

OPERATION MANUAL

FA-10DCCRU Remote Control Unit

4th Edition Software Version 4.00 – Higher

FOR-A COMPANY LIMITED

Edition Revision History

| | 1 | | | |
|-------|------|------------|--|---|
| Edit. | Rev. | Date | Description | Section/Page |
| 1 | - | 2014/06/30 | 1 st Edition | |
| 2 | - | 2014/12/17 | Supported FA-505 units. | |
| | | | Changed event save/load procedure. | 7 |
| 2 | 1 | 2015/05/29 | Changed default IP address to 192.168.0.101. Factual errors corrected | 5-2, 5-6 |
| 3 | - | 2016/05/30 | Supported HDR in FA-505 | 2, 6-10, 6-11-2, 6-9-9, 6-10-2-3, 7-3 |
| 3 | 1 | 2016/07/29 | Supported FA-505 (Ver. 2.10) HDR changes. | 2-1 6-10-3 6-11-2 9-9 |
| 3 | 2 | 2016/09/28 | Changed the White Input Clip setting range for RGB Clip. Factual errors corrected. | 6-10-2-1 |
| 4 | — | 2018/11/05 | Supported FA-9600 units. | |

Important Safety Warnings

[Power]

| Caution | Operate unit only at the specified supply voltage. |
|---------|---|
| | 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. |
|--------|--|
| Hazard | 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. |
| | 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]



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]



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]



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]



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.

Unpacking

FA-10DCCRU 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-10DCCRU | 1 | |
| AC Cord | 1 set | (Including an AC cord retaining clip) |
| Rack Mount Brackets | 1 set | EIA standard type |
| CD-ROM | 1 | Installation Disc User manual (PDF) included |
| Quick Setup Guide | 1 | |

Installing the AC Cord Retaining Clip

Secure the AC cord with the supplied ladder strap/retaining clip assembly to prevent accidental removal from the unit.

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 clip up to unfasten the clip.
- 2) Push the tab on the ladder strap up and slide the clip back.
- 3) Unplug the AC cord.



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1. Prior to Starting

1-1. Welcome

Congratulations! By purchasing an FA-10DCCRU 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-10DCCRU is a dedicated remote control unit for color correction, which can control FA-505, FA-1010, FA-9520, FA-9500 and FA-9600 units.

- > Control of up to 100 FA-505 / FA-1010 / FA-9520 / FA-9500 / FA-9600 units via Ethernet.
- Coexist with FA-10RU and FA-95RU in a system.
- Direct operation with 14 rotary encoders
- FA-505 / FA-1010 / FA-9520 / FA-9500 / FA-9600 can accept up to 5 FA-10DCCRU control units simultaneously.
- Save up to 100 sets of settings in FA-10DCCRU
- GPI 30 inputs and 30 outputs
- Expansion control panel: FA-AUX30 (option)
- Windows-based GPIO utility: FA GPIO Editor

1-3. System Requirements for FA-10DCCRU Setup PC

| OS | Windows® 7 /8.1 Professional (32/64bit) | Windows® 10 Professional (32/64bit) |
|---------------|--|--|
| CPU | Intel® Core [™] 2 Duo processor 2GHz or higher | Intel® Core [™] 2 Duo processor 2GHz or higher |
| Web browser | Internet Explorer® 11 Firefox®54 Chrome®59 Opera®46 | Internet Explorer® 11 Firefox®54 Chrome®59 Opera®46 |
| Memory | 2GB or more | 4GB or more |
| Display | 1024 x 768 or better, 24-bit true color or better | |
| LAN interface | Ethernet x 1 port 100BASE-TX/1000BASE-T | |

2. Main Unit Compatibility

FA-10DCCRU units do not support all FA-505, FA-1010, FA-9520, FA-9500 or FA-9600 versions. Refer to the tables below for compatibility details. Main units with earlier software versions are unable to be (or to be fully) controlled by FA-10DCCRU units.

Upgrade your main unit if it is fully or partially incompatible with the FA-10DCCRU.

Refer to each Operation Manual for details on software version verification.

FA-505 Compatibility

| FA-505 Software Version | Supported/unsupported functions | |
|----------------------------|---|--|
| 1.00 - 1.10 | Able to be controlled, with the following functions unavailable: RGB Clip (HDR), Color Space settings, Gamma Range | |
| 2.03 | Supported the following functions. RGB Clip (HDR), Color Space settings, Gamma Range | |
| 2.10 or later | Changed the following function specifications. RGB Clip (HDR), Color Space settings, Gamma Range | |

FA-1010 Compatibility

| FA-1010 Software Version | Supported/unsupported functions |
|-----------------------------|--|
| 1.00 - 2.01 | Unable to connect with FA-10DCCRU. |
| 2.22 | Able to be controlled, with the following functions unavailable: BY-PASS/OPERATE, Y Level, SPLIT RGB Clip (HDR), Color Space settings, Gamma Range |
| 3.00 or higher | Able to be controlled, with the following functions unavailable: RGB Clip (HDR), Color Space settings, Gamma Range |

◆ FA-9520 Compatibility

| FA-9520 Software Version | | Supported/upsupported functions | | |
|--------------------------|----------------|---|--|--|
| FA-9520 mode | FA-9500 mode | Supported/unsupported functions | | |
| 1.00 - 2.01 | 7.00 - 8.01 | Unable to connect with FA-10DCCRU. | | |
| 2.02 or higher | 8.02 or higher | Able to be controlled, with the following functions unavailable: BY-PASS/OPERATE, Y Leve, SPLIT RGB Clip (HDR), Color Space settings, Gamma Range | | |

◆ FA-9500 Compatibility

| FA-9500 Software Version | Supported/unsupported functions |
|-----------------------------|--|
| 1.00 - 8.00 | Unable to connect with FA-10DCCRU. |
| 8.01 or higher | Able to be controlled, with the following functions unavailable: BY-PASS/OPERATE, Y Level, SPLIT RGB Clip (HDR), Color Space settings, Gamma Range |

◆ FA-9600 Compatibility

Able to be controlled with all FA-10DCCRU versions. Only BY-PASS/OPERATE is unavailable

3. Panel Descriptions

3-1. Front Panel



| No. | Name | Description | | | |
|-----|---|--|--|--|--|
| (1) | 1-5, 6-10, 11-15/UNIT, 16-20 | Main Unit selection buttons. Before selecting Main Unit ID numbers with these buttons, assign Main Units (FA-505, FA-1010, FA-9520 / FA-9500 and FA-9600) to Unit ID numbers using IP addresses. See section 5-3-4. "Unit ID Assignment" and section 5-3-5. "Direct Mode Settings" for more details. Two connection modes are available: Direct and Unit . See section 6-1. "Selecting Main Units." | | | |
| | | Allows you to se | lect the operation mode by pressing the button. | | |
| (2) | BYPS/OP (BYPASS / | Lit | Performs the correction and outputs the corrected signal. (Operate mode) | | |
| (=/ | OPERATE) | Flashing | Outputs the input signal without performing color correction (Bypass mode) | | |
| (3) | Allows you to select an FS for which to adjust color correction se when connecting to an FA-505, FA-1010, FA-9520 (in FA-9520 FA-9600.FS SELThe button is disabled when connecting to an FA-9520 from FA-9 See section 6-3. "Selecting an FS Channel." | | | | |
| | | between Direct a Mode." | and Unit. See section 6-1-3. "Selecting the Connection | | |
| (4) | MEMORY/SET | Allows you to save settings to / load settings from memory as needed. See section 7. "How to Use Event Memory." Setting values are displayed while saving or loading settings. See section 9. "Information Display." | | | |
| (5) | PROCESS CONTROL | Allows you to adjust Proc Amp settings in Color Correction mode (with CLIP (10) unlit). See section 6-8. "Process Control" and section 6-9. "Color Correction." Allows you to clip signal levels in Clip mode (with CLIP (10) lit) using the three center buttons. See section 6-10. "Clipping Signal Levels." The settings apply to the selected FS if controlling an FA-505, FA-1010, FA-9520 in FA-9520 mode or FA-9600. | | | |
| (6) | GROUP ADJ SYSTEM | Allows you to adjust R , G , and B component levels (White, Black or Gamma) all together. While the button is lit, R , G and B component levels can be set together by turning the R , G or B control button. When holding down the button, the button blinks and the menu changes to SYSTEM settings mode. See section 8. "System Settings." | | | |
| (7) | WHITE LEVEL | Allows you to adjust the white level. This setting is disabled in Sepia mode. The level adjustment applies to the selected FS if controlling an FA-505, FA-1010, FA-9520 in FA-9520 mode or FA-9600. | | | |
| (8) | BLACK LEVEL | Allows you to adjust the black level. This setting is disabled in Sepia mode. The level adjustment applies to the selected FS if controlling an FA-505, FA-1010, FA-9520 in FA-9520 mode or FA-9600. | | | |

| No. | Name | Description | |
|------|----------------------------|---|--|
| (9) | GAMMA LEVEL | Allows you to adjust the gamma level. In Sepia mode, only Y signal can be adjusted using the G control button. The level adjustment applies to the selected FS if controlling an FA-505, FA-1010, FA-9520 in FA-9520 mode or FA-9600. | |
| (10) | FREEZE | Allows you to toggle Freeze On or Off. The button turns on while the video is frozen. See section 6-4. "Freeze Setting." The setting applies to the selected FS if controlling an FA-505, FA-1010, FA-9520 in FA-9520 mode or FA-9600. | |
| | CLIP | Allows you to toggle the mode between Color Correction and Clip . Holding down the buttons simultaneously changes the mode to Clip. See section 6-10. "Clipping Signal Levels." The setting applies to the selected FS if controlling an FA-505, FA-1010, FA-9520 in FA-9520 mode or FA-9600. | |
| | SPLIT (*1) | Allows you to change the video display mode in the following order: OFF > MODE1 > MODE2 > MODE3. The setting applies to the selected FS (by FS SEL) in an FA-505, FA-1010 or FA-9600. | |
| (11) | UNITY (*2) | Pressing the UNITY button resets the value to default. Pressing the button again returns the default value to the previous value. | |
| (12) | WHITE/ CENTER/ BLACK | Selects a gamma curve from WHITE, CENTER or BLACK. The setting applies to the selected FS if controlling an FA-505, FA-1010, FA-9520 in FA-9520 mode or FA-9600. For FA-9600 units, these buttons can toggle each clip on/off. | |
| (13) | BAL/DIF/SEPIA | Selects a correction type for Color Correction mode from the following: BAL (Balanced, mainly used for RGB signals) DIF (Differential, mainly used for YPbPr signals) SEPIA (Sepia color) | |
| | | The setting applies to the selected FS if controlling an FA-505, FA-1010, FA-9520 in FA-9520 mode or FA-9600. For FA-9600 units, SEPIA mode cannot be controlled. Instead. the SEPIA button selects the Proc Amp process (post- or pre-process) if FA-96AHDR is installed. | |

(*1) Split control is available if the FA-1010 software version is 3.00 or higher. Split control is not available for FA-9520 or FA9500.

(*2) Two operation modes, **Linked Unity** and **Unlinked Unity**, are available for setting WHITE LEVEL, BLACK LEVEL and GAMMA LEVEL using the R, G and B UNITY buttons. See section 8. "SYSTEM Settings" and section 6-7. "UNITY Button and Unity Mode" for more details.

3-2. Rear Panel



| No. | Name | Description | | |
|-----|--|--|--|--|
| (1) | TO MU | Used to connect to an FA-505, FA-1010, FA-9520, FA-9500 or FA-9600 via LAN. Set the unique IP address and connect to the network. | | |
| (2) | (2) GPI1 to GPI3 Used to connect an FA-AUX30 or external expansion switch pane supplied CD-ROM. | | | |
| | | | | |
| (3) | Cooling Fan | ventilation openings. | | |
| (4) | Ground Terminal | Used to ground the unit to protect operators against static electricity and / or electrical shock. | | |
| (5) | AC cord retaining clip anchor hole | Used to anchor the AC cord retaining clip. | | |
| (6) | AC IN | Used for connection to an AC power source via the supplied accessory cord. (AC 100 V-240 V 50/60 Hz) | | |

4. Connecting to Main Units (FA-505 / 1010 / 9520 / 9500 / 9600)

Connect FA-10DCCRU units to main units (FA-505, FA-1010, FA-9520, FA-9500 and FA-9600) via Ethernet. FA-10RU and FA-95RU units can be connected in the same network.

4-1. Basic Configuration



Specify unique IP addresses for all devices connected to the network.

See section 5-3-2. "Network Settings" for details on IP address settings.

A single FA-505, FA-1010, FA-9520, FA-9500 or FA-9600 unit can be controlled by up to 5 remote FA-10DCCRU, FA-10RU and/or FA-95RU units.

An attempted 6th connection will not be accepted.

4-2. Optional Configuration

Connection with an FA-AUX30 option



Connection with a user-made switch box

| FS1 | FS2 | FS3 | FS4 | FS5 | |
|-----|--------------------|-----|---------------|---------------------------|-------|
| FS6 | FS7 | FS8 | FS9 | FS10 | |
| | | | connect to GP | PI1-GPI3 conn FA-10DCC | ector |
| | هو مەرو مەرو | 0P3 | | | |

* See section 10. "GPI Interface" for details on GPI connectors.

5-1. Connecting an FA-10DCCRU to the Computer

(1) Connect the FA-10DCCRU and your PC. Set the IP address of the PC so that it appears on the same LAN subnet. For example, 192.168.0.1 as shown below.



- (2) Launch your web browser on the PC. Microsoft Internet Explorer is used in this manual. Other web browsers are also supported.
- (3) Enter the IP address of the FA-10DCCRU (default: **192.168.0.101**) in your browser's address bar.
- (4) When the FA-10DCCRU connection is established, the **Information** page will appear.

5-2. Changing the FA-10DCCRU IP Address

(1) In the left pane of the Web GUI, click Network Settings.

| | | Information | | |
|---|--|--------------------------------|--|--|
| | FA-10DCCRU | Unit Information | | |
| | | Soft Version: 2.10 | | |
| _ | Information | FPGA1 Version: 1.00 | | |
| | Network Settings | FPGA2 Version: 1.00 | | |
| | Unit ID Assignment | Serial Number: 15623998 | | |
| | Direct Mode Settings | MAC Address: 00-10-B1-09-9F-9E | | |
| | Event Naming | IP Address: 192.168.0.101 | | |
| | Backup & Restore | Subnet Mask: 255.255.255.0 | | |
| | Residit | Default Gateway: Unused | | |
| | | | | |
| | | Connection Status | | |
| | INNOVATIONS IN VIDEO and AUDIO TECHNOLOGY | Status : Disconnect | | |
| | | Unit ID: 0 | | |
| | | Host Address : 192.168.0.10 | | |
| | | TCP Port Number: 50010 | | |
| | | Unit Name : | | |
| | | | | |
| | | | | |

(2) If a login dialog window as shown below appears, enter the following user name and password.

Default User name and Password User name: **fa10dccru** Password: **foranetwork**

| The server 192.168.0.101 is asking for your user name and password. The server reports that it is from FA-10DCCRU. | | | |
|---|--|--|--|
| Warning: Your user name and password will be sent using basic authentication on a connection that isn't secure. | | | |
| | fa10dccru ●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●● | | |
| | OK キャンセル | | |

- (3) The Network Settings page is displayed in the right pane.
- (4) Change the FA-10DCCRU IP address as needed. Set a unique IP address and subnet mask in the LAN.
- (5) Click **Apply**.



(6) Wait at least 1 second then click **Restart** in the left pane to display the System Restart page. Click **Restart** in the right pane to restart the FA-10DCCRU. New network settings are applied after the restart.



5-3-1. Information

Click **Information** in the left pane to display the Information page, in which Unit Information and Connection Status details of the FA-10DCCRU are displayed.

- FA-10DCCRU version, serial number and network setting details
- Main Unit information



Click Refresh to refresh the page.

5-3-2. Network Settings

In the left pane of the Web GUI, clicking **Network Settings** displays the Network Settings page in the right pane, in which FA-10DCCRU network settings are entered. After settings are complete, click **Apply** to apply them.

| | Network Settings |
|-----------------------------------|--|
| <section-header></section-header> | Network Settings IP Address: 192.168.0.101 Subnet Mask: 255.255.0 Default Gateway: Apply |

| Item | Default | Description |
|--------------------|---------------|--|
| IP Address | 192.168.0.101 | Allows you to set the FA-10DCCRU IP address and subnet |
| Subnet Mask | 255.255.255.0 | mask. Set a unique IP address and connect to a LAN network. |
| Default Gateway | | This setting is not required. Set the Default Gateway address according to your network circumstances. |

IMPORTANT

Network Settings are applied after the FA-10DCCRU restarts. See section 5-3-8. "System Restart."

5-3-3. User Account Settings

This page allows you to change user name and password settings by logging in through the Web GUI.

| | User Account Settings | | | |
|--|-----------------------|-----------------------|---------------|--|
| FA-10DCCRU | | Jser Account Settings | | |
| Information | User Name: | fa10dccru | (15 Max char) | |
| Network Settings | Password: | ••••• | (15 Max char) | |
| User Account Settings Unit ID Assignment | Confirm Password: | | (15 Max char) | |
| Direct Mode Settings Event Naming Backup & Restore | | 3 Apply | | |
| Restart | | | | |
| | | | | |

- (1) Click **User Account Settings** in the left pane.
- (2) Enter a user name (Alphanumeric, up to 15 characters). Enter a password (Alphanumeric, up to 15 characters). Re-enter the password.
- (3) Click Apply.
- (4) Wait at least 1 second, then click **Restart** in the left pane to display the System Restart page. Click **Restart** in the right pane to restart the FA-10DCCRU. The new network settings are applied after the restart.

IMPORTANT

User Account Settings are applied after the FA-10DCCRU restarts. See section 5-3-8. "System Restart."

Do not forget your user name or password.

If you forget your user name or password, set the FA-10DCCRU back to factory default settings (see section 12. "Resetting to Factory Default Settings") and reset your user name and password.

5-3-4. Unit ID Assignment

Click **Unit ID Assignment** in the left pane to display the Unit ID Assignment page. This page allows you to assign Main Units to **Unit ID** numbers using IP addresses and unit names. When controlling multiple main units, unit names can help you identify units. Up to 100 units can be registered in the list.



- (1)Move the mouse over the desired Unit ID numbers at the top of the page to display the list. Then click on the ID numbers (**Unit 1- 20** for example).
- (2) Enter an IP address (required) under the Unit ID number for each unit (FA-505, FA-1010, FA-9520, FA-9500 or FA-9600) as shown above.

If a unit is not registered in the list, the message "No Assigned IP Address" will appear when trying to connect to the unit.

(3) Enter a unit name (not required) under the Unit ID number. Units names must be alphanumeric and within 15 characters.

Unit names are displayed on the FA-10DCCRU front panel while selecting a main unit or after connection is established. If a unit name is not specified, the IP address will be displayed instead of a unit name.

Change the Port (TCP port number) setting only when another device than those below exists in the LAN and uses this port number:

FA-505 / FA-50GUI / FA-1010 / FA-10GUI / FA-9520 / FA-9500 / FA-9600/ FA-10RU / FA-95RU / FA-10DCCRU

If a port number is changed, set the same number for all devices listed above.

(4) After all settings are finished, click **Apply**.

IMPORTANT

Do **not** forget to click **Apply**. When the list display or menu page is changed without clicking **Apply**, the settings in the list are ignored and they will return to their previous settings.

5-3-5. Direct Mode Settings

Click **Direct Mode Settings** in the left pane to display the Direct Mode Settings page. This page allows you to assign Main Units to **MU1** to **MU20**, which are used for direct mode connections.

Up to 20 MU units (MU 1 – MU 20) can be registered in the Direct Mode list, but they must be registered in the Unit ID list. (See the previous page).

See section 6-1-2. "Connecting a Main Unit in Direct Mode" for details on the connection procedure.

As factory default, **Unit ID 1 to 20** are set to **MU 1 to 20**. If you need to change these assignments, follow the procedure below.



- (1) Change the Unit ID numbers for MU 1 to MU 5. Click the MU 1-5 button.
- (2) Change the Unit ID numbers for MU 6 to MU 10, then click the **MU 2-10** button. Change other settings in the same way.
- (3) When all settings are finished, click **Apply**. Note that if another page is entered without clicking **Apply**, the settings are ignored.

IMPORTANT

Note that if an IP address is not set under the associated Unit ID number in the Unit Assignment page (see section 5-3-4), it cannot be accessed using the Unit ID or MU number.

When connecting to main units using the 1-5, 6-10, 11-15 or 16-20 button in Direct mode, user names set in the Unit Assignment page are displayed. If user names are not set, IP addresses are displayed.

Setting **Unit ID** to "**0**" in the Direct Mode Settings page disables the connection. Use "0," as necessary.

5-3-6. Event Naming

Click **Event Naming** in the left pane to display the Event Naming page. This page allows you to assign names to events. The default names are **Event 1** to **Event 100**. To change event names, follow the procedure below.

| | 6 | Event | t Naming | _ | |
|--|------------|---------------------------|--------------------|----------------------------------|--|
| FA-10DCCRU | Event No.: | Event 1 - 20 Event 21 - 4 | 10 / Event 41 - 60 | / Event 61 - 80 / Event 81 - 100 | |
| Information | | | | | |
| Network Settings | | Event 1 - 20 | | | |
| User Account Settings Unit ID Assignment | Event 1 | : Event 1 (2) | Event 11 | Event 11 | |
| Direct Mode Settings | Event 2 | Event 2 | Event 12 | Event 12 | |
| Backup & Restore | Event 3 | Event 3 | Event 13 | Event 13 | |
| Restart | Event 4 | Event 4 | Event 14 | Event 14 | |
| | Event 5 | Event 5 | Event 15 | Event 15 | |
| For .s | Event 6 | Event 6 | Event 16 | Event 16 | |
| INNOVATIONS IN VIDEO and AUDIO TECHNOLOGY | Event 7 | Event 7 | Event 17 | Event 17 | |
| | Event 8 | Event 8 | Event 18 | Event 18 | |
| | Event 9 | Event 9 | Event 19 | Event 19 | |
| | Event 10 | Event 10 | Event 20 | Event 20 | |
| | | 3 | Apply | | |

- (1) Move the mouse over the desired event numbers at the top of the page to display the list. Then click on the event numbers (**Event 1- 20** for example).
- (2) Type a new name (alphanumeric, within 15 characters) under each event.
- (3) Click Apply.

IMPORTANT

Do **not** forget to click **Apply**. When the list display or menu page is changed without clicking **Apply**, the settings in the list are ignored and the event names return to the their previous settings.

5-3-7. Backup & Restore

Click **Backup & Restore** in the left pane to display the Backup & Restore page. This page allows you to perform the following backup and restoration tasks.

- Backup and restore Network Settings, Unit ID Assignment, Direct Mode Settings, and Event Name pages, and GPI and System settings.
- Backup and restore Event data (See sections 7-4 and 7-5.)
- Copy settings to another FA-10DCCRU unit. (See sections 7-2 and 7-3.)

• Backing Up All FA-10DCCRU Settings (excluding Event Data)

Clicking Save in the Config Data area allows you to save all settings as shown below.

| | Backup & Restore | - |
|--|--|----------|
| FA-10DCCRU Information Network Settings User Account Settings User Account Settings Unit ID Assignment Direct Mode Settings Event Naming Backup & Restore Restart | Config Data Save File: Save Restore: Load Settings Network Settings Unit ID Assignment Direct Mode Settings Event Name GPI Settings System Settings | 800 |
| | Event Data | |
| | Save File: Save | |
| | Restore: Load 🍻 | <u>R</u> |

- (1) Click Save in the Config Data area to display the Download dialog.
- (2) Click **Save** in the dialog.
- (3) A Select Destination dialog will appear. Specify the destination folder and click **Save**. The FA-10DCCRU settings are automatically stored in the backup file named "**fa10dccru.csv**." Change the file name as necessary.

Restoring Settings

To restore stored settings, proceed as follows.

| | | Backup & Restore |
|--|-----------------|--------------------|
| FA-10DCCRU | Co | onfig Data |
| 1 | Save File: Save | |
| Information Network Settings | Restore 3 Load | (2) |
| User Account Settings | | Settings |
| Direct Mode Settings | 🗖 Ne | etwork Settings |
| Event Naming | 🗖 Un | nit ID Assignment |
| Restart | 👝 🗖 Dir | rect Mode Settings |
| | | vent Name |
| | GP | PI Settings |
| INNOVATIONS IN VIDEO and AUDIO TECHNOLOGY | Sy: | stem Settings |
| | Ev | vent Data |
| | Save File: Save | |
| | Restore: Load | 参照 |
| | | |

- (1) Check on the checkboxes in the Config Data area to select data.
- (2) Click **Browse** to select the backup file.
- (3) Click Load. A confirmation dialog will appear. Click OK to load the settings. It will take up to one minutes to complete the loading process. To cancel the process, click Cancel.

IMPORTANT

After loading network settings, restart the FA-10DCCRU. (See section 5-3-8. "System Restart."

Saving Event Data

This procedure allows you to save all event data (1 - 100) in a file.

| | | | Backup & Restore | ; |
|--|------------|------|-----------------------------|----|
| FA-10DCCRU | | | Config Data | |
| Information | Save File: | Save | | |
| Network Settings | Restore: | Load | | 参照 |
| User Account Settings | | | Settings | |
| Direct Mode Settings | | | Network Settings | |
| Event Naming | | | Unit ID Assignment | |
| Restart | | | Direct Mode Settings | |
| | | | Event Name | |
| | | | GPI Settings | |
| INNOVATIONS IN VIDEO and AUDIO TECHNOLOGY | | | System Settings | |
| | | | Event Data | |
| | Save File: | Save | | |
| | Restore: | Load | | 参照 |

- (1) Click **Save** in the Config Data area to display the Download dialog.
- (2) Click **Save** in the dialog.
- (3) Specify the destination folder and click **Save**. All event data are automatically stored in the file named **fa10dccru_evt.1re**. Change the file name as necessary.

• Restoring Event Data

- (1) Click the browse button in the Event Data area and select the event backup file.
- (2) Click **Load**. All event data stored in the file are loaded. It will take up to one minutes to complete the loading process.

IMPORTANT

Note that once event data are loaded, all settings in the FA-10DCCRU are replaced.

5-3-8. System Restart

| | System Restart |
|---|----------------|
| FA-10DCCRU | System Restart |
| Information Network Settings User Account Settings Unit ID Assignment Direct Mode Settings Event Naming Backup & Restore Restart | Restart |
| | |

(1) Click **Restart** in the left pane to display the System Restart page.

- (2) Click **Restart** in the right pane.
- (3) A confirmation dialog will appear. Click **OK** to restart the FA-10DCCRU.

Note that the following settings require a system restart and that they are applied after the restart. Do not forget to restart the FA-10DCCRU.

- Network Settings (See section 5-3-2. "Network Settings.")
- User name or password settings (See section 5-3-3. "User Account Settings.")
- Network Settings from the Backup & Restore page (See section 5-3-6. "Backup & Restore.")

6. Controlling FA-505 / 1010 / 9520 / 9500 / 9600 Units

6-1. Selecting Main Units

When connecting Main Units (FA-505, FA-1010, FA-9520, FA-9500 and FA-9600) from an FA-10DCCRU, the following two connection modes are available:

- Unit mode: Connects to Main Units using Unit ID numbers.
- **Direct** mode: Connects to Main Units using Direct Numbers (**MU1** to **MU20**) (Default connection mode is Direct mode.)

IMPORTANT

When powered on, wait at least 1 second and a half before the connection is establishd.

6-1-1. Connecting a Main Unit in Unit Mode

(1) Set connection mode to Unit. (See section 6-1-3. "Selecting the Connection Mode.")

- (2) Press 11-15/UNIT
- (3) Turn VIDEO LEVEL to select a Unit ID. (+ and buttons also available. Pressing and holding these buttons scrolls selections.)

The Unit ID number is displayed while a selection is being entered.

About 2 seconds later when the selection is confirmed, the Unit Name or IP address will also be displayed in a scroll view.

<Display examples>

| ID01: FA-1010 | When IP Address and User Name are set under Unit ID 01: |
|---------------------------------|--|
| ID01: 192.168.0.10 (No Name) | When only IP Address is set under the Unit ID number: |
| ID01: No Assigned IP Address | When nothing is set under Unit ID 01: FA-10DCCRU cannot connect to a unit using Unit ID 01. Set an IP address and User Name for this number. See section 5-3-4. "Unit ID Assignment." |

If **Disconnect** is selected instead of a Unit ID number, this connection channel is disabled.

(4) Press <u>SELECT</u> or <u>11-15/UNIT</u> to start the connection. While connecting to a main unit, "Connecting(Unit)" is displayed. If the connection time is too short, the message may not appear.



To cancel the connection process, press CLEAR.

<Display Examples (after connection)>

| (Diopia) Examples (alter connection) | | |
|--------------------------------------|--|--|
| Connected: FA-1010 | When IP Address and User Name (FA-1010) are set under the Unit ID number : | |
| Connected: IP 192.168.0.10 | When only IP Address (192.168.0.10) is set under the Unit ID number: | |

6-1-2. Connecting a Main Unit in Direct Mode

- (1) Set the connection mode to **Direct**. (See section 6-1-3. "Selecting the Connection Mode.")
- (2) Press a number button within the desired Unit ID sequence: <u>1-5</u>, <u>6-10</u>, <u>11/15/UNIT</u> or <u>16-20</u>. Scrolling through a sequence, press the associated button as many times as needed; for example, to connect to an FA-1010 with Direct ID 1, press <u>1-5</u> once, to connect to an FA-1010 with Direct ID 7, press <u>6-10</u> twice. (See "Selecting an MU ID" below.)



(3) While connecting to a main unit, "Connecting(Direct)" is displayed. If the connection time is too short, the message may not appear.

To cancel the connection process, press <u>CLEAR</u>. The message "Please Choose Direct MU No" will then be displayed, and the number buttons will blink, allowing you to reselect a Direct ID number.

| <display< th=""><th>Examples</th><th>(after connection)</th><th>)></th></display<> | Examples | (after connection) |)> |
|---|----------|--------------------|----|
|---|----------|--------------------|----|

| Connected: FA-1010 | When User Name is set for the connected main unit: |
|-------------------------------------|---|
| Connected: IP 192.168.0.10(No Name) | When User Name is not set for the connected main unit: |
| Disconnect | No main unit is connected: |

* See section 5-3-4. "Unit ID Assignment" for details on Unit Name settings.

♦ Selecting an MU ID

To select a desired MU ID, press the button until the desired ID number is displayed. Every time each number button is pressed, the displayed number will scroll through in the following order.

| 1-5 button: | MU 1 \rightarrow 2 \rightarrow ··· \rightarrow 5 \rightarrow 1 |
|---------------|--|
| 6-10 button: | MU 6→7→···→10→6 |
| 11-15 button: | MU 11 \rightarrow 12 \rightarrow ··· \rightarrow 15 \rightarrow 11 |
| 16-20 button: | MU 16→17→···→20→16 |

If an IP address is not registered for an MU ID number, the number will be skipped. See section 5-3-5. "Direct Mode Setting" for details on MU ID number settings. See section 5-3-4. "Unit ID Assignment" for details on main unit assignments.

6-1-3. Selecting the Connection Mode

- (1) Press and hold down the FS SEL button for about 3 seconds.
- (2) The current connection mode is displayed in a scroll view.
- (3) To change to "Direct Mode Connection," press To change to "Unit Mode Connection," press +
- (4) Verify the selection on the display and press SELECT or FS SEL to confirm the selection.

IMPORTANT

If the connection mode is changed from **Unit** to **Direct**, the message "Please Choose Direct MU No" will appear and the number buttons will blink. Select a Direct ID number to connect to a main unit.

6-2. BYPS/OP (Bypass/Operate)

Pressing the BYPS/OP button changes the Bypass/Operation mode:

-Bypass mode: The button is flashing and FA-505 / FA-1010 Color Correction is bypassed. -Operate mode: The button is lit.

This mode cannot be changed while adjusting Clip levels. (See section 6-10. "Clipping Signal Levels.")

Bypass can be selected when the FA-1010 software version is 3.00 or higher. Bypass cannot be selected for the FA-9520, FA-9500 or FA-9600.

6-3. Selecting an FS Channel

When connecting FA-505 units, an FS channel can be selected from FS1 to FS5. When connecting FA-1010 units, an FS channel can be selected from FS1 to FS10. When connecting an FA-9520 in FA-9520 mode, an FS can be selected between FS1 and FS2. When connecting an FA-9520 in FA-9500 mode or FA-9600, an FS cannot be selected.

(1) Press FS SEL to turn on the button. The selected FS number is displayed.

(2) Use - and + to change the FS for control.

When connecting FA-505 / FA-1010 / FA-9600 units and FS names are registered, the selected FS is displayed by its name. (FS names are not displayed for FA-9520 units in FA-9520 mode.)

Pressing and holding the \Box or + button scrolls selections. While selecting an FS, the name is displayed in short form such as "FS1."

About 2 seconds after a selection, the name will appear in long form such as "FA-1010 FS1."

- * See "FA-1010 Operation Manual" for details on setting FS Names.
- * See "FA-505 Operation Manual" for details on setting FS Names.
- * See "FA-9600 Operation Manual" for details on setting FS Names.



NOTE

While controlling an FS (FS SEL lit), other settings than the FS selection are not displayed. To display other settings, press FS SEL to turn the button light off.

6-4. Freeze Setting

The Freeze setting is available only when **Sync Mode** is set to **Frame** in the main FA-505, FA-1010, FA-9520, FA-9500 or FA-9600 unit. (See the respective Operation Manuals for details on Sync Mode.)

Pressing the FREEZE button turns Freeze On (button lit) or Off (button unlit) The "Freeze" function is applied to FS channels for FA-505, FA-1010 and FA-9520 (FA-9520 mode) units.

The "Freeze" function is applied to main units for FA-9520 (FA-9500 mode), FA-9500 and FA-9600 units.

 NOTE

 Freeze is unable to be set while a main unit is being selected or when changing system settings. The Freeze setting do not appear when FS SEL is lit.

6-5. Split Display

The mode switches every time the <u>SPLIT</u> button is pressed, in the following order: OFF > MODE1> MODE2> MODE3 and displays images before and after correction as shown below.

| SPLIT mode | FA-505 | FA-1010 (V3.00 -) | FA-9600 |
|------------|--|-------------------|----------------|
| OFF | Image after correction in full screen | | |
| MODE1 | Left and Right | Left and Right | Top and Bottom |
| MODE2 | Top and Bottom | Top and Bottom | Left and Right |
| MODE3 | Image before correction in full screen | | |



Display Example (FA-505/1010)



* Split is unable to be set for FA-9520 or FA-9500.

NOTE Split is unable to be set while in Bypass mode or when changing system settings. The Split setting do not appear when FS SEL is lit.

6-6. UNITY Settings and Indicators

> Three indicators on each level control button indicate level status as shown below

A center indicator that is turned on indicates the level is set to UNITY. A left indicator that is turned on indicates the level is set to less than UNITY level. A right indicator that is turned on indicates the level is set to more than UNITY level.

- Pressing a UNITY button resets the associated value to default. Pressing the button again returns the default value to the previous value.
- > An error alarm will sound when a higher or lower limit is exceeded.

6-7. UNITY Button and Unity Mode

UNITY buttons have two operation modes: Unlinked Unity and Linked Unity.

- Unlinked Unity mode UNITY is applied only to the selected FS.
- Linked Unity mode UNITY is applied to all linked FS channels (FS Link On). Unsupported in FA-9600 units
 - * See section 8. "SYSTEM Settings" for more details on setting UNITY mode.
 - * See section 11. "FS Link" for more details on FS Linking.

6-8. Process Control (Proc Amp)

In this section, use the following parameters to perform Proc Amp adjustments.

| VIDEO LEVEL | Adjusts the video level. |
|-------------|---|
| Y LEVEL | Adjusts the luminance level. |
| | Y LEVEL can be adjusted when the FA-1010 software version is 3.00 or higher. Y LEVEL is unable to be adjusted for FA-9520 or FA-9500 |
| C LEVEL | Adjusts the CHROMA LEVEL. (Adjusts the sepia level in Sepia Mode.) |
| SETUP/BLACK | Adjusts the SETUP/BLACK level. |
| HUE | Adjusts the HUE. (Adjusts the SEPIA color in Sepia Mode.) |

In FA-9600 units, SEPIA functions as shown below.

SEPIA Selects the Proc Amp process: Post-process (button lit) or pre-process (button unlit) if FA-96AHDR is installed.

IMPORTANT

Proc Amp is disabled while in Bypass, MU Selection, Clip Setting or System Setting mode.

Proc Amp settings do not appear when FS SEL is lit.

Note that changes are applied to all linked FS channels (FS Link On) in FA-505, FA-1010 or FA-9520 (FA-9520 mode). See section 11. "FS Link" for more details.

6-9. Color Correction

In order to enter the Color Correction settings, first you need to select a correction mode using the following three buttons:

| BAL (Balance) button: | RGB mode |
|----------------------------|--|
| DIF (Differential) button: | Color Difference (YPbPr) mode |
| SEPIA button: | Sepia mode (Disabled in FA-9600 units) |



The following settings are available in Color Correction mode.

| WHITE LEVEL | White Level setting using the R, G and B components. (Disabled in Sepia mode.) |
|-------------|--|
| BLACK LEVEL | Black Level setting using the R, G and B components. (Disabled in Sepia mode.) |
| GAMMA | Gamma Level setting using the R, G and B components. (Only Y signal is adjustable using G in Sepia mode.) Three gamma curves (White, Center and Black) are selectable. |

GROUP ADJ allows you to select between **Group adjustment** and **Individual adjustment**. When <u>GROUP ADJ</u> is turned **off**, R, G and B levels can be set individually. When <u>GROUP ADJ</u> is turned **on**, R, G and B levels can all be set together by changing R, G or B.

IMPORTANT

Color Correction is disabled while in Bypass, MU Selection, Clip Setting or System Setting mode.

Color Correction settings are not displayed when FS SEL is lit.

Note that changes are applied to all linked FS channels (FS Link On) in FA-505, FA-1010 or FA-9520 (FA-9520 mode). See section 11. "FS Link" for more details.

6-10. Signal Level Clip, Color Space and HDR Settings

To enter clip, color space and HDR settings, first, change the mode from Color Correction to Clip. *Color Space is supported only in FA-505 Software Version 2.00 or later.)

* HDR settings are supported only in FA-9600 and unsupported in other units.

In the following situations, Clip mode is unable to be selected:

- While in System Settings (GRP ADJ/SYSTEM is flashing) To enter Clip mode, press GRP ADJ/SYSTEM to exit the System setting mode.
- While Changing Connection Mode (FS SEL is flashing) To enter Clip mode, press SELECT or FS SEL to complete the change, or complete the connection process.
- While Selecting a Unit ID (<u>11-15 UNIT</u> is flashing) To enter Clip mode, complete the connection process.
- ♦ While in Bypass mode (BYPS/OP is flashing)

To enter Clip mode, change the mode to Operate.

IMPORTANT

Clip settings are not displayed when FS SEL is lit.

Note that changes are applied to all linked FS channels (FS Link On) in FA-505, FA-1010 or FA-9520 (FA-9520 mode). However, FS Link does not support Color Space settings in FA-505. See section 11. "FS Link" for more details.

See section 11. "FS Link" for more details.

If Color Corrector is remotely set to Bypass by another remote unit (FA-10DCCRU or FA-10RU) or FA-10GUI, the system automatically exits CLIP mode.

(1) Press CLIP for at least 3 seconds.

(2) A beep will sound and the CLIP button will flash to indicate the mode has changed to Clip.



(3) After all clip settings are finished, press CLIP to return to the Color Correction mode.

* To enter clip settings in another FS when connecting to an FA-505, FA-1010, FA-9520 (FA-9520 mode) or FA-9600 unit, press FS SEL to turn on the button light, then select an FS. Note that clip settings are applied to the selected FS while FS SEL is unlit.

6-10-1. YPbPr Clip

(1) If connecting an FA-9600 unit:

While CLIP is flashing, the system is in YPbPr clip mode if DIF is lit. The system is in KNEE(RGB clip) mode if BAL is lit (and DIF is unlit), To change clip mode, press the respective button. CENTER can toggle YPbPr Clip On (button lit) /Off (unlit).

If connecting another main unit:

With CLIP flashing, press DIF on the right end of the front panel to enable YPbPr Clip. (To disable the function, press DIF again.)

(2) The following process control settings are available.

| Y LEVEL | Y signal White clipping |
|-------------|-------------------------|
| C LEVEL | C signal White clipping |
| SETUP/BLACK | Y signal Black clipping |

- (3) Adjust the clip setting while viewing the three indicators above the controls and the value on the MEMORY/SET display panel. (See "Signal levels and level display" below.) Pressing the UNITY button below the value resets the clip value to the default.
- (4) Repeat steps (2) and (3) to enter additional adjustments.

IMPORTANT

Note that changes are applied to all linked FS channels (FS Link On) in an FA-505, FA-1010 or FA-9520 (FA-9520 mode). See section 11. "FS Link" for more details.

Signal levels and level display

The relationship between indicators, controls, and clip settings are as shown below.





SMPTE 100% color bars when 100% white

| Button | Setting | Level indicators | Panel display |
|---------|---------|--------------------------------------|---------------|
| Y LEVEL | A | Lit orange. Flashes at 109% (UNITY). | 101% - 109% |
| | В | Lit green | 100% |
| | С | Lit orange. Flashes at 50% | 50% - 99% |

② Y Black Clip Level



| Button | Setting | Level indicators | Panel display |
|-----------------|---------|------------------------------------|---------------|
| SETUP/ BLACK | A | Lit orange. Flashes at -7% (UNITY) | -7.5%1% |
| | В | Lit green | 0% |
| | С | Lit orange. Flashes at 50%. | 1% - 50% |

③ C White Clip Level

Setting range: 50% - 111% Default (UNITY): 111%



SMPTE 100% color bars when color 700mVp-p

| Button | Setting | Level indicators | Panel display |
|---------|---------|-------------------------------------|---------------|
| | А | Lit orange. Flashes at 111% (UNITY) | 101% - 111% |
| C LEVEL | В | Lit green | 100% |
| | С | Lit orange. Flashes at 50%. | 50% - 99% |

The RGB Clip menu changes depending on the main unit and its software version.

- FA-9600
- FA-505 with Software Version 2.10 or later
- FA-505 with Software Version 2.03
- FA-1010/FA-9500/FA-9520 and FA-505 with Software Version 1.21 or earlier

6-10-2-1. FA-9600

(1) With CLIP flashing, press BAL on the right end of the front panel to enable RGB Clip. If RGB CLIP (White) is enabled, WHITE lights. (To disable RGB CLIP (White), press WHITE.)

If RGB CLIP (Black) is enabled, BLACK lights. (To disable RGB CLIP (White), press BLACK.)

(2) The following process control settings are available.

| Y LEVEL | KNEE (RGB CLIP) White Output Clip |
|---------------|-----------------------------------|
| WHITE LEVEL R | KNEE (RGB CLIP)White Knee Slope |
| WHITE LEVEL G | KNEE (RGB CLIP) White Knee Point |
| SETUP/BLACK | RGB CLIP (Black) Output Clip |

(3) Adjust the clip setting while viewing the three indicators above the controls and the value on the MEMORY/SET display panel. (See "Signal levels and level display" below.)

Pressing the UNITY button below the value resets the clip value to default.

(4) Repeat steps (2) and (3) to enter additional adjustments.



Signal levels and level display

The relationship between indicators, controls, and clip settings are as shown below. KNEE (RGB CLIP) White Output Clip and White Knee Point affect and interact with each other and change their setting range accordingly. (RGB CLIP (Black) Output Clip and Black Knee Point function in the same manner.)



KNEE (RGB CLIP) White Output Clip Setting range: 50% - 150% Default (UNITY): 100%

| Button | Setting | Level indicators | Panel display |
|---------|---------|-----------------------------|---------------|
| | А | Lit orange. Flashes at 150% | 101% - 150% |
| Y LEVEL | В | Lit green (UNITY) | 100% |
| | С | Lit orange. Flashes at 50%. | 50% - 99% |

 ② RGB CLIP (Black) Output Clip (SETUP/BLACK) Setting range: -50% - 50% Default (UNITY): 0%

| Button | Setting | Level indicators | Panel display |
|-----------------|---------|-----------------------------|---------------|
| SETUP/ BLACK | А | Lit orange. Flashes at -50% | -50%1% |
| | В | Lit green (UNITY) | 0% |
| | С | Lit orange. Flashes at 50%. | 1% - 50% |

Knee Clip Setting



Knee Clip allows you to output high-luminance areas (indicated in green line in the figure above) in images with enough resolution (indicated in blue line), which will be overexposed in traditional methods. Knee Clip is mainly used when images are converted from wide color range to small color range.

The clip levels are calculated on the basis of the **Output Peak** value (as 100%). When Knee Point is the same as the clip level, the hard clip processing, the legacy RGB clip, will be performed (indicated in red line).

③ KNEE (RGB CLIP)White Knee Slope (WHITE LEVEL R)

| Setting range: | 0.10 to 1.00 (in 0.05 steps) |
|------------------|------------------------------|
| Default (UNITY): | 1.00 |

| Button | Setting | Level indicators | Panel display |
|---------|---------|------------------------------|---------------|
| WHITE | В | Lit green | 1.00 |
| LEVEL R | С | Lit orange. Flashes at 0.10. | 0.10 to 0.95 |
④ KNEE (RGB CLIP)White Knee Point (WHITE LEVEL G) Setting range: 50% to 150

Default (UNITY): 100%

| Button | Setting | Level indicators | Panel display |
|------------------|---------|------------------------------|---------------|
| WHITE LEVEL G | А | Lit orange. Flashes at 150%. | 101% to 150% |
| | В | Lit green (Unity) | 100% |
| | С | Lit orange. Flashes at 50%. | 50% to 99% |

6-10-2-2. FA-505 (Software Version 2.10 or later)

(1) With CLIP flashing, press BAL on the right end of the front panel to enable RGB Clip. (RGB Clip cannot be On/Off in these versions. To release video signals from RGB Clip offset, reset all the parameters shown in the table under (2).)

(2) The following process control settings are available.

| Y LEVEL | White Output Clip |
|---------------|-------------------|
| SETUP/BLACK | Black Output Clip |
| WHITE LEVEL R | White Input Clip |
| WHITE LEVEL G | White Knee Point |
| BLACK LEVEL R | Black Input Clip |
| BLACK LEVEL G | Black Knee Point |

(3) Adjust the clip setting while viewing the three indicators above the controls and the value on the MEMORY/SET display panel. (See "Signal levels and level display" below.)

Pressing the UNITY button below the value resets the clip value to default.

(4) Repeat steps (2) and (3) to enter additional adjustments.

Signal levels and level display

The relationship between indicators, controls, and clip settings are as shown below. RGB White Level and White Knee Point affect and interact with each other and change their setting range accordingly. (RGB Black Level and Black Knee Point function in the same manner.)





White Output Clip (YLEVEL) (*) Setting range: 50% - 150% Default (UNITY): 100%

| Button | Setting | Level indicators | Panel display |
|---------|---------|--------------------------------|---------------|
| Y LEVEL | А | Lit orange. Flashes at 150% | 101% - 150% |
| | В | Lit green (UNITY) | 100% |
| | С | Lit orange. Flashes at 50%. | 50% - 99% |

 Black Output Clip (SETUP/BLACK) (*) Setting range: -50% - 50% Default (UNITY): 0%

| Button | Setting | Level indicators | Panel display |
|-----------------|---------|--------------------------------|---------------|
| SETUP/ BLACK | А | Lit orange. Flashes at -50% | -50%1% |
| | В | Lit green (UNITY) | 0% |
| | С | Lit orange. Flashes at 50%. | 1% - 50% |

* Adjustable ranges for White Level and Black Level change depending on whether the FA-505 Software Version is 2.00 and later or other versions, Values will return to default settings if they exceed the adjustable range due to loading events.

Knee Clip Setting



Knee Clip allows you to output high-luminance areas (indicated in green line in the figure above) in images with enough resolution (indicated in blue line), which will be overexposed in traditional methods. Knee Clip is mainly used when images are converted from wide color range to small color range.

The clip levels are calculated on the basis of the Output Peak value (as 100%).

On the other side, Black is fixed to 0.0% (equal to **Black 0%**). When **Knee Point** is the same as the **Output Clip** level, the legacy RGB clip will be performed (indicated in red line).

Note that **Knee Point** cannot exceed the **Output Clip** level in the White side and **Knee Point** cannot lower the **Output Clip** level in the Black side. White Input Clip (WHITE LEVEL R) Setting range: 0.5% to 100

0.5% to 100% (FA-505 Software Version 2.13 or later) 50% to 150% (FA-505 Software Version 2.12 or earlier) 100%

Default (UNITY):

| Button | Setting | Level indicators | Panel display |
|------------------|---------|--|---------------|
| WHITE LEVEL R | А | Lit orange. Flashes at 100% (Ver. 2.13 or later) or 150% (Ver. 2.12 or earlier). | 100% - 150% |
| | В | Lit green (Ver. 2.12 or earlier) | 100% |
| | С | Lit orange. Flashes at 0% (Ver. 2.13 or later) or 50% (Ver. 2.12 or earlier). | 0% - 99% |

 ④ White Knee Point (WHITE LEVEL G) Setting range: 50% to WHITE OUTPUT CLIP value Default (UNITY): WHITE OUTPUT CLIP value

| Button | Setting | Level indicators | Panel display |
|------------------|---------|--|-------------------|
| WHITE LEVEL G | А | Lit orange. Flashes when matched with the WHITE OUTPUT CLIP value. | 101% - (Variable) |
| | В | Lit green | 100% |
| | С | Lit orange. Flashes at 50%. | 50% - 99% |

 Black Input Clip (BLACK LEVEL R) Setting range: -50% - 50% Default (UNITY): 0%

| Button | Setting | Level indicators | Panel display |
|------------------|---------|---------------------------------|---------------|
| BLACK LEVEL R | А | Lit orange. Flashes at 50%. | 1% - 50% |
| | В | Lit green | 0% |
| | С | Lit orange. Flashes at -50%. | -50% - 1% |

⑥ Black Knee Point (BLACK LEVELG)
 Setting range: BLACK OUTPUT CLIP value to 50%
 Default (UNITY): BLACK OUTPUT CLIP value

| Button | Setting | Level indicators | Panel display |
|------------------|---------|--|-----------------|
| BLACK LEVEL G | A | Lit orange. Flashes when matched with the BLACK OUTPUT CLIP value. | (Variable) - 1% |
| | В | Lit green. | 0% |
| | С | Lit orange. Flashes at 50%. | 1% - 50% |

6-10-2-3. FA-505 (Software Version 2.03)

- (1) With CLIP flashing, press BAL on the right end of the front panel to enable RGB Clip. (RGB Clip cannot be On/Off in these versions. To release video signals from RGB Clip offset, reset all the parameters shown in the table under (2).)
- (2) The following process control settings are available.

| Y LEVEL | White clipping of RGB signal |
|---------------|------------------------------|
| SETUP/BLACK | Black clipping of RGB signal |
| WHITE LEVEL R | White Knee Point |
| WHITE LEVEL G | White Knee Slope |
| BLACK LEVEL R | Black Knee Point |
| BLACK LEVEL G | Black Knee Slope |

(3) Adjust the clip setting while viewing the three indicators above the controls and the value on the MEMORY/SET display panel. (See "Signal levels and level display" below.)

Pressing the UNITY button below the value resets the clip value to default.

(4) Repeat steps (2) and (3) to enter additional adjustments.

Signal levels and level display

The relationship between indicators, controls, and clip settings are as shown below. RGB White Level and White Knee Point affect and interact with each other and change their setting range accordingly. (RGB Black Level and Black Knee Point function in the same manner.)



RGB WHITE LEVEL (YLEVEL) (*) Setting range: 50% - 150%

Default (UNITY): 100%

| Button | Setting | Level indicators | Panel display |
|---------|---------|--------------------------------|---------------|
| Y LEVEL | А | Lit orange. Flashes at 150% | 101% - 150% |
| | В | Lit green (UNITY) | 100% |
| | С | Lit orange. Flashes at 50%. | 50% - 99% |

RGB BLACK LEVEL (SETUP/BLACK) (*) Setting range: -50% - 50% Default (UNITY): 0%

| Button | Setting | Level indicators | Panel display |
|-----------------|---------|--------------------------------|---------------|
| SETUP/ BLACK | А | Lit orange. Flashes at -50% | -50%1% |
| | В | Lit green (UNITY) | 0% |
| | С | Lit orange. Flashes at 50%. | 1% - 50% |

Adjustable ranges for White Level and Black Level change depending on whether the FA-505 Software Version is 2.00 and later or other versions, Values will return to default settings if they exceed the adjustable range due to loading events.

Knee Clip Setting



Knee Clip allows you to output high-luminance areas (indicated in green line in the figure above) in images with enough resolution (indicated in blue line), which will be overexposed in traditional methods. Knee Clip is mainly used when images are converted from wide color range to small color range.

The clip levels are calculated on the basis of the **OETF Maximum Input** value (as 100%). On the other side, Black is fixed to 0.0% (equal to **Black 0%**). When Knee Point is the same as the clip level, or Knee Slope is set to **OFF**, the hard clip processing, the legacy RGB clip, will be performed (indicated in red line).

③ White Knee Point (WHITE LEVEL R) Setting range: 50% to RGB WHITE LEVEL value Default (UNITY): RGB WHITE LEVEL value

| Button | Setting | Level indicators | Panel display |
|------------------|---------|--|-------------------|
| WHITE LEVEL R | А | Lit orange. Flashes when matched with the RGB WHITE LEVEL value. | 101% - (Variable) |
| | В | Lit green | 100% |
| | С | Lit orange. Flashes at 50%. | 50% - 99% |

④ White Knee Slope (WHITE LEVEL G) Setting range: Off to 15 Default (UNITY): Off

| Button | Level indicators | Panel display |
|------------------|--|---------------|
| WHITE LEVEL G | Lit orange. Flashes at 15. | 1 - 15 |
| | Lit orange. Flashes at Off (UNITY). | Off |

 ⑤ Black Knee Point (BLACK LEVEL R) Setting range: RGB BLACK LEVEL value to 50% Default (UNITY): RGB BLACK LEVEL value

| Button | Setting | Level indicators | Panel display |
|---------|---------|--|-----------------|
| BLACK | A | Lit orange. Flashes when matched with the BLACK LEVEL value. | (Variable) - 1% |
| LEVEL R | В | Lit green. | 0% |
| | С | Lit orange. Flashes at 50%. | 1% - 50% |

⑥ Black Knee Slope (BLACK LEVEL G) Setting range: Off - 15 Default (UNITY): Off

| Button | Level indicators | Panel display |
|---------|--|---------------|
| BLACK | Lit orange. Flashes at 15. | 1 - 15 |
| LEVEL G | Lit orange. Flashes at Off (UNITY). | Off |

- (1) With CLIP flashing, press BAL on the right end of the front panel to enable RGB Clip. (To disable, press BAL again.)
- (2) The following process control settings are available.

| Y LEVEL | White clipping of RGB signal |
|-------------|------------------------------|
| SETUP/BLACK | Black clipping of RGB signal |

(3) Adjust the clip setting while viewing the three indicators above the controls and the value on the MEMORY/SET display panel. (See "Signal levels and level display" below.)

Pressing the UNITY button below the value resets the clip value to default.

(4) Repeat steps (2) and (3) to enter additional adjustments.

Signal levels and level display

The relationship between indicators, controls, and clip settings are as shown below.





 RGB WHITE LEVEL (YLEVEL) Setting range: 50% - 300% Default (UNITY): 300%

| Button | Setting | Level indicators | Panel display |
|---------|---------|-------------------------------------|---------------|
| | A | Lit orange. Flashes at 300% (UNITY) | 101% - 300% |
| Y LEVEL | В | Lit green | 100% |
| | С | Lit orange. Flashes at 50%. | 50% - 99% |

② RGB BLACK LEVEL (SETUP/BLACK)

Setting range: -200% - 50% Default (UNITY): -200%

| Button | Setting | Level indicators | Panel display |
|-----------------|---------|--|---------------|
| | А | Lit orange. Flashes at 200% (UNITY) | -200%1% |
| SETUP/ BLACK | В | Lit green | 0% |
| BEACK | С | Lit orange. Flashes at 50%. | 1% - 50% |

IMPORTANT

Note that changes are applied to all linked FS channels (FS Link On) in an FA-505, FA-1010 or FA-9520 (FA-9520 mode). See section 11. "FS Link" for more details.

6-10-3. Color Space Setting (FA-505)

The Color Space menu is supported in FA-505 Software Version 2.00 and later.

- (1) With CLIP flashing, press SEPIA on the right end of the front panel.
- (2) Repeatedly pressing <u>SELECT</u> displays items one after another in the following order. Pressing <u>SELECT</u> while Gamma Range is selected jumps back to the top.

| FA-505 with Software Version 2.10 | FA-505 with Software Version 2.03 |
|-----------------------------------|--|
| 1 EOTF | ① EOTF |
| \downarrow | \downarrow |
| ② In Color Space | ② In Color Space |
| \downarrow | \downarrow |
| ③ OETF | ③ OETF |
| \downarrow | \downarrow |
| ④ Out Color Space | ④ Out Color Space |
| \downarrow | \downarrow |
| ⑤ Input Peak Luminance | 5 ST 2084 (PQ) Range |
| Input Peak Variable | \downarrow |
| \downarrow | ⑦ Dynamic Range |
| 6 Output Peak Luminance | \downarrow |
| Output Peak Variable | 8 Gamma Range |
| \downarrow | \downarrow |
| ⑦ Dynamic Range | EOTF (Back to the top) |
| \downarrow | |
| 8 Gamma Range | |
| \downarrow | |
| ①EOTF (Back to the top) | |

Select an item and turn VIDEO LEVEL to set or adjust the selected item.

- (3) Adjust the clip setting while viewing the three indicators above the controls and the value on the MEMORY/SET display panel. (See "Signal levels and level display" below.) Pressing the UNITY button below the value resets the clip value to default.
- (4) Repeat steps (2) and (3) to enter additional adjustments.

• Signal levels and level display

The relationship between indicators, controls, and clip settings are as shown below.



Move between items.

① EOTF* (Input Gamma Curve)

| FA-505 Ver. | Setting range | Default (Unity) |
|-------------|--|-----------------|
| 2.03 | By-pass, SDR 2.2 Rec.1886, SDR 2.4 Rec.1886, HLG SG 1.0, HLG SG 1.2, HLG SG 1.4, ST2084(Narrow), ST2084(SDI), ST2084(Full) | By-pass |
| 2.10- | By-pass, Rec. ITU-R BT.709, Rec. ITU-R BT.1886, Hybrid Log Gamma, SMPTE ST 2084, S-Log3, Canon Log2 | By-pass |

* EOTF: Electric Optical Transfer Function

2 In Color Space

| FA-505 Ver. | Setting range | Default (Unity) |
|-------------|---------------------------------------|-----------------|
| 2.03 | Rec. 709, Rec. 2020 | Rec. 709 |
| 2.10- | Rec. 709, Rec. 2020, User 1 – 5 | Rec. 709 |

③ OETF* (Output Gamma Curve)

The setting range and default value (Unity) are the same as those for EOTF* (Input Gamma Curve).

* OETF: Optical Electric Transfer Function

④ Out Color Space

The setting range and default value (Unity) are the same as those for In Color Space.

⑤ ST 2084 (PQ) Range

| | \ · · / | | | |
|---------------|---------|---------|--------------------------------|-----------------|
| FA-505 Ver. | | | Setting range | Default (Unity) |
| 2.03 | | 1 - 64% | | 64% |
| Setting metho | | d | | |
| | Button | Setting | Level indicators | Panel display |
| | VIDEO | А | Lit orange. Flashes at 64%. | 64% |
| | LEVEL | С | Lit orange. Flashes at 1%. | 1% - 63% |

⑤ Input Peak Luminance

| FA-5 | 05 Ver. | Setting range | Default (Unity) |
|-------|---------|--|-----------------|
| 2.10- | | Maximum, 100, 200, 300, 400, 500, 800, 1000, 2000, 4000, 8000, 10000, Variable | Maximum |

If **Variable** is selected, set the value as shown below.

Setting range: 50-10000 Default (Unity): 10000

| Button | Setting | Level indicators | Panel display |
|--------|---------|----------------------------------|---------------|
| VIDEO | A | Lit orange. Flashes at 10000. | 10000 |
| LEVEL | С | Lit orange. Flashes at 50. | 50 - 10000 |

6 Output Peak Luminance

The setting range, default value (Unity) and setting method are the same as those for Input Peak Luminance.

⑦ Dynamic Range

| FA-505 Ver. | | Setting range | Default (Unity) | |
|-------------|----------------|---------------|---|--|
| 2.03 | | 0.5 - 65% | Changes depending on the EOTF setting (2) | |
| 2.10- | | 50 - 10000 | Changes depending on the EOTF setting (2) | |
| | Setting metho | d | | |
| | Button | Setting | Level indicators | |
| | VIDEO LEVEL | A | Lit orange. Flashes at 65% / 10000. | |
| | | С | Lit orange. Flashes at 0.5% / 50. | |

⑧ Gamma Range

| FA-505 Ver. | Setting range | Default (Unity) |
|---------------|---------------|-----------------|
| 2.03 2.10- | 25 - 100% | 100% |

Setting method

| Button | Setting | Level indicators | Panel display |
|--------|---------|---------------------------------|---------------|
| VIDEO | А | Lit orange. Flashes at 100%. | 100% |
| LEVEL | С | Lit orange. Flashes at 0.5%. | 25% - 100% |

6-10-4. HDR Settings (FA-9600)

The HDR menu is supported only in FA-9600 units..

- (1) With CLIP flashing, press SEPIA on the right end of the front panel.
- (2) Repeatedly pressing SELECT displays items one after another in the following order.



Select an item and turn VIDEO LEVEL to set or adjust the selected item.

- (3) Adjust the clip setting while viewing the three indicators above the controls and the value on the MEMORY/SET display panel. (See "Control Knobs and Buttons" below.) Pressing the UNITY button below the value resets the clip value to default.
- (4) Repeat steps (2) and (3) to enter additional adjustments.

Control Buttons

Control buttons and indicators used for HDR settings are indicated as shown below.



Move between items

① Dynamic Range Conv.

| Button | | Setting range | Default (Unity) |
|-----------------------------|--|-----------------|-----------------|
| VIDEO LEVEL Bypass, operate | | Bypass, operate | Bypass |

② Gamma Curve (EOTF)

| Button | Setting range | Default (Unity) |
|-------------|---|--------------------------|
| VIDEO LEVEL | User 01: SDR 2.2 BT.1886 User 02: SDR 2.4 BT.1886 User 03: HLG BT.2100 User 04: HLG (RGB SG1.2) User 05: HLG (RGB SG1.4) User 06: ST 2084 (PQ) User 07: SDR 2.2 BT.709 User 08: S-Log3 User 09: Canon Log 2 User 10: SDR 2.4 BT.1886 | User 01: SDR 2.2 BT.1886 |

 User 01-10 listed above are default names in FA-9600. New names are displayed if they are changed.

③ In Color Space

| Button | Setting range | Default (Unity) |
|-------------|--|-------------------|
| VIDEO LEVEL | Rec. ITU-R BT.709 Rec. ITU-R BT.2020 User 01: S-Gamut/Gamut3 User 02 User 03 User 04 User 05 | Rec. ITU-R BT.709 |

* User 01-05 listed above are default names in FA-9600. New names are displayed if they are changed.

④ Gamma Curve (OETF)

| Button | Setting range | Default (Unity) |
|-------------|---|--------------------------|
| VIDEO LEVEL | User 01: SDR 2.2 BT.1886 User 02: SDR 2.4 BT.1886 User 03: HLG BT.2100 User 04: HLG (RGB SG1.2) User 05: HLG (RGB SG1.4) User 06: ST 2084 (PQ) User 07: SDR 2.2 BT.709 User 08: S-Log3 User 09: Canon Log 2 User 10: SDR 2.4 BT.1886 | User 01: SDR 2.2 BT.1886 |

 * User 01-10 listed above are default names in FA-9600. New names are displayed if they are changed.

5 Out Color Space

| Button | Setting range | Default (Unity) |
|-------------|---|-------------------|
| VIDEO LEVEL | Rec. ITU-R BT.709 Rec. ITU-R BT.2020 User 01: S-Gamut/Gamut3 User 02 User 03 User 04 | Rec. ITU-R BT.709 |
| | User 05 | |

* User 01-05 listed above are default names in FA-9600. New names are displayed if they are changed.

6 Gamma Range

| Item | | Setting range | | Default (Unity) |
|----------------|-------------|---------------|------------------------------|-----------------|
| Gamma Range | | 0.5~100% | | 100% |
| Setting method | | | | |
| | Button | Setting | Level indicators | Panel display |
| | | А | Lit orange. Flashes at 100%. | 100% |
| | VIDEO LEVEL | С | Lit orange. Flashes at 0.5%. | 0.5% - 100% |

⑦ OOTF for HLG

| Button | Setting range | Default (Unity) | | |
|---|-----------------|-----------------|--|--|
| VIDEO LEVEL | Disable, Enable | Disable | | |
| * Enabled only when HI G BT 2100 is selected for Input / Output Gamma Curve. In other cases | | | | |

Enabled only when **HLG BT.2100** is selected for **Input / Output Gamma Curve**. In other cases, set **OOTF for HLG** to **Disable**. If enabled, HLG OOTF settings are available in the OOTF for HLG (INPUT SIDE) or OOTF for HLG (OUTPUT SIDE) menu. (FA-96AHDR required).

⑧ OOTF (Input Side)

| Button | Setting range | Default (Unity) |
|-------------|-----------------|-----------------|
| VIDEO LEVEL | Disable, Enable | Disable |

| Item | | Setting range | | Default (Unity) |
|----------------|---------|---------------|-----------------------------|-----------------|
| System Gamma | | 1.0 - 2.0 | | 1.2 |
| Setting method | | | | |
| | Button | Setting | Level indicators | Panel display |
| | | А | Lit orange. Flashes at 2.0. | 1.3 - 2.0 |
| | Y LEVEL | В | Lit green | 1.2 |
| | | С | Lit orange. Flashes at 1.0. | 1.0 - 1.1 |

| | Item | Setting range | Default (Unity) |
|--|----------------|--------------------|-----------------|
| | Display Peak | 100 - 10,000 cd/m2 | 1,000 cd/m2 |
| | Setting method | | |

| - | o ang moanoa | | | | | | |
|---|--------------|---------|--------------------------------|---------------------|--|--|--|
| | Button | Setting | Level indicators | Panel display | | | |
| | | А | Lit orange. Flashes at 10,000. | 1,100 -10,000 cd/m2 | | | |
| | C LEVEL | В | Lit green | 1,000 cd/m2 | | | |
| | | С | Lit orange. Flashes at 100. | 100 -900 cd/m2 | | | |

| | Item | Setting range | | Default (Unity) |
|----------------|---------------|---------------|-----------------------------|-----------------|
| | Display Black | 0 - 100 cd/ | m2 | 0 cd/m2 |
| Setting method | | | | |
| | Button | Setting | Level indicators | Panel display |
| | SETUP/ | А | Lit orange. Flashes at 100. | 10 -100 cd/m2 |

Lit green

0 cd/m2

9 OOTF (Output Side)

BLACK

В

| | Item | Setting range Default (Unity) | | |
|--------------|---------------|---|-----------------|--|
| | System Gamma | (Setting method and range are the same as those for Input.) | | |
| Display Peak | | (Setting method and range are the same as those for Input.) | | |
| | Display Black | (Setting method and range are the same as th | ose for Input.) | |

Repeatedly pressing the + (or -) button displays settings one after another. Settings are not be displayed while FS SEL is lit.

6-11-1. When in Color Correction Mode

When in BALANCE or DIFFERENTIAL Correction Mode, repeatedly pressing the + button displays settings one after another in the following order.

 $\label{eq:constraint} \begin{array}{l} \mbox{Video Level} \rightarrow \mbox{Y Level} \rightarrow \mbox{C Level} \rightarrow \mbox{Setup/Black} \rightarrow \mbox{Hue} \rightarrow \\ \mbox{White R Level} \rightarrow \mbox{White G Level} \rightarrow \mbox{White B Level} \rightarrow \\ \mbox{Black R Level} \rightarrow \mbox{Black G Level} \rightarrow \mbox{Black B Level} \rightarrow \\ \mbox{Gamma R Level} \rightarrow \mbox{Gamma G Level} \rightarrow \mbox{Gamma B Level} \end{array}$

* Pressing the - button displays settings in the reverse order.

When in SEPIA Correction Mode, repeatedly pressing the \pm button displays settings one after another in the following order.

Video Level→Y Level→Sepia Level→Setup/Black→Sepia Color→Gamma G Level

* Pressing the - button displays settings in the reverse order.

6-11-2. When in Clip Mode

6-11-2-1. RGB Clip

With the RGB Clip menu displayed, pressing + (and with FS SEL unlit) displays the following settings. (Pressing the - button displays settings in the reverse order.) The menu items and display order vary depending on the main unit software version.

(FA-9600)

KNEE (RGB CLIP) White Enable \rightarrow KNEE (RGB CLIP) White Output Clip \rightarrow KNEE (RGB CLIP)White Knee Slope \rightarrow KNEE (RGB CLIP) White Knee Point \rightarrow KNEE (RGB CLIP) Black Enable \rightarrow RGB CLIP (Black) Output Clip

(FA-505 with Software Version 2.10 or later) White Output Clip→Black Output Clip

 \rightarrow White Input Clip \rightarrow White Knee Point

 \rightarrow Black Input Clip \rightarrow Black Knee Pont

(FA-505 with Software Version 2.03)

RGB White Clip→RGB Black Clip

 \rightarrow White Knee Point \rightarrow White Knee Slope

 \rightarrow Black Knee Pont \rightarrow Black Knee Slope

(FA-1010/FA-9500/FA-9520 and FA-505 with Software Version 1.21 or earlier) RGB White Clip \rightarrow RGB Black Clip

6-11-2-2. YPbPr Clip

With the YPbPr Clip menu displayed, pressing + (and with FS SEL unlit) displays settings in the following order.

(FA-9600)

YPbPr Enable \rightarrow Y White Clip \rightarrow Chroma Clip \rightarrow Y Black Clip

(Other main units)

Y White Clip→Chroma Clip→Y Black Clip

IMPORTANT

Repeatedly pressing the + (or -) button displays settings one after another. When the end setting is reached, the display returns to the top item. If the control is turned while displaying settings using the + button, the changed setting is displayed. Pressing the + button after that displays the next setting of the setting displayed before the control is turned.

Example: Pressing the + button and adjusting SETUP/BLACK while Y LEVEL (YL 100%) is displayed shows "SB 10%". Pressing the + button after that displays "Hue 0°."

The - button works in the same way but in the reverse direction.

7. Event Memory

7-1. About Event Memory

Event Memory allows you to save FA-10DCCRU settings and load them when needed. EVENT MEMORY can store 100 (1-100) settings, which are saved in the FA-10DCCRU and cannot be used from main units.

IMPORTANT

Note that FA-9600 event data cannot be loaded from other FA event data and vice versa.

In the following situations, event operations are disabled:

♦ While selecting an FS for FA-505, FA-1010, FA-9520 in FA9520 mode or FA-9600 (FS SEL is lit)

To enable event operation, press FS SEL to turn off the button light.

- While in System Settings (GRP ADJ/SYSTEM is flashing) To enable event operation, press GRP ADJ/SYSTEM to exit the System setting mode.
- While Changing Connection Mode (FS SEL is flashing)
 To enable event operation, press SELECT or FS SEL to complete the change, or complete the connection process.
- While Selecting a Unit ID (11-15 UNIT is flashing) To enable event operation, complete the connection process.

7-2. Data Stored in Events

- When connecting an FA-505, FA-1010 or FA-9520 (in FA9520 mode) The current FS settings are saved to events.
- When connecting an FA-9520 (in FA-9500 mode), FA-9500 or FA-9600 The Main Unit settings are saved to events.

7-3. Data Loaded from Events

- When connecting an FA-505(*), FA-1010, FA-9520 (in FA9520 mode) or FA-9600 Event data is loaded to the current FS.
 - * In FA-505 Soft Version 2.00 and later, setting ranges of White Level and Black Level in RGB Clip are different from those in other versions. Values will return to default settings if they exceed the adjustable range due to loading events.
- When connecting an FA-9520 (in FA-9500 mode) or FA-9500 Event data is loaded to the Main Unit.

7-4. Saving Settings to Events

Once all setup settings are completed, save the settings to event memory using the following procedure.



- (1) When connecting to an FA-505, FA-1010, FA-9520 (FA-9520 mode) or FA-9600, select an FS.
- (2) Press <u>SAVE</u>. A beep will sound and an event number is displayed. The event memory number will appear. (To cancel the process, <u>press CLEAR</u>.)
- (3) If you need to change the event number, use + and to select the desired number (Event1 Event100)

Press + and - to increase and decrease the number.

Holding down + or - for several seconds quickly increases and decreases the number. Pressing UNITY of VIDEO LEVEL sets the number to Event1.

(4) Press SAVE. A beep will sound and the current settings are saved to the selected event.

| IMPORTANT | | | | |
|--|-------------------|----------|--|--|
| Note that the following settings are not saved to event memory but are stored in the FA-10DCCRU. | | | | |
| -BYPASS/OPERATE -FS SEL | -FREEZE -SPLIT | -GRP ADJ | | |

7-5. Loading Settings from Events

Follow the instructions below to load settings. Note that the current settings will be lost after settings are loaded.

(1) When connecting to an FA-505, FA-1010, FA-9520 (FA-9520 mode) or FA-9600, select an FS.

- (2) Press the LOAD button. A bleep sounds and the event memory number flashes. (To cancel the operation, press CLEAR.)
- (3) Select the memory number from **Default**, **Event0** to **Event100** using the + and (or VIDEO LEVEL) buttons.

Press + and - to increase and decrease the number.

Holding down + or - for several seconds quickly increases and decreases the number. Pressing UNITY of VIDEO LEVEL sets to **Default**.

(4) Press the LOAD button. After a beep, the data is loaded from the memory.

8. SYSTEM Settings

Press and hold the <u>GRP ADJ/SYSTEM</u> button to enter System Setting mode.

The GRP ADJ/SYSTEM button flashes in this mode.

Pressing the flashing <u>GRP ADJ/SYSTEM</u> button exits System Setting mode and the button functions as a Group ADJ On/Off.

The <u>SELECT</u> button allows you to select a setting. Successively pressing the button scrolls setting items in the following order. When the end setting is reached, the display returns to the top item.

- ① Unity Mode: Unlinked
- 2 Front Buzzer: Enable
- ③ GPI Buzzer: Enable
- ④ Display Mode: Full
- 5 Display BRIGHT: 30%
- 6 GPI 1 No.1-10
- ⑦ GPI 2 No.11-20
- ⑧ GPI 3 No.21-30
- ⑨IP: 192.168.0.101
- 10 Subnet 255.255.255.0
- (1) Gateway 0.0.0.0
- 12 FAN: Normal
- 13 Soft Ver: 4.00
- (4) FPGA1 Ver: 1.00
- 15 FPGA2 Ver. 1.00

Unity Mode: Unlinked (Back to the top)

IMPORTANT

Note that in System Setting mode system settings can be checked and changed without a main unit connection. Other settings cannot be performed in this mode.

8-1. System Settings

| No. | Menu item | Setting buttons | Description |
|-----|----------------------|---------------------|---|
| 1 | Unity Mode | ─, | Unlinked: UNITY is applied only to the relevant FS channel. Linked: UNITY is applied to all linked FS channels. See section 11. "FS Link" for more details. Fixed to Unlinked in FA-9600 |
| 2 | Front Buzzer | ─, + buttons | Disable: Disables the front buzzer. Enable: Enables the front buzzer. |
| 3 | GPI Buzzer | ─, + buttons | Disable: Disables the buzzer for GPI settings. + Enable: Disables the buzzer for GPI settings. |
| 4 | Display Mode | ─, + buttons | Full: Displays settings in detailed format. Simple: Displays settings in short format. |
| 5 | Display BRIGHT | —, 🕂 buttons | Sets front panel brightness. Options are 1.7%, 3.3%, 5%, 6.7%, 8.3%, 11.7%, 15%, 18%, 23%, 30%(default), 37%, 47%, 60%, 80% and 100% |
| 6 | GPI1 No.1-10 | Rotary encoder (*1) | Sets brightness for GPI OUT LED indicators (No1 – 10) from 0 to 255. (Default: 50) |
| 7 | GPI2 No.11-20 | Rotary encoder (*1) | Sets brightness for GPI OUT LED indicators (No11 – 20) from 0 to 255. (Default: 50) |
| 8 | GPI3 No.21-30 | Rotary encoder (*1) | Sets brightness for GPI OUT LED indicators (No21 – 30) from 0 to 255. (Default: 50) |
| 9 | IP: 192.168.0.101 | (Display only) | Displays the FA-10DCCRU IP address. |
| 10 | Subnet 255.255.255.0 | (Display only) | Displays the FA-10DCCRU subnet mask. |
| 11 | Gateway 0.0.0.0 | (Display only) | Displays the FA-10DCCRU default gateway. |
| 12 | FAN ^(*2) | (Display only) | Displays the FA-10DCCRU fan status. Normal: The fan is functioning normally. Stopped: The fan has stopped. |
| 13 | Software Ver. 4.00 | (Display only) | Displays the software version. |
| 14) | FPGA1 Ver. 1.00 | (Display only) | Displays the FPGA1 version. |
| 15 | FPGA2 Ver. 1.00 | (Display only) | Displays the FPGA2 version. |

(*1) See section 8-2. "GPI OUT LED Indicator Brightness Settings."
(*2) When the fan has stopped, turn off the unit power, notify your FOR-A reseller or supplier and change the fan.

8-2. GPI OUT LED Indicator Brightness Settings

| GPI OUT No. | Controller | System menu item (GPI connector) | FA-AUX30 block |
|-------------|---------------|-------------------------------------|-------------------|
| GPI- OUT 1 | VIDEO LEVEL | | |
| GPI- OUT 2 | Y LEVEL | | |
| GPI- OUT 3 | C LEVEL | | |
| GPI- OUT 4 | SETUP/BLACK | ⑦ GPI1 No 1-10 | l eft block |
| GPI- OUT 5 | HUE | (GPI1) | |
| GPI- OUT 6 | WHITE LEVEL R | | |
| GPI- OUT 7 | WHITE LEVEL G | | |
| GPI- OUT 8 | WHITE LEVEL B | | |
| GPI- OUT 9 | BLACK LEVEL R | | |
| GPI- OUT 10 | BLACK LEVEL G | | |
| GPI- OUT 11 | VIDEO LEVEL | | |
| GPI- OUT 12 | Y LEVEL | | |
| GPI- OUT 13 | C LEVEL | | |
| GPI- OUT 14 | SETUP/BLACK | (8) GPI2 No.11-20 | Center block |
| GPI- OUT 15 | HUE | (GPI2) | Contor Stook |
| GPI- OUT 16 | WHITE LEVEL R | | |
| GPI- OUT 17 | WHITE LEVEL G | | |
| GPI- OUT 18 | WHITE LEVEL B | | |
| GPI- OUT 19 | BLACK LEVEL R | | |
| GPI- OUT 20 | BLACK LEVEL G | | |
| GPI- OUT 21 | VIDEO LEVEL | | |
| GPI- OUT 21 | Y LEVEL | | |
| GPI- OUT 23 | C LEVEL | | |
| GPI- OUT 24 | SETUP/BLACK | 9 GPI3 No.21-30 | Right block |
| GPI- OUT 25 | HUE | (GPI3) | |
| GPI- OUT 26 | WHITE LEVEL R | | |
| GPI- OUT 27 | WHITE LEVEL G | | |
| GPI- OUT 28 | WHITE LEVEL B | | |
| GPI- OUT 29 | BLACK LEVEL R | | |
| GPI- OUT 30 | BLACK LEVEL G | | |

* See section 10-4. "GPI1-GPI3 Pin Assignments."

9. Information Display

While setting up the FA-10DCCRU, relevant information is displayed on the 8-digit display in two modes (**Full** and **Simple**). The following Information Display lists show when these information messages are displayed.

Full: Displays information or message in detailed format. Note that while setting menu items, information is displayed in Simple mode and about 2 seconds after entering a setting, it is displayed in Full mode.

Simple: Displays information or message in short format.

* To change the display mode, set under ④ **Display Mode** (See section 8. "SYSTEM Settings.")

9-1. Messages during Main Unit Connection

| (**: Setting values) | | 1 |
|--|---|----------------|
| Displayed message (Full / Simple) | When information/message is displayed: | Refer to |
| Please Choose Direct MU No | FA-10DCCRU is in Direct Connection mode, but no main unit is selected. Connect to a main unit using 1-5, 6-10, 11-15 or 16-20 button. | 6-1-2 |
| ID** | When FA-10DCCRU is connected to a main unit in Unit ID Connection mode, its Unit ID number is displayed. | 6-1-1 |
| Disconnect | FA-10DCCRU is in Unit ID Connection mode, but no main unit is connected. It is also displayed while trying to connect to a main unit. | 6-1-1 6-1-2 |
| ID**: No IP Address Assigned | FA-10DCCRU is trying to connect to a main unit in Unit ID Connection mode, but no IP address has been set for the specified Unit ID number. | 6-1-1 |
| ID**: IP**. **. **. ** (No Name) | When FA-10DCCRU is connected to a main unit in Unit ID Connection mode and no Unit Name is set for the main unit, its IP address is displayed. | 6-1-1 |
| ID**: FA-1010 | When FA-10DCCRU is connected with a main unit, its Unit Name is displayed. | 6-1-1 |
| Direct Mode Connection | While changing the connection mode to Direct . | 6-1-2 |
| Unit Mode Connection | While changing the connection mode to Unit ID . | 6-1-1 |
| No Assigned IP Address | FA-10DCCRU is trying to connect to a main unit in Direct Connection mode by pressing a number button (1-5, 6-10, 11-15 or 16-20), but no IP address has been set for the specified MU ID number. Set an IP address for the MU ID (Unit ID) number. | 6-1-1 |
| Connecting(Direct) | FA-10DCCRU is connecting to a main unit in Direct Connection mode. If the connection time is too short, the message may not appear. | 6-1-1 |
| Connecting (Unit) | FA-10DCCRU is connecting to a main unit in Unit ID Connection mode. If connection time is too short, the message may not appear. | 6-1-2 |
| No Connection Established (IP **. **. **. **) | When the FA-10DCCRU fails to connect to a main unit, the message and specified main unit IP address are displayed. Verify the network connection and settings. Note that the FA-10DCCRU will attempt to connect to the main unit while the message is being displayed. | 6-1 |

| Displayed message (Full / Simple) | When information/message is displayed: | Refer to |
|--|---|-------------|
| Over Limit (IP **. **. **. **) | When FA-10DCCRU is attempting to connect to a main unit, the main unit has connected with 5 remote control units (maximum) and this connection fails. To connect to the main unit, the main unit must disconnect one of the connected remote control units. This message may also be displayed when a disconnection is being improperly performed. Note that it will take 1 minute at most to complete the disconnection process. | 6-1 |
| Connected: IP **.**.**.** (No Name) | When FA-10DCCRU is connected to a main unit in Direct Connection mode and no Unit Name is set for the main unit, its IP address is displayed. The message is cleared when there is no operation within 1 minute. | |
| Connected: FA-1010 | When FA-10DCCRU is connected to a main unit in Direct Connection mode, the message is displayed with its Unit Name (FA-1010) for about 7 seconds. | 6-1 |
| MU is Local Mode | When the FA-10DCCRU is connected to a main unit, but the main unit operates in local mode, this message will appear and the main unit cannot be controlled from the FA-10DCCRU. To control the main unit, change the operation mode to Remote in the main unit. | - |

9-2. Messages during Bypass Setting

| Displayed message (Full / Simple) | When information/message is displayed: | Refer to |
|--------------------------------------|---|-------------|
| By-pass | Displayed when the connected FA-505/FA-1010 is set to Bypass . | 6-2 |
| Operate (*1) | Displayed when the connected FA-505/FA-1010 is set to Operate . | 6-2 |
| By-pass No Support (*1) | Displayed when trying to set to Bypass for the main unit that has no bypass function. | 2 6-2 |

(*1) The display is automatically turned off when there is no operation within 1 minute.

9-3. Messages during FS Selection

| Displayed message (Full) | Displayed message (Simple) | When information/message is displayed: | Refer to |
|-----------------------------|-------------------------------|--|-------------|
| FS* | (Same as in Full mode) | FS number of connected FA-9520 (9520 mode). | 6-3 |
| FS*: FS1 Name | FS* | FS number and FS Name (FS1 Name) of connected FA-505 / FA-1010 / FA-9600. | 6-3 |
| FS*(No Name) | FS* | FS number (without FS Name) of connected FA-505 / FA-1010 / FA-9600. See each main unit operation manual for details on how to assign names to FSs. | 6-3 |
| FS Select No Support | (Same as in Full mode) | Displayed when attempting to select an FS for an FA-9520 (FA-9500 mode) or FA-9500. The display is automatically turned off when there is no operation within 1 minute. | 2 6-3 |

| Displayed message (Full) | Displayed message (Simple) | When information/message is displayed: | Refer to |
|-----------------------------|-------------------------------|---|--------------|
| Default | Default | Displayed when default settings are being loaded. | 7-3 |
| Load **: Event1 | Load ** | Event number and name (Event1 in this example) displayed when loading an event. | 5-3-6 7-3 |
| Load **(No Name) | Load ** | Event number (with no name) displayed when loading an event. | 5-3-6 7-3 |
| Loading | (Same as in Full mode) | Displayed while loading events. | 7-3 |
| Loaded Default (*1) | (Same as in Full mode) | Displayed when an event with default settings has been loaded. | 7-3 |
| Loaded Event** (*1) | (Same as in Full mode) | Displayed when an event with no name has been loaded. | 5-3-6 7-3 |
| Loaded Event**: Event1 | (Same as in Full mode) | Displayed when a named event (Event1) has been loaded. | 5-3-6 7-3 |
| Save **: Event1 | Save ** | Event number and name (Event1) displayed when saving settings to an event. | 5-3-6 7-2 |
| Save **(No Name) | Save ** | Event number (with no name) displayed when saving settings to an event. | 5-3-6 7-2 |
| Saving | (Same as in Full mode) | Displayed while saving settings to events. | 7-2 |
| Saved Event** (*1) | (Same as in Full mode) | Displayed when settings have been saved to an event with no name. | 5-3-6 7-2 |
| Saved Event**: Event1 (*1) | (Same as in Full mode) | Displayed when settings have been saved to a named event (Event1). | 5-3-6 7-2 |

9-4. Messages during Event Memory Operation

(*1) The display is automatically turned off when there is no operation within 1 minute.

9-5. Messages during Freeze Setting

| Displayed message (Full) | Displayed message (Simple) | When information/message is displayed: | Refer to |
|-----------------------------|-------------------------------|--|----------|
| Freeze On | (Same as in Full mode) | Displayed when Freeze is set to On. | 6-4 |
| Freeze Off | (Same as in Full mode) | Displayed when Freeze is set to Off. | 6-4 |

The display is automatically turned off when there is no operation within 1 minute.

9-6. Messages during Split Setting

| Displayed message (Full) | Displayed message (Simple) | When information/message is displayed: | Refer to |
|-----------------------------|-------------------------------|---|-------------|
| Split: Off | Off | Displayed when Split is set to Off. | 6-5 |
| Split: Mode1 | Mode1 | Displayed when Split is set to Mode1. | 6-5 |
| Split: Mode2 | Mode2 | Displayed when Split is set to Mode2. | 6-5 |
| Split: Mode3 | Mode3 | Displayed when Split is set to Mode3. | 6-5 |
| Split No Support | (Same as in Full mode) | Displayed when trying to set Split to a main unit that has no Split function. | 2 6-5 |

The display is automatically turned off when there is no operation within 1 minute.

9-7. Messages during Proc Amp Settings

In Full display mode, text in parentheses are displayed during menu settings. When verifying settings using — and + buttons, information is displayed in Simple display mode.

| Displayed message (Full) | Displayed message (Simple) | When information/message is displayed: | Refer to |
|----------------------------------|-------------------------------|--|-------------|
| Video Level: ***.*% (***.*%) | VL ***% | Displayed when the Video Level setting is changed. | 6-8 |
| Y Level: ***.*% (***.*%) | YL ***% | Displayed when the Y Level setting is changed. | 6-8 |
| Y Level No Support | (Same as in Full mode) | Displayed when trying to change the Y Level setting of a main unit with no Y Level parameters. | 2 |
| Chroma Level: ***.*% (***.*%) | CL ***% | Displayed when the Chroma Level setting is changed. | 6-8 |
| Setup/Black: ***.*% (***.*%) | BL **% | Displayed when the Setup/Black Level setting is changed. | 6-8 |
| Hue: *.*° (*.*°) | Hue *° | Displayed when Hue is changed. | 6-8 |

The display is automatically turned off when there is no operation within 1 minute.

Post-process or Pre-process

| Displayed message (Full) | Displayed message (Simple) | When information/message is displayed: | Refer to |
|-----------------------------|-------------------------------|---|-------------|
| Post-process | (Same as in Full mode) | Displayed when switched to Post-Process. | 6-8 |
| Pre-process | (Same as in Full mode) | Displayed when switched to Pre-Process. | 6-8 |

When Color Correction mode is set to Sepia:

| Displayed message (Full) | Displayed message (Simple) | When information/message is displayed: | Refer to |
|-------------------------------------|-------------------------------|--|-------------|
| Sepia Level : ***.*% (***.*%) | SL ***% | Displayed when the Sepia Level setting is changed. | 6-8 6-9 |
| Sepia Color: *.*° (***.*°) | SC *° | Displayed when the Sepia Color setting is changed. | 6-8 6-9 |

The display is automatically turned off when there is no operation within 1 minute.

9-8. Messages during Color Correction Settings

In Full display mode, text in parentheses are displayed during menu settings.

When verifying settings using - and + buttons, information is displayed in Simple display mode.

See section 6-9. "Color Correction" for more details.

| Displayed message (Full) | Displayed message (Simple) | When information/message is displayed: |
|-----------------------------------|-------------------------------|--|
| White R Level: ***.*% (***.*%) | WR ***% | Displayed when the White R Level setting is changed. |
| White G Level: ***.*% (***.*%) | WG ***% | Displayed when the White G Level setting is changed. |
| White B Level: ***.*% (***.*%) | WB ***% | Displayed when the White B Level setting is changed. |
| Black R Level: ***.*% (***.*%) | BR ***% | Displayed when the Black R Level setting is changed. |
| Black G Level: ***.*% (***.*%) | BG ***% | Displayed when the Black G Level setting is changed. |
| Black B Level: ***.*% (***.*%) | BB ***% | Displayed when the Black B Level setting is changed. |
| Gamma R Level: ***.*% (***.*%) | GR ***% | Displayed when the Gamma R Level setting is changed. |
| Gamma G Level: ***.*% (***.*%) | GG ***% | Displayed when the Gamma G Level setting is changed. |
| Gamma B Level: ***.*% (***.*%) | GB ***% | Displayed when the Gamma B Level setting is changed. |

The display is automatically turned off when there is no operation within 1 minute.

In Full display mode, text in parentheses are displayed during menu settings.

| Displayed message (Full) | Displayed message (Simple) | When information/message is displayed: |
|-----------------------------|-------------------------------|--|
| Curve White (White) | White | Displayed when Gamma Curve is set to White. |
| Curve Center (Center) | Center | Displayed when Gamma Curve is set to Center. |
| Curve black (Black) | Black | Displayed when Gamma Curve is set to Black. |
| Balance | (Same as in Full mode) | Displayed when Color Correction Mode is set to Balance. |
| Differential (DIF) | DIF | Displayed when Color Correction Mode is set to Differential. |
| Sepia | (Same as in Full mode) | Displayed when Color Correction Mode is set to Sepia. |

The display is automatically turned off when there is no operation within 1 minute.

9-9. Messages during Video Clip Settings

In Full display mode, text in parentheses are displayed during menu settings. When verifying settings using — and + buttons, information is displayed in Simple display mode.

See section 6-10. "Clipping Signal Levels" for more details.

| Displayed message (Full) | Displayed message (Simple) | When information/message is displayed: |
|---|----------------------------------|--|
| Clip Off | (Same as in Full mode) | Displayed when Video Clip Mode is set to Off. |
| RGB Clip | (Same as in Full mode) | Displayed when Video Clip Mode is set to RGB. |
| YPbPr Clip (YPbPr) | YPbPr | Displayed when Video Clip Mode is set to YPbPr. |
| White Out Clip: ***.*% (***.*%) | WOC ***% | Displayed when the White Output Clip Level setting is changed. |
| Black Out Clip: ***.*% (***.*%) | BOC ***% | Displayed when the Black Output Clip Level setting is changed. |
| White In Clip: ***.*% (***.*%) | WIC ***% | Displayed when the White Input Clip setting is changed. |
| White Knee Point: ***.* (****.*%) | WKP ***% | Displayed when the White Knee Point setting is changed. |
| Black In Clip: ***.*% (***.*%) | BIC ***% | Displayed when the Black Input Clip setting is changed. |
| Black Knee Point: ***.* (***.*%) | BKP ***% | Displayed when the Black Knee Point setting is changed. |
| Y White Clip: ***.*% (***.*%) | YW ***% | Displayed when the Y White Clip Level setting is changed in YPbPr mode. |
| Y Black Clip: ***.*% (***.*%) | YB ***% | Displayed when the Y Black Clip Level setting is changed in YPbPr mode. |
| Chroma Clip: ***.*% (***.*%) | CW ***% | Displayed when the Chroma Clip Level setting is changed in YPbPr mode. |
| Input Color Space: ****** | (Same as in Full mode) | Displayed when the Input Color Space setting is changed. |
| EOTF: ****** | (Same as in Full mode) | Displayed when the EOTF setting is changed. |
| Output Color Space: ****** | (Same as in Full mode) | Displayed when the Output Color Space setting is changed. |
| OETF: ****** | (Same as in Full mode) | Displayed when the OETF setting is changed. |
| Input Peak Luminance: ****** (******) | (Same as in Full mode) | Displayed when the Input Peak Luminance setting is changed. |
| Input Peak(Variable): ***** (*****) | IV****% | Displayed when the Variable of Input Peak Luminance setting is changed. |
| Output Peak Luminance: ****** (******) | (Same as in Full mode) | Displayed when the Output Peak Luminance setting is changed. |
| Output Peak(Variable): ***** (*****) | OV****% | Displayed when the Variable of Output Peak Luminance setting is changed. |
| Dynamic Range: **.*% | DR **% | Displayed when the Dynamic Range setting is changed. |
| Gamma Range: ***.*% | GRng ***% | Displayed when the Gamma Range setting is changed. |

◆ FA-505 with Software Version 2.10 or later

◆ FA-505 with Software Version 2.03

| Displayed message (Full) | Displayed message (Simple) | When information/message is displayed: |
|--------------------------------------|-------------------------------|--|
| Clip Off | (Same as in Full mode) | Displayed when Video Clip Mode is set to Off. |
| RGB Clip | (Same as in Full mode) | Displayed when Video Clip Mode is set to RGB. |
| YPbPr Clip (YPbPr) | YpbPr | Displayed when Video Clip Mode is set to YPbPr. |
| RGB White Clip: ***.*% (***.*%) | RW ***% | Displayed when the RGB White Clip Level setting is changed. |
| RGB Black Clip: ***.*% (***.*%) | RB ***% | Displayed when the RGB Black Clip Level setting is changed. |
| White Knee Point: ***.* (****.*%) | WKP***% | Displayed when the White Knee Point setting is changed. |
| White Knee Slope: ** | WKS ** | Displayed when the White Knee Slope setting is changed. |
| Black Knee Point: ***.* (***.*%) | BKP ***% | Displayed when the Black Knee Point setting is changed. |
| Black Knee Slope: ** | BKS ** | Displayed when the Black Knee Slope setting is changed. |
| Y White Clip: ***.*% (***.*%) | YW ***% | Displayed when the Y White Clip Level setting is changed in YPbPr mode. |
| Y Black Clip: ***.*% (***.*%) | YB ***% | Displayed when the Y Black Clip Level setting is changed in YPbPr mode. |
| Chroma Clip: ***.*% (***.*%) | CW ***% | Displayed when the Chroma Clip Level setting is changed in YPbPr mode. |
| Input Color Space: | (Same as in Full mode) | Displayed when the Input Color Space setting is changed. |
| EOTF: ****** | (Same as in Full mode) | Displayed when the EOTF setting is changed. |
| Output Color Space: | (Same as in Full mode) | Displayed when the Output Color Space setting is changed. |
| OETF: ****** | (Same as in Full mode) | Displayed when the OETF setting is changed. |
| PQ Range: ****.*% | PQ **% | Displayed when the ST2084 (PQ) Range setting is changed. |
| Dynamic Range: **.*% | DR **% | Displayed when the Dynamic Range setting is changed. |
| Gamma Range: ***.*% | GRng ***% | Displayed when the Gamma Range setting is changed. |

The display is automatically turned off when there is no operation within 1 minute.

◆ FA-1010/FA-9500/FA-9520 and FA-505 with Software Version 1.21 and earlier

| Displayed message (Full) | Displayed message (Simple) | When information/message is displayed: |
|------------------------------------|-------------------------------|---|
| Clip Off | (Same as in Full mode) | Displayed when Video Clip Mode is set to Off. |
| RGB Clip | (Same as in Full mode) | Displayed when Video Clip Mode is set to RGB. |
| YPbPr Clip (YPbPr) | YPbPr | Displayed when Video Clip Mode is set to YPbPr. |
| RGB White Clip: ***.*% (***.*%) | RW ***% | Displayed when the RGB White Clip Level setting is changed. |

| RGB Black Clip: ***.*% (***.*%) | RB ***% | Displayed when the RGB Black Clip Level setting is changed. |
|------------------------------------|---------|--|
| Y White Clip: ***.*% (***.*%) | YW ***% | Displayed when the Y White Clip Level setting is changed in YPbPr mode. |
| Y Black Clip: ***.*% (***.*%) | YB ***% | Displayed when the Y Black Clip Level setting is changed in YPbPr mode. |
| Chroma Clip: ***.*% (***.*%) | CW ***% | Displayed when the Chroma Clip Level setting is changed in YPbPr mode. |

The display is automatically turned off when there is no operation within 1 minute.

◆ FA-9600 (Successive display using - and + is unavailable for HDR settings)

| Displayed message (Full) | Displayed message (Simple) | When information/message is displayed: |
|--|-------------------------------|--|
| RGB Clip | (Same as in Full mode) | Displayed when KNEE(RGB) Clip is selected for Video Clip. |
| WClip Enable | (Same as in Full mode) | Displayed when White Clip of KNEE(RGB) Clip is enabled. |
| WClip Disable | (Same as in Full mode) | Displayed when White Clip of KNEE(RGB) Clip is disabled. |
| RGB White Clip: ***.*% (***.*%) | RW ***% | Displayed when RGB White Clip is changed. |
| Knee Slope: *.** (*.**) | KS * | Displayed when Knee Slope is changed. |
| Knee Point: ***.*% (***.*%) | KP ***% | Displayed when Knee Point is changed. |
| BClip Enable | (Same as in Full mode) | Displayed when RGB Clip(Black is enabled. |
| BClip Disable | (Same as in Full mode) | Displayed when RGB Clip(Black is disabled. |
| RGB Black Clip: ***.*% (***.*%) | RB ***% | Displayed when RGB Black Clip is changed. |
| YPbPr Clip (YPbPr) | YPbPr | Displayed when YPbPr(YCbCr) Clip is selected for Video Clip. |
| Clip Enable | (Same as in Full mode) | Displayed when YPbPr(YCbCr) Clip is enabled. |
| Y White Clip: ***.*% (***.*%) | YW ***% | Displayed when Y White Clip of YPbPr is changed. |
| Y Black Clip: ***.*% (***.*%) | YB ***% | Displayed when Y Black Clip of YPbPr is changed. |
| Chroma Clip: ***.*% (***.*%) | CW ***% | Displayed when Chroma Clip of YPbPr is changed. |
| Dynamic Range Conv.: Bypass (Bypass) | DRC: Bypass | Displayed when Dynamic Range Conv. is set to Bypass. |
| Dynamic Range Conv.: Operate (Operate) | DRC: Operate | Displayed when Dynamic Range Conv. is set to Operate. |
| EOTF: ****** | (Same as in Full mode) | Displayed when EOTF is changed. |
| Input Color Space: ****** | (Same as in Full mode) | Displayed when Input Color Space is changed. |
| OETF: ****** | (Same as in Full mode) | Displayed when OETF is changed. |
| Output Color Space: ***** | (Same as in Full mode) | Displayed when Output Color Space is changed. |
| Gamma Range: ***.*% | GRng ***% | Displayed when Gamma Range is changed. |

| OOTF for HLG Mode: Disable | (Same as in Full mode) | Displayed when Mode of OOTF for HLG is disabled. |
|---------------------------------------|------------------------|--|
| OOTF for HLG Mode: Enable | (Same as in Full mode) | Displayed when Mode of OOTF for HLG is enabled. |
| OOTF: Enable | (Same as in Full mode) | Displayed when OOTF is enabled. |
| OOTF: Disable | (Same as in Full mode) | Displayed when OOTF is disabled. |
| System Gamma(In):*.* (*.*) | SGI *.* | Displayed when System Gamma for OOTF (input) is changed. |
| Display Peak(In):****cd/m2 (****) | DPI **** | Displayed when Display Peak for OOTF (input) is changed. |
| Display Black(In):*** cd/m2 (***) | DBI *** | Displayed when Display Black for OOTF (input) is changed. |
| Inverse OOTF: Enable | (Same as in Full mode) | Displayed when Inverse OOTF is enabled. |
| Inverse OOTF: Disable | (Same as in Full mode) | Displayed when Inverse OOTF is disabled. |
| System Gamma(Out):*.* (*.*) | SGO *.* | Displayed when System Gamma for OOTF (output) is changed. |
| Display Peak(Out):****cd/m2 (****) | DPO **** | Displayed when Display Peak for OOTF (output) is changed. |
| Display Black(Out):*** cd/m2 (***) | DBO *** | Displayed when Display Black for OOTF (output) is changed. |

The setting display (excluding HDR) is automatically turned off when there is no operation within 1 minute.

9-10. Messages during System Settings

Text in parentheses are displayed during menu settings. See section 8. "System Settings" for more details.

| Displayed message (Full / Simple) | When information/message is displayed: |
|--------------------------------------|--|
| Unity Mode: Unlinked | Displayed while Unity Mode is being set to Unlinked. |
| Unity Mode: Linked | Displayed while Unity Mode is being set to Linked. |
| Front Buzzer: Enable | Displayed while Front Buzzer is being enabled. |
| Front Buzzer: Disable | Displayed while Front Buzzer is being disabled. |
| GPI Buzzer: Enable | Displayed while GPI Buzzer is being enabled. |
| GPI Buzzer: Disable | Displayed while GPI Buzzer is being disabled. |
| Display Mode: Full | Displayed while Display Mode is being set to Full. |
| Display Mode: Simple | Displayed while Display Mode is being set to Simple. |
| Display BRIGHT: **% | Displayed while Brightness is being changed. |
| GPI1 No.1-10 | Displayed when entering the GPI1 Brightness setting. |
| GPI2 No.11-20 | Displayed when entering the GPI2 Brightness setting. |
| GPI3 No.21-30 | Displayed when entering the GPI3 Brightness setting. |
| GPI Port* BRIGHT: ** (No.* : **) | Displayed while a GPI OUT LED Brightness is being changed. |
| IP: **. **. **. ** | IP address of FA-10DCCRU. |
| Subnet: **. **. **. ** | Subnet mask of FA-10DCCRU |
| Gateway: **. **. **. ** | Default gateway of FA-10DCCRU |
| FAN: Normal | Displayed when the FA-10DCCRU FAN is functioning normally. |
| FAN: Stopped | Displayed when the FA-10DCCRU FAN has stopped. |
| Soft Ver. *. ** | Software version of FA-10DCCRU |
| FPGA1 Ver. *. ** | FPGA1 version of FA-10DCCRU |
| FPGA2 Ver. *. ** | FPGA2 version of FA-10DCCRU |

Other

| | Displayed with an use of the start for starting staff and the setting set |
|-----------------|---|
| Factory Setting | Displayed when resetting to factory default settings. |
| | See section 12. "Resetting to Factory Default Settings." |

10. GPI Interface

GPI input /output functions can be assigned to GPI ports 1-30 (GPI 1-3 connectors) on the FA-10DCCRU using the supplied FA GPIO Editor software.

GPI input and output functions can be assigned to ports individually or in 10-port groups. (See section 10-4.)

GPI settings can be backed up to and restored from files using Export and Import. (See section -2)

10-1. FA-GPIO Editor

10-1-1. Installing the FA GPIO Editor

Use the supplied CD-ROM to install the FA GPIO Editor software.

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.

| 😸 FA GPIO Editor - InstallSh | ield Wizard | | | | | |
|------------------------------|--|--|--|--|--|--|
| 2 | Welcome to the InstallShield Wizard for FA GPIO Editor | | | | | |
| | The InstallShield(R) Wizard will install FA GPIO Editor on your computer. To continue, dick Next. | | | | | |
| | WARNING: This program is protected by copyright law and international treaties. | | | | | |
| | < Back Next > Cancel | | | | | |

(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.

| B FA GPIO Editor - InstallShield Wizard |
|---|
| License Agreement Please read the following license agreement carefully. |
| Software License Agreement |
| This Software License Agreement is a legally binding agreement between you ('User') and FOR-A Company Limited ("Company'). The software, user manual and all other associated documentation (collectively, "Product") are licensed, not sold, to the User. By installing and using the software, or by using a product of the Company in which the software is installed, User agrees to be bound by all terms and conditions of this agreement, as set forth below. |
| 1. Grant of License |
| a. The Company grants User a license to operate the Product in the manner specified in the user manual and other associated - |
| I accept the terms in the license agreement Print |
| ○ I do not accept the terms in the license agreement |
| T |
| <pre>LInstaiisnieid </pre> <pre><back next=""> Cancel</back></pre> |

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.



(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**.

| H FA GPIO Editor - InstallShield Wizard |
|---|
| Ready to Install the Program The wizard is ready to begin installation. |
| If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard. Current Settings: |
| Setup Type: Typical |
| Destination Folder: C:¥Program Files¥FOR-A¥FA-1010¥ |
| User Information: Name: Company: |
| InstallShield |

(7) When the software installation is complete, the window as shown below will appear. Click **Finish** to finish the installation.

| FA GPIO Editor - InstallSh | ield Wizard |
|----------------------------|---|
| 2 | InstallShield Wizard Completed |
| | The InstallShield Wizard has successfully installed FA GPIO Editor. Click Finish to exit the wizard. |
| 21 | |
| _ | |
| | |
| | < Back Finish Cancel |

10-2. About the FA GPIO Editor

GPI input /output functions can be assigned to 30 GPI ports (GPI 1-3 connectors) on the FA-10DCCRU using the supplied FA GPIO Editor software.

GPI assignments are very flexible: an input or output or both can be assigned to a port, GPI pulse signals can be output inversely and assignments can be performed individually or in groups using Pattern Load.

In addition, GPI settings can be backed up to and restored from files using Export and Import.

10-2-1. Connecting FA GPIO Editor to the FA-10DCCRU

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



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

< Default FA-10DCCRU settings> IP address: 192.168.0.101 User name: fa10dccru Password: foranetwork

| 🖪 EA GRIO Editi | or | | | | | | | | | |
|---------------------------|-----|---|-----|---|---|---|-----|---|------|---|
| | 01 | | | | | | | | | |
| <u>File</u> <u>A</u> bout | | _ | _ | _ | _ | _ | _ | _ | | |
| Unit Select — | | | | | | | | | | ٦ |
| IP Address : | 192 | 1 | 168 | | 0 | | 100 | | Load | |
| <u>U</u> ser Name : | | _ | _ | _ | _ | _ | _ | 1 | | |
| <u>P</u> assword : | | _ | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

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

| 💁 FA GPIC |) Editor | | | | | | | |
|-------------------------|---|---------------------------------------|---------------------------------------|---------------------------------------|------------|------|----------|--|
| <u>File</u> <u>A</u> bo | ut | | | | | | | |
| [Unit Sele | | | | | | | | |
| IP Addre | IP Address: 192 . 168 . 0 . 101 Load | | | | | | | |
| User Nar | me : fa10dccru | | | | | | | |
| Passwor | Passward: | | | | | | | |
| GPI Port : | 1 - 10(FA-AUX30 Left Block) GPI Part 11 | 1 - 20(FA-AUX30 Center Block) GF | I Port 21 - 30(FA-AUX30 Right Blog | ik) | | | | |
| e Pattern | Load | | | | | | | |
| Pattern | | Load | | | | | | |
| cinput - | | | | | - Output - | | | |
| | Setting 1 | Setting 2 | Setting 3 | Setting 4 | | | Polarity | |
| Port 1 | None 🔻 | · · · · · · · · · · · · · · · · · · · | · · · · · · · · · · · · · · · · · · · | × | Port 1 | None | Normal | |
| Port 2 | None 🔻 | × | × | × | Port 2 | None | Normal | |
| Port 3 | None 🔹 | · · · · · · · · · · · · · · · · · · · | · · · · · · · · · · · · · · · · · · · | × | Port 3 | None | Normal | |
| Port 4 | None 🔹 | | · · · · · · · · · · · · · · · · · · · | · · · | Port 4 | None | Normal | |
| Port 5 | None 🔻 | | | × | Port 5 | None | Normal | |
| Port 6 | None 💌 | v | · · · · · · · · · · · · · · · · · · · | × | Port 6 | None | Normal | |
| Port 7 | None 🔻 | × | · · · · · · · · · · · · · · · · · · · | | Port 7 | None | Normal | |
| Port 8 | None 🔹 | · · · · · · · · · · · · · · · · · · · | · · · · · · · · · · · · · · · · · · · | · · · · · · · · · · · · · · · · · · · | Port 8 | None | Normal | |
| Port 9 | None 🔻 | v . | × | v. | Port 9 | None | Normal | |
| Port 10 | None | v | · · · · · · · · · · · · · · · · · · · | × | Port 10 | None | Normal | |
| | | | | | | | | |
| | | | | | | | Apply | |

When the user name and password are not accepted, the following pop-up dialog windows appears. Click **OK** to close the dialog.

Enter the correct user name and password and click Load.

| | × |
|------------------------|---|
| Failed authentication. | |
| ОК | |

10-2-2. Loading and Assigning GPI Functions

As factory default, GPI functions are all set to **None (no function).** Use the FA-GPIO Editor to perform GPI assignments for GPI1 - 3 (Ports 1-30) connectors. 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.

| 💁 FA GPIO | D Editor | | | | | | | |
|-------------------------|--------------------------------------|-----------------------------------|---------------------------------------|---------------------------------------|------------|------|---|----------|
| <u>File</u> <u>A</u> bo | out | | | | | | | |
| (^{Unit Sele} | | | | | | | | |
| IP Addre | ess: 192 . 168 . O | . 101 Load | | | | | | |
| User Na | me : fa10dccru | | | | | | | |
| Passwor | d: ••••• | | | | | | | |
| GPI Port | 1 - 10(FA-AUX30 Left Block) GPI Port | 11 - 20(FA-AUX30 Center Block) Gi | PI Port 21 - 30(FA-AUX30 Right Blo | :k) | | | | |
| r Pattern | Load | | | | | | | |
| Pattern | | - Load | | | | | | |
| cinput - | | | | | - Output - | | | |
| | Setting 1 | Setting 2 | Setting 3 | Setting 4 | | | | Polarity |
| Port 1 | None | • | · · · · · · · · · · · · · · · · · · · | · · · · · · · · · · · · · · · · · · · | Port 1 | None | • | Normal |
| Port 2 | None | • | · · · · · · · · · · · · · · · · · · · | · · · · · · · · · · · · · · · · · · · | Port 2 | None | • | Normal |
| Port 3 | None | • | ~ | · · · · · · · · · · · · · · · · · · · | Port 3 | None | • | Normal |
| Port 4 | None | • | ~ | · · · · · · · · · · · · · · · · · · · | Port 4 | None | • | Normal |
| Port 5 | None | • | | × | Port 5 | None | • | Normal |
| Port 6 | None | • | × | × | Port 6 | None | • | Normal |
| Port 7 | None | • | ~ | ~ | Port 7 | None | • | Normal |
| Port 8 | None | • | | · · · · · · · · · · · · · · · · · · · | Port 8 | None | • | Normal |
| Port 9 | None | · · | T | | Port 9 | None | • | Normal |
| Port 10 | None | • | , v | · · · · · · · · · · · · · · · · · · · | Port 10 | None | • | Normal |
| | | | | | | | | |
| | | | | | | | | Apply |

10-2-3. GPI Input Settings

A combination of GPI input settings (**Setting 1**, **Setting 2** and **Setting 3**) can be assigned to each GPI port.

GPI ports are activated when they are closed with a common port.

(1) First, set **Setting 1**. To disable ports, set **None** under Setting 1.

| Setting 1 setting | Description | Refer to |
|-----------------------------|--|----------|
| None | No function | - |
| MU Select | MU Select allows you to select a main unit under Setting 2 (Unit ID1 - 100) and an FS of the main unit under Setting 3 (FS1 - 10). If set to None under Setting 3, the last controlled FS is selected. Main unit IP addresses must be set for Unit ID numbers in advance. If set to Disconnect under Setting 2, the port can disconnect main units. | 5-3-4 |
| FS Select | FS Select allows you to select an FS under Setting 2, FS1 - FS10 if connecting to FS-1010 and FS1 or FS2 if connecting to FA -9520 (FA-9520 mode). FS Select is inoperative when connecting with FA-9520 (FA-9500 mode) or FA-9500 units. | - |
| FS Link (toggled On/Off) | Allows you to link or unlink an FS under Setting 2. If All Clear is set under Setting 2, all FS channels are unlinked. * FS Link is not supported in FA-9600. | 11 |
| Freeze (toggled On/Off) | Allows you to set Freeze to On or Off. If an FS is selected under Setting 2, the controlled FS is changed to the selected one and a Freeze setting is applied to it. If None is set under Setting 2, a Freeze setting applies to the current FS. | 6-4 |
| Split Mode | Allows you to set Split mode under Setting 2. If an FS is selected under Setting 3, the controlled FS is changed to the selected one and a Split Mode setting is applied to it. If None is set under Setting 3, a Split Mode setting applies to the current FS. | 6-5 |
| CC Mode | Allows you to set Color Correction mode under Setting 2. If an FS is selected under Setting 3, the controlled FS is changed to the selected one and a CC Mode setting is applied to it. If None is set under Setting 3, a CC Mode setting applies to the current FS. | 6-9 |
| Gamma Curve | Allows you to set Gamma Curve under Setting 2. If an FS is selected under Setting 3, the controlled FS is changed to the selected one and a Gamma Curve setting is applied to it. If None is set under Setting 3, a Gamma Curve setting applies to the current FS. | 6-9 |
| Clip | (FA-505 Software Version is 2.00 or later) Allows you to select Clip mode. Off: Turns Off YPbPr Clip and opens the YPbPr Clip setting menu. YPbPr Clip: Turns On YPbPr Clip and opens the YPbPr Clip setting menu. RGB Clip: Opens the RGB Clip setting menu. (FA-505 Software Version is 1.10 or earlier) Allows you to set Clip mode under Setting 2. If an FS is selected under Setting 3, the controlled FS is changed to the selected one and a Clip setting is applied to it. If None is set under Setting 3, a Clip setting applies to the current FS. (FA-9600) | 6-10 |

Detailed Input Settings
| | Allows you to set Clip mode. Off: Exits the Clip menu if in the Clip menu. YPbPr Clip: Opens the YPbPr Clip setting menu. RGB Clip: Opens the RGB Clip setting menu. | |
|----------------------------------|---|-----|
| GPI Lock (toggled On/Off) | Allows you to enable (GPI Lock Off) / disable (GPI Lock On) all GPI inputs. | - |
| Group Adjust (toggled On/Off) | Allows you to enable / disable group adjustment. The group adjustment functions are adjusted in the same manner as those in FA-10DCCRU. | 6-9 |
| Event Load | Allows you to load an event set under Setting 2 (Event1 - 100). | 7 |
| Event Save | Allows you to save settings to an event set under Setting 2 (Event1 - 100). | 7 |

(2) Set Setting 2 and Setting 3 according to Setting 1.

Input Setting List

| Port No. | Setting 1 | Setting 2 | Setting 3 |
|----------|----------------------|----------------------------------|--------------------|
| | None | - | - |
| | MU Select | Disconnect | - |
| | | Unit ID1 - 100 | None FS1 - FS10 |
| | FS Select | FS1 - FS10 | - |
| | FS Link(On/Off) | All Clear FS1 - FS10 | - |
| | Freeze(On/Off) | None FS1 - FS10 | - |
| | Split Mode | Off Mode1 - 3 | None FS1 - FS10 |
| 1 - 30 | CC Mode | Balance Differential Sepia | None FS1 - FS10 |
| | Gamma Curve | Center Black White | None FS1 - FS10 |
| | Clip | Off YPbPr RGB | None FS1 - FS10 |
| | GPI Lock(On/Off) | - | - |
| | Group Adjust(On/Off) | - | - |
| | Event Load | Default Event1 - 100 | - |
| | Event Save | Event1 - 100 | - |

10-2-4. GPI Output Settings

Available GPI output functions are shown below.

Output Setting List

| Port No. | Function | When tally signals are supplied | |
|----------|------------------------------|---|--|
| | None | No tally output | |
| | Follow GPI In Settings | When the input function of the same port is enabled. | |
| | All DC/FAN Alarm (*1) | When one or more cooling fans or power supply units in the main unit and FA-10DCCRU fail. | |
| | FA-10DCCRU FAN Alarm | When the FA-10DCCRU cooling fan fails. | |
| | MU/FA-10DCCRU FAN Alarm | When one or more cooling fans in the main unit and FA-10DCCRU fail. | |
| | MU FAN1 Alarm | When FAN1 in the main unit fails. | |
| | MU FAN2 Alarm | When FAN2 in the main unit fails. | |
| | MU FAN3 Alarm (*2) (*6) | When FAN3 in the main unit fails. | |
| | MU FAN4 Alarm (*2) | When FAN4 in the main unit fails. | |
| | DC Power Alarm (*3) | When one or more power supply units in the main unit fail. | |
| | DC Power1 Alarm (*3) | When Power Supply 1 in the main unit fails. | |
| | DC Power2 Alarm (*3) | When Power Supply 2 in the main unit fails. | |
| Port | Reference Input Video Status | When a reference input video is detected in the main unit. | |
| 1 - 30 | FS1 Input Video Status | When an input video for FS1 is present in the main unit. | |
| | FS2 Input Video Status (*4) | When an input video for FS2 is present in the main unit. | |
| | FS3 Input Video Status (*5) | When an input video for FS3 is present in the main unit. | |
| | FS4 Input Video Status (*5) | When an input video for FS4 is present in the main unit. | |
| | FS5 Input Video Status (*5) | When an input video for FS5 is present in the main unit. | |
| | FS6 Input Video Status (*2) | When an input video for FS6 is present in the main unit. | |
| | FS7 Input Video Status (*2) | When an input video for FS7 is present in the main unit. | |
| | FS8 Input Video Status (*2) | When an input video for FS8 is present in the main unit. | |
| | FS9 Input Video Status (*2) | When an input video for FS9 is present in the main unit. | |
| | FS10 Input Video Status (*2) | When an input video for FS10 is present in the main unit. | |

(*1) The system detects DC power alarm/s, as needed, for the second power supply in the main unit.

(*2) Used for FA-1010 connection.

(*3) Used for main units with redundant power supplies

(*4) Used for FA-505, FA-1010, FA-9520 (in FA-9520 mode) or FA-9600 connection

(*5) Used for FA-505 or FA-1010 connection

(*6) Used for FA-9600 connection

10-2-5. Inverting GPI Output Pulse Polarity

To invert the polarity of GPI output pulse, change **Polarity** from **Normal** to Invert. This function is used in such cases such as when inverting a tally condition, or using output devices that work in inverse logic.

When connecting to FA-AUX30 units, set Polarity to Normal.

10-2-6. Sending GPI Settings

After all GPI settings are finished, click **Apply** to send all settings to the FA-10DCCRU unit. The following message indicates that GPI ports have successfully been set. Click **OK** to close the dialog window.



The following message indicates that GPI settings have failed. Click **OK** to close the dialog window. Verify the network connection and settings, then click **Apply** to reenter settings.



10-2-7. Pattern Load

The Pattern Load function allows you to assign GPIO functions in groups by loading patterns.

<Pattern Load Procedure>

- (1) Click to select a tab from GPI Port 1 10(FA-AUX30 Left Block), GPI Port 11 20(FA-AUX30 Center Block) and Port 21 30(FA-AUX30 Right Block).
- (2) Click on the Pattern box to select a pattern from the dropdown menu.
- (3) Click **Load** to load the pattern. Ten GPI input/output ports are quickly set. Loaded settings can be changed in the same manner as that of assignments. (See section 10-2-3. "GPI Input Settings" and section 10-2-4. "GPI Output Settings.")
- (4) After all GPI settings are finished, click **Apply** to send the settings to the FA-10DCCRU unit. If a "Successful settings" message appears, GPI settings are complete.

See section 10-2-8. "GPI Pattern List" for details on GPI patterns.

GPI settings can be backed up to and loaded from files in the computer.

Select File > Export in the menu bar.

| 💁 FA GPIO Editor | | | | |
|------------------|------------|--------|--|--|
| File | File About | | | |
| | Import | Ctrl+O | | |
| Export | | | | |
| | | | | |
| | Exit | Alt+X | | |

Specify a file name and location to save the settings. The default file name is FA-10DCCRU GPIO.csv. Change the file name, as needed, then click **OK**.

10-2-9. Importing GPI Settings from Files

Select **File** > **Import** in the menu bar.

| 🧕 FA GPIO Editor | | | | |
|------------------|--------|--------|--|--|
| File About | | | | |
| | Import | Ctrl+O | | |
| Export | | | | |
| | Exit | Alt+X | | |

Specify the file name and location.

Verify settings in the FA GPIO Editor, then click **Apply** to send the settings to the FA-10DCCRU unit. (See section 10-2-6. "Sending GPI Settings.")

10-2-10. Verifying GPIO Editor Version

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

| FA GPIO Editor | |
|---|---|
| Copyright © 2014 FOR-A Company Limited. | |
| Version. 2.0 | Å |
| | - |
| | ж |

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

10-3. GPI Pattern List

The following available GPI patterns are mainly for FA-AUX30 use. Buttons and their functions shown in each pattern represent a button block of FA-AUX30 units.

♦ MU Select



| Button function | Description | | |
|-----------------|---|--|--|
| MU ID1 - 10 | Used for MU selection by specifying ID1 – ID10. The LED lights while an MU is connected. | | |

FS Select

| FS1 | FS2 | FS3 | FS4 | FS5 |
|-----|-----|-----|-----|------|
| FS6 | FS7 | FS8 | FS9 | FS10 |

| Button function | ction Description | |
|-----------------|---|--|
| FS1 - 10 | Used for FS selection from FS1 - FS10. The LED lights while an FS is being controlled. | |

FS Link Select

| FS1 | FS2 | FS3 | FS4 | FS5 |
|------|------|------|------|------|
| Link | Link | Link | Link | Link |
| FS6 | FS7 | FS8 | FS9 | FS10 |
| Link | Link | Link | Link | Link |

| Button function | Description | |
|-----------------|---|--|
| FS1 – 10 | Used to enable FS Link. The LED lights while an FS is linked. | |
| Link | When the FS cannot be linked, an error beep sounds. | |

♦ FREEZE

| FS1 | FS2 | FS3 | FS4 | FS5 |
|--------|--------|--------|--------|--------|
| FREEZE | FREEZE | FREEZE | FREEZE | FREEZE |
| FS6 | FS7 | FS8 | FS9 | FS10 |
| FREEZE | FREEZE | FREEZE | FREEZE | FREEZE |

| Functions | Description |
|--------------------|---------------------------------------|
| FS1 – 10 Freeze | Used to set Freeze On/Off on each FS. |

♦ Split

T

| Mode Off | Mode1 | Mode2 | Mode3 | |
|-------------|-------|-------|-------|--|
| | | | | |

| Functions | Description |
|---------------------|--------------------------------|
| Mode Off Mode1-3 | Used for Split mode selection. |

10-4. GPI1-GPI3 Pin Assignments



Pin assignments (25-pin D-sub, female)

| Din No | Signal | | | | | | | | | |
|----------|-----------------------|---------------------|---------------------|--|--|--|--|--|--|--|
| FILLINO. | GPI1 | 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 OUT 16 (Output) | GPI OUT2 6 (Output) | | | | | | | |
| 15 | GPI OUT 7 (Output) | GPI OUT 17 (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 | | | | | | | | | |



10-6. 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.





IMPORTANT

Note that the allowed current for each GPI output circuit is **50 mA** and the external power supply should be **5-24 VDC**.

11. FS Link

The FS Link function allows you to simultaneously apply the same settings (Proc Amp, Color Correction and Clip) to all linked FS channels in FA-505, FA-1010 or FA-9520 (FA-9520 mode). This function is available only when FS links are enabled. FS link settings can be performed by GPI inputs sent from an FS-AUX30 or other GPI device/s to the FA-10DCCRU. FS Link is not supported in FA-9600.

11-1. Requirements for FS Link

- 1. The same Color Correction mode is set in linked FS channels.
- 2. The same Clip mode is set in linked FS channels.

FS channels cannot be linked if the above two requirements are not met. In addition, Color Correction and Clip modes cannot be changed in FS-linked channels. To change these modes, set FS link to off.

11-2. Notes on FS Link

An FA-10DCCRU always selects and controls an FS when connecting an FA-505, FA-1010 or FA-9520 (FA-9520 mode).

If the FS is not linked, settings are applied only to the FS.

If the FS is linked, settings are applied simultaneously to all linked FS channels.

- * FS links can be set only by GPI inputs sent from GPI devices such as an FA-AUX30.
- * Refer to section 10-2-3. "GPI Input Settings" for details on how to assign the FS Link function to GPI inputs.
- * Refer to section 16-9. "Color Correction" for details on Color Correction mode.
- * Refer to section 6-10. "Clipping Signal Levels" for details on Clip mode.
- * Refer to section 6-3. "Selecting an FS Channel" for details on FS selection.

To prevent unexpected operational errors, assigning "FS Select" functions to GPI inputs is recommended.

11-3. FS Link Examples

Assume that the main unit is FA-1010 and that FS1 - FS10 are set as shown below.

- Color Correction mode is set to **Balance** in FS1 FS8.
- Clip mode is set to **Off** in FS1 FS8.
- FS1 FS5 are linked On. FS6 FS10 are linked Off. (See the figure below.)
- Color Correction mode is set to **Differential** in FS9.
- Clip mode is set to **RGB** in FS10.

| FS1 | FS2 | FS3 | FS4 | FS5 |
|------|------|------|------|------|
| Link | Link | Link | Link | Link |
| On | On | On | On | On |
| FS6 | FS7 | FS8 | FS9 | FS10 |
| Link | Link | Link | Link | Link |
| | Off | Off | Off | Off |

In conditions described in the previous page, the following five procedures will change FS states as shown below.

1. If FS1 is selected:

If any value in Proc Amp, Color Correction or Clip is increased or decreased, the difference is applied to all FS channels FS1 – FS5 due to FS link. Same as above if FS2, FS3, FS4 or FS5 is selected.

Color correction and Clip modes cannot be changed in FS1- FS5, because they are linked.

- If FS6 is selected: If any value in Proc Amp, Color Correction or Clip is changed, the new value is applied only to FS6. Same as above if FS7, FS8, FS9 or FS10 is selected.
- If setting FS7 link to On (by pressing the FS7 Link button in the previous page): FS7 link is enabled because Color Correction and Clip modes settings in FS7 are the same as those in FS1-FS5. The LED indicator of the FS7 Link button turns on. Same as above for FS6 and FS8.
- If FS9 Link is set to On (by pressing the FS9 Link button in the previous page): FS9 linking is **not** enabled because Color Correction and Clip mode settings in FS9 are different from those in FS1-FS5.
 A beep sounds and the FS9 link fails.
- If FS10 Link is set to On (by pressing the FS10 Link button in the previous page): FS10 linking is **not** enabled because Color Correction and Clip mode settings in FS10 are different from those in FS1-FS5. A beep sounds and the FS10 link fails.

12. Resetting to Factory Default Settings

To reset FA-10DCCRU to factory settings, power on the FS-10DCCRU by simultaneously pressing BLACK and SEPIA.

When the reset process starts, the message "Factory Setting" appears on the front panel. Wait for about 10 seconds, power the unit off then on again.

IMPORTANT

Ensure that this operation resets all parematers saved in the FS-10DCCRU to factory default settings.

It is recommended to back up your current data to files before resettig your FA-10DCCRU. (See section 5-3-7. "Backup & Restore.")

13. Specifications and Dimensions

13-1. Unit Specifications

| Interfaces | |
|-------------------|---|
| TO MU | 10/100/1000 BASE-T, RJ-45 x 1 port |
| GPI | 25-pin D-sub (female) x 3, 30 inputs and 30 outputs |
| Temperature | 0°C to 40°C |
| Humidity | 30% to 90% (no condensation) |
| Power | 100V - 240V AC ±10%, 50/60Hz |
| Power Consumption | 21VA (11W) (at 100 V AC) 24VA (11W) (at 200 V AC) |
| Dimensions | 430 (W) x 44 (H) x 140 (D) mm |
| Weight | 2.4 kg |
| Consumables | Power supply unit: Replace every 5 years |
| | Cooling fan: P1467-1, replace every 5 years |
| Accessories | Operation Manual (CD-ROM), AC cord, Rack mount brackets |

13-2. External Dimensions

(All dimensions in mm.)





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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.

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