AUDIO OUTPUT DELAY

```
--- ANALOG AUDIO OUTPUT DELAY ---        P653
F1 Ch1:   5msec      F2 CH2:   5msec
   Ch3:   5msec         CH4:   5msec
   Master Delay:  5msec
```

```
7 OUTPUT
  DELAY
```

Item	Default	Setting range (Steps)	Description
CH1 - CH4	5	5ms - 1000ms	Allows you to set delay for analog audio channels.
Master	5	5ms - 1000ms	Allows you to set a delay offset for all analog audio channels.

* The ":" the of audio channel of which the sum of Master delay and the CH delay exceeds the setting range blinks. In this case, the setting range indicates the relative limits.

Move the F1/F2 indication to the item to be changed using the single-arrow buttons..

* Displayed if an FA-10ANA-AUD is installed.

7-28. ANALOG AUDIO INPUT/OUTPUT

```
--- ANALOG AUDIO INPUT/OUTPUT ---       P681
   Input Level        Output Level
F1 CH1: +4dBu        F2 CH1: +4dBu
   CH2: +4dBu           CH2: +4dBu
   CH3: +4dBu           CH3: +4dBu
   CH4: +4dBu           CH4: +4dBu
Terminal:600 Ohm
```

```
9 ANC
  ANALOG
```

Item	Default	Setting range (Steps)	Description
Input Level CH1 - CH4	+4dBu	-10dBu 0dBu +4dBu +8dBu	Allows you to set the input signal level for each analog audio channle.
Output Level CH1 - CH4	+4dBu	-10dBu 0dBu +4dBu +8dBu	Allows you to set the output signal level for each analog audio channel.
Terminal	600 Ohm	600 Ohm High Impedance	Allows you to set termination for all analog input channels.

Move the F1/F2 indication to the item to be changed using the single-arrow buttons..

* Displayed if an FA-10ANA-AUD is installed.

83

7-29. MICROPHONE SETTINGS

```
--- MICROPHONE SETTINGS ---              P682
F1 CH1/2 Input Mode:Line Level
F2 Microphone Power:Off
 -------------------------------------------
|Caution!!                                  |
|Verify analog audio input signal(CH1/2)    |
|before changing settings                   |
|_____|
```

```
┌─────────────┐
│     ANC     │
│  9  ANALOG  │
└─────────────┘
```
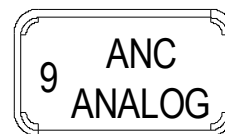
Analog audio CH1 and CH2 can be used for microphone audio inputs.
They can also be used for power outputs to microphones.

Item	Default	Setting range (Steps)	Description
CH1/2 Input Mode *	Line Level	Line Level Microphone Level	Allows you to set the input signal level for analog audio input CH1, and CH2.
Microphone Power *	Off	Off On(+48V)	On(+48V): Outputs power for microphones. Selectable if Ch1/2 Input Mode is set to Microphone Level. If Ch1/2 Input Mode is set to Line while On(+48V) is selected, the Microphone Power setting automatically turns Off.

Displayed if an FA-10ANA-AUD is installed.

* This setting requires you to confirm the setting change as the setting change confirmation regardless of the setting under the OPERATION SETTINGS menu (see sec. 6-20).

⚠ **Caution**	Ensure proper audio signal level input to analog audio input Ch1 and Ch2, before changing the CH1/2 Input Mode or Microphone Power setting. Incorrect level audio signal input levels may impair or damage connected devices.

7-30. AUDIO SYSTEM

```
--- AUDIO SYSTEM ---                        P686
F1 Reference Level:-20dBFS
   Grade:Professional
   Resolution:24bit
   Silence Time: 2sec
   Silence Level(Digital):-72dbFS
   Silence Level(Analog) :-60dbFS
```

```
10 SYSTEM
```

* Digital audio settings are effective on all digital signals in FSs and AES options.

Parameter	Default	Setting range	Description
Reference Level	-20 dBFS	-18 dBFS -20 dBFS	Allows you to select digital audio signal reference levels.
Grade	Professional	Professional Consumer	Allows you to select an audio application for digital audio channels. **Professional**: Optimized for professional use **Consumer**: Optimized for consumer use.
Resolution	24 bit	16 bit 20 bit 24 bit	Allows you to select an audio word length for Digital Audio output signals.
Silence Time	2 sec	1 – 10 sec	Allows you to set the duration to determine whether the degital/analog audio signal is silent.
Silence Level (Digital)	-72 dBFS	-72 dBFS -66 dBFS -60 dBFS -54 dBFS -48 dBFS	Allows you to select the audio level to determine whether the digital audio signal is silent.
Silence Level (Analog) [1]	-60 dBFS	-72 dBFS -66 dBFS -60 dBFS -54 dBFS -48 dBFS	Allows you to select the audio level to determine whether the analog audio signal is silent.

Move the F1 indication to the item to be changed using the single-arrow buttons.

[1] Displayed if the FA-10ANA-AUD is installed. Otherwise displays "Not installed."

7-31. EMBEDDED AUDIO TEST SIGNAL

```
--- EMBEDDED AUDIO TEST SIGNAL ---
P687
F1 FS1:Off
   FS2:Off
   FS3:Off
   FS4:Off
   FS5:Off
```

```
10 SYSTEM
```

Parameter	Default	Setting range	Description
FS1 - FS5	Off	OFF 500Hz Tone 1kHz Tone	Allows you to set the audio test signal output for each FS.

Move the F1 indication to the item to be changed using the single-arrow buttons.
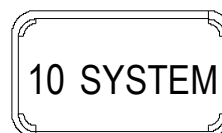
7-32. AES AUDIO TEST SIGNAL

```
--- AES AUDIO TEST SIGNAL ---              P688
F1 Slot A:Off
F2 Slot B:Off
F3 Slot C:Off
F4 Slot D:Off
```

10 SYSTEM

Parameter	Default	Setting range	Description
Slot A - D	Off	OFF 500Hz Tone 1kHz Tone	Allows you to set the audio test signal output for AES audio channels for each slot. Displayes "Not installed" if no AES option is installed in the slot.

Move the F1 indication to the item to be changed using the single-arrow buttons.

* Displayed if an FA-10AES-BL/ FA-10AES-UBL is installed in slot A-D.

7-33. ANALOG AUDIO TEST SIGNAL
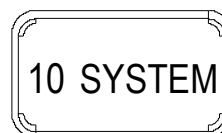
```
--- ANALOG AUDIO TEST SIGNAL ---        P689
F1 Test Signal:Off
```

10 SYSTEM

Parameter	Default	Setting range	Description
Test Signal	Off	OFF 500Hz Tone 1kHz Tone	Allows you to set the audio test signal output for analog audio channels.

* Displayed if an FA-10ANA-AUD is installed.

7-34. ALL AUDIO TEST SIGNAL

```
--- ALL AUDIO TEST SIGNAL ---           P690
F1 Test Signal:Off

 ------------------------------------------
|                                          |
| Carefully change "ALL AUDIO TEST SIGNAL" |
|                                          |
|                                          |
 ------------------------------------------
```
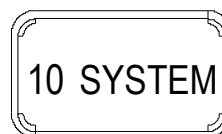
10 SYSTEM

Parameter	Default	Setting range	Description
Test Signal	Off	OFF 500Hz Tone 1kHz Tone	Allows you to set the audio test signal output for all audio channels.

7-35. EMBEDDED AUDIO INPUT STATUS

```
FS1 Name:FS 1
--- EMBEDDED AUDIO INPUT STATUS ---        P701
CH        CH        CH        CH
1: Loss    2:Loss    3:Loss    4:Loss
5: Loss    6:Loss    7:Loss    8:Loss
9: Loss   10:Loss   11:Loss   12:Loss
13:Loss   14:Loss   15:Loss   16:Loss
S:Silence NP:Non-PCM A:Async
```
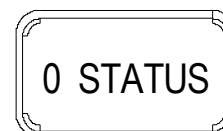
0 STATUS

Parameter	Default	Setting range	Description
CH1 - CH16	—	—	Displays the status of embedded audio input signals for each FS.

To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

7-36. AES AUDIO INPUT STATUS

```
AES(A)
--- AES AUDIO INPUT STATUS ---             P702
CH1:Loss              CH2:Loss
CH3:Loss              CH4:Loss
CH5:Loss              CH6:Loss
CH7:Loss              CH8:Loss
```

0 STATUS

Parameter	Default	Setting range	Description
CH1 - CH8	—	—	Displays the status of AES audio input signals in slot A-D.

To change the slot selection to set settings, select a slot from A to D (AES(A) to AES(D)) in the same procedure described in section 5-3-7. "Selecting 5-channel Frame Synchronizers."
* Displayed if an FA-10AES-BL/ FA-10AES-UBL is installed in slot A-D.

7-37. ANALOG AUDIO INPUT STATUS

```
--- ANALOG AUDIO INPUT STATUS ---          P703
CH1:Loss
CH2:Loss
CH3:Loss
CH4:Loss
```
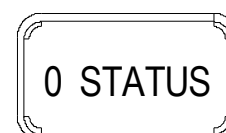
0 STATUS

Parameter	Default	Setting range	Description
CH1 - CH4	—	—	Displays the status of analog audio input signals.

* Displayed if an FA-10ANA-AUD is installed.

7-38. EMBEDDED AUDIO OUTPUT STATUS

```
FS1 Name:FS 1
--- EMBEDDED AUDIO OUT STATUS ---        P704
CH         CH         CH         CH
1: S        2:S        3:S         4:S
5: S        6:S        7:S         8:S
9: S       10:S       11:S        12:S
13:S       14:S       15:S        16:S
S:Silence NP:Non-PCM
```

`0 STATUS`

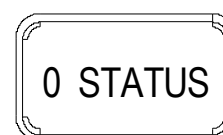| Parameter	Default	Setting range	Description
CH1 - CH16	—	—	Displays the status of embedded audio output signals for each FS.

To change the FS selection to set settings, refer to section 5-3-7. "Selecting 5-channel Frame Synchronizers."

7-39. AES AUDIO OUTPUT STATUS

```
AES(A)
--- AES AUDIO OUTPUT STATUS ---          P705
CH1:Loss               CH2:Loss
CH3:Loss               CH4:Loss
CH5:Loss               CH6:Loss
CH7:Loss               CH8:Loss
```

`0 STATUS`

Parameter	Default	Setting range	Description
CH1 - CH8	—	—	Displays the status of AES audio output signals in slot A-D.

To change the slot selection to set settings, select a slot from A to D (AES(A) to AES(D)) in the same procedure described in section 5-3-7. "Selecting 5-channel Frame Synchronizers."
* Displayed if an FA-10AES-BL/ FA-10AES-UBL is installed in slot A-D.

7-40. ANALOG AUDIO OUTPUT STATUS

```
--- ANALOG AUDIO OUTPUT STATUS ---       P706
CH1:Loss
CH2:Loss
CH3:Loss
CH4:Loss
```

`0 STATUS`

Parameter	Default	Setting range	Description
CH1 - CH4	—	—	Displays the status of analog audio output signals.

* Displayed if an FA-10ANA-AUD is installed.

8. Event Memory

The FA-10RU can store and recall 100 event memories. It can also control 100 event memories in the connected FA-505.

* FA-1010 and FA-505 settings are stored in different memory banks. Therefore, FA-1010 settings cannot be loaded to FA-505 units.

8-1. LOAD EVENT MEMORY

```
--- LOAD EVENT MEMORY ---              P811
F1 Load Mode:All Data
F2 Unit:FA-10RU
F3 No: 0 Name:Default
Press F4 UNITY to start loading
```

EVENT

Parameter	Default	Setting range	Description
Load Mode	All Data	All Data FS1-FS5 Only (*)	Allows you to select the event loading mode. **All Data:** Loads all setting data saved in the event. **FS1-FS5 Only:** Loads only the selected FS event data. (*) will be the FS name set on the FA-505.
Unit	FA-10RU	FA-10RU FA-505	Allows you to select a unit from which to load the event data.
No	0	0 - 100	Allows you to select an event number to be recalled. **0:** Allows you to recall the default settings. Name displays the event name set for each event number.
F4 UNITY	—	—	The F4 UNITY button allows you to load the event data specified under Load Mode, Unit, or No. Displays the "Loading event memory" message while processing.

* See section 10-5. "Event Naming" for details on event name settings on the FA-10RU. Events saved on the FA-505 can be named using FA-50GUI.

8-2. SAVE EVENT MEMORY

```
--- SAVE EVENT MEMORY ---                    P812
F1 Unit:FA-10RU
F2 No: 1 Name:EVENT1
Press F3 UNITY to start saving
```

EVENT

Item	Default	Setting range	Description
Unit	FA-10RU	FA-10RU FA-505	Allows you to select a unit in which to save the event data.
No	1	1 - 100	Allows you to select an event number to save. Name displays the event name set for the event number.
F3 UNITY	—	—	The F3 UNITY button allows you to save the event specified under No. Displays the "Saving event memory" message while processing.

* See section 10-5. "Event Naming" for details on setting event names on the FA-10RU.
Events saved on the FA-505 can be named using FA-50GUI.

8-3. Event Memory Load Settings List

◆ **VIDEO Settings**

Menu button	VIDEO related menus (Lit green)	Event Loading	
		Load All	Load FS1-5 Only
1 PROC EMB	VIDEO PROCESS AMPLIFIER VIDEO LEVEL Y LEVEL CHROMA LEVEL SETUP/BLACK LEVEL HUE	Yes	Yes
2 CC SETUP	COLOR CORRECTION COLOR CORRECTION WHITE LEVEL COLOR CORRECTION BLACK LEVEL COLOR CORRECTION GAMMA LEVEL	Yes	Yes
3 CLIP DWN MIX	VIDEO CLIP	Yes	Yes
4 BY-PASS MAPPING	SDI VIDEO BY-PASS COLOR CORRECTION BYPASS	No	No
5 INPUT AES	FS VIDEO IN SETTINGS FS SYNC FORMAT SETTINGS	Yes	Yes
6 CLN SW GAIN	CLEAN SWITCH SETTINGS	Yes	No
	SALVO LOAD SALVO SAVE OPERATION SETTINGS	No	No
7 OUTPUT DELAY	SDI VIDEO OUTPUT PORT ASSIGN	Yes	No
	UP/DOWN CONVERTER MODE UP/DOWN CONVERTER SIZE/POS UP/DOWN CONVERTER CROPPING IMPROVEMENT IN CONVERTER UP/DOWN CONVERTER SIDE COLOR	Yes	Yes
8 OPTION	SLOT A GPI FUNCTION SETTINGS [1] SLOT B GPI FUNCTION SETTINGS [1] SLOT C GPI FUNCTION SETTINGS [1] SLOT D GPI FUNCTION SETTINGS [1]	No	No
9 ANC ANALOG	SDI MULTIPLEXER EMBEDDED AUDIO MULTIPLEXER ANCILLARY DETECT LINE	Yes	Yes
	INPUT ANCILLARY STATUS1 INPUT ANCILLARY STATUS2	No	No
	EMBEDDED ANCILLARY 1 EMBEDDED ANCILLARY 2 EMBEDDED ANCILLARY 3	Yes	Yes
	EMBEDDED TIME CODE	Yes	Yes [1]
	TIME CODE GENERATOR	Yes	No
10 SYSTEM	VIDEO INPUT LOSS FS MODE SETTINGS VIDEO SYSTEM PHASE/POSITION	Yes	Yes
	VIDEO FREEZE	Yes	Yes
	SD LINE MASK 3G SDI OUTPUT LEVEL VIDEO TEST SIGNAL VIDEO SYSTEM FRAME RATE	Yes	Yes
0 STATUS	VIDEO INPUT STATUS SDI VIDEO OUTPUT STATUS PAYLOAD ID INPUT STATUS MAIN UNIT ALARM INFORMATION MAIN UNIT VERSION INFORMATION OPTION VERSION INFORMATION OTHER OPTION INFORMATION	No	No

*1 LTC Port settings are unloaded.

◆ **AUDIO Settings**

Menu button	AUDIO related settings (Lit orange)	Event Loading	
		Load All	Load FS1-5 Only
1 PROC EMB	EMBEDDED AUDIO DEMULTIPLEX EMBEDDED AUDIO ERROR SENSE FADE IN/OUT EMBEDDED AUDIO MULTIPLEX	Yes	No
2 CC SETUP	EMBEDDED AUDIO SRC MODE AES AUDIO SRC MODE EMBEDDED AUDIO IN POLARITY AES AUDIO IN POLARITY SDI EMBEDDED AUDIO MONO SUM AES AUDIO MONO SUM ANALOG AUDIO MONO SUM	Yes	No
3 CLIP DWN MIX	AUDIO DOWN MIX MODE AUDIO DOWN MIX ASSIGN	Yes	No
4 BY-PASS MAPPING	EMBEDDED AUDIO GROUP1/2 MAPPING EMBEDDED AUDIO GROUP3/4 MAPPING AES AUDIO OUTPUT MAPPING ANALOG AUDIO OUTPUT MAPPING	Yes	No
5 INPUT AES	AES AUDIO HYSTERESIS	Yes	No
	FA-10AES-UBL TERMINAL IN/OUT	No	No
6 CLN SW GAIN	EMBEDDED AUDIO OUTPUT GAIN AES AUDIO OUTPUT GAIN ANALOG AUDIO OUTPUT GAIN	Yes	No
	AUDIO MATER MUTE	No	No
7 OUTPUT DELAY	EMBEDDED AUDIO OUTPUT DELAY AES AUDIO OUTPUT DELAY ANALOG AUDIO OUTPUT DELAY	Yes	No
9 ANC ANALOG	ANALOG AUIO INPUT/OUTPUT	Yes	No
	MICROPHONE SETTINGS	No	No
10 SYSTEM	AUDIO SYSTEM EMBEDDED AUDIO TEST SIGNAL AES AUDIO TEST SIGNAL ANALOG AUDIO TEST SIGNAL ALL AUDIO TEST SIGNAL	Yes	No
0 STATUS	EMBEDDED AUDIO INPUT STATUS AES AUDIO INPUT STATUS ANALOG AUDIO INPUT STATUS EMBEDDED AUDIO OUTPUT STATUS AES AUDIO OUTPUT STATUS ANALOG AUDIO OUTPUT STATUS	No	No

9. FA-10RU SYSTEM Settings and Viewing

9-1. FA-10RU SYSTEM Menus

Pressing the MU SELECT button, then the 10 SYSTEM button (lit red), opens the menu as shown below, allowing you to verify the FA-10RU GPI function assignments, front panel display settings, and software versions.

9-1-1. LOAD GPI INPUT PATTERN

Allows you to assign functions to GPI 10 inputs / outputs simultaneously using patterns.
See Sec. 11-3. "GPI1-GPI3 Pin Assignments" for details on pin arrangements.
See Sec. 11-2. "GPI Input Patterns" for details on function patterns.
See Sec. 9-1-2-1. "Setting Details via Setting 1-4" for details on individual input settings.

```
--- LOAD GPI INPUT PATTERN ---             P821
F1 GPI1 BLOCK:None
F2 GPI2 BLOCK:None
F3 GPI3 BLOCK:None
Press F4 UNITY to start pattern loading
```

```
MU SEL
LOCK
```

```
10 SYSTEM
```

Item	Default	Setting range	Description
GPI1 BLOCK	---	--- None MU Select FS Select Process(FS1-FS10) [*1] Video Level(FS1-FS10) [*1] Chroma Level(FS1-FS10) [*1] Setup/Black(FS1-FS10) [*1] Hue(FS1-FS10) [*1] CC (FS1-FS10) [*1] CC White(FS1-FS10) [*1] CC Black(FS1-FS10) [*1] CC Gamma(FS1-FS10) [*1] BY-PASS(SDI1-SDI10) [*2] Clean SW (Destination) Clean SW (Source) Clean SW (Mode/Take) Clean SW (Salvo1-10 Load) Clean SW (Salvo1-10 Save) Clean SW (Salvo1-5 Load/Save) Time Code Generator Freeze(FS1-FS10) [*1] Audio Gain(FS1-FS10) [*1] Audio Delay(FS1-FS10) [*1] Event(No1-10 Load) Event(No1-10 Save) Event(No1-5 Load/Save) Menu1 Select Menu2 Select Menu3 Select Menu4 Select Status1 Status2	Allows you to assign functions to GPI Input/Output 1-10 simultaneously. (See Sec. 11-2. "GPI Input Patterns")
GPI2 BLOCK	---	Ditto	Allows you to assign functions to GPI Input/Output 11-20 simultaneously. (See Sec. 11-2. "GPI Input Patterns")
GPI3 BLOCK	---	Ditto	Allows you to assign functions to GPI Input/Output 21-30 simultaneously. (See Sec. 11-2. "GPI Input Patterns")

*1 Do **not** select FS6 to FS10 when connecting to FA-505 units.
*2 Do **not** select BY-PASS(SDI6) to BY-PASS(SDI10) when connecting to FA-505 units.

9-1-2. GPI INPUT PORT FUNCTION

Allows you to assign functions to GPI input pins.

```
--- GPI INPUT PORT FUNCTION ---        P822
F1 Port:GPI1 PORT 1(FA-AUX30 Left Block)
    Setting1:None
    Setting2:None
    Setting3:None
    Setting4:None
```

MU SEL
LOCK

10 SYSTEM

Select an item to set using single-arrow buttons.
F1, F2, F3, or F4 next to the selected item blinks.

Item	Default	Setting range	Description
Port	GPI1 Port 1 (FA-AUX30 Left Block)	GPI1 Port 1-10 (FA-AUX30 Left Block) GPI2 Port11-20 (FA-AUX30 Center Block) GPI3 Port21-30 (FA-AUX30 Right Block)	Allows you to select a GPI input pin to assign functions to. Assigned settings are displayed under Settings 1-4.
Setting1 to Setting4	None	See section 9-1-2-1. "Setting Details via Setting1-4."	Allows you to specify a function to be assigned to the GPI input pin selected under Port using Setting 1-4.

9-1-2-1. Setting Details via Setting 1-4

Settings list under Settings 1-4

No	Setting1	Setting2	Setting3	Setting4
1	None	---	---	---
2	MU Select	Menu Disconnected ID1-ID100	None FS1-FS10	---
3	FS Select	FS1-FS10	---	---
4	Video Process	Video Process Amplifier Video Level Chroma Level Setup/Black level Hue	Menu FS1-FS10	---
5	Color Corrector	Color Correction White Level Black Level Gamma Level	Menu FS1-FS10	---
6	Freeze (Mode)	Menu Frame Odd Even	None FS1-FS10	None Menu
7	Freeze (On/Off)	On Off On/Off	None All FS1-FS10	None Menu
8	By-pass	Menu On Off On/Off	All FS1-FS10	None Menu
9	Audio Gain(Embedded)	Menu FS1-FS10	---	---
10	Audio Gain(AES)	Menu Option Slot A-D	---	---
11	Audio Gain(Analog)	---	---	---
12	Audio Delay(Embedded)	Menu FS1-FS10	---	---
13	Audio Delay(AES)	Menu Option Slot A-D	---	---
14	Audio Delay(Analog)	---	---	---
15	Time Code	Menu, Start, Stop, Reset, Preset	None, Menu	---

16	Clean Switch	Mode	Direct Mode Take Mode Take	---
		Destination	Destination1-10	
		Source	Source1(FS1)-10(FS10)	
17	Video Test Signal	Menu	---	---
		Video Test Signal(Off)		
		Video Test Signal(100% CB)	All FS1-FS10	On On/Off On (with Menu Move) On/Off (with Menu Move)
		Video Test Signal(75% CB)		
		Video Test Signal(SMPTE CB)		
		Video Test Signal(RAMP)		
18	Audio Test Signal(Embedded)	Menu	---	---
		Audio Test Signal(Off)		
		Audio Test Signal(500Hz)	FS1-FS10	On On/Off On (with Menu Move) On/Off (with Menu Move)
		Audio Test Signal(1kHz)		
19	Audio Test Signal(AES)	Menu	---	---
		Audio Test Signal(Off)		
		Audio Test Signal(500Hz)	Option Slot A-D	On On/Off On (with Menu Move) On/Off (with Menu Move)
		Audio Test Signal(1kHz)		
20	Audio Test Signal(Analog)	Menu	---	None Menu
		Audio Test Signal(Off)	---	
		Audio Test Signal(500Hz)	On On/Off	
		Audio Test Signal(1kHz)		
21	All Audio Test	Menu	---	---
		Audio Test Signal(Off)		None Menu
		Audio Test Signal(500Hz)	On On/Off	
		Audio Test Signal(1kHz)		
22	GPI Lock	On, Off, On/Off	---	---
23	Memory Load	Event, Salvo	Menu, Default, No1-100	FA-10RU, MU
24	Memory Save	Event, Salvo	Menu, No1-100	FA-10RU, MU
25	Menu Move	P000-999	None, FS1-FS10	None, Line1-Line8
26	Color Corrector Split	Off, Mode1-3	None, FS1-FS10	None, Menu

The above table is the GPI input pin function setting list. An "---" indicates no setting.

*1 Do **not** select FS6 to FS10 when connecting to FA-505 units.
*2 Do **not** select BY-PASS(SDI6) to BY-PASS(SDI10) when connecting to FA-505 units.
*3 Do **not** select Destination6 to 10 when connecting to FA-505 units.

◆ **None**

No.	Setting1	Setting2	Setting3	Setting4
1	None	---	---	---

Specifies the GPI input pin function setting. If Setting1 is set to **None**, no function is set to the pin. Nothing occurs even if the pin circuit is closed.

◆ **MU Select**

No.	Setting1	Setting2	Setting3	Setting4
2	MU Select	Menu Disconnect ID1 - ID100	None FS1 - FS10	---

Selecting **MU Select** under Setting 1, and an ID from among ID1 – ID100 under Setting 2 allows you to establish a connection to the FA-505 of the selected ID, when the circuit is closed.
If **Menu** is selected under Setting 2, the MU Select page opens instead of establishing a new connection.
If **Disconnect** is selected under Setting 2, the FA-10RU is disconnected from the main unit.
See section 5-2-1. "Connecting in Unit ID Selection Mode" for details on IDs.
To change an FS along with the connection, select an FS under Setting 3.

◆ FS Select

No.	Setting1	Setting2	Setting3	Setting4
3	FS Select	FS1 - FS10	---	---

Selecting **FS Select** under Setting 1, and an FS under Setting 2, allows you to switch to the selected FS, when the circuit is closed. See section 5-3-7. "Selecting 5-channel Frame Synchronizers" for details on FS switching.

Do **not** select FS6 to FS10 when connecting to FA-505 units.

◆ Video Process

No.	Setting1	Setting2	Setting3	Setting4
4	Video Process	Video Process Amplifier Video Level Chroma Level Setup/Black level Hue	Menu FS1 - FS10	---

Selecting **Video Process** under Setting 1, and a menu under Setting 2, allows you to open the selected menu, when the circuit is closed. To change an FS at the same time, select an FS under Setting 3.

If Setting 3 is set to **Menu,** FS will remain unchanged, and only the menu display will change. See section 6-1. "VIDEO PROCESS AMPLIFIER", 6-2. "VIDEO LEVEL", 6-4. "CHROMA LEVEL", 6-5. "SETUP/BLACK LEVEL", and 6-6. "HUE."

Do **not** select FS6 to FS10 when connecting to FA-505 units.

◆ Color Corrector

No.	Setting1	Setting2	Setting3	Setting4
5	Color Corrector	Color Correction White Level Black Level Gamma Level	Menu FS1 - FS10	---

Selecting **Color Corrector** under Setting 1, and a menu selection under Setting 2 allows you to display the selected menu. To switch an FS at the same time, select an FS under Setting 3.

If Setting 3 is set to **Menu,** FS will remain unchanged, and only the menu display will be changed. See section 6-7. "COLOR CORRECTION", 6-8. "COLOR CORRECTION WHITE LEVEL", 6-9. "COLOR CORRECTION BLACK LEVEL", and 6-10. "COLOR CORRECTION GAMMA LEVEL" for details.

Do **not** select FS6 to FS10 when connecting to FA-505 units.

◆ Freeze

No.	Setting1	Setting2	Setting3	Setting4
6	Freeze (Mode)	Menu Frame Odd Even	None FS1-FS10	None Menu
7	Freeze (On/Off)	On Off On/Off	None All FS1 - FS10	None Menu

Selecting **Freeze** under Setting 1, and a Freeze mode under Setting 2, allows you to change Freeze mode among **Frame, Odd, and Even**, when the circuit is closed. Freeze On/Off settings turns the Freeze function On or Off. **On/Off** alternately turns On and Off, when the circuit is closed. Select an FS for which to set Freeze under Setting 3. To set Freeze for all FSs 1 to 5, select **All.** To change the menu display when the circuit is closed, select **Menu** under Setting 4. To change only the menu display, select **None** under Setting 3 and **Menu** under Setting 4. See section 6-48. "VIDEO FREEZE" for details.

Do **not** select FS6 to FS10 when connecting to FA-505 units.

◆ By-Pass

No.	Setting1	Setting2	Setting3	Setting4
8	By-pass	Menu On Off On/Off	--- All SDI1 - SDI10	None Menu

Selecting **Bypass** under Setting 1 allows you to turn On or Off the Bypass function by selecting On/Off under Setting 2. **On/Off** alternately turns Bypass On and Off, when the circuit is closed.
Select an SDI connector to be bypassed under Setting 3. To bypass all SDI connectors, set to All.
To change the menu display when the circuit is closed, select Menu under Setting 4.
See section 6-13. "SDI VIDEO BY-PASS" for details.
Do **not** select FS6 to FS10 when connecting to FA-505 units.

◆ Audio Gain (Embedded)

No.	Setting1	Setting2	Setting3	Setting4
9	Audio Gain(Embedded)	Menu FS1 - FS10	---	---

Selecting **Audio Gain(Embedded)** under Setting 1 opens the Audio Gain (Embedded) menu when the circuit is closed. To change an FS at the same time, select an FS under Setting 2. See section 7-21. "EMBEDDED AUDIO OUTPUT GAIN" for details.
Do **not** select FS6 to FS10 when connecting to FA-505 units.

◆ Audio Gain(AES)

No.	Setting1	Setting2	Setting3	Setting4
10	Audio Gain(AES)	Menu Option Slot A - D	---	---

Selecting **Audio Gain(AES)** under Setting 1 opens the Audio Gain(AES) menu when the circuit is closed. To switch Options, select an Option under Setting 2. Ineffective if no AES Option is installed. See section 7-22. "AES AUDIO OUTPUT GAIN" for details.

◆ Audio Gain(Analog)

No.	Setting1	Setting2	Setting3	Setting4
11	Audio Gain(Analog)	---	---	---

Selecting **Audio Gain(Analog)** under Setting 1 opens the Audio Gain(Analog) menu when the circuit is closed. Ineffective if no Analog Option is installed. See section 7-23. "ANALOG AUDIO OUTPUT GAIN" for details.

◆ Audio Delay(Embedded)

No.	Setting1	Setting2	Setting3	Setting4
12	Audio Delay(Embedded)	Menu FS1 - FS10	---	---

Selecting **Audio Delay(Embedded)** under Setting 1 opens the Audio Delay(Embedded) menu, when the circuit is closed. To change FS at the same time, select an FS under Setting 2. See section 7-25. "EMBEDDED AUDIO OUTPUT DELAY" for details.
Do **not** select FS6 to FS10 when connecting to FA-505 units.

◆ Audio Delay(AES)

No.	Setting1	Setting2	Setting3	Setting4
13	Audio Delay(AES)	Menu Option Slot A - D	---	---

Selecting **Audio Delay(AES)** under Setting 1 opens the Audio Delay(AES) menu, when the circuit is closed. To switch Options, select an Option under Setting 2. Effective if an AES Option is installed. See section 7-26. "AES AUDIO OUTPUT DELAY" for details.

◆ Audio Delay(Analog)

No.	Setting1	Setting2	Setting3	Setting4
14	Audio Delay(Analog)	---	---	---

Selecting **Audio Delay(Analog)** under Setting 1 opens the Audio Delay(Analog) menu, when the circuit is closed. Effective if an Analog Option is installed. See section 7-27. "ANALOG AUDIO OUTPUT DELAY" for details

◆ Time Code

No.	Setting1	Setting2	Setting3	Setting4
15	Time Code	Menu Start Stop Reset Preset	--- None Menu	---

Selecting **Time Code** under Setting 1 allows you to control Time code generation by selecting the operation under Setting 2. To display the Time Code menu, select Menu under Setting 3. See section 6-31. "TIMECODE GENERATOR" for details.

◆ Clean Switch

No.	Setting1	Setting2	Setting3	Setting4
16	Clean Switch	Mode	Direct Mode Take Mode Take	---
		Destination	Destination1 - 10	---
		Source	Source1 (FS1) - 10 (FS10)	---

Selecting **Clean Switch** under Setting 1 allows you to control Clean Switching by selecting the operation under Setting 2 and 3. See section 6-17 "CLEAN SWITCH SETTINGS" for details.

◆ Video Test Signal

No.	Setting1	Setting2	Setting3	Setting4
17	Video Test Signal	Menu	---	---
		Video Test Signal(Off)	All FS1 - FS10	None Menu
		Video Test Signal(100% CB)		On (with Menu Move)
		Video Test Signal(75% CB)		On/Off (with Menu Move)
		Video Test Signal(SMPTE CB)		
		Video Test Signal(RAMP)		

Selecting **Video Test Signal** under Setting 1 allows a video test signal, selected under Setting 2, to be output when the circuit is closed. To change the menu display, select **Menu** under Setting 2. Setting3 allows you to select an FS to be controlled. **All** outputs the test signal to all FSs. See section 6-51. "VIDEO TEST SIGNAL" for details.
Do **not** select FS6 to FS10 when connecting to FA-505 units.

◆ Audio Test Signal(Embedded)

No.	Setting1	Setting2	Setting3	Setting4
18	Audio Test Signal(Embedded)	Menu	---	---
		Audio Test Signal(Off)	FS1 - FS10	None Menu
		Audio Test Signal(500Hz)		On (with Menu Move)
		Audio Test Signal(1kHz)		On/Off (with Menu Move)

Selecting **Audio Test Signal(Embedded)** under Setting 1 allows an audio test signal, selected under Setting 2, to be output when the circuit is closed. To change the menu display, select **Menu** under Setting 2. Setting3 allows you to select an FS to be controlled. See section 7-31. "EMBEDDED AUDIO TEST SIGNAL" for details.
Do **not** select FS6 to FS10 when connecting to FA-505 units.

◆ Audio Test Signal(AES)

No.	Setting1	Setting2	Setting3	Setting4
19	Audio Test Signal(AES)	Menu	---	---
		Audio Test Signal(Off)	Option Slot A - D	None Menu
		Audio Test Signal(500Hz)		On (with Menu Move)
		Audio Test Signal(1kHz)		On/Off (with Menu Move)

Selecting **Audio Test Signal(AES)** under Setting 1 allows an audio test signal, selected under Setting 2, to be output when the circuit is closed. To change the menu display, select **Menu** under Setting 2. Setting3 allows you to select an FS to be controlled.
On/Off (with Menu Move) under Setting 4 alternates AES audio test signal output On and Off. Ineffective if no AES option is installed. See section 7-32. "AES AUDIO TEST SIGNAL" for details.

◆ Audio Test Signal(Analog)

No.	Setting1	Setting2	Setting3	Setting4
20	Audio Test Signal(Analog)	Menu	---	---
		Audio Test Signal(Off)	---	None
		Audio Test Signal(500Hz)	On	Menu
		Audio Test Signal(1kHz)	On/Off	

Selecting **Audio Test Signal(Analog)** under Setting 1 allows an audio test signal, selected under Setting 2, to be output when the circuit is closed. To change the menu display, select **Menu** under Setting 2. **On/Off (with Menu Move)** under Setting 4 alternates Analog audio test signal output On and Off. Ineffective if no Analog Option is installed. See section 7-33. "ANALOG AUDIO TEST SIGNAL" for details.

◆ All Audio Test

No.	Setting1	Setting2	Setting3	Setting4
21	All Audio Test	Menu	---	---
		Audio Test Signal(Off)	---	None Menu
		Audio Test Signal(500Hz)	On	None
		Audio Test Signal(1kHz)	On/Off	Menu

Selecting **All Audio Test** under Setting 1 allows an audio test signal, selected under Setting 2, to be output when the circuit is closed. To change the menu display, select **Menu** under Setting 2. **On/Off (with Menu Move)** under Setting 4 alternates audio test signal output On and Off. See section 7-34. "ALL AUDIO TEST SIGNAL" for details.

◆ GPI Lock

No.	Setting1	Setting2	Setting3	Setting4
22	GPI Lock	On Off On/Off	---	---

Selecting **GPI Lock** under Setting 1 allows you to control the GPI Lock function by selecting On, Off or On/Off under Setting 2. **On/Off** alternates lock and unlock when the circuit is closed.

◆ Memory Load

No.	Setting1	Setting2	Setting3	Setting4
23	Memory Load	Event Salvo	Menu Default No1 - 100	FA-10RU MU

Selecting **Memory Load** allows you to load the memory data selected under Setting 2, 3 and 4. See section 6-18. "SALVO LOAD", and 8-1. "LOAD EVENT MEMORY" for details.
Setting 2 allows you to select a memory type.
Setting 3 allows you to select a memory number. (To change the Menu display, select **Menu.)**
Setting 4 allows you to select a unit from which to load the memory data.

◆ Memory Save

No.	Setting1	Setting2	Setting3	Setting4
24	Memory Save	Event Salvo	Menu No1 - 100	FA-10RU MU

Selecting **Memory Save** under Setting 1 allows you to save the memory data to the memory specified under Setting 2, 3 and 4, when the circuit is closed. See section 6-19. "SALVO SAVE", and 8-2. "SAVE EVENT MEMORY" for details.
Setting 2 allows you to select a memory type.
Setting 3 allows you to select a memory number. (To change the Menu display, select **Menu.)**
Setting 4 allows you to select a unit to which to save the memory data.

◆ Menu Move

No.	Setting1	Setting2	Setting3	Setting4
25	Menu Move	P001 - 999	None FS1 - FS10	None Line1 - Line8

Selecting **Menu Move** under Setting 1 allows you to display the menu selected under Setting 2, 3, and 4 when the circuit is closed.
Setting 2 allows you to select a menu number.

Setting 3 allows you to change an FS.
Setting 4 allows you to select the menu display row in which to set a setting. Lines are numbered 1 to 8 from top to bottom.
* If a menu number that does not exist is selected under Setting 2, the menu display will not be changed. If the selected menu does not contain any FS or line selections, those settings will be ignored. If an FA-1010 menu number is specified during FA-505 operation, the remote unit automatically replaces it with the corresponding FA-505 menu.
Do **not** select FS6 to FS10 when connecting to FA-505 units.

◆ **Color Correction Split**

No.	Setting1	Setting2	Setting3	Setting4
26	Color Correction Split	Off,Mode1, Mode2, Mode3	None FS1 - FS10	None Menu

Selecting **Color Correction Split** under Setting 1 allows you to display the menu selected under Setting 2, 3, and 4 when the circuit is closed.
Setting 2 allows you to specify the Color Correction Split mode.
Setting 3 allows you to change an FS.
Setting 4 allows you to change the menu.
If an FA-1010 menu number is specified during FA-505 operation, the remote unit automatically replaces it with the corresponding FA-505 menu.
Do **not** select FS6 to FS10 when connecting to FA-505 units.

9-1-3. GPI OUTPUT PORT FUNCTION

Allows you to assign functions to GPI output pins.

```
--- GPI OUTPUT PORT FUNCTION ---         P823
1 Port:GPI1 PORT 1(FA-AUX30 Left Block)
F2 Setting :None
F3 Polarity:Normal
```

MU SEL
LOCK

10 SYSTEM

Item	Default	Setting range	Description
Port	GPI1 Port 1 (FA-AUX30 Right Block)	GPI1 Port 1 - 10(FA-AUX30 Left Block) GPI2 Port11 - 20 (FA-AUX30 Center Block) GPI3 Port21 - 30 (FA-AUX30 Right Block)	Allows you to select a GPI output pin for which to assign functions.
Setting	None	None Follow GPI In Setting All DC/FAN Alarm FA-10RU FAN Alarm MU/FA-10RU FAN Alarm MU FAN1 - 4 Alarm DC Power Alarm DC Power 1 - 2Alarm Reference Input Video Status FS1 - 10 Input Video Status [1] FS1 - 10 Input Audio Status [1] Option A - D Input Audio Status	Allows you to specify a function to be assigned to the GPI output pin. See section 9-1-3-1. "GPI OUTPUT Functions" for details on output functions.
Polarity	Normal	Normal Invert	Allows you to select the output polarity. Select Normal when connecting with the FA-AUX30.

[1] In case of FA-505, no status information is displayed for FS6 to FS10.

9-1-3-1. GPI OUTPUT Functions

Settings	Description
None	No output
Follow GPI In Setting	Outputs a signal the same as that specified for the input.
All DC/FAN Alarm [1]	Outputs a signal if an alarm is detected in an FA-1010 / FA-505 FAN, power, or FA-10RU FAN unit.
FA-10RU FAN Alarm	Outputs a signal if an alarm is detected in the FA-10RU FAN unit.
MU/FA-10RU FAN Alarm [1]	Outputs a signal if an alarm is detected in an FA-1010 / FA-505 or FA-10RU FAN unit.
MU FAN1 Alarm [1]	Outputs a signal if an alarm is detected in FA-1010 / FA-505 FAN 1.
MU FAN2 Alarm [1]	Outputs a signal if an alarm is detected in FA-1010 / FA-505 FAN 2.
MU FAN3 Alarm [1]	Outputs a signal if an alarm is detected in FA-1010 / FA-505 FAN 3.
MU FAN4 Alarm [1]	Outputs a signal if an alarm is detected in FA-1010 / FA-505 FAN 4.
DC Power Alarm [1]	Outputs a signal if an alarm is detected in an FA-1010 / FA-505 power supply unit.
DC Power 1 Alarm [1]	Outputs a signal if an alarm is detected in FA-1010 / FA-505 power supply unit 1.
DC Power 2 Alarm [1]	Outputs a signal if an alarm is detected in FA-1010 / FA-505 power supply unit 2.
Reference Input Video Status [1]	Outputs a signal if the reference signal input is lost.
FS1 - 10 Input Video Status [1, 2]	Outputs a signal if the input video signal in FS1 - FS10 is lost.
FS1 - 10 Input Audio Status [1, 2]	Outputs a signal if the embedded audio signal in FS1 - FS10 is lost.
OptionA - D Input Audio Status [1]	Outputs a signal if the audio signal in Option A – OptionD is lost.

[1] The state of not having a connection with the FA-505 is recognized as a normal state.
[2] In case of FA-505, no status information is displayed for FS6 to FS10.

9-1-4. GPI OUTPUT BRIGHTNESS

```
--- GPI OUTPUT BRIGHTNESS ---          P824
F1 GPI BLOCK: GPI1 (FA-AUX30 Left Block)
F2 Port 1: 50        F3 Port 2 : 50
   Port 3: 50           Port 4 : 50
   Port 5: 50           Port 6 : 50
   Port 7: 50           Port 8 : 50
   Port 9: 50           Port 10: 50
F4 All Port Setting
```

MU SEL
LOCK

10 SYSTEM
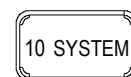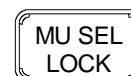
Item	Default	Setting range	Description
GPI BLOCK	GPI1 (FA-AUX30 Left Block)	GPI1 (FA-AUX30 Left Block) GPI2 (FA-AUX30 Center Block) GPI3 (FA-AUX30 Right Block)	Allows you to select a block of GPI output pins. The current brightness is shown for Ports 1 – 10.
Port1 - Port10	50	0 - 255	Allows you to set brightness for the GPI output LED. **0 – 255**: Dark - Bright The F4 UNITY button resets brightness for all LEDs to default.

9-1-5. FRONT PANEL SET

```
--- FRONT PANEL SETTINGS ---              P831
F1 VFD Brightness:50.0%
   VFD Auto Off  :Disable
   LED Brightness:Level4
   FA-10RU Buzzer:Enable
   GPI Buzzer    :Enable
   Front GPI Lock:Link
```

Item	Default	Setting range	Description
VFD Brightness	50%	12.5% 25.0% 37.5% 50.0% 62.5% 75.0% 87.5% 100.0%	Allows you to set brightness for the front panel menu display (Vacuum Fluorescent Display). **12.5% – 100%:** Dark - Bright
VFD Auto Off	Disable	Disable 5min 10min 30 min	Allows you to set the duration after the last operation, before the VFD turns off. **Disable:** Does not turn off.
LED Brightness	Level4	Level 1 - 8	Allows you to set brightness for front panel LEDs. **Level 1 – 8:** Dark - Bright
FA-10RU Buzzer	Enable	Disable Enable	**Disable:** Disables the FA-10RU buzzer. **Enable:** Enables the FA-10RU buzzer.
GPI Buzzer	Enable	Disable Enable	**Disable:** Disables the GPI buzzer. **Enable:** Enables the GPI buzzer.
Front GPI Lock	Link	Unlink Link	**Unlink:** The front lock function does not disable GPI control. **Link:** The front lock function also disables GPI control.

9-1-6. STATUS LED MODE SETTINGS

```
--- STATUS LED MODE SETTINGS ---          P832
F1 GENLOCK LED      :Normal
   FREEZE LED       :Normal
   TEST SIGNAL LED:Normal
   BY-PASS LED      :Normal
   FAN ALARM LED    :Normal
   DC POWER LED     :Normal
```

MU SEL LOCK

10 SYSTEM

Item	Default	Setting range	Description
GENLOCK LED	Normal	Normal Blink	**Normal:** Status lights will light to indicate statuses. **Blink:** Status lights will blink to indicate statuses.
FREEZE LED	Normal	Normal Blink	**Normal:** Status lights will light to indicate statuses. **Blink:** Status lights will blink to indicate statuses.
TEST SIGNAL LED	Normal	Normal Blink	**Normal:** Status lights will light to indicate statuses. **Blink:** Status lights will blink to indicate statuses.
BY-PASS LED	Normal	Normal Blink	**Normal:** Status lights will light to indicate statuses. **Blink:** Status lights will blink to indicate statuses.
FAN ALARM LED	Normal	Normal Blink	**Normal:** Status lights will light to indicate statuses. **Blink:** Status lights will blink to indicate statuses.
DC POWER LED	Normal	Normal Blink	**Normal:** Status lights will light to indicate statuses. **Blink:** Status lights will blink to indicate statuses.

Move the F1 indication to the item to be set using single-arrow buttons.

9-1-7. FA-10RU INFORMATION

Displays the FA-10RU version information and FA-10RU FAN unit status.

```
--- FA-10RU INFORMATION ---          P833
FPGA1 Version: 1.00
FPGA2 Version: 1.00
SOFT Version : 4.20
FAN Status   :Normal
```

MU SEL LOCK

10 SYSTEM

9-1-8. FA-10RU NETWORK INFORMATION

Allows you to veiw FA-10RU network settings.

```
--- FA-10RU NETWORK INFORMATION ---   P834
IP Address      :192.168.  0.100
Subnet mask     :255.255.255.  0
Default Gateway:  0.  0.  0.  0
```

MU SEL LOCK

10 SYSTEM

See section 10-2. "Network Settings" for details on network settings and setting changes.

10. WEB Browser Settings

This section describes FA-10RU settings via a web browser on PC.

(1) Connect to a computer. See section 3. "Connections."
(2) Open a web browser on the computer, and enter the address **http://192.168.0.100**/ (factory default setting) in the address bar.
(3) The Information page as shown below appears.

FA-10RU

Information

Network Settings
User Account Settings
Unit ID Assignment
Event Naming (FA-1010)
Event Naming (FA-505)
Salvo Naming (FA-1010)
Salvo Naming (FA-505)
Backup & Restore
Restart

Unit Information
Serial Number : 15440001
FPGA1 Version : 1.00
FPGA2 Version : 1.00
Soft Version : 3.00

Network Information
IP Address : 192.168.0.100
Subnet Mask : 255.255.255.0
Default Gateway : Unused
MAC Address : 00-10-B1-09-40-01

Connection Status
Status : Connect
Unit ID : 1
Host Address : 192.168.0.10
TCP Port Number : 50011
Unit Name : FA-505

Click on a page link such as **Network Settings, User Account Settings** shown on the left side of the screen, the following "Windows Security" dialog will appear.

Windows セキュリティ

The server 192.168.0.100 is asking for your user name and password. The server reports that it is from FA-10RU.

Warning: Your user name and password will be sent using basic authentication on a connection that isn't secure.

fa10ru

●●●●●●●●●●●

☐ 資格情報を記憶する

OK　　キャンセル

Enter your user name and password.

User name: fa10ru
User password: foranetwork

Then click **OK**. After successful authentication, you will have access to all the FA-10RU pages.

10-1. Information

Click **Information.** The **information** page as shown below appears.

FA-10RU

Information
Network Settings
User Account Settings
Unit ID Assignment
Event Naming (FA-1010)
Event Naming (FA-505)
Salvo Naming (FA-1010)
Salvo Naming (FA-505)
Backup & Restore
Restart

Unit Information
Serial Number : 15440001
FPGA1 Version : 1.00
FPGA2 Version : 1.00
Soft Version : 3.00

Network Information
IP Address : 192.168.0.100
Subnet Mask : 255.255.255.0
Default Gateway : Unused
MAC Address : 00-10-B1-09-40-01

Connection Status
Status : Connect
Unit ID : 1
Host Address : 192.168.0.10
TCP Port Number : 50011
Unit Name : FA-505

◆ **Unit Information**

Item	Description
Serial Number	Displays the serial number of the FA-10RU.
FPGA1 Version	Displays the version of the FA-10RU FPGA1.
FPGA2 Version	Displays the version of the FA-10RU FPGA2.
Soft Version	Displays the version of the FA-10RU Software.

◆ **Network Information**

Item	Description
IP Address	Displays the IP address of the FA-10RU.
Subnet Mask	Displays the subnet mask of the FA-10RU.
Default Gateway	Displays the gateway of the FA-10RU.
MAC Address	Displays the MAC address of the FA-10RU.

◆ **Connection Status**

Item	Description
Status	Displays the status of connection with FA-505.
Unit ID	Displays the registered ID number if the connected FA-505 IP address is registered using Unit ID Assignment [*1]. Displays an "IP Address Select" message, if the connection is established via the IP ADDR SEL menu [*2].
Host Address	Displays the IP address of the connected FA-505.
TCP Port Number	Displays the TCP port number of the connected FA-505.
Unit Name	Displays the unit name of the connected FA-505.

*1 See section 10-4. "Unit ID Assignment" for details.
*2 See section 5-2-2. "Connecting in IP Address Selection Mode" for details.

10-2. Network Settings

Clicking Network Settings opens the dialog box as shown below.

FA-10RU

Information

Network Settings

User Account Settings

Unit ID Assignment

Event Naming
(FA-1010)

Event Naming
(FA-505)

Salvo Naming
(FA-1010)

Salvo Naming
(FA-505)

Backup & Restore

Restart

Network Settings

IP Address: 192.168.0.100
Subnet Mask: 255.255.255.0
Default Gateway:

Submit

To change the network address, change the settings and click **Submit**.
Changes will be applied after rebooting or 10-8. "Restart" is performed.

10-3. User Account Settings

Clicking **User Account** opens the dialog box as shown below.

FA-10RU

Information

Network Settings

User Account Settings

Unit ID Assignment

Event Naming
(FA-1010)

Event Naming
(FA-505)

Salvo Naming
(FA-1010)

Salvo Naming
(FA-505)

Backup & Restore

Restart

User Account Settings

User Name: fa10ru   (15 Max char)
Password: ••••••••••   (15 Max char)
Re-enter Password: (15 Max char)

Submit

To change the user account, change the settings and click **Submit**.
The authentication dialog box will not appear if the User Name and Password setting boxes are left empty.
Changes will be applied after rebooting or 10-8. "Restart" is performed.

10-4. Unit ID Assignment

Clicking **Unit ID Assignment** opens the dialog box as shown below.

This page allows you to assign IP addresses to MU IDs to select units to be connected in Unit ID selection mode, described in section 5-2-1. "Connecting in Unit ID Selection Mode." Unit Name allows you to set names for units to be displayed for settings.

Once settings are complete, click **Submit.** (The assignments are effective without rebooting.)
Unit names can be set with up to 15 alphanumeric characters.

10-5. Event Naming

Event Naming has two menu pages one for FA-1010 and the other for FA-505.
Clicking **Event Naming (FA-505)** opens the dialog box as shown below.

◆ **Setting Procedure**
This page allows you to rename evens (Event1 to Event100) saved in the FA-10RU.
(1) Enter a desired name (up to 15 alphanumeric characters) in the Event Name field.
(2) After setting, click **Submit**.
(3) Click "Event 21-40" to open the next page. Rename events, as necessary.
(4) Event1 to Event100 (default names) can be renamed in this way.

Once new names are set, these names are displayed during the event operation.
See section 8. "Event Memory" for more details.

10-6. Salvo Naming

Salvo Naming has two menu pages one for FA-1010 and the other for FA-505.
Clicking **Salvo Naming (FA-505)** opens the dialog box as shown below.

◆ **Setting Procedure**
This page allows you to rename evens (Salvo1 to Salvo100) saved in the FA-10RU.
(1) Enter a desired name (up to 15 alphanumeric characters) in the Salvo Name field.
(2) After setting, click **Submit**.
(3) Click "Salvo 21-40" to open the next page. Rename events, as necessary.
(4) Salvo1 to Salvo100 (default names) can be renamed in this way.

Once new names are set, these names are displayed during the salvo operation.
See section 6-18. "SALVO LOAD" and 6-19. "SALVO SAVE" for more details.

10-7. Backup & Restore

Clicking **Backup & Restore** opens the dialog box as shown below.

This dialog box allows you to save the FA-10RU settings and event data to a PC.
The saved data can be recalled.

10-7-1. Configuration Data Backup

The FA-10RU configuration data can be saved/recalled to/from a PC as a CSV file.

◆ **Saving Configuration Data to a file on a PC**
(1) Click Save File: **Save** under "Backup Config Data Save File."
(2) Click **Save** in the dialog to save the data to a desired folder.

◆ **Recalling the Saved Configuration Data from a file on a PC**
(1) Select items in the configuration data to be recalled.

Item	Description
Network Settings	Recalls settings that are set in the Network Settings menu (section 10-2).
Unit ID Assignment	Recalls settings that are set in the Unit ID Assignment menu (section 10-4).
Event Name	Recalls settings that are set in the Event Naming menu (section 10-5).
Salvo	Recalls settings that are set in the Salvo Naming menu (section 10-6).
GPI Settings	Recalls GPI settings. See sections 9-1-2 to 9-1-4 for details on GPI settings.
Front Panel Settings	Recalls front panel operationsl settings. See sections 9-1-5 and 9-1-6 for details.

(2) Click **Browse** under Backup Config Data to select a file in which the configuration data is saved.

* The control from the FA-10RU is disabled while saving or recalling configuration data.

IMPORTANT
Network settings will be applied after restart. Be sure to perform restart as described in section 10-8. "Restart."

10-7-2. Event Data Backup

All event data for FA-505 saved in the FA-10RU can be saved/recalled to/from a file on a PC

◆ **Saving all Event Data to a file on a PC**
(1) Click Save File: **Save** under "Backup Event Data (FA-505)."
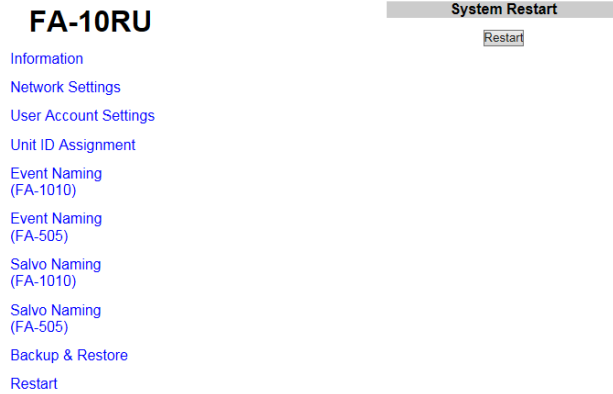(2) Click **Save** in the pop-up dialog to save the data to a desired folder.

◆ **Recalling the Saved Event Data from a file on a PC**
(1) Click **Browse** under under "Backup Event Data (FA-505)" to select a file in which the event data is saved.
(2) Click **Load**, then click **OK** in the pop-up dialog to load the data.

* The control from the FA-10RU is disabled while saving or recalling the configuration data.

10-8. Restart

Clicking **Restart** opens the window as shown below.

FA-10RU

Information

Network Settings

User Account Settings

Unit ID Assignment

Event Naming
(FA-1010)

Event Naming
(FA-505)

Salvo Naming
(FA-1010)

Salvo Naming
(FA-505)

Backup & Restore

Restart

System Restart

Restart

Be sure to click **Restart** after changing Network Settings or User Account Settings.

11. GPI Interface

The GPI1, GPI2 and GPI3 connectors provide a total of 30 inputs and 30 outputs. Functions can be assigned to each terminal as well as a group of terminals using patterns, which are set for specific purposes (Pattern Load). Refer to sections 9-1-1 to 9-1-3 for details on function assignments. The FA GPIO Editor also allows you to set GPI assignments on the GUI screen (see the following chapters).

11-1. FA GPIO Editor

Before performing GPI function assignments using the FA GPIO Editor, install the software into your computer from the supplied CD-ROM. GPI settings can also be backed up to and restored from files using Export and Import.

11-1-1. Software Installation

Before installing this software, close all other applications on the computer.

(1) Insert the supplied CD-ROM into the PC. Click "FA GPIO Editor > setup " on the CD-ROM to start the installation wizard.

(2) Click **Next**.
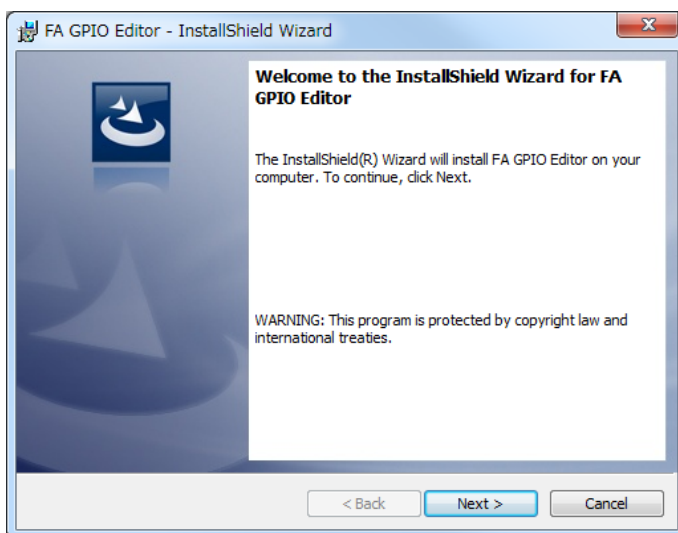
(3) The Software License Agreement window appears. Read the agreement statement and check the **I accept the terms in license agreement** check box, then click **next**.
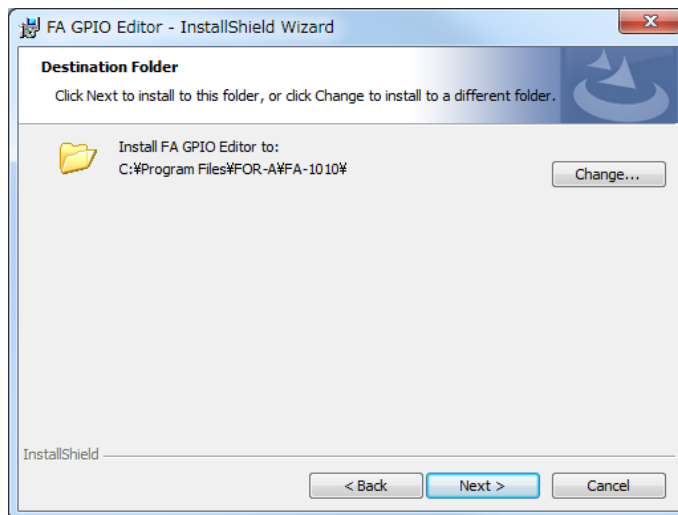To cancel the installation, click **Cancel**.

| **NOTE** |
|---|
| To print the Software License Agreement, click **Print**. Before printing the License agreement, verify that your printer is actually connected to the PC. |

(4) The installation directory of the FA GPIO Editor is displayed.
To change the default installation directory, click **Change···** and specify a new directory.

(5) Click **Next**.

(6) The last wizard page is displayed. Verify the installation settings and click **Install** to install the software.
To change settings, click on **Back**, change installation settings as required, then click **Install**.
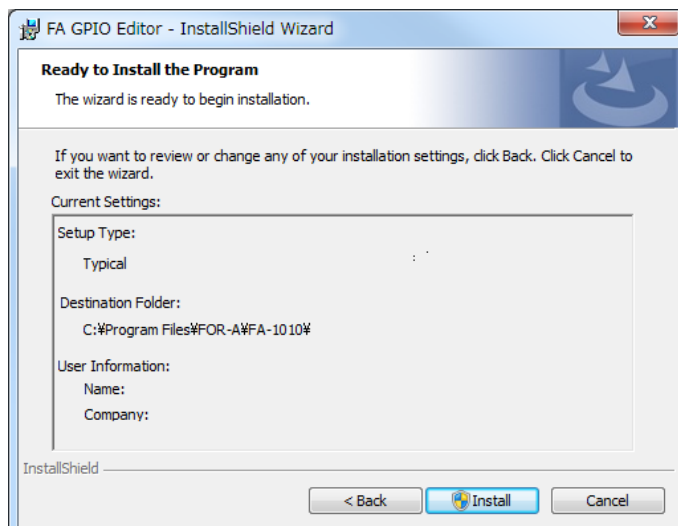
(7) When the software installation is complete, the window as shown below will appear.
Click **Finish** to finish the installation.
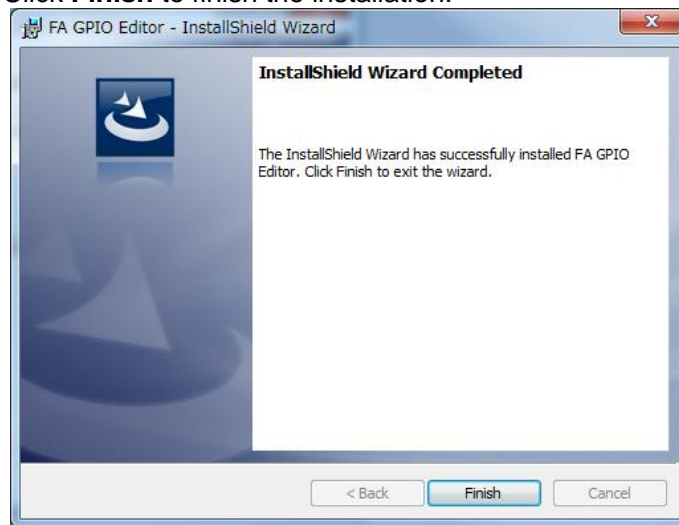
11-1-2. Verifying GPIO Editor Version

Click **Version Information** in the menu bar.
A window as shown below will appear.

To close the window, click **OK**.

11-1-3. Connecting FA GPIO Editor to the FA-10RU

(1) Click the FA GPIO Editor shortcut icon on the desktop to start FA GPIO Editor.
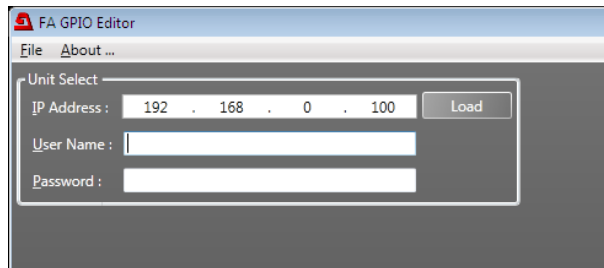

FA GPIO Editor

(2) When the software window appears, enter the FA-10DCCRU IP address, user name and password. Click **Load**.

< Default FA-10RU settings>
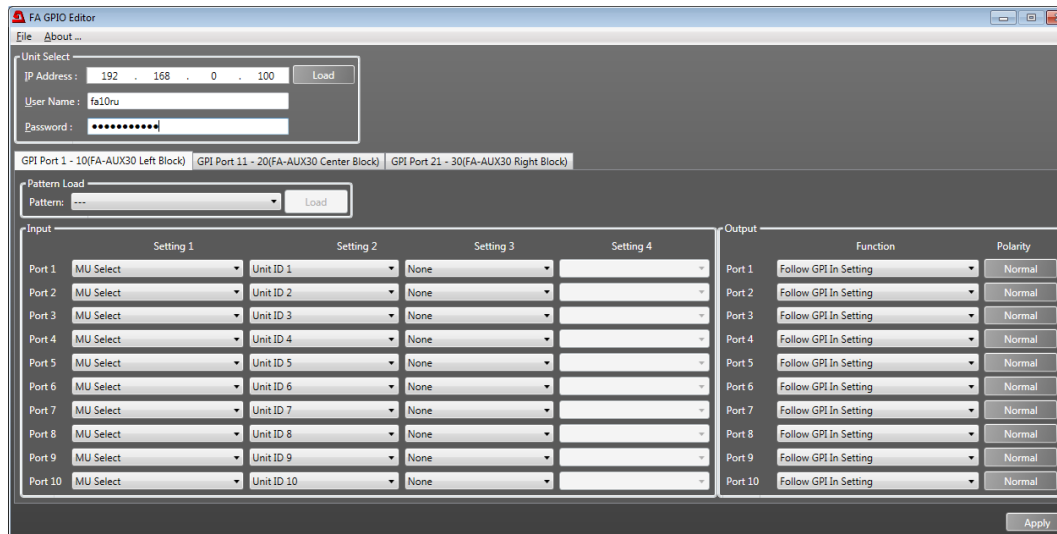IP address: **192.168.0.100**
User name: **fa10ru**
Password: **foranetwork**

(3) When the user name and password are accepted, a window as shown below is displayed and FA-10RU GPI settings are loaded in the window.

When the user name and password are not accepted, an error pop-up dialog windows appears. Click **OK** to close the dialog.
Enter the correct user name and password and click **Load**.

11-1-4. Setting GPI Functions

Use the FA-GPIO Editor to assign functions to 30 inputs and 30 outputs in GPI1, GPI2 and GPI3 connectors. As factory default, GPI functions are all set to **None (no function).**

◆ **If Using Pattern Load (input only)**
(1) Select a GPI connector (10 ports) by clicking a tab from the following three:

> **GPI Port 1 – 10 (FA-AUX30 Left Block)**
> **GPI Port 11 – 20 (FA-AUX30 Center Block)**
> **GPI Port 21 – 30 (FA-AUX30 Right Block)**

> Note that "(FA-AUX30…)" indicates a button block (seen from the front side) when connecting an FA-AUX30 unit.

(2) Select a pattern (a combination of GPI input settings) in the **Pattern Load**, then click the **Load** button. (See Sec.11-2. "GPI Input Patterns" for details on function patterns.) Ten GPI inputs/outputs are quickly set. Loaded settings (including output functions) can be changed. (See "If Setting Individually" below.)

(3) After all GPI settings are finished, click **Apply** to send the settings to the FA-10RU unit. If a "Successful settings" message appears, GPI settings are complete.
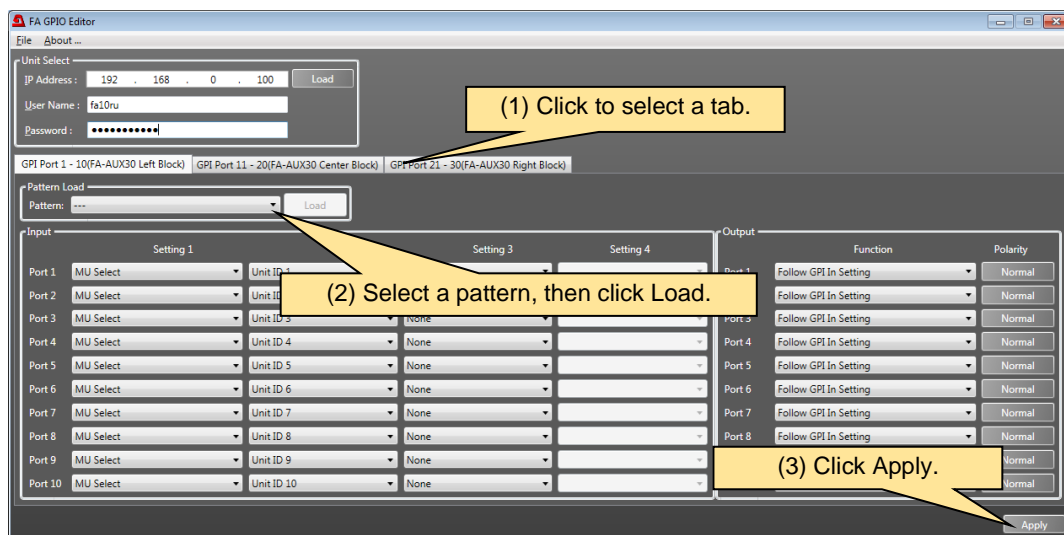

◆ **If Setting Individually**
(1) Select a GPI connector (10 ports).

(2) For input functions, first, set **Setting 1** then set **Settings 2-4** as needed.
See Sec. 9-1-2-1. "Setting Details via Setting 1-4" for details on individual input settings.
See Sec. 11-3. "GPI1-GPI3 Pin Assignments" for details on pin arrangements.

(3) Set GPI output functions.
See Sec. 9-1-3-1. "GPI OUTPUT Functions" for details on output settings.
To invert the polarity of GPI output pulse, change **Polarity** from **Normal** to Invert.

(3) After all GPI settings are finished, click **Apply** to send the settings to the FA-10RU unit. If a "Successful settings" message appears, GPI settings are complete.

(1) Click to select a tab.

(2) Set **Setting 1** then set **Settings 2-4** as needed.

(3) Set output functions

(4) Click Apply.
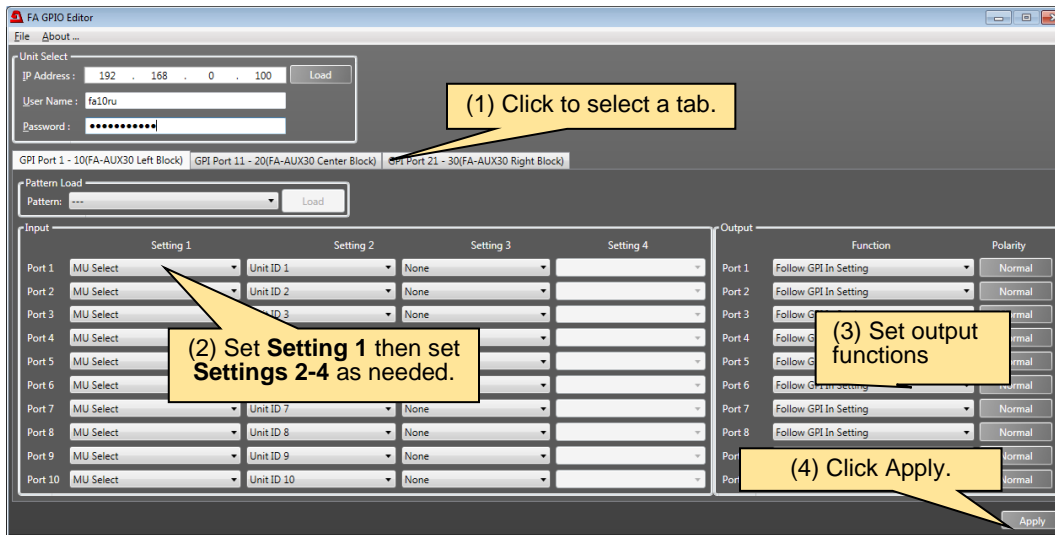
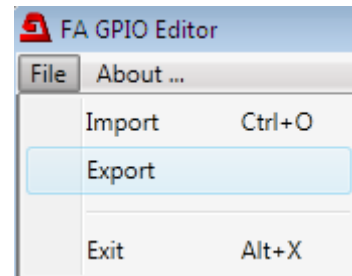# 11-1-5. Exporting / Importing GPI Settings

◆ **Export to files**

GPI settings can be backed up to files in the computer.
(1) Select **File** > **Export** in the menu bar.
(2) Specify a file name and location in the pop-up windows to save the settings.
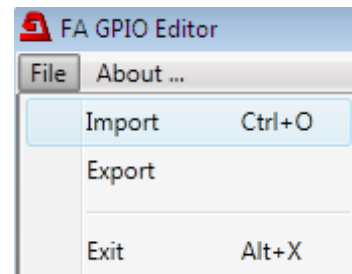 The default file name is **FA-10RU GPIO.csv**.
  Change the file name, as needed, then click **OK**.

◆ **Import from files**

GPI settings can be loaded from files in the computer.
(1) Select **File** > **Import** in the menu bar.
(2) Specify the file name (such as FA-10RU GPIO.csv) and location.
(3) Verify settings in the FA GPIO Editor, then click **Apply** to send the settings to the FA-10RU unit.

11-2. GPI Input Patterns

This section describes GPI Input setting patterns that can be selected in the LOAD GPI PATTERN menu (section 9-1-1). The following figures depict FA-AUX30 buttons.

Pattern: MU Select

MU ID1	MU ID2	MU ID3	MU ID4	MU ID5
MU ID6	MU ID7	MU ID8	MU ID9	MU ID10
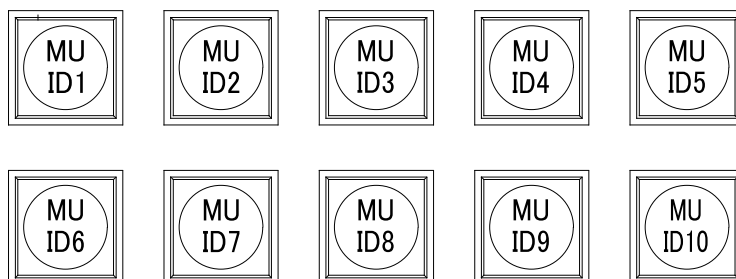
Item	Description
MU ID1 - 10	Each button establishes a connection to the FA-505 registered with the ID 1-10. The LED lights while the unit is connected.

Pattern: FS Select

FS1	FS2	FS3	FS4	FS5
FS6	FS7	FS8	FS9	FS10
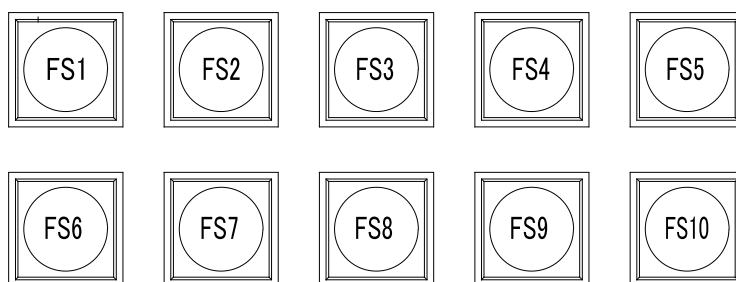
Item	Description
FS1 - 10	Each button allows you to select the FS assigned to the button. The selected FS button lights.

* Do **not** select FS6 to FS10 when connecting to FA-505 units.

Pattern: Process (FS1-FS10)

PROCESS FS1	PROCESS FS2	PROCESS FS3	PROCESS FS4	PROCESS FS5
PROCESS FS6	PROCESS FS7	PROCESS FS8	PROCESS FS9	PROCESS FS10

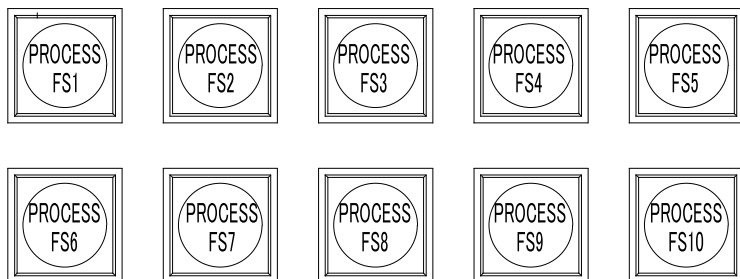| Item	Description
PROCESS FS1 - 10	Each button allows you to open the VIDEO PROCESS AMPLIFIER menu, and select an FS. The button LED lights if the VIDEO PROCESS AMPLIFIER menu is open and the relevant FS is selected.

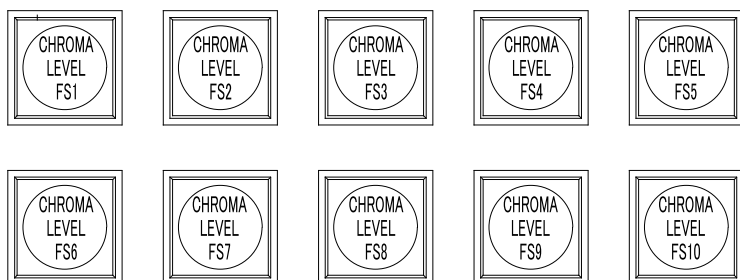* Do **not** select FS6 to FS10 when connecting to FA-505 units.

Pattern: Video Level (FS1-FS10)

VIDEO LEVEL FS1	VIDEO LEVEL FS2	VIDEO LEVEL FS3	VIDEO LEVEL FS4	VIDEO LEVEL FS5
VIDEO LEVEL FS6	VIDEO LEVEL FS7	VIDEO LEVEL FS8	VIDEO LEVEL FS9	VIDEO LEVEL FS10

Item	Description
VIDEO LEVEL FS1 - 10	Each button allows you to open the VIDEO LEVEL menu, and select an FS. The button LED lights if the VIDEO LEVEL menu is open and the relevant FS is selected.

* Do **not** select FS6 to FS10 when connecting to FA-505 units.

Pattern: Chroma Level (FS1-FS10)

CHROMA LEVEL FS1	CHROMA LEVEL FS2	CHROMA LEVEL FS3	CHROMA LEVEL FS4	CHROMA LEVEL FS5
CHROMA LEVEL FS6	CHROMA LEVEL FS7	CHROMA LEVEL FS8	CHROMA LEVEL FS9	CHROMA LEVEL FS10

Item	Description
CHROMA LEVEL FS1 - 10	Each button allows you to open the CHROMA LEVEL menu, and select an FS. The button LED lights if the CHROMA LEVEL menu is open and the relevant FS is selected.

* Do **not** select FS6 to FS10 when connecting to FA-505 units.

Pattern: Setup/Black Level (FS1-FS10)

| BLACK LEVEL FS1 | BLACK LEVEL FS2 | BLACK LEVEL FS3 | BLACK LEVEL FS4 | BLACK LEVEL FS5 |

| BLACK LEVEL FS6 | BLACK LEVEL FS7 | BLACK LEVEL FS8 | BLACK LEVEL FS9 | BLACK LEVEL FS10 |

Item	Description
BLACK LEVEL FS1 - 10	Each button allows you to open the SETUP/BLACK LEVEL menu, and select an FS. The button LED lights if the SETUP/BLACK LEVEL menu is open and the relevant FS is selected.

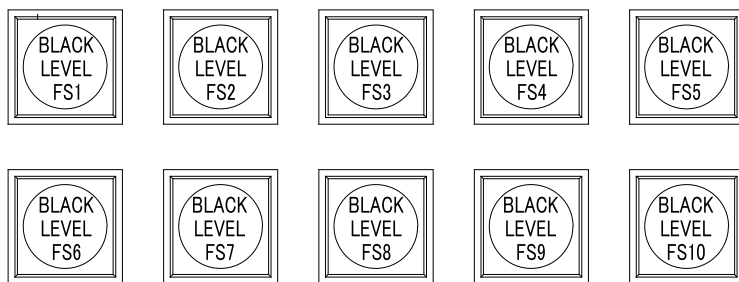* Do **not** select FS6 to FS10 when connecting to FA-505 units.

Pattern: Hue (FS1-FS10)

| HUE FS1 | HUE FS2 | HUE FS3 | HUE FS4 | HUE FS5 |

| HUE FS6 | HUE FS7 | HUE FS8 | HUE FS9 | HUE FS10 |

Item	Description
HUE FS1 - 10	Each button allows you to open the HUE menu, and select an FS. The button LED lights if the HUE menu is open and the relevant FS is selected.

* Do **not** select FS6 to FS10 when connecting to FA-505 units.

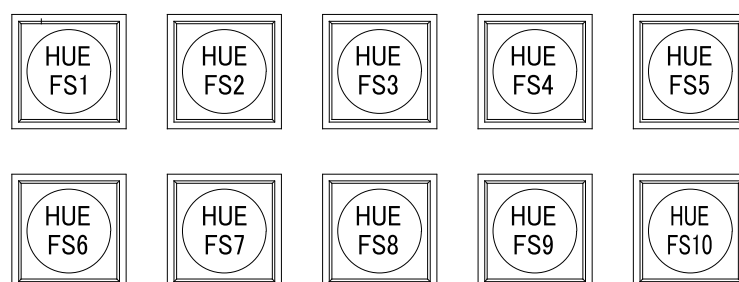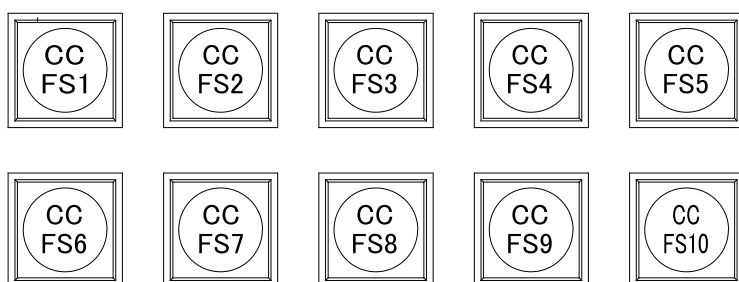Pattern: CC (FS1-FS10)

| CC FS1 | CC FS2 | CC FS3 | CC FS4 | CC FS5 |

| CC FS6 | CC FS7 | CC FS8 | CC FS9 | CC FS10 |

Item	Description
CC FS1 - 10	Each button allows you to open the COLOR CORRECTION menu, and select an FS. The button LED lights if the COLOR CORRECTION menu is open and the relevant FS is selected.

* Do **not** select FS6 to FS10 when connecting to FA-505 units.

Pattern: CC White (FS1-FS10)

| CC WHITE FS1 | CC WHITE FS2 | CC WHITE FS3 | CC WHITE FS4 | CC WHITE FS5 |

| CC WHITE FS6 | CC WHITE FS7 | CC WHITE FS8 | CC WHITE FS9 | CC WHITE FS10 |

Item	Description
CC WHITE FS1 - 10	Each button allows you to open the COLOR CORRECTION WHITE LEVEL menu, and select an FS. The button LED lights if the COLOR CORRECTION WHITE LEVEL menu is open and the relevant FS is selected.

* Do **not** select FS6 to FS10 when connecting to FA-505 units.

Pattern: CC Black (FS1-FS10)
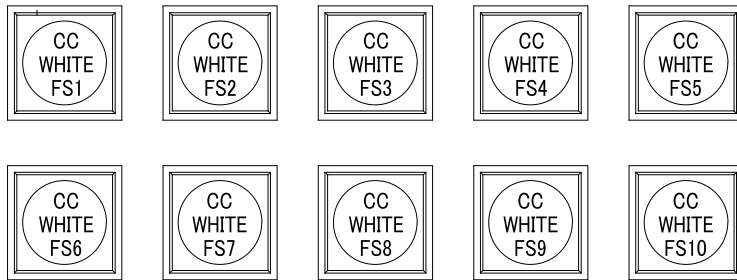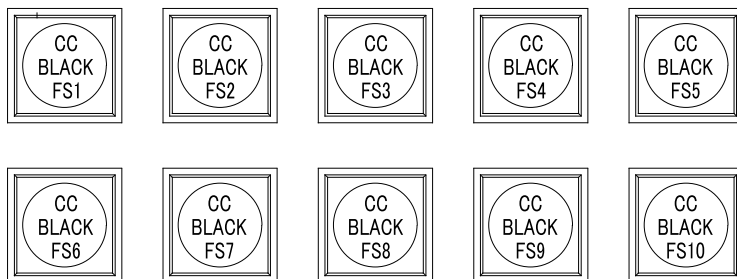
| CC BLACK FS1 | CC BLACK FS2 | CC BLACK FS3 | CC BLACK FS4 | CC BLACK FS5 |

| CC BLACK FS6 | CC BLACK FS7 | CC BLACK FS8 | CC BLACK FS9 | CC BLACK FS10 |

Item	Description
CC BLACK FS1 - 10	Each button allows you to open the COLOR CORRECTION BLACK LEVEL menu, and select an FS. The button LED lights if the COLOR CORRECTION BLACK LEVEL menu is open and the relevant FS is selected.

* Do **not** select FS6 to FS10 when connecting to FA-505 units.

Pattern: CC Gamma (FS1-FS10)

| CC GAMMA FS1 | CC GAMMA FS2 | CC GAMMA FS3 | CC GAMMA FS4 | CC GAMMA FS5 |

| CC GAMMA FS6 | CC GAMMA FS7 | CC GAMMA FS8 | CC GAMMA FS9 | CC GAMMA FS10 |

Item	Description
CC GAMMA FS1 - 10	Each button allows you to open the COLOR CORRECTION GAMMA LEVEL menu, and select an FS. The button LED lights if the COLOR CORRECTION GAMMA LEVEL menu is open and the relevant FS is selected.

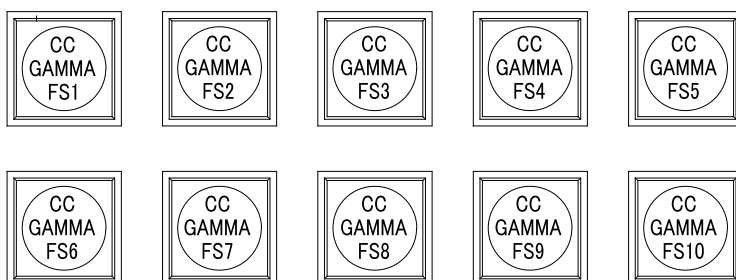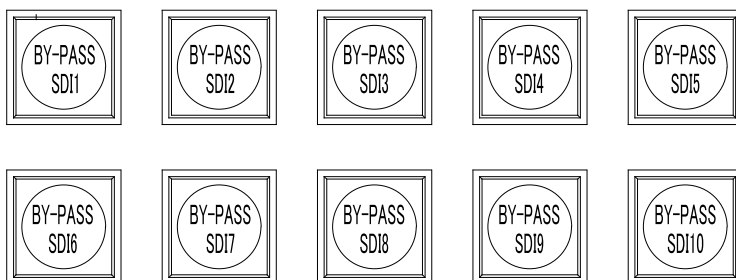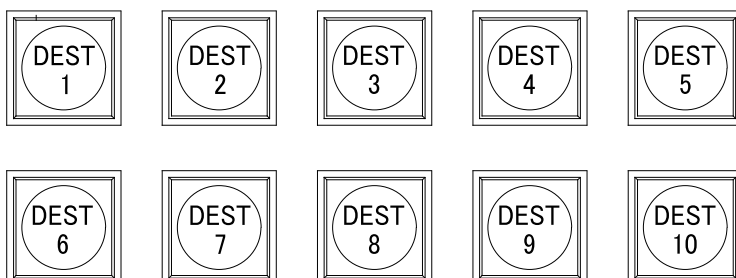* Do **not** select FS6 to FS10 when connecting to FA-505 units.

Pattern: BY-PASS(FS1-FS10)

| BY-PASS SDI1 | BY-PASS SDI2 | BY-PASS SDI3 | BY-PASS SDI4 | BY-PASS SDI5 |
| BY-PASS SDI6 | BY-PASS SDI7 | BY-PASS SDI8 | BY-PASS SDI9 | BY-PASS SDI10 |

Item	Description
BY-PASS SDI1 - 10	Each button sets video bypass On for the corresponding SDI 1-10 channel. The button LED lights when video bypass is On. Pressing the button while the LED is On turns video bypass Off.

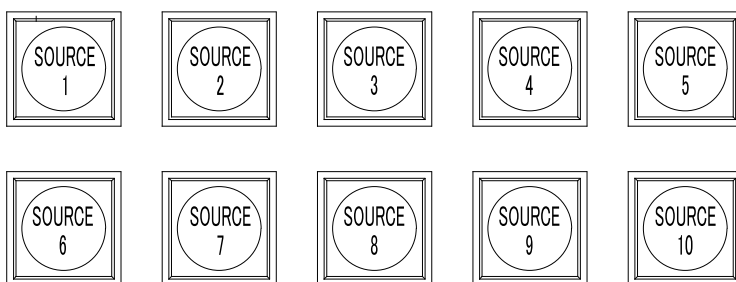* Do **not** select FS6 to FS10 when connecting to FA-505 units.

Pattern: Clean SW Destination

| DEST 1 | DEST 2 | DEST 3 | DEST 4 | DEST 5 |
| DEST 6 | DEST 7 | DEST 8 | DEST 9 | DEST 10 |

Item	Description
DEST 1 - 10	Each button allows you to select a Clean Switch Destination.

* Do **not** select FS6 to FS10 when connecting to FA-505 units.

Pattern: Clean SW Source

| SOURCE 1 | SOURCE 2 | SOURCE 3 | SOURCE 4 | SOURCE 5 |
| SOURCE 6 | SOURCE 7 | SOURCE 8 | SOURCE 9 | SOURCE 10 |

Item	Description
SOURCE 1 - 10	The Source number button corresponding to the Destination lights. In TAKE MODE, the source number buttons to be selected by the switchover blink. In DIRECT MODE, selecting a button that is unlit switches signals.

* Do **not** select FS6 to FS10 when connecting to FA-505 units.

Pattern: Clean SW(Mode/Take)

| DIRECT MODE | TAKE MODE | ( ) | ( ) | ( ) |
| TAKE | ( ) | ( ) | SALVO LOAD | SALVO SAVE |
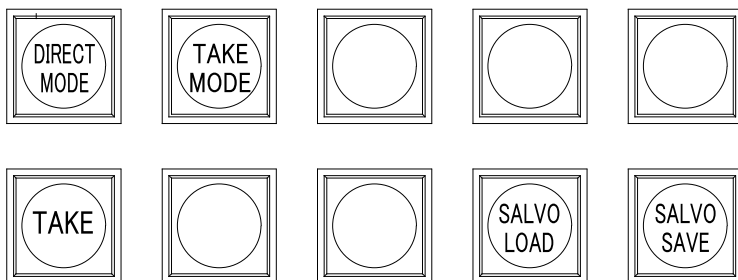
Item	Description
DIRECT MODE	The selected DIRECT MODE or TAKE MODE button lights.
TAKE MODE	If a Source selection is changed in TAKE MODE, the TAKE button LED blinks.
TAKE	Pressing the blinking TAKE button switches preset crosspoints simultaneously. While the TAKE button LED is blinking, Clean switch mode cannot be changed to DIRECT MODE.
SALVO LOAD	The SALVO LOAD button allows you to open the SALVO LOAD menu. The button LED lights while the SALVO LOAD menu is open.
SALVO SAVE	The SALVO SAVE button allows you to open the SALVO SAVE menu. The button LED lights while the SALVO SAVE menu is open.

Pattern: Clean SW(Salvo1-10 Load),
Pattern: Clean SW(Salvo1-10 Save)

| SALVO 1 | SALVO 2 | SALVO 3 | SALVO 4 | SALVO 5 |
| SALVO 6 | SALVO 7 | SALVO 8 | SALVO 9 | SALVO 10 |

Item	Description
SALVO 1 - 10	When used for LOAD, pressing the button allows you to load the clean switch matrix data saved to SALVO 1-10. When used for SAVE, pressing the button allows you to save the current clean switch matrices to SALVO 1-10.

Pattern: Clean SW(Salvo1-5 Load/Save)

| LOAD SALVO 1 | LOAD SALVO 2 | LOAD SALVO 3 | LOAD SALVO 4 | LOAD SALVO 5 |
| SAVE SALVO 1 | SAVE SALVO 2 | SAVE SALVO 3 | SAVE SALVO 4 | SAVE SALVO 5 |

Item	Description
LOAD SALVO 1 - 5	Pressing a LOAD SALVO 1-5 button allows you to load the clean switch matrices saved to the corresponding SALVO (1-5).
SAVE SALVO 1 - 5	Pressing a SAVE SALVO 1-5 button allows you to save the current clean switch matrices to the corresponding SALVO (1-5).

Pattern: Time Code Generator
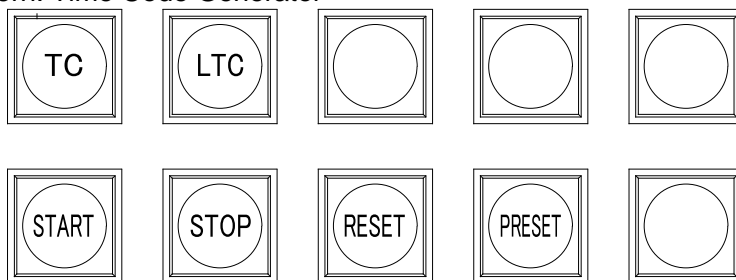
| TC | LTC | ◯ | ◯ | ◯ |

| START | STOP | RESET | PRESET | ◯ |

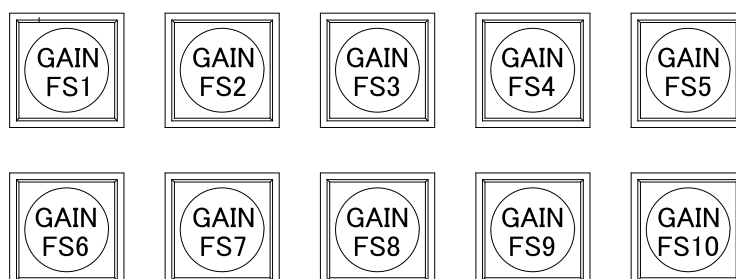| Item	Description
TC	The TC button allows you to open the TIME CODE GENERATOR menu.
LTC	The LTC button allows you to open the EMBEDDED TIME CODE menu.
START	The START button starts internal TIME CODE GENERATOR count-up. The START button LED lights while counting.
STOP	The STOP button stops internal TIME CODE GENERATOR count-up. The STOP button LED lights when counting stops.
RESET	The RESET button resets the internal TIME CODE GENERATOR.
PRESET	The PRESET button sets the internal TIME CODE GENERATOR to the preset time.

Pattern: Freeze (FS1-FS10)

| FREEZE FS1 | FREEZE FS2 | FREEZE FS3 | FREEZE FS4 | FREEZE FS5 |

| FREEZE FS6 | FREEZE FS7 | FREEZE FS8 | FREEZE FS9 | FREEZE FS10 |

Item	Description
FREEZE FS1 - 10	Each FREEZE FS1 - FS10 button allows you to set the FREEZE function On for the corresponding FS. The button lights when FREEZE is On. Pressing the button while the button is lit, turns the FREEZE function Off.

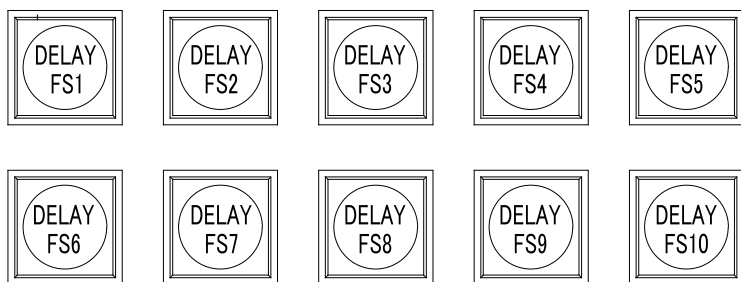* Do **not** select FS6 to FS10 when connecting to FA-505 units.

Pattern: Audio Gain (FS1-FS10)

| GAIN FS1 | GAIN FS2 | GAIN FS3 | GAIN FS4 | GAIN FS5 |

| GAIN FS6 | GAIN FS7 | GAIN FS8 | GAIN FS9 | GAIN FS10 |

Item	Description
GAIN FS1 - 10	The GAIN FS1-FS10 button allows you to open the EMBEDDED AUDIO OUTPUT GAIN menu. At the same time, FS1-FS5 is also switched. The corresponding button lights if the EMBEDDED AUDIO OUTPUT GAIN menu is open and the FS is selected.

* Do **not** select FS6 to FS10 when connecting to FA-505 units.

Pattern: Audio Delay (FS1-FS10)

| DELAY FS1 | DELAY FS2 | DELAY FS3 | DELAY FS4 | DELAY FS5 |

| DELAY FS6 | DELAY FS7 | DELAY FS8 | DELAY FS9 | DELAY FS10 |

Item	Description
DELAY FS1 - 10	The DELAY FS1-FS10 button allows you to open the EMBEDDED AUDIO OUTPUT DELAY menu. At the same time, FS1-FS5 is switched. The corresponding button lights, if the EMBEDDED AUDIO OUTPUT DELAY menu is open and the FS is selected.

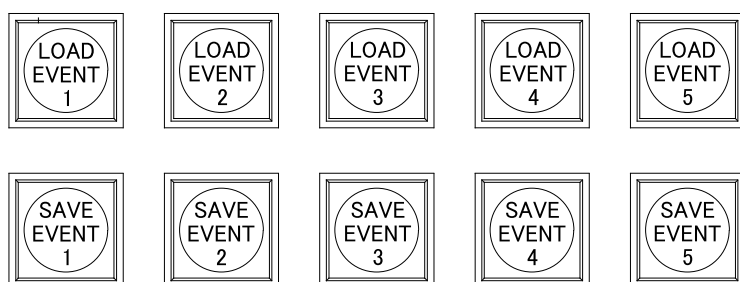*　Do **not** select FS6 to FS10 when connecting to FA-505 units.

Pattern: Event(No 1-10 Load)
Pattern: Event(No 1-10 Save)
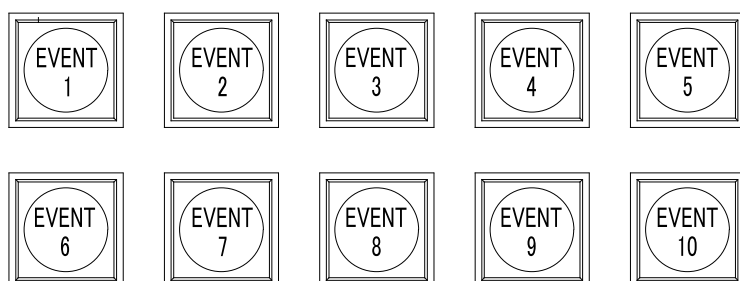
| EVENT 1 | EVENT 2 | EVENT 3 | EVENT 4 | EVENT 5 |

| EVENT 6 | EVENT 7 | EVENT 8 | EVENT 9 | EVENT 10 |

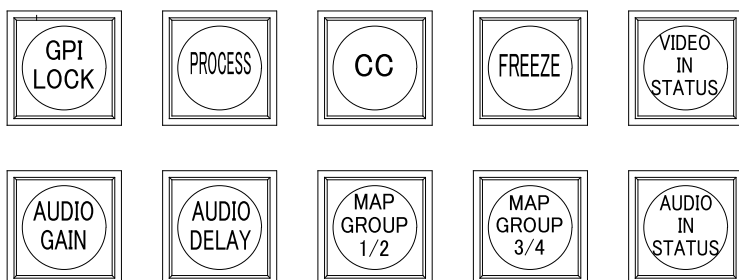| Item	Description
EVENT 1 - 10	When used for LOAD, pressing the button allows you to load the event data saved to EVENT1-10. (*Load functions in All Data mode.) When used for SAVE, pressing the button allows you to save the current settings to EVENT1-10.

Pattern: Event (No 1-5 Load/Save)

| LOAD EVENT 1 | LOAD EVENT 2 | LOAD EVENT 3 | LOAD EVENT 4 | LOAD EVENT 5 |

| SAVE EVENT 1 | SAVE EVENT 2 | SAVE EVENT 3 | SAVE EVENT 4 | SAVE EVENT 5 |

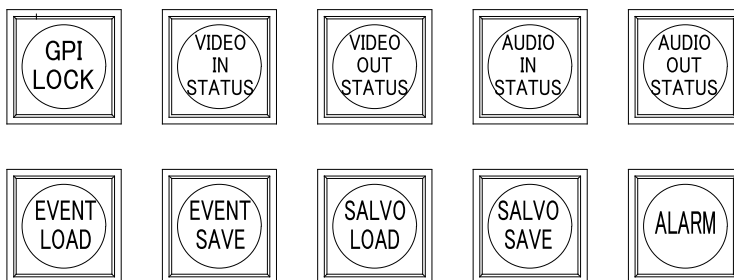| Item	Description
LOAD EVENT 1 - 5	Pressing a LOAD EVENT1-5 button allows you to load the corresponding event data registered as EVENT1-5. (*Load functions in All Data mode.)
SAVE EVENT 1 - 5	Pressing a SAVE EVENT1-5 button allows you to save the current settings to EVENT1-5.

Pattern: Menu 1
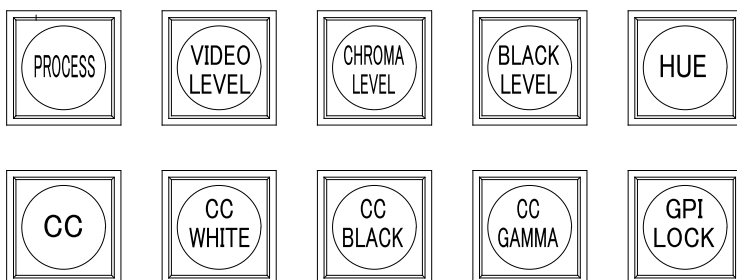
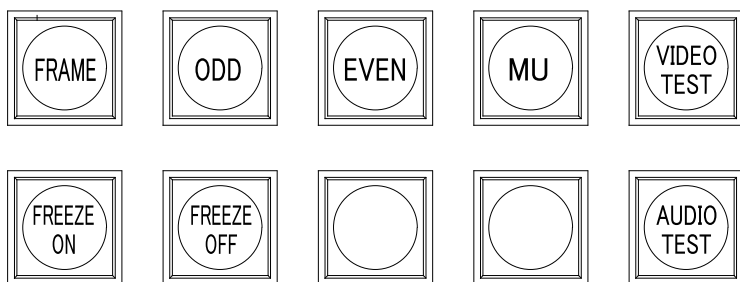| Item	Description
PROCESS	The PROCESS button allows you to open the VIDEO PROCESS AMPLIFIER menu. The LED lights when the VIDEO PROCESS AMPLIFIER menu is open.
VIDEO LEVEL	The VIDEO LEVEL button allows you to open the VIDEO LEVEL menu. The LED lights when the VIDEO LEVEL menu is open.
CHROMA LEVEL	The CHROMA LEVEL button allows you to open the CHROMA LEVEL menu. The LED lights when the CHROMA LEVEL menu is open.
BLACK LEVEL	The BLACK LEVEL button allows you to open the SETUP/BLACK LEVEL menu. The LED lights when the SETUP/BLACK LEVEL menu is open.
HUE	The HUE button allows you to open the HUE menu. The LED lights when the HUE menu is open.
CC	The CC button allows you to open the COLOR CORRECTION menu. The LED lights when the COLOR CORRECTION is open.
CC WHITE	The CC WHITE button allows you to open the COLOR CORRECTION WHITE LEVEL menu. The LED lights when the COLOR CORRECTION WHITE LEVEL menu is open.
CC BLACK	The CC BLACK button allows you to open the COLOR CORRECTION BLACK LEVEL menu. The LED lights when the COLOR CORRECTION BLACK LEVEL menu is open
CC GAMMA	The CC GAMMA button allows you to open the COLOR CORRECTION GAMMA LEVEL menu. The LED lights when the COLOR CORRECTION GAMMA LEVEL menu is open.
GPI LOCK	Pressing the GPI LOCK button turns the button LED On and sets all GPI input to be ignored. Pressing and holding down the GPI LOCK button turns the button LED Off and sets all GPI input to be accepted.

Pattern: Menu 2

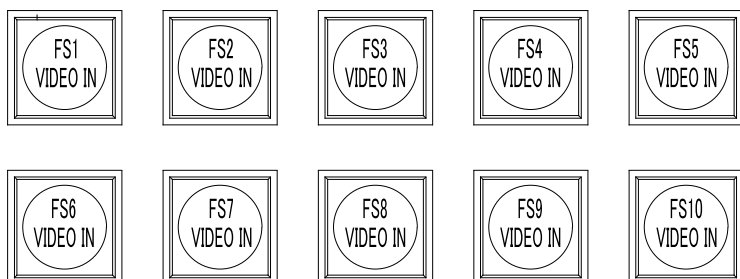| Item	Description
GPI LOCK	G Pressing the GPI LOCK button turns the button LED On and sets all GPI input to be ignored. Pressing and holding down the GPI LOCK button turns the button LED Off and sets all GPI input to be accepted.
PROCESS	The PROCESS button allows you to open the VIDEO PROCESS AMPLIFIER menu. The LED lights when the VIDEO PROCESS AMPLIFIER menu is open.
CC	The CC button allows you to open the COLOR CORRECTION menu. The LED lights when the COLOR CORRECTION menu is open.
FREEZE	The FREEZE button allows you to open the VIDEO FREEZE menu. The LED is lie when the VIDEO FREEZE menu is open.
VIDEO IN STATUS	The VIDEO IN STATUS button allows you to open the VIDEO INPUT STATUS menu. The LED lights when the VIDEO INPUT STATUS menu is open.
AUDIO GAIN	The AUDIO GAIN button allows you to open the EMBEDDED AUDIO OUTPUT GAIN menu. The LED lights when the EMBEDDED AUDIO OUTPUT GAIN.
AUDIO DELAY	The AUDIO DELAY button allows you to open the EMBEDDED AUDIO OUTPUT DELAY menu. The LED lights when the EMBEDDED AUDIO OUTPUT DELAY menu is open.
MAP GROUP 1/2	The MAP GROUP1/2 button allows you to open the EMBEDDED AUDIO GROUP1/2 MAPPING menu. The LED lights when the EMBEDDED AUDIO GROUP1/2 MAPPING menu is open.
MAP GROUP 3/4	The MAP GROUP3/4 button allows you to open the EMBEDDED AUDIO GROUP3/4 MAPPING menu. The LED lights when the EMBEDDED AUDIO GROUP3/4 MAPPING menu is open.
AUDIO IN STATUS	The AUDIO IN STATUS button allows you to open the EMBEDDED AUDIO INPUT STATUS menu. The LED lights when the EMBEDDED AUDIO INPUT STATUS menu is open.

Pattern: Menu 3

| GPI LOCK | VIDEO IN STATUS | VIDEO OUT STATUS | AUDIO IN STATUS | AUDIO OUT STATUS |

| EVENT LOAD | EVENT SAVE | SALVO LOAD | SALVO SAVE | ALARM |

Item	Description
GPI LOCK	Pressing the GPI LOCK button turns the button LED On and sets all GPI input to be ignored. Pressing and holding down the GPI LOCK button turns the button LED Off and sets all GPI input to be accepted.
VIDEO IN STATUS	The VIDEO IN STATUS button allows you to open the VIDEO INPUT STATUS menu. The LED lights when the VIDEO INPUT STATUS menu is open.
VIDEO OUT STATUS	The VIDEO OUT STATUS button allows you to open the VIDEO OUTPUT STATUS menu. The LED lights when the VIDEO OUTPUT STATUS menu is open.
AUDIO IN STATUS	The AUDIO IN STATUS button allows you to open the EMBEDDED AUDIO INPUT STATUS menu. The LED lights when the EMBEDDED AUDIO INPUT STATUS menu is open.
AUDIO OUT STATUS	The AUDIO OUT STATUS button allows you to open the EMBEDDED AUDIO OUTPUT STATUS menu. The LED lights when the EMBEDDED AUDIO OUTPUT STATUS menu is open.
EVENT LOAD	The EVENT LOAD button allows you to open the LOAD EVENT MEMORY menu. The LED lights when the LOAD EVENT MEMORY menu is open.
EVENT SAVE	The EVENT SAVE button allows you to open the SAVE EVENT MEMORY menu. The LED lights when the SAVE EVENT MEMORY menu is open.
SALVO LOAD	The SALVO LOAD button allows you to open the SALVO LOAD menu. The LED lights when the SALVO LOAD menu is open.
SALVO SAVE	The SALVO SAVE button allows you to open the SALVO SAVE menu. The LED lights when the SALVOSAVE menu is open.
ALARM	The button LED lights if an alarm is detected in a FAN or power unit of the connected FA-505, or a FAN unit in the FA-10RU.

Pattern: Menu 4

| FRAME | ODD | EVEN | MU | VIDEO TEST |
| FREEZE ON | FREEZE OFF | | | AUDIO TEST |

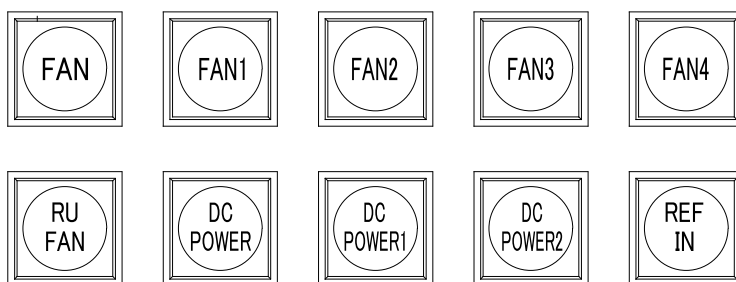| Item	Description
FRAME	The FRAME button allows you to set FREEZE mode to FRAME for the selected FS. The LED lights when FREEZE mode is set to FRAME.
ODD	The ODD button allows you to set FREEZE mode to ODD for the selected FS The LED lights when FREEZE mode is set to ODD.
EVEN	The EVEN button allows you to set FREEZE mode to EVEN for the selected FS The LED lights when FREEZE mode is set to EVEN.
MU	The MU button allows you to open the UNIT ID MU SELECT menu.
VIDEO TEST	Pressing the VIDEO TEST button outputs the SMPTE CB test signal to the selected FS. The LED lights while the test signal is output. Pressing the lit VIDEO TEST button turns the test signal output Off.
FREEZE ON	The FREEZE ON button allows you to set the selected FS to the FREEZE ON state. The LED lights when FREEZE is On.
FREEZE OFF	The FREEZE OFF button allows you to set the selected FS to the FREEZE OFF state. The LED lights when FREEZE is Off.
AUDIO TEST	Pressing the AUDIO TEST button outputs the 1kHz test signal to the selected FS. The LED lights while the test signal is output. Pressing the lit AUDIO TEST button turns the test signal output Off.

Pattern: Status1

| FS1 VIDEO IN | FS2 VIDEO IN | FS3 VIDEO IN | FS4 VIDEO IN | FS5 VIDEO IN |
| FS6 VIDEO IN | FS7 VIDEO IN | FS8 VIDEO IN | FS9 VIDEO IN | FS10 VIDEO IN |

| Item	Description
FS1 - 10 VIDEO IN	If an input video signal exists in FS1-FS5, the corresponding button LED lights. Pressing the button opens the VIDEO INPUT STATUS menu.

* FS6 to FS10 buttons are disabled when connecting to FA-505 units.

Pattern: Status2

FAN	FAN1	FAN2	FAN3	FAN4
RU FAN	DC POWER	DC POWER1	DC POWER2	REF IN

| Item	Description
FAN	The button LED lights if an alarm occurs in a FAN or power unit of the connected FA-505, or a FAN unit in the FA-10RU. Pressing the button opens the MAIN UNIT ALARM INFORMATION menu.
FAN 1 - 4	The corresponding button LED lights if an alarm occurs in FAN1-FAN4 in the connected FA-505. Pressing the button opens the MAIN UNIT ALARM INFORMATION menu.
RU FAN	The button LED lights if an alarm occurs in an FA-10RU FAN unit. Pressing the button opens the FA-10RU INFORMATION menu.
DC POWER	The button LED lights if an alarm occurs in DC power 1 or 2. Pressing the button opens the MAIN UNIT ALARM INFORMATION menu.
DC POWER 1	The button LED lights if an alarm occurs in DC power 1. Pressing the button opens the MAIN UNIT ALARM INFORMATION menu.
DC POWER 2	The button LED lights if an alarm occurs in DC power 2. Pressing the button opens the MAIN UNIT ALARM INFORMATION menu.
REF IN	The button LED lights if no reference signal is input. Pressing the button opens the VIDEO INPUT STATUS menu.

11-3. GPI1-GPI3 Pin Assignments
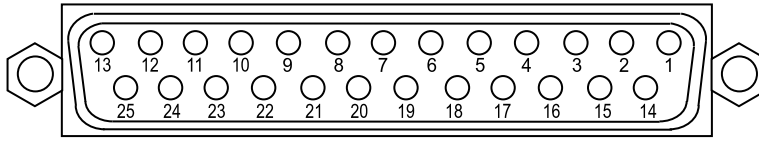
◆ **GPI connector 25-pin D-sub, female**

Pin No.	Signals		
	GPI1	GPI2	GPI3
1	GND (Ground)		
2	GPI OUT 1 (Output)	GPI OUT 11 (Output)	GPI OUT 21 (Output)
3	GPI OUT 2 (Output)	GPI OUT 12 (Output)	GPI OUT 22 (Output)
4	GPI OUT 3 (Output)	GPI OUT 13 (Output)	GPI OUT 23 (Output)
5	GPI OUT 4 (Output)	GPI OUT 14 (Output)	GPI OUT 24 (Output)
6	GPI OUT 5 (Output)	GPI OUT 15 (Output)	GPI OUT 25 (Output)
7	GND (Ground)		
8	GPI IN 1 (Input)	GPI IN 11 (Input)	GPI IN 21 (Input)
9	GPI IN 2 (Input)	GPI IN 12 (Input)	GPI IN 22 (Input)
10	GPI IN 3 (Input)	GPI IN 13 (Input)	GPI IN 23 (Input)
11	GPI IN 4 (Input)	GPI IN 14 (Input)	GPI IN 24 (Input)
12	GPI IN 5 (Input)	GPI IN 15 (Input)	GPI IN 25 (Input)
13	DC OUT (5.0 V output, maximum 200 mA DC)		
14	GPI OUT 6 (Output)	GPI OUT1 6 (Output)	GPI OUT2 6 (Output)
15	GPI OUT 7 (Output)	GPI OUT1 7 (Output)	GPI OUT2 7 (Output)
16	GPI OUT 8 (Output)	GPI OUT 18 (Output)	GPI OUT 28 (Output)
17	GPI OUT 9 (Output)	GPI OUT 19 (Output)	GPI OUT 29 (Output)
18	GPI OUT 10 (Output)	GPI OUT 20 (Output)	GPI OUT 30 (Output)
19	GND (Ground)		
20	GPI IN 6 (Input)	GPI IN 16 (Input)	GPI IN 26 (Input)
21	GPI IN 7 (Input)	GPI IN 17 (Input)	GPI IN 27 (Input)
22	GPI IN 8 (Input)	GPI IN 18 (Input)	GPI IN 28 (Input)
23	GPI IN 9 (Input)	GPI IN 19 (Input)	GPI IN 29 (Input)
24	GPI IN 10 (Input)	GPI IN 20 (Input)	GPI IN 30 (Input)
25	NC		

11-4. GPI Input Circuit

FA-505 inside

PINs 8 to 12   20 to 24 (IN)

PIN 1, 7, 19
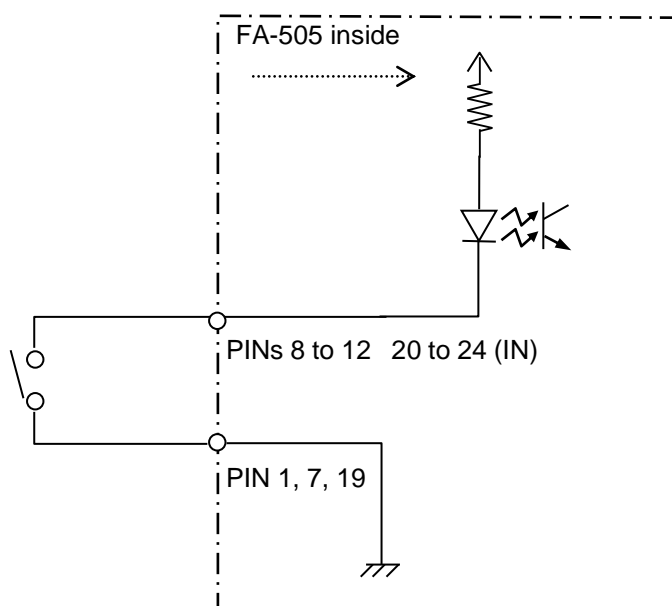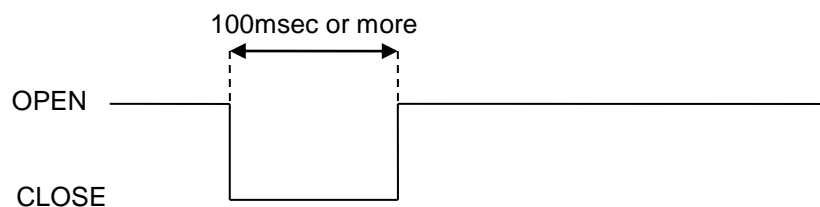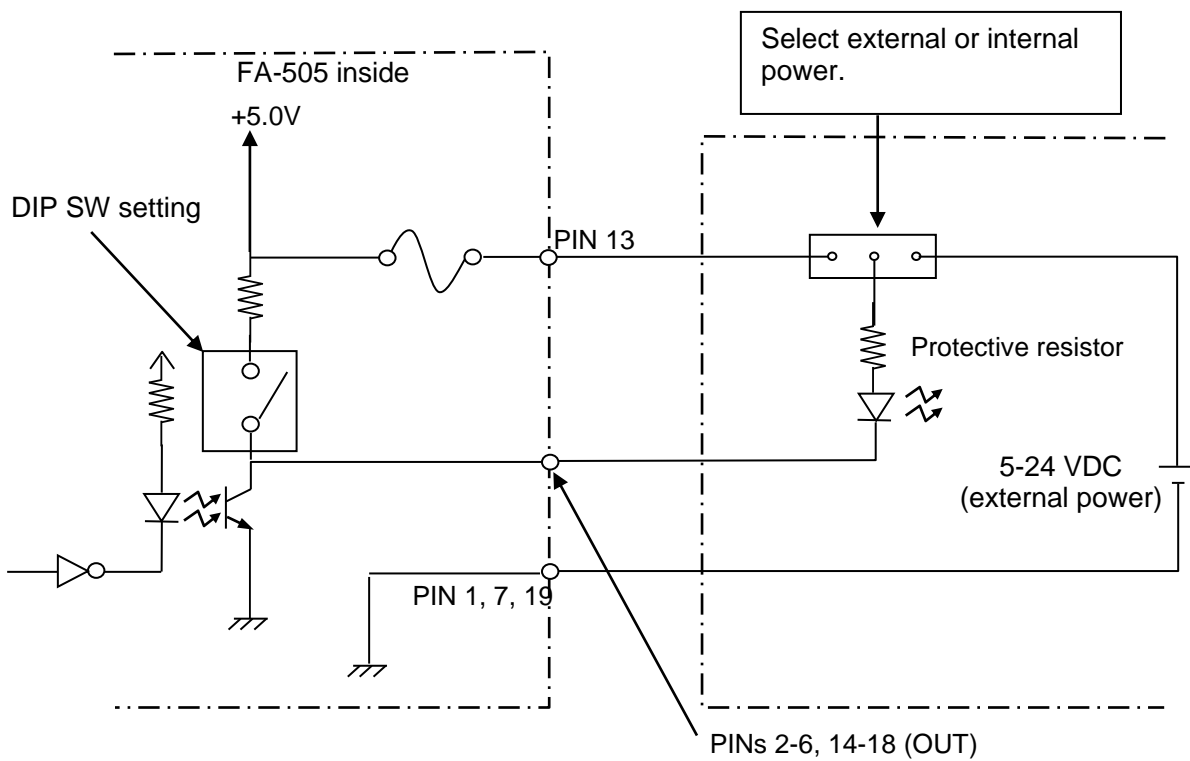
11-5. GPI Input Control

◆ **Pulse signals**
The pulse signal level change (OPEN to CLOSE) triggers each operation.
OPEN to CLOSE: The assigned function will be turned on.

100msec or more

OPEN

CLOSE

11-6. GPI Output Circuit (Same for GPI 1-3)

Select external or internal power.

FA-505 inside

+5.0V

DIP SW setting

PIN 13

Protective resistor

PIN 1, 7, 19

5-24 VDC
(external power)

PINs 2-6, 14-18 (OUT)

| IMPORTANT |
|---|
| Note that the allowed current for each GPI output circuit is **50 mA** and the external power supply should be **5 to 24 VDC**.
See section 2-3-1. "Dipswitch Settings" for details on "DIP SW setting." |

12. Specifications and Dimensions

12-1. Specifications

Interface
	LAN	10/100/1000BASE-T, RJ-45, x 1
	GPI	25-pin D-sub (female) x 3 (inch screws)
		Input: 30 ports / Output: 30 ports
Temperature		0°C - 40°C
Humidity		30% - 90% (no condensation)
Power		100 VAC - 240 VAC ±10%, 50/60 Hz
Power Consumption		28 VA (16 W) (at 100 - 120 VAC)
		33 VA (16 W) (at 200 - 240 VAC)
Dimensions		430 (W) x 44 (H) x 130 (D) mm
Weight		2.0 kg
Consumables		(Recommended replacement timespans)
		Power unit (within 5 years)
		Cooling fan: P1467-1 (within 5 years)
Accessories		CD-ROM (Operation Manual), AC cord, rack mount brackets, colored Light Identification Label

12-2. External Dimensions

(All dimensions in mm.)
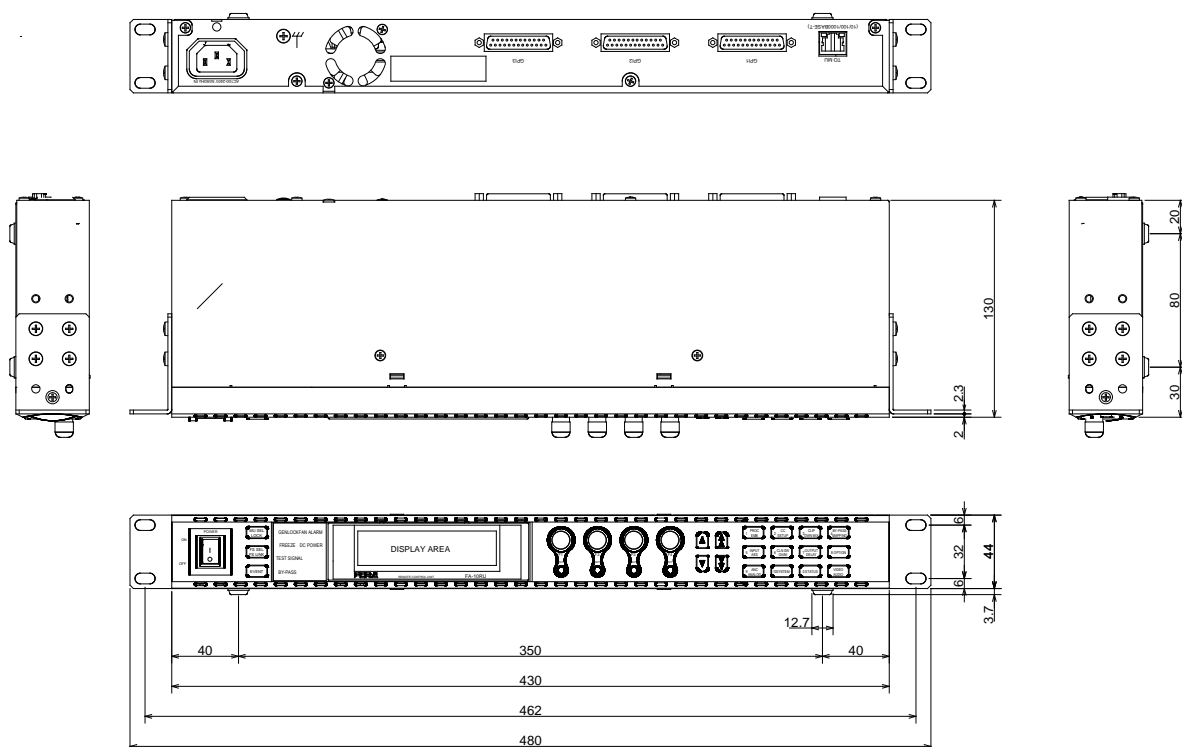
Warning

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

FOR.A®

FOR-A COMPANY LIMITED
Head Office   3-8-1 Ebisu, Shibuya-ku, Tokyo 150-0013, Japan
Overseas Division   Tel: +81(0)3 3446 3936   Fax: +81(0)3 3446 1470
Japan Branch Offices   Osaka/Okinawa/Fukuoka/Hiroshima/Nagoya/Sendai/Sapporo
R&D/Production   Sakura Center/Sapporo Center

FOR-A Corporation of America
11155 Knott Ave., Suite G&H, Cypress, CA 90630, USA.
Tel: +1 714 894 3311   Fax: +1 714 894 5399

FOR-A Corporation of America East Coast Office
2 Executive Drive, Suite 670, Fort Lee Executive Park, Fort Lee, NJ 07024, USA
Tel: +1 201 944 1120   Fax: +1 201 944 1132

FOR-A Corporation of America Distribution & Service Center
2400 N.E. Waldo Road, Gainesville, FL 32609, USA
Tel: +1 352 371 1505   Fax: +1 352 378 5320

FOR-A Corporation of America Miami Office
5200 Blue Lagoon Drive, Suite 760, Miami, FL 33126, USA
Tel: +1 305 931 1700   Fax: +1 305 264 7890

FOR-A Corporation of Canada
1131A, Leslie Street Suite 209, Toronto, Ontario M3C 2J6, Canada
Tel: +1 416 977 0343   Fax: +1 416 977 0657

FOR-A Europe S.r.l.
Via Volturno 37, 20861 Brugherio MB, Italy
Tel: +39 039 879 778   Fax: +39 039 878 140

FOR A UK Limited
Trident Court, 1 Oakcroft Road, Chessington, KT9 1BD, UK
Tel: +44 (0)20 3044 2935   Fax: +44(0)20 3044 2936

FOR-A Italia S.r.l.
Via Volturno 37, 20861 Brugherio MB, Italy
Tel: +39 039 881 086/103   Fax: +39 039 878 140

FOR-A Corporation of Korea
1007, 57-5, Yangsan-ro, Yeongdeungpo-gu, Seoul 150-103, Korea
Tel: +82 (0)2 2637 0761   Fax: +82 (0)2 2637 0760

FOR-A China Limited
708B Huateng Building, No. 302, 3 District, Jinsong, Chaoyang, Beijing 100021, China
Tel: +86 (0)10 8721 6023   Fax: +86 (0)10 8721 6033

FOR-A Middle East-Africa Office
Dubai Media City, Aurora Tower, Office 1407, P.O. Box 502688, Dubai, UAE
Tel: +971 (0)4 551 5830   Fax: +971 (0)4 551 5832

Agiv (India) Private Limited (FOR-A India)
85, V.N. Purav Marg Sion-Chunabhatti (E) Mumbai - 400 022
Tel: +91 22 2405 1258   Fax: +91 22 2405 0007

http://www.for-a.com/