HD

MODEL
HLM-1705WR

**FULL HD MULTI FORMAT
LCD COLOR MONITOR**

OPERATION MANUAL

Ikegami

CAUTION

**RISK OF ELECTRIC SHOCK
DO NOT OPEN.**

SA 1965

SA 1966

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

SA 1965
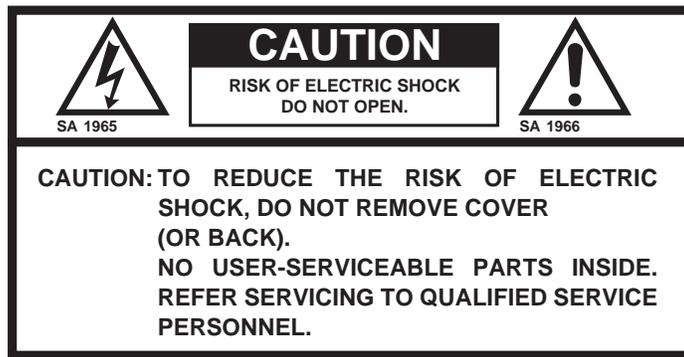
The lightning flash with arrowhead inside a triangle is intended to warn the user that parts inside the product are dangerous and many cause electric hazards.

SA 1966

The exclamation mark inside a triangle is intended to inform users that important operating and servicing instructions are provided with the equipment.

WARNING: FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS (REFER TO SERVICE LITERATURE).

DECLARATION of CONFORMITY:

The "CE" mark means the products as mentioned below will meet the intent of the following Directives and Standards.
Inrush current according to EN55103-1 Annex B is as follows.
HLM-1705WR : 0.11A r.m.s. (the average half-cycle r.m.s. inrush current, on initial switch-on.)
     : 0.34A r.m.s. (the average half-cycle r.m.s. inrush current after a supply interruption of 5 s.)
Directives : 93/68/EEC, 2004/108/EC, 92/31/EEC for EMC (electromagnetic compatibility)
     2006/95/EC for Low voltage (Safety)
Standards : HLM-1705WR: EN55103-1-E4, EN55103-2-E4, EN60950-1

WARNING: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR WATER.

Disposal of used Electric and Electronic Equipment
(Applicable in the European Union and other European countries with separate collection systems)

This symbol on the product, or in the related documents in the package, indicates that this product shall not be treated as normal household waste. Instead, it should be taken to a proper applicable collection point or depot for the recycling of electric and electronic equipment.

By ensuring this product is disposed of correctly, you will help prevent possible negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources.

For more detailed information about recycling of this product, please contact your local city authority, your household waste disposal service or the place where you purchased the product.

NOTE:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the 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.

CAUTION;

ANY CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PART RESPONSIBLE FOR COMPLIANCE COULD VOID THE USERS AUTHORITY TO OPERATE THE EQUIPMENT.

IMPORTANT SAFETY INSTRUCTIONS

1. General

1) Read all instructions provided.
2) Save these instructions for future use.
3) Follow all warnings and instructions marked on the television equipment.
4) Never insert objects of any kind into this television monitor through cabinet slots as they may come in contact with dangerous voltage points or short out parts, resulting in fire or electric hazards, Never spill liquid of any kind on the television monitor.
5) Do not attempt to service this television monitor yourself as operating or removing covers many expose you to dangerous voltage or other hazards, Refer all servicing to qualified service personnel.
6) Do not use attachments not recommended by the television equipment manufacturer as they may result in the risk of fire, electric shock, or injury to persons.
7) This television monitor has been preadjusted to meet the respective broadcasting standard signals. So, it cannot be used with the signals of different broadcasting standards.
8) When keeping or transporting the unit for a long time, pack it in the supplied carton or equivalent.

2. Power supply

1) This television equipment should be operated only from the type of power source indicated on the marking label.
2) This television equipment is provided with a three-wire grounding type plug with a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet.
   Do not defeat the safety purpose of the grounding-type plug.
3) When connecting and disconnecting the power cable, be sure to hold the plug.
4) Do not allow anything to rest on the power cord. Do not place this television equipment where the cord will be abused by persons walking on it.

5) For added protection for this television equipment during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet.
   This will prevent damage to the equipment due to lightning and power-line surges.
6) Do not overload wall outlets and extension cords as this can result in fire or electric shock.

3. Usage and location

1) Do not use this television equipment near water - for example, near a bath tub, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, or the like.
2) Do not place this television equipment on an unstable cart, stand, or table. The television equipment may fall, causing serious injury to children and adults, and serious damage to the equipment. Use only with a cart or stand recommended by the manufacture, or sold with the television equipment. Wall or shelf mounting should follow the manufacture's instructions, and should use a mounting kit approved by the manufacture.
   Television equipment and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the equipment and cart combination to overturn.

3) Slots and openings in the cabinet and the back or bottom are provided for vitiation, and to ensure reliable operation of the monitor and to protect it from overheating, these openings should never be blocked or covered. The openings should never be blocked by placing the television equipment on a bed, sofa, rug, or other similar surface. (This television equipment should never be placed near or over a radiator or heat register.) This television equipment monitor should not be placed in a built-in installation such as a bookcase unless proper ventilation is provided.

IMPORTANT SAFETY INSTRUCTIONS

4) Avoid operating or placing (keeping) in a hot (+40℃ or over) or cold (less than 0℃), high vibration, or dusty place. Avoid operating or storing in a place exposed to direct sunlight.

5) If an image of extremely high brightness is displayed on the screen for a long time, the panel may get burned in.

4. Cleaning

1) Unplug this television equipment from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

2) Do not use thinner or benzene for cleaning. Otherwise, the cabinet may deform or the paint may peel away.

5. Repair

1) Unplug this television monitor from the wall outlet and refer servicing to qualified service personnel under the following conditions:

a. When the power cord or plug is damaged or frayed.

b. If liquid has been spilled into the television.

c. If the television monitor has been exposed to rain or water.

d. If the television does not operate normally by following the operating instructions.
Adjust only those controls that are covered by the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the television monitor to normal operation.

e. If the television monitor has been dropped or the cabinet has been damaged.

f. When the monitor exhibits a distinct change in performance - this indicates a need for service.

2) When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacture that have the same characteristics as the original part.
Unauthorized substitutions may result in fire, electric shock, or injury to persons.

3) Upon completion of any service or repairs to this monitor, ask the service technician to perform routine safety checks to determine that the television is in safe operating condition.

4) For repair service, contact **Ikegami**'s authorized sales representative or **Ikegami** service desk directly.

PRECAUTIONS FOR OPERATIONS

1) Never let this unit fall or subject it to strong shock.

2) Do not remove the cabinet unless necessary. High-voltage parts are contained in the cabinet and they are very dangerous if you touch then. Only qualified service engineers are allowed to adjust the internal parts of the cabinet.

3) This color monitor has been adjusted to signals conforming to each broadcasting standard. It cannot be used for signals of different broadcasting standards. Be sure to operate the color monitor within the voltage range marked on its back.

4) If cabinet or screen is dirty, wipe with soft cloth. At this time, avoid using benzene or thinner, otherwise the paint may peel away.

5) Note that, if video signals with high luminance are monitored on the LCD panel over a long period of time, the panel may burn in the image.

6) The socket-outlet shall be installed near the equipment and shall be easily accessible.

7) Avoid using or storing this unit in the following places:
   ・ Hot (+40℃ or more) or cold (0℃ or less) places, especially where this unit may be exposed to the direct rays of the sun.
   ・ Humid and dusty places.
   ・ Places where there is considerable vibration.
   ・ Places exposed to rain or water.
   ・ When storing or transporting this unit, pack it in the supplied carton or equivalent.

8) If no image can be monitored even after performing user adjustment or the unit appears faulty, do not dismantle this unit by yourself. In such cases, contact the **Ikegami** service desk.

9) Should this unit fail within one year after delivery, it will be repaired free of charge unless the malfunction was caused by mishandling or misuse of the user. However, the fuses are not covered by the warranty.

10) The specifications and appearance of this unit may be subject to change for further improvement without prior notice.

Cautions for Rack-Mount.

A) Elevated Operating Ambient -   If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (Tma) specified by the manufacturer.

B) Reduced Air Flow - Installation   of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.

C) Mechanical Loading -   Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

D) Circuit Overloading - Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

E) Reliable Earthing - Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips).

Precautions Upon Use

In order to use the monitor safely, read through this manual and pay attention to the following points in particular.

1. **Do not use any power supply other than the specified one (AC).**

2. **Do not give a shock to the monitor.**

   Be very careful to keep the monitor from shocks because glass is used inside the LCD.

3. **Do not use or store the monitor in the following places.**

   Place where the ambient temperature is out of spec

   When installing the monitor on a monitor shelf, switcher table, rack, etc., make sure in advance that the temperature of the installation location is within the specified range.

   In the case of an outdoor setup, even if the ambient temperature is within the specified range, the inside of the monitor may be heated by direct sunlight. Therefore, keep radiation in mind. (Avoid direct sunlight.)

   Never block the air outlet at the rear of the monitor and the air inlet at the side. Make sure in particular that a blackout curtain or the like does not block the air outlet.

   Place exposed to rain, snow or high humidity

   Use of the monitor in such a place will cause electric leakage or failure.

4. **Please avoid direct sunlight on the screen.**

   Exposure of the LCD screen to direct sunlight for a long time will degrade the film. Therefore be careful of direct sunlight when using the monitor outdoors.

5. **Caution for the panel surface**

   Be careful not to touch the LCD panel front surface with bare hands, unless necessary. When wiping the dust off the surface, use soft, dry cloth and take care not to rub the surface strongly. Do not use thinner or benzene.

6. **Do not touch liquid crystal leaked from the monitor's display surface.**

   If the monitor's display surface is accidentally broken and the liquid crystal leaks, be careful never to put the liquid in your mouth, inhale it and allow it on your skin. If the liquid gets into your eye or mouth, immediately rinse it with water and get medical attention.

   If the liquid contacts your skin or clothes, immediately wipe it off using alcohol or the like and wash the stained spot with soap and water. Do not leave the liquid intact, because otherwise your skin or clothes may be affected.

7. **Do not display the same pattern for a long time.**

   If the monitor's display surface is accidentally broken and the liquid crystal leaks, be careful never to put the liquid in your mouth, inhale it and allow it on your skin. If the liquid gets into your eye or mouth, immediately rinse it with water and get medical attention.

   If the liquid contacts your skin or clothes, immediately wipe it off using alcohol or the like and wash the stained spot with soap and water. Do not leave the liquid intact, because otherwise your skin or clothes may be affected.

8. **Avoid operation at low temperatures.**

   Note that the backlight function will be degraded at low temperatures, leading to shorter service life. It is recommended to use the monitor at normal temperatures.

9. **Caution for condensing.**

When the monitor is used in the condition where temperature abruptly changes, the surface of outside and the inside of monitor are possible to get condensed.

And if it is used leaving condensed, it can cause deterioration of quality and trouble.

If the device is condensed, please do not turn on the power until waterdrop is disappeared completely.

10. **Avoid operation or storage in a place exposed to corrosive gas.**

Operation or storage in a place where any corrosive gas such as sulfur dioxide, hydrogen sulfide, chlorine or ammonia is generated may lead to a significant reduction in the monitor service life. It may also cause failure or electric leakage.

Also avoid using the monitor in a location exposed to high salty wind.

11. **Do not use this monitor for such applications as space appliance, nuclear control system as any medical equipment involving human life.**

12. **Considerations when storing the monitor in a hard carrying case.**

The LCD panel used for this monitor has a very delicate structure that is composed of multiple layers of expensive films. Therefore, the following considerations must be taken into account when storing the monitor in a hard case.

・ If the monitor that has been stored at low temperature for a long time is suddenly exposed to high temperature environment, dew condensation may occur. When you store the monitor in the case for a long time, **make sure to store at a temperature near room temperature** and avoid a sudden temperature change when taking out the monitor from the case.

・ If you are planning to store the monitor in the case for a long time, make sure to **replace silica gels, etc. in a regular basis and store the monitor at proper humidity** as the humidity in the case can cause corrosion.

・ If the monitor is stored in the case with water droplets or condensation for a long time, the humidity stays in the case and can cause corrosion. **Make sure to allow the monitor to dry well before storing in the case**.

Quality of LCD panel

Note that because the LCD panel mounted on the monitor is manufactured through the use of high-precision technology, 99.99% or more of the pixels are effective, but 0.01% or less of them may be lacking in brightness or lit up constantly.

Internal fan

The internal fan does not run constantly but automatically starts running when the internal temperature of the monitor rises. When the environmental temperature is low, the internal fan may not be running, which indicates no fault condition.

At power-on, the fan rotates for a moment for checking its own performance.

In the case of outdoor use, even if the ambient temperature is low, the fan may start running when the internal temperature of the monitor rises.

Suppose that the fan does not operate properly at power-on or at high temperatures. In such case, the message "FAN ERROR!" will appear at the top of the screen.

The brightness of the backlight may be reduced in order to keep the internal temperature of the motor from rising.

If the message "FAN ERROR!" is displayed, contact your dealer or **Ikegami** service desk.

Warranty

If the product should fail within one year from the date of delivery in spite of the proper use, the manufacturer will repair the product free of charge. Even if the product is covered by the warranty, however, the customer will be charged for labor and parts in the following cases.

1. Failure and damage caused by the following:
   - ・Improper use
   - ・Repair or modification performed by the customer
   - ・Transportation, transfer, falling, etc. after the purchase of the product
   - ・External factors such as natural disasters and over-voltage
2. LCD panel burn-in and aged deterioration (burn-in, change in brightness, increase in bright points and flashing, etc.)
3. D Scratch or dirt on the entire surface of panel, or damage, discoloration, and deterioration of the chassis
4. Replacement of the accessories and fuse

   If no image comes out in spite of routine adjustment or if the product should seem to fail, contact your dealer or **Ikegami** service desk.

Accessories

The monitor comes with the following accessories. Be sure that they are included.

1. Operation manual: 1 copy
2. Parallel remote connector: 1 set
3. Power cable: 1 pc.

* Specifications and external dimensions are subject to change without prior notice.

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HLM-1705WR Full HD Multi-Format LCD Color Monitor

1．Outline

1-1．Outline

This monitor has a 17-inch full HD LCD panel aiming to reduce the thickness, weight and power consumption, and is a HDTV/SDTV multi-format compatible LCD color monitor that is intended to be used in various spaces such as sub-control room, edit and monitor shelf, transmission control desk, and relay mobile.

This monitor is compatible with the functions and operation of the HTM/TM series CRT monitors, so that it can realize the functions necessary for a broadcasting service monitor with conventional operation..

1-2．Features

(1) High performance LCD panel

The Full HD (1920 x 1080 dots) 10-bit liquid crystal panel features high brightness, high contrast, wide viewing angle, quick response and good color reproducibility. Accordingly, realistic images can be displayed with higher-fidelity gradation but without having to resize the input pixels.

(2) Multi-format

The monitor supports various broadcasting formats.

・480i/59.94 (NTSC)	・1080p/24, 23.98
・575i/50 (PAL-B)	・1035i/60, 59.94
・1080psF/30	・1080i/60, 59.94
・1080psF/25	・1080i/50
・1080psF/24, 23.98	・720p/60, 59.94
・1080p/60, 59.94	・720p/50
・1080p/50	・720p/30, 29.97
・1080p/30, 29.97	・720p/24, 23.98 (*1)
・1080p/25	・720p/25

(*1) SDI input only

(3) Diverse input sources

SDI signal (3G/HD/SD) 2 input, analog composite signal 1 input are included as standard.

(4) Compatibility with embedded audio

It supports the embedded audio as a standard, and automatically recognizes the embedded audio signal that is multiplexed to 3G-SDI signal, HD-SDI signal, and SD-SDI (4:2:2) signal. It also enables the audio output from the built-in speaker. (You can select which pair channels to be output on the MENU.)

The monitor also has a standard embedded audio level meter display on the screen.

(5) Remote control functions

The monitor can be remote-controlled with the use of three remote control functions. Depending on the place of installation and type of operation, the parallel, serial mode can be used.

Besides the remote control with a conventional parallel, an input interface of the serial remote controller SRC-400 (optional) that can be remote controlled by RS485 is equipped as a standard.

The SRC-400 allows you to remote control up to 96 monitors individually by connecting the monitors with loop-through using RS485. In addition, since the Ethernet connection between a controller and PC is possible, you can individually control the monitors that are connected to RS485 via SRC-400 from the PC screen.

(6) Built-in markers

4:3 (16:9 mode), 13:9, 14:9, 15:9, 16:9 (4:3 mode), 1.85:1 (16:9 mode) and 2.35:1 (16:9 mode) line markers can be displayed.

The monitor can also get the 1%-stepwise safety marker displayed in the range of 80-99% with respect to the line marker area.

The safety markers over the effective screen can be equally preset 1% by 1% in the range of 80-99%.

The monitor also comes standard abundantly with five-part split and ten-part split crosshatch markers useful for location alignment.

(7) User marker display function

Up to 100 types (10 scenes x 10 types) of user markers can be plotted. Also up to 10 types of lines or BOX markers per 1 scene can be plotted to a given positions and sizes on a pixel basis, and 10 scenes can be set.

The line and box drawing settings can be easily made with not just the switch but also the USB mouse. Resulting complicated data may also be saved on a USB memory so that the data can be copied to another monitor or stored in a PC.

This function is optimum for positioning in editing the layout and its display for various types of information such as teleshopping.

* It is patented.

(8) Shadow function

The shadow function is to shade the area other than a 4:3 (16:9 mode), 13:9, 14:9, 15:9 or 16:9 (4:3 mode) marker area on images. The shadow contrast can be set at 0%, 20%, 40% or 60% on the MENU. The use of this function allows you to instantly visualize the image area when converting images with an aspect ratio of 16:9 to those with an aspect ratio of 4:3 or vice versa.

(9) Various built-in test signals

As color bar signal, pluge signal, grayscale signal with pluge, window signal, 20% gray signal, -6.8% to 0% & 100% to 109% signals are built in as a standard inside the monitor, various adjustment tasks can be performed by the monitor itself.

(10) Time code display function

It is possible to display the time code (VITC) multiplexed into HD SDI signal on the screen.

The display comes in two sizes, large and small, and its brightness in three levels.

(11) Waveform monitor/Vector scope display functions

Waveform monitor of brightness signal can be displayed. The display comes in two sizes, NORMAL and SMALL, and its brightness in four levels. The waveform can also be displayed in any of three selectable positions and in one of two colors: GREEN and WHITE. The vector scope can also be readily displayed.

(12) Display comparison function by using 2 split screens or by switching between 2 full screens

This is a convenient function to display the still pictures that were captured in advance and the videos that are currently being input with two-screen display on the both sides of screen. This function is useful to adjust and align the multiple cameras.

(13) Dot-by-dot display function

All the picture elements of an input signal are displayed 1:1 according to the pixels of the panel without scaling the incoming signal (enlarging or reducing the input signal according to the panel pixels).

This function is useful in checking transmitted input signals for pixel defects, camera CCD's scratches, etc.

Only 1080i/p signal will be displayed at normal scan status of 1:1.

(14) External memory function

Various data (including the MENU settings, the PRESET data) can be stored on the USB memory for data management on the PC. All these data can be copied onto another monitor.

* In case the data is to be copied onto another monitor, care should be taken as the PRESET data on individual monitors are different in their data types.

(15) USB mouse control

By connecting a commercially available USB mouse to the USB terminal of this monitor, it is possible to perform various adjustments including the "MENU setting," "PRESET data setting," "Input signal switching," and the "Front switch setting" through the use of a mouse. Remote operation of the monitor at a distant position is possible by using a commercially available wireless mouse.

Use of the scroll wheel function of the mouse has significantly improved the user-friendliness of the monitor for making adjustment of various data such as color temperature.

(16) Downmix function

Among the embedded audio 8 channels, 5.1 channel surround audio channel (Lm, Rm, C, Ls, and Rs) has been selected for the stereophonic audio function at the downmix mixing ratio specified by ARIB and ISO/IEC.

You can output the downmixed audio to the speaker that is built in the monitor.

(17) Auto Setup Function for Color Temperature

The color temperature, which was difficult to adjust before is simply and automatically adjustable in each steps without PC, connecting this ASP-100 (Ver.1 or later) Auto Setup Prove to the USB port on monitors.

And it is also able to be used as the measuring instrument for measuring color temperature (color point of x, y) and contrast.

(18) 2x/4x zoom function

This function enlarges the input signal 2x and 4x without scaling, and allows you to check the scratch on the CCD of camera and fine details of the image.

(19) Image & TEST signal MIX function

While the image is displayed, "pluge signal of -2%/0%/+2%"can be displayed at the same time on the corner of the screen (small enough not to disturb the image) so that you can check if there is no "black sun" effect caused by the brightness adjustment while looking at the image.

The "brightness signal of 100 to 109%" is also displayed at the same time so that you can check if the signal of 100% to 109% is not saturated when it is input during the contrast adjustment.

(20) White balance adjustment assist function

When adjusting white balance, each switch on the front can be assigned to the direct switch for the white balance adjustment, which allows you to adjust the white balance quickly and easily.

When you remote control the white balance adjustment using a USB mouse, various adjustment buttons (BRIGHTNESS, CONTRAST, R/G/B BACKGROUND, R/G/B GAIN) are displayed on the screen with GUI. The white balance can be adjusted with ease as if you have an operation panel at hand.

(21) UMD/IMD display with TSL protocol

A function is used to integrally control the UMD/IMD display using "TSL UMD protocol V3.1".

Material display (alphanumeric) and TALLY display can be displayed.

Up to 32 devices can be integrally controlled per one line using RS485.

By increasing the number of lines, you can set the IDs and perform individual control for up to 96 devices.

(22) UMD/IMD display with user display

Sets a material name (alphanumeric) with up to 8 characters to individual monitor for each input (SDI-A/SDI-B/VBS) and displays the preset material name with UMD/IMD display when the input channel is switched.

2. Names of parts and their Functions

2-1. Front Controller Parts
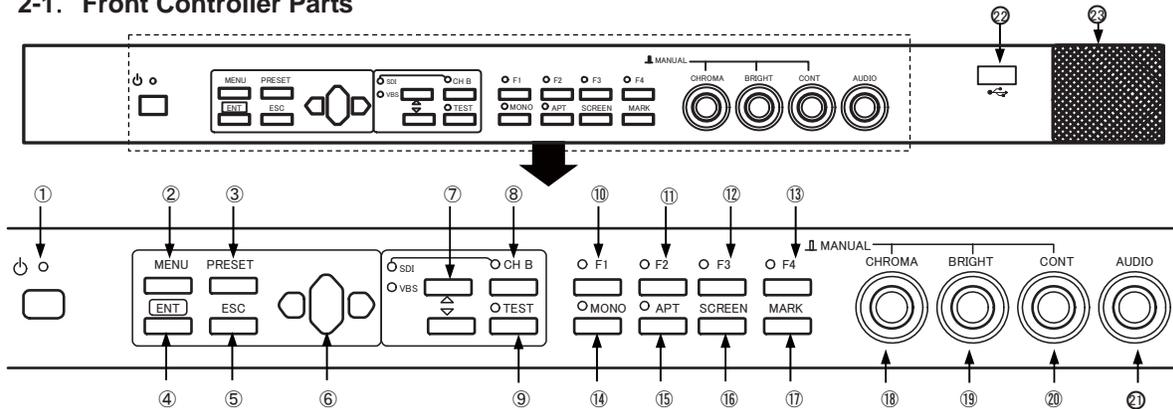
① **POWER** switch
・ This switch is used to turn ON/OFF the monitor.
* This switch will not turn ON/OFF the AC power supply for the monitor.
* It takes several seconds for an image to come up after power-on.

POWER LED
・ This LED is lit up in green when the power supply for the monitor is ON.

② **MENU** switch
・ This switch is pressed to display the menu screen and to change the menu screen.
* This switch is disabled when the menu is displayed.

③ **PRESET** switch
・ This switch is pressed to display the preset menu.
* This switch is ineffective when the menu is displayed.

④ **ENT** switch
・ Press this switch to execute menu operations.

⑤ **ESC** switch
・ This switch is pressed to escape from menu operation.

⑥ **▲(UP)/ ▼(DOWN)/ ◀(LEFT)/ ▶(RIGHT)** switch
・ Use this switch to change menu items or the setting of each item when a menu or preset menu is displayed.
・ With the menu off and the marker on, the image pattern can be preset with the ▲ and ▼ switches and the safety marker area with the ◀ and ▶

switches in the range of 80-99%

⑦ **INPUT SELECT** switch
・ Use the ▲ and ▼ switches to change input sources.

⑧ **CH-B** switch
・ Use this switch to change channels in the SDI or VBS input mode.

⑨ **TEST** switch
・ Press this switch to display internal test signals.
・ The switching between the following seven types of TESTS signals is done each time this switch is pressed.

<Normal>

<-6. 8%～0%&100～109%>

<Gray scale with pluge>

<Full Color bar>

<Color Bar>

<Pluge>

<100% Window>

<20% Gary>
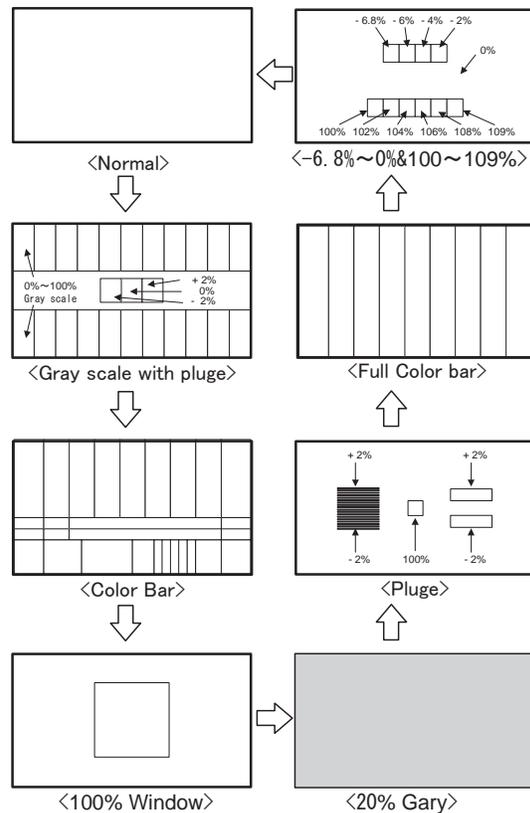
⑩ F1 switch
・ Press this switch to select an item preset on the menu.
・ For presettable items, refer to **"4-4. Description on MENU 2 Functions"**

⑪ F2 switch
・ Press this switch to select an item preset on the menu.
・ For presettable items, refer to **"4-4. Description on MENU 2 Functions"**

⑫ F3 switch
・ Press this switch to select an item preset on the menu.
・ For presettable items, refer to **"4-4. Description on MENU 2 Functions"**

⑬ F4 switch
・ Press this switch to select an item preset on the menu.
・ For presettable items, refer to **"4-4. Description on MENU 2 Functions"**

⑭ MONO switch
・ This switch is pressed to make a color signal monochrome.

⑮ APT switch
・ Press this switch to select the aperture.
・ Set a correction amount on PRESET MENU.

⑯ SCREEN switch
・ Press this switch to display images in R, G or B individually.
・ The switching between colors takes place as follows each time this switch is pressed.
"R only" → "G only" → "B only" → "NormalScreen"

⑰ MARK switch
・ Press this switch to turn on/off markers.
・ To change icons, use the and switches. Detailed settings are made on MENU 8.
* This function is disabled when an internal test signal is displayed.

⑱ CHROMA manual control
・ This control serves as a manual/preset switch for chroma or a manual data variable control.
・ The control pops out when it is pressed and the mode is changed to MANUAL.

⑲ BRIGHT manual control
・ This control serves as a manual/preset switch for brightness or a manual data variable control.
・ The control pops out when it is pressed and the mode is changed to MANUAL.

⑳ CONT manual control
・ This control serves as a manual/preset switch for contrast or a manual data variable control.
・ The control pops out when it is pressed and the mode is changed to MANUAL.
・ This control can be an allocation to BACK-LIGHT according to the NENU setting.

㉑ AUDIO control
・ Use this control to adjust the sound volume of the front speaker or the headphones.
* An audio (analog/embedded audio) to be outputted to the speaker must be set on MENU7.

㉒ USB terminal
・ Connect a USB memory, and the monitor's data can be saved on the USB memory or the data on the USB memory can be downloaded on another monitor.
・ Connect a USB mouse, and the user markers can be drawn.
・ Connect the ASP-100 Rev.1 or later to automatically adjust the color temperature.

㉓ Speaker
・ Analog audio signals, embedded audio signals and downmix audio signals are fed out of this terminal.
・ The analog and embedded inputs can be selected on MENU7.

2-2. Rear panel (left)
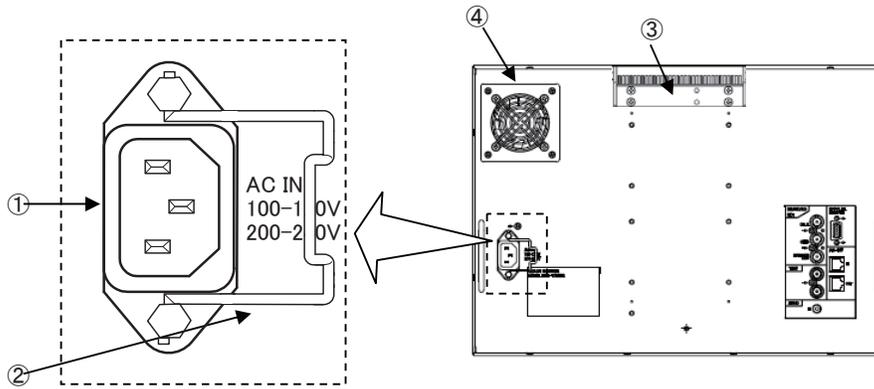
① AC power input

・ Insert the provided AC cable here to supply AC power.

② Lock

・ After inserting the AC plug, lock the AC plug with this lock to prevent it from disconnecting.

③ GR-1770 (option)

・ This handle is the rubber-coateed grip for easy carrying.

④ Fan

・ This fan is easily detachable from the back.
・ When power is turned on, the fan starts running for the operational check. Then, it automatically operates according to the internal temperature.
・ If the fan does not start running, the message "FAN ERROR!" is displayed on the screen.

2-3. Rear panel (video inputs/outputs)
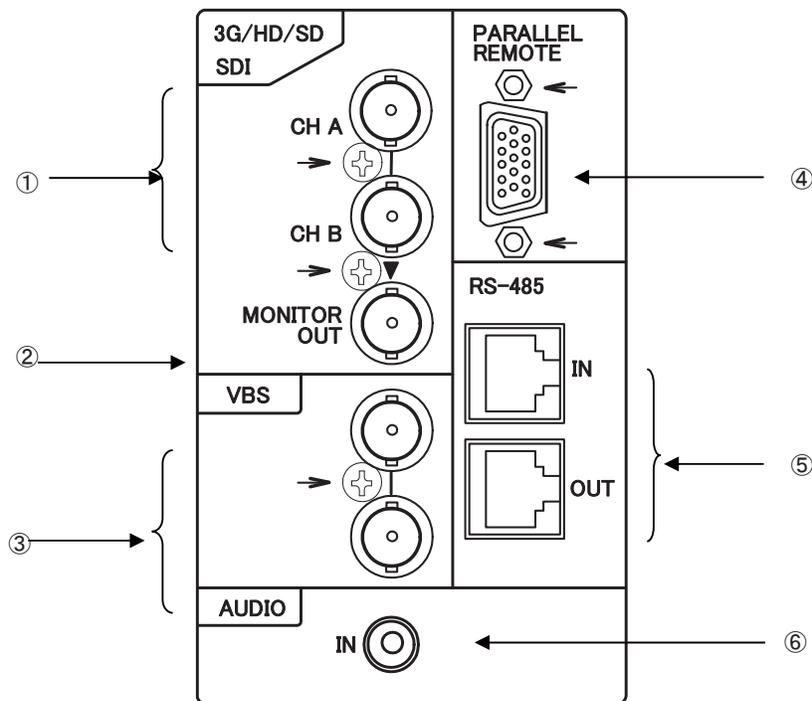
① SDI A/B signal input
・Input the 3G/HD-SDI or SD-SDI (4:2:2) signal
  here.
・The format of input signal is automatically-
  identified.

② SDI signal output
・Output the same selected channel signal from
  the A/B channel as channel select is made for
  monitoring.

③ NTSC/PAL-B analog composite input
・Input the NTSC/PAL-B analog composite
  (VBS) signal here.
・Without the loop through connection in place,
  connect a terminating plug.

④ PARALLEL REMOTE signal input
・Connect the accompanying remote connectorhere.
・Use a shield wire for the cable.

⑤ RS-485 input/output
・You can remote control from the optional serial
  remote controller "SRC-400".
・Up to 32 units can be loop-through-connected.
・Without loop-through connection, use the optional
  terminating device.
* Make sure the cable used is shielded.

⑥ Analog audio input
・Feed analog audio signals here.

3. Markers

3-1. Types of Markers

In the 16:9 aspect ratio display mode (HDTV/SDTV)	In the 4:3 aspect ratio display mode (SDTV)

(1) Safety marker
— Active screen area
— 100% area
— Variable from 80% to 99% (1% increments)

(9) Safety marker
— Active screen area (4:3)
— 100% area
— Variable from 80% to 99% (1% increments)

(2) 5-division crosshatch
— Active screen area

(10) 5-division crosshatch
— Active screen area

(3) 10-division crosshatch
— Active screen area

(11) 10-division crosshatch
— Active screen area

(4) Cross marker
— Active screen area

(12) Cross marker
— Active screen area

(5) Aspect marker
— Active screen area
— Aspect marker [4:3/13:9/14:9/15:9]

(13) Aspect marker
— Active screen area
— Aspect marker [13:9/14:9/15:9/16:9]

(6) Aspect marker + Safety marker
— Active screen area
— Aspect marker [4:3/13:9/14:9/15:9]
— Safety marker in area, variable from 80% to 99% (1% increments)

(7) 1.85:1 Aspect marker
— Active screen area
— 1.85:1 Aspect marker

(8) 2.35:1 Aspect marker
— Active screen area
— 2.35:1 Aspect marker

・The displayed markers are set on **MENU8**.
・With no menu onscreen, the image pattern can be changed with the ▲ and ▼ switches, whereas the safety marker percentage setting (1% increments) with the ◀ and ▶ switches.

4．MENU Functions

4-1．List of MENU

MENU			
	MENU1 (STATUS)	HLM-1705WR	Displaying the model name
		>PRESET FILE	Setting file status
		>BACKLIGHT DIM	Backlight dimmer status
		>GAMMA	Gamma setting status
		>FUNCTION1 MODE	F1 switch assignment status
		>FUNCTION2 MODE	F2 switch assignment status
		>FUNCTION3 MODE	F3 switch assignment status
		>FUNCTION4 MODE	F4 switch assignment status
		>POWER ON STATUS	Power on status setting status
	MENU2 (MODE-1)	1.FUNCTION1 MODE	Setting the function assignment of F1(Function 1)switch
		2.FUNCTION2 MODE	Setting the function assignment of F2(Function 2)switch
		3.FUNCTION3 MODE	Setting the function assignment of F3(Function 3)switch
		4.FUNCTION4 MODE	Setting the function assignment of F4(Function 4)switch
		5.POWER ON STATUS	Setting the power on status ON/OFF
		6.→STATUS MEMORY	Executing the content that is stored in POWER ON STATUS
	MENU3 (MODE-2)	1.REMOTE NO.	Setting the monitor ID code for remote control
		2.CHANGE ASPECT	Setting the automatic/manual aspect ratio change as per reception channel
		3.CONT VR ASSIGN	Setting the assignment of "CONT" manual control
		4.TALLY	Setting the tally lamp display format
		5.REAL SCAN	Setting the same-size (dot-by-dot) display ON/OFF
		6.SDI CH LOCK	Setting the SDI channel lock ON/OFF
		7.FORMAT DISPLAY	Setting the format display ON/OFF/TIMER at signal switching
		8.ZOOM WATCH	Executing the 2X/4X zoom functon
		9.MIX TEST SIGNAL	Executing the MIX TEST SIGNAL function
		10.OSD BACKGROUND	Setting the OSD backlight
	MENU4 (VITC/WFM/VSC)	1.SDI VITC	Setting the SDI VITC display ON/OFF
		2.→DIMMER	Setting the SDI VITC display brightness
		3.→SIZE	Setting the SDI VITC display size
		4.WFM DISPLAY	Setting the waveform display ON/OFF
		5.→DIMMER	Setting the waveform display brightness
		6.→SIZE	Setting the waveform display size
		7.→POSITION	Setting the waveform display position (right/center/left)
		8.→COLOR	Setting the waveform display color (white/green)
		9.VECTOR SCOPE	Setting the VECTOR SCOPE display ON/OFF
		10.→DIMMER	Setting the VECTOR SCOPE display brightness
		11.→MAGNIFICATION	Setting the VECTOR SCOPE display magnification ratio
		12.→SCALE	Setting the COLOR BOX scale display (75%/100%)
		13.→POSITION	Setting the VECTOR SCOPE display position (right/center/left)
		14.→COLOR	Setting the VECTOR SCOPE display color (white/green)
	MENU5 (SCREEN CAPTURE)	1.SCR CAPTURE	Executing the 2-picture split mode
		2.→AREA	Setting the 2-picture split mode display area

(next page)

MENU6 (VIDEO)		
	1.CHROMA GAIN UP	Setting the chroma gain -up ON/OFF
	2.→GAIN UP SELECT	Gain-up level (9dB/12dB) setting
	3.IP MODE	Setting the IP conversion mode (FIELD/FRAME)
	4.SCAN MODE	Scan size (NORMAL/UNDER) setting
	5.ASPECT MODE	Aspect (4:3/16:9/ZOOM) setting
	6.H POSITION	Adjusting the horizontal screen position
	7.V POSITION	Adjusting the vertical screen position
	8.CONTRAST RANGE	Setting the contrast range (Normal/Wide)

MENU7 (AUDIO)		
	1.LINE/SP CH.	Setting the paired channels of embedded audio outputs
	2.SP INPUT SEL	Setting the audio output signals
	3.LEVEL INDICATOR	Setting the audio level meter display ON/OFF
	4.→MODE	Setting the audio level meter display mode
	5.→CHANNEL	Setting the audio level meter display channel
	6.→DIMMER	Setting the audio level meter display brightness
	7.→PEAK HOLD	Setting the audio level meter display peak hold
	8.→REF LEVEL	Standard level setting (-18/-20dBFS)
	9.DOWNMIX SETTING	Setting the 5.1 channel surround downmix
	10.→FORMAT	Setting the downmix formats (ARIB/ISO IEC)
	11.→Ls/Rs LEVEL	Setting the Ls/Rs level (-3dB/-6dB/-9dB/OFF)
	12.→INPUT OF Lm	Setting the embedded audio channel assignment of speaker (Lm)
	13.→INPUT OF Rm	Setting the embedded audio channel assignment of speaker (Rm)
	14.→INPUT OF C	Setting the embedded audio channel assignment of speaker (C)
	15.→INPUT OF Ls	Setting the embedded audio channel assignment of speaker (Ls)
	16.→INPUT OF Rs	Setting the embedded audio channel assignment of speaker (Rs)

MENU8 (MARKER)		
	1.MARKER (16:9)	Setting the type of marker displayed at 16:9 aspect ratio
	2.→SAFRTY AREA	Setting the 16:9 safety marker area (80-99% (1% increments))
	3.→ASPECT	Setting the type of aspect marker at 16:9 display
	4.→AREA IN ASPECT	Setting the safety marker (80-99% (1% increments)) in aspect marker area
	5.MARKER (4:3)	Setting the type of marker displayed at 4:3 aspect ratio
	6.→SAFETY AREA	Setting the 4:3 safety marker (80-99% (1% increments))
	7.→ASPECT	Setting the type of aspect marker at 4:3 display
	8.ASP MARKER MODE	Setting the aspect marker display mode
	9.→SHADOW LEVEL	Setting the shadow contrast level with shadow on screen
	10.CENTER MARKER	Setting the center cross marker ON/OFF
	11.MARKER LEVEL	Setting the marker display level
	12.MARKER COLOR	Setting the marker display color
	13.USER MARKER	Setting the user marker display ON/OFF
	14.→SCENE NAME	Setting each scene of user markers and setting the scene names
	15.→SETTING	Executing the user marker for the drawing setting menu

MENU9 (PARALLEL REMOTE)		
	1.PIN FUNCTION	Setting the parallel remote pin function

MENU10 (VBS)		
	1.VBS FORMAT	Setting the VBS input
	2.→Y/C SEP.	Setting the decoder Y/C separation
	3.→NTSC SETUP LVL	Setting the NTSC setup level

(next page)

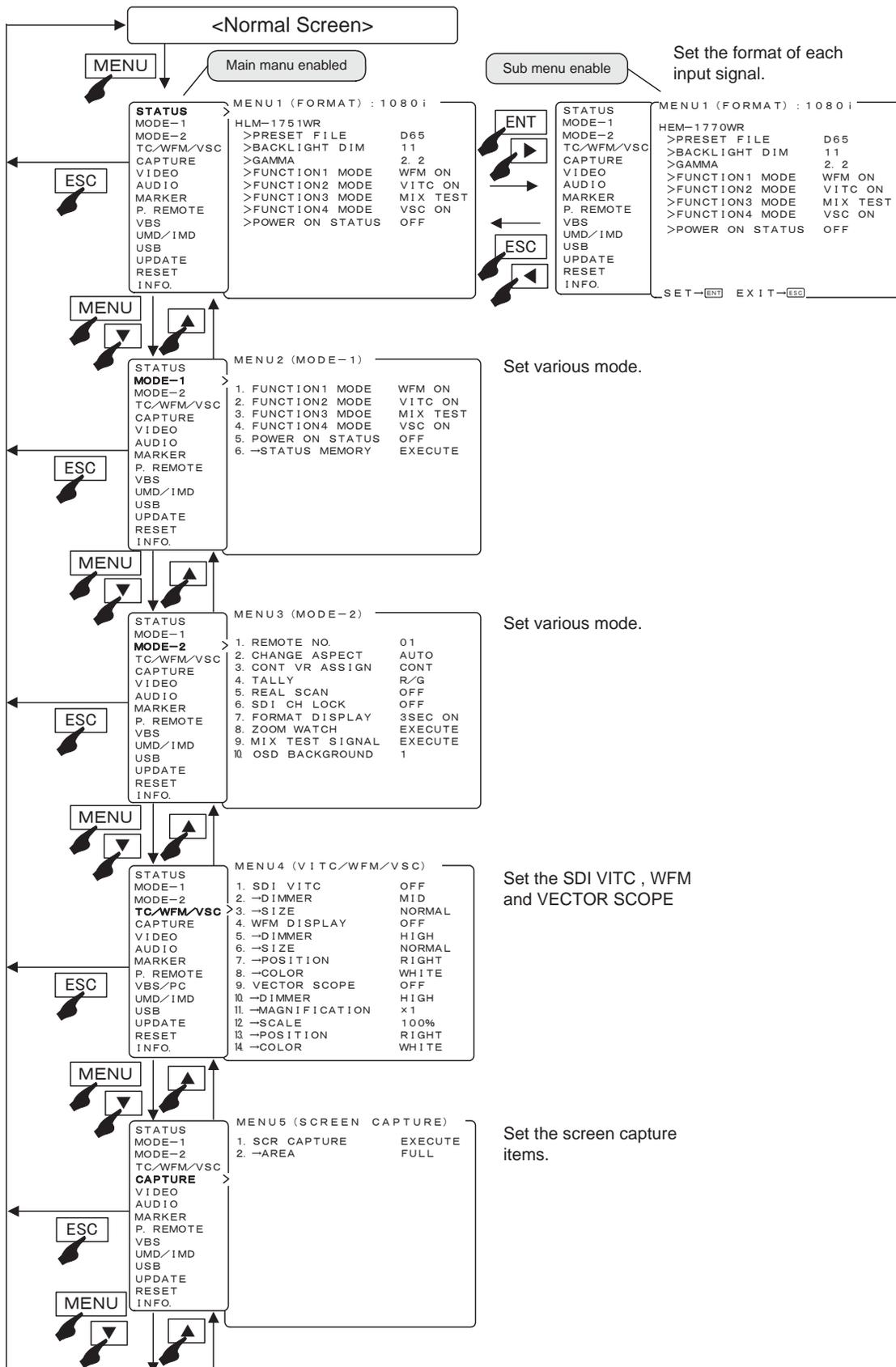|		
MENU11 **(UMD/IMD)**	1.FUNCTION	Setting the TSL/user display function switching
	\<USER DISPLAY\>：Setting items dedicated for user display function	
	2.USER DISPLAY	Setting the user display ON/OFF
	3.BRIGHTNESS	Setting the user display character brightness
	4.→SETTING	Setting the user display character content setting
	\<TSL\>：Setting items dedicated for TSL function	
	5.MONITOR ID	Setting the TSL monitor ID number
	6.TALLY CONTROL	Setting the TSL TALLY light-up method
	7.LH TALLY COLOR	Setting the TSL TALLY (left side) color
	8.RH TALLY COLOR	Setting the TSL TALLY (right side) color
	\<COMMON\>：Setting the Common item	
	9.TEXT COLOR	Setting the Display character color
	10.TEXT SIZE	Setting the Display character size
	11.TEXT POSITION	Setting the Display character position
	12.DISPLAY POSITION	Setting the Video display position
MENU12 **(USB MEMORY)**	\<MONITOR→USB MEMORY\> Data write menu from monitor to USB memory	
	1.SETTING DATE＆TIME	Setting the files date /time to write on USB memory
	2.→DATE(Y/M/D)	Setting the files year/month/day to write on USB memory
	3.→TIME(H:M)	Setting the files hour/minute to write on USB memory
	4.WRIGHT TO MEM	Executing to write on USB memory
	\<USB MEMORY→MONITOR\>：Download menu from USB memory to monitor	
	5.CONTENTS TO DOWNLOAD	Setting the data contents to be downloaded from USB memory to monitor
	□MENU&SW	Date in the menu-based and switch-preset status
	□USER MARKER	Data of user markers
	□PRESET	Various preset data
	6.DOWNLOAD	Downloading from USB memory to monitor
MENU13 **(UPDATE)**	\<USB MEMORY→MONITOR\>：Download menu from USB memory to monitor	
	1.CONTENTS TO DOWNLOAD	Setting the data contents to be downloaded from USB memory to monitor
	□MPU FIRMWARE	Update data of MPU
	□FPGA	Update data of FPGA
	2.DOWNLOAD	Downloading from USB memory to monitor
MENU14 **(RESET)**	1.LOAD FACTORY	Executing the initialization to the factory settings
	2.RESET FILE	Selecting the preset files to be initialized
MENU15 **(INFORMATION)**	1.MPU VERSION	Displaying the MPU version
	2.FPGA VERSION	Displaying the FPGA version
	3.WORKING TIME	Displaying the operating hours

4-2. Flow of MENU Operations

MENU can be switched as follows using the **MENU** switch.

<Normal Screen>

MENU

Main manu enabled

Sub menu enable

Set the format of each input signal.

ENT

ESC

```
STATUS        >
MODE-1
MODE-2
TC/WFM/VSC
CAPTURE
VIDEO
AUDIO
MARKER
P. REMOTE
VBS
UMD/IMD
USB
UPDATE
RESET
INFO.
```

```
MENU1 (FORMAT) : 1080i
HLM-1751WR
>PRESET FILE      D65
>BACKLIGHT DIM    11
>GAMMA            2. 2
>FUNCTION1 MODE   WFM ON
>FUNCTION2 MODE   VITC ON
>FUNCTION3 MODE   MIX TEST
>FUNCTION4 MODE   VSC ON
>POWER ON STATUS  OFF
```

```
STATUS
MODE-1
MODE-2
TC/WFM/VSC
CAPTURE
VIDEO
AUDIO
MARKER
P. REMOTE
VBS
UMD/IMD
USB
UPDATE
RESET
INFO.
```

```
MENU1 (FORMAT) : 1080i
HEM-1770WR
>PRESET FILE      D65
>BACKLIGHT DIM    11
>GAMMA            2. 2
>FUNCTION1 MODE   WFM ON
>FUNCTION2 MODE   VITC ON
>FUNCTION3 MODE   MIX TEST
>FUNCTION4 MODE   VSC ON
>POWER ON STATUS  OFF

SET→ENT  EXIT→ESC
```

ESC

MENU

```
STATUS
MODE-1     >
MODE-2
TC/WFM/VSC
CAPTURE
VIDEO
AUDIO
MARKER
P. REMOTE
VBS
UMD/IMD
USB
UPDATE
RESET
INFO.
```

```
MENU2 (MODE-1)
1. FUNCTION1 MODE    WFM ON
2. FUNCTION2 MODE    VITC ON
3. FUNCTION3 MDOE    MIX TEST
4. FUNCTION4 MODE    VSC ON
5. POWER ON STATUS   OFF
6. →STATUS MEMORY    EXECUTE
```

Set various mode.

ESC

MENU

```
STATUS
MODE-1
MODE-2     >
TC/WFM/VSC
CAPTURE
VIDEO
AUDIO
MARKER
P. REMOTE
VBS
UMD/IMD
USB
UPDATE
RESET
INFO.
```

```
MENU3 (MODE-2)
1. REMOTE NO.          01
2. CHANGE ASPECT       AUTO
3. CONT VR ASSIGN      CONT
4. TALLY               R/G
5. REAL SCAN           OFF
6. SDI CH LOCK         OFF
7. FORMAT DISPLAY      3SEC ON
8. ZOOM WATCH          EXECUTE
9. MIX TEST SIGNAL     EXECUTE
10. OSD BACKGROUND     1
```

Set various mode.

ESC

MENU

```
STATUS
MODE-1
MODE-2
TC/WFM/VSC  >
CAPTURE
VIDEO
AUDIO
MARKER
P. REMOTE
VBS/PC
UMD/IMD
USB
UPDATE
RESET
INFO.
```

```
MENU4 (VITC/WFM/VSC)
1. SDI VITC           OFF
2. →DIMMER            MID
3. →SIZE              NORMAL
4. WFM DISPLAY        OFF
5. →DIMMER            HIGH
6. →SIZE              NORMAL
7. →POSITION          RIGHT
8. →COLOR             WHITE
9. VECTOR SCOPE       OFF
10. →DIMMER           HIGH
11. →MAGNIFICATION    ×1
12. →SCALE            100%
13. →POSITION         RIGHT
14. →COLOR            WHITE
```

Set the SDI VITC , WFM and VECTOR SCOPE

ESC

MENU

```
STATUS
MODE-1
MODE-2
TC/WFM/VSC
CAPTURE    >
VIDEO
AUDIO
MARKER
P. REMOTE
VBS
UMD/IMD
USB
UPDATE
RESET
INFO.
```

```
MENU5 (SCREEN CAPTURE)
1. SCR CAPTURE        EXECUTE
2. →AREA              FULL
```

Set the screen capture items.

MENU

MENU ▲
▼

MENU6 (VIDEO)
```
STATUS
MODE-1       1. CHROMA GAIN UP      OFF
MODE-2       2. →GAIN UP SELECT     12dB
TC/WFM/VSC   3. IP MODE             FILED
CAPTURE      4. SCAN MODE           NORMAL
VIDEO      > 5. ASPECT              16:9
AUDIO        6. H POSITION          0
MARKER       7. V POSITION          0
P. REMOTE    8. CONTRAST RANGE      NORMAL
VBS
USB
UPDATE
RESET
INFO.
```
Set the image-related items.

ESC

MENU ▲
▼

MENU7 (AUDIO)
```
STATUS
MODE-1        1. LINE/SP CH.          CH1/2
MODE-2        2. SP INPUT SEL.        AUTO
TC/WFM/VSC    3. LEVEL INDICATOR      OFF
CAPTURE       4. →MODE 1 (1357-2468)
VIDEO         5. →CHANNEL             CH 1~8
AUDIO       > 6. →DIMMER              HIGH
MARKER        7. →PEAK HOLD           ON
P. REMOTE     8. →REF LEVEL           -20dBFS
VBS           9. DOWNMIX SETTING
UMD/IMD      10. →FORMAT              ISO/IEC
USB          11. →Ls/Rs LEVEL        -3dB
UPDATE       12. →INPUT OF Lm         CH1
RESET        13. →INPUT OF Rm         CH2
INFO.        14. →INPUT OF C          CH3
             15. →INPUT OF Ls         CH5
             16. →INPUT OF Rs         CH6
```
Set the audio-related items.

ESC

MENU ▼
▲

MENU8 (MARKER)
```
STATUS
MODE-1        1. MARKER (16:9)        SAFETY
MODE-2        2. →SAFETY AREA         80%
TC/WFM/VSC    3. →ASPECT              4:3
CAPTURE       4. →AREA IN ASPECT      80%
VIDEO         5. MARKER (4:3)         SAFETY
AUDIO         6. →SAFETY AREA         80%
MARKER      > 7. →ASPECT              16:9
P. REMOTE     8. ASP. MARKER MODE     MRK+SHD
VBS           9. →SHADOW LEVEL        40%
UMD/IMD      10. CENTER MARKER        OFF
USB          11. MARKER LEVEL         80%
UPDATE       12. MARKER COLOR         □
RESET        13. USER MARKER          ON
INFO.        14. →SCENE NAME          SCENE1
             15. →SETTING             EXECUTE
```
Set the marker-related items.

ESC

MENU ▲
▼

MENU9 (PARALLEL REMOTE)
```
STATUS
MODE-1        1. PIN FUNCTION   DEFAULT
MODE-2        P2:CH-B         P9 :EXT SYNC
TC/WFM/VSC    P3:(blank)      P10:16:9
CAPTURE       P4:G-TALLY      P11:DVI
VIDEO         P5:COMP.        P12:MARKER
AUDIO         P6:CHR UP       P13:SHADOW
MARKER        P7:MONO         P14:R-TALLY
P. REMOTE   > P8:RGB          P15:SDI
VBS            (P1:GND)
UMD/IMD
USB
UPDATE
RESET
INFO.
```
Set the parallel remote-related items.

ESC

MENU ▲
▼

MENU10 (VBS)
```
STATUS
MODE-1        1. VBS FORMAT
MODE-2        2. →Y/C SEP.           COMB
TC/WFM/VSC    3. →NTSC SETUP LVL     0%
CAPTURE
VIDEO
AUDIO
MARKER
P. REMOTE
VBS         >
UMD/IMD
USB
UPDATE
RESET
INFO.
```
Set the VBS input-related items.

ESC

MENU ▲
▼

MENU ▲

MENU11 (UMD／IMD)

STATUS
MODE−1
MODE−2
TC／WFM／VSC
CAPTURE
VIDEO
AUDIO
MARKER
P. REMOTE
VBS
UMD／IMD
USB
UPDATE
RESET
INFO.

1. FUNCTION   TSL
<USER DISPLAY>
2. USER DISPLAY   ON
3. BRIGHTNESS   FULL
4. →SETTING   EXECUTE
<TSL>
5. MONITOR ID   000
6. TALLY CONTROL   DISPLAY
>7. LH TALLY COLOR   RED
8. RH TALLY COLOR   GREEN
<COMMON>
9. TEXT COLOR   □
10. TEXT SIZE   NORMAL
11. TEXT POSITION   BOTTOM
12 DISPLAY POSITION CENTER

ESC

Set the UMD/IMD input-related items.

MENU ▲

MENU12 (USB)

STATUS
MODE−1
MODE−2
TC／WFM／VSC
CAPTURE
VIDEO
AUDIO
MARKER
P. REMOTE
VBS
UMD／IMD
USB
UPDATE
RESET
INFO.

<MOITOR→USB MEMORY>
1. SETTING DATE&TIME
2. →DATE (Y／M／D)   13／01／01
3. →TIME (H:M)   00:00
4. WRIGHT TO USB   EXECUTE

<USB MEMORY→MONITOR>
5. CONTENTS TO DOWNLOAD
 □MENU&SW
 □USER MARKER   S01~S10
 □PRESET   D65
6. DOWNLOAD   EXECUTE

ESC

Set the USB memory-related read/write items.

MENU ▲

MENU13 (UPDATE)

STATUS
MODE−1
MODE−2
TC／WFM／VSC
CAPTURE
VIDEO
AUDIO
MARKER
P. REMOTE
VBS
UMD／IMD
USB
UPDATE
RESET
INFO.

<USB MEMORY→MONITOR>
1. CONTENTS TO DOWNLOAD
 □MPU FIRMWARE
 □FPGA
2. DOWNLOAD   EXECUTE

ESC

Set the MPU/FPGA download-related read/write items.

MENU ▲

MENU14 (RESET)

STATUS
MODE−1
MODE−2
TC／WFM／VSC
CAPTURE
VIDEO
AUDIO
MARKER
P. REMOTE
VBS
UMD／IMD
USB
UPDATE
RESET
INFO.

1. LOAD FACTORY   ALL
2. RESET FILE

ESC

Initialize the menu items / file setting.

MENU ▲

MENU15 (INFORMATION)

STATUS
MODE−1
MODE−2
TC／WFM／VSC
CAPTURE
VIDEO
AUDIO
MARKER
P. REMOTE
VBS
UMD／IMD
USB
UPDATE
RESET
INFO.

1. MPU VERSION   01.00
2. FPGA VERSION   01／×00
3. WORKING TIME   50H

ESC

Display the MPU/FPGA version , operating hours.

MENU ▼
to MENU1

4-3．Description of MENU 1 Functions

＊Note the following description on the menu.
- ・The vertical frequency "/60" includes both 60 Hz and 59.94 Hz (60/1.001).
- ・The vertical frequency "/48" includes both 24 psF and 23.98 psF (24/1.001).
- ・The vertical frequency "/24" includes both 24 Hz and 23.98 Hz (24/1.001).

```
STATUS          > MENU1 (FORMAT) : 1080i
MODE-1
MODE-2            HLM-1705WR
TC/WFM/VSC        >PRESET FILE      D65      ◄────── ① Setting file status
CAPTURE           >BACKLIGHT DIM    11       ◄────── ② Backlight dimmer status
VIDEO             >GAMMA            2.2      ◄────── ③ Gamma setting status
AUDIO             >FUNCTION1 MODE   WFM ON   ◄────── ④ F1 switch assignment status
MARKER            >FUNCTION2 MODE   VITC ON  ◄────── ⑤ F2 switch assignment status
P. REMOTE         >FUNCTION3 MODE   MIX TEST ◄────── ⑥ F3 switch assignment status
VBS               >FUNCTION4 MODE   VSC ON   ◄────── ⑦ F3 switch assignment status
UMD/IMD           >POWER ON STATUS  OFF      ◄────── ⑧ Power on status setting status
USB
UPDATE
RESET
INFO.
```

① Setting file status
- ・The status of FILE (D65, D93, and FILE 1 to 8) that was set in "SELECT FILE" of the PRESET MENU-1 section is displayed here.

② Back light setting status
- ・The value set in "BACKLIGHT DIM." of the PRESET MENU-2 section is displayed here.

③ Gamma setting status
- ・The status of GAMMA (2.2, 2.4 and CRT) that was set in "CHANGE DATA" of the PRESET MENU-3 section is displayed here.

④ F1 switch assignment status
- ・The function that was set in "FUNCTION1 MODE" of the MENU2-1 section is displayed here.

⑤ F2 switch assignment status
- ・The function that was set in "FUNCTION2 MODE" of the MENU2-2 section is displayed here.

⑥ F3 switch assignment status
- ・The function that was set in "FUNCTION3 MODE" of the MENU2-3 section is displayed here.

⑦ F4 switch assignment status
- ・The function that was set in "FUNCTION4 MODE" of the MENU2-4 section is displayed here.

⑧ Power on status setting status
- ・The ON/OFF status that was set in "POWER ON STATUS" of the MENU2-5 section is displayed here.

4-4．Description of MENU 2 Functions

```
STATUS          MENU2 (MODE-1)
MODE-1
MODE-2          1. FUNCTION1 MODE    WFM ON      ◄────── ① Setting the function assignment of F1(Function 1)switch
TC／WFM／VSC     2. FUNCTION2 MODE    VITC ON     ◄────── ② Setting the function assignment of F2(Function 2)switch
CAPTURE         3. FUNCTION3 MDOE    MIX TEST    ◄────── ③ Setting the function assignment of F3(Function 3)switch
VIDEO           4. FUNCTION4 MODE    VSC ON      ◄────── ④ Setting the function assignment of F4(Function 4)switch
AUDIO           5. POWER ON STATUS   OFF         ◄────── ⑤ Setting the power on status ON/OFF
MARKER          6. →STATUS MEMORY    EXECUTE     ◄────── ⑥ Executing the content that is stored in POWER ON STATUS
P. REMOTE
VBS
UMD／IMD
USB
UPDATE
RESET
INFO.
```

① Setting the function assignment of F1 switch

・Set any of the following operations performed by
　pressing the F1 switch on the front panel.
・Default setting is WFM ON.

・The function assigned for each function switch is
　as follows.

　< F1   to   F4   SW Function Assignment List>

・FILE   Switching of the preset file
　　　　　　 D65 →D93 →FILE1 →FILE2…→

・MRK SEL   Switching of the types of marker
　　　　　　 SAFETY → CROSS 5…→ASP+SAF→

・COMB   Switching of the Decoder Y/C separation
　　　　　　 setting
　　　　　　 COMB → TRAP →

・CHR UP   Turning ON/OFF of CROMA UP
　　　　　　 CHROMA UP ON → OFF →

・DELAY   Switching of H/V/H+V of DELAY
　　　　　　 Enabled only for SDI input
　　　　　　 H.DL→V.DL→H/V.DL→DL OFF

・IP MODE   Switching of the IP
　　　　　　 FIELD/FRAME/INTERLACE conversion
　　　　　　 mode
　　　　　　 FRAM → FIELD →INTERLACE→

・RS ON   Turning ON/OFF of the equal- magnifica-
　　　　　　 tion display
　　　　　　 RS ON → OFF →

・UMRK SEL Switching of the USER MARKER
　　　　　　 SCENES
　　　　　　 SCENE1→2→3→・・・10→OFF→

・UMRK ON   Turning ON/OFF of the USER MARKER
　　　　　　 display
　　　　　　 SCENE*→OFF→
　　　　　　 *Scene that was set in the "SCENE
　　　　　　 NAME" is displayed.

・VSC ON   Turning ON/OFF of the VECTOR display
　　　　　　 VSC ON → OFF →

・VITC ON   Turning ON/OFF of the SDI VITC display
　　　　　　 VITC ON → OFF →

・WFM ON   Turning ON/OFF of the WFM display
　　　　　　 WFM ON → OFF →

・AUD CH   Switching of the embedded audio channel
　　　　　　 CH1/2→CH3/4→CH5/6→CH7/8→DMIX→

・PRESET   A shortcut key to PRESET MENU for
　　　　　　 white balance adjustment.

・ASPECT   Switches between 4:3 and 16:9 during
　　　　　　 the SD signal.
　　　　　　 ASPECT 4:3→16:9→

・SCAN   Switching of the NORMAL/UNDER
　　　　　　 SCAN
　　　　　　 UNDER SCAN→NORMAL SCAN→

・BL DIM   Increases the backlight brightness.
　　　　　　 1→2→3→4→5→6→・・・29→30→

・MIX TEST Switches ON/OFF the MIX TEST
　　　　　　 SIGNAL function.
　　　　　　 MIX TEST SIGNAL   ON→OFF

* "DELAY" will not be operated with VBS signal.
　During the DELAY, it will be the same magnifi-
　cation display (dot by dot) so that the scaling
　process is not performed.

② **Setting the function assignment of F2 switch**
・The function assignment is selectable in the same way as that shown above ① by pressing the $\boxed{\text{F2}}$ switch on the front panel.
・Default setting is VITC OFF.

③ **Setting the function assignment of F3 switch**
・The function assignment is selectable in the same way as that shown above ① by pressing the $\boxed{\text{F3}}$ switch on the front panel.
・Default setting is MIX TEST.

④ **Setting the function assignment of F4 switch**
・The function assignment is selectable in the same way as that shown above ① by pressing the $\boxed{\text{F4}}$ switch on the front panel.
・Default setting is VSC ON.

⑤ **Setting the power on status ON/OFF**
・Even if another person changes the setting without permission, you can use this function to revert the setting anytime by turning on the power again. This function is convenient if multiple people are involved in the operation.
・If this function is set to "ON", all settings and data that had been changed before the power was turned off are cleared, and the setting items and data for the MENU and PRESET MENU that are stored in the "STATUS MEMORY" of the section 6 are loaded.
・When it is set to "OFF", the setting status is displayed the same as it was before the power is turned OFF.
* If "LOARD FACTORY" of MENU13 is executed, the contents stored in "STATUS MEMORY" will be cleared.
・Default setting is OFF.

⑥ **Executing the content that is stored in POWER ON STATUS**
・The items to be stored in "POWER ON STATUS" are executed here.
・When the "STATUS MEMORY" is executed, the setting items for the MENU and PRESET MENU are stored (except some of the following items). If the power is turned on with the "POWER ON STATUS: ON" setting, all items that are stored here will be loaded.
* The items that will not be stored in POWER ON STATUS.
・Internal gamma table value when the color temperature adjustment is executed by APS-100
・User marker setting value
・The setting value of "H POSITION" and "V POSITION" to be set in the MENU6 section.

4-5. Description of MENU 3 Functions

```
              MENU3 (MODE-2)
STATUS
MODE-1      1. REMOTE NO.          01        ←——— ① Setting the monitor ID code for remote control
MODE-2    > 2. CHANGE ASPECT      AUTO       ←——— ② Setting the automatic/manual aspect ratio change as per reception channel
TC/WFM/VSC  3. CONT VR ASSIGN      CONT       ←——— ③ Setting the assignment of "CONT" manual control
CAPTURE     4. TALLY              R/G        ←——— ④ Setting the tally lamp display format
VIDEO       5. REAL SCAN           OFF        ←——— ⑤ Setting the same-size (dot-by-dot) display ON/OFF
AUDIO       6. SDI CH LOCK         OFF        ←——— ⑥ Setting the SDI channel lock ON/OFF
MARKER      7. FORMAT DISPLAY     3SEC ON     ←——— ⑦ Setting the format display ON/OFF/TIMER at signal switching
P. REMOTE   8. ZOOM WATCH        EXECUTE     ←——— ⑧ Executing the 2X/4X zoom function
VBS         9. MIX TEST SIGNAL   EXECUTE     ←——— ⑨ Executing the MIX TEST SIGNAL function
UMD/IMD     10. OSD BACKGROUND     1          ←——— ⑩ Setting the OSD backlight
USB
UPDATE
RESET
INFO.
```

① Setting the serial remote control ID number
・Used to set the ID number (01 to 99) of the monitor.
・The ID number is assigned to each monitor in order to perform remote operation with the infrared remote controller (RCT-20A/30A) and serial remote controller (SRC-400).
・Default setting is 01.

②Setting the ASPECT ratio to Automatic or Manual
・Used to select the automatic setting of a preset aspect ratio or the fixed setting for all reception channels, when selecting any reception channel.
・AUTO   : displayed with the set aspect ratio for each channel
・MANUAL   : displayed with the same aspect ratio for all channels
・Default setting is AUTO.
* When switching the ASPECT in the parallel remote mode, set the ASPECT ratio to "MANUAL".

③ Setting the CONT volume function assignment
・The "CONT" volume at the front can be operated for the purpose of backlight adjustment.
・CONT : Operates for the purpose of CONTRAST adjustment
・BL : Operates for the purpose of backlight adjustment
       This setting is reflected on the PRESET value.
・Default setting is CONT.

④ Setting the tally lamp indication
・Set any of the following display modes of the tally lamps located at the top of the front of the monitor.
・R/G : R is on the left side and G on the right side, when facing the screen.

R	G
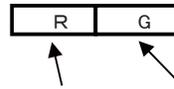
   [R-TALLY ON]   [G-TALLY ON]

・G/R : G is on the left side and R on the right side, when facing the screen.

G	R
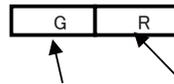
   [G-TALLY ON]   [R-TALLY ON]

・R+G : The entire tally is displayed.
The lamp is displayed in amber when both the R-TALLY and G-TALLY are set at ON. Both R- and G-TALLY at ON.
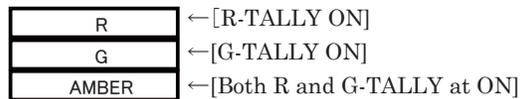
R	←[R-TALLY ON]
G	←[G-TALLY ON]
AMBER	←[Both R and G-TALLY at ON]

・R/G ALL : Displays the entire TALLY only when it is solely set to ON.
If both R-TALLY and G-TALLY are set to ON, they will be displayed on the left and right sides.

R	←[R-TALLY ON]
G	←[G-TALLY ON]
R	G	←[Both R and G-TALLY at ON]
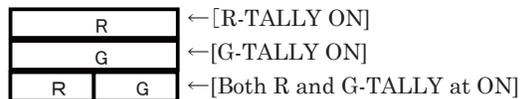
・G/R ALL : Displays the entire TALLY only when it is solely set to ON.

If both R-TALLY and G-TALLY are set to ON, they will be displayed on the left and right sides.

R	
G	
G	R

←[R-TALLY ON]
←[G-TALLY ON]
←[Both R and G-TALLY at ON]

・Default setting is R/G.

⑤ **Setting the same-size (dot-by-dot) display ON/OFF**
・Set to ON in order to reproduce the input signal in its original pixels without enlargement or reduction.
・This function can be assigned with the F1 to F4 switch on the front panel.
・Default setting is OFF.
* Signals in 480i/575i format are not in square pixels. Therefore, the aspect ratio will be displayed differently from the original image.

⑥ **Setting the SDI channel switching lock ON/OFF**
・If you want to prevent the switching between A/B channels of SDI signal from switching, set it to "ON", and then fix the input channel.
・It utilizes the MONITOR OUT terminal and is effective in fixing the channel. It prevents accidental channel switching.
・Default setting is OFF.
* Before setting it to "ON", make sure the desired SDI channel is selected.

⑦ **Setting the format display ON/OFF before switching signals**
・Used to set whether the channel and signal format are displayed or not.
　・3SEC ON　: Three seconds indication
　・CONT ON　: Consecutive indication
　・OFF　　　: Indication off
・Default setting is 3SEC ON.

⑧ **Executing the 2x/4x zoom function**
・A function used to enlarge the image 2x or 4x without screening.
・You can check for any scratch on the CCD of camera or for the delicate images.
・The display area to be enlarged is displayed on the left bottom of the screen.
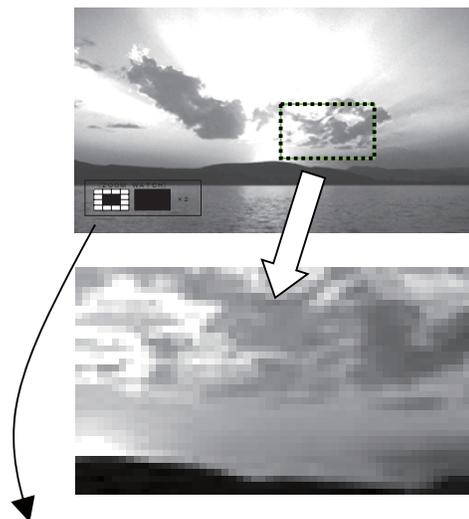
・The ENT switch is used to switch between 2x and 4x.
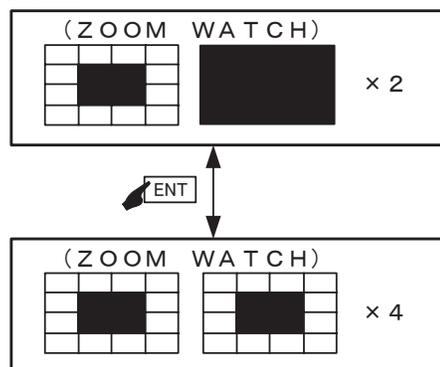
⑨ **Executing the MIX TEST SIGNAL function**

- By mixing the pluge signal (-2%/0%/+2%) and 100% to 109% signal into the image, you can adjust the image in real time by checking if white part is filled out due to the CONTRAST adjustment for the over 100% signal or if there is no "black sun" effect cased by the BRIGHTNESS adjustment.
- This device automatically turns off the display when the front volume is not operated for approximately one minute.
- This function can be assigned with the F1 to F4 switch on the front panel.
- Default setting is OFF.

Superimpose -2%, 0%, and +2% of pluge signal.

-2%　　0　　+2%

Superimpose 100 to 109% of brightness signal.

100　　102　　104　　106　　109
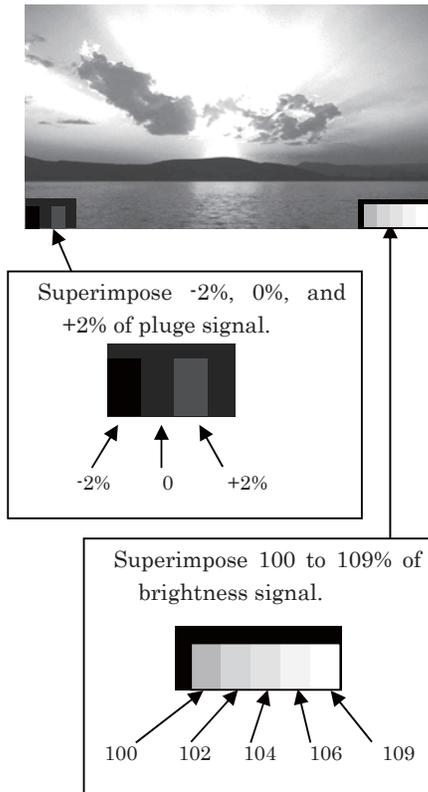
⑩ **OSD background transparency setting**

- The background for displaying the OSD can be set on 3 levels: 1 (semi-transparent) to 3 (transparent).
- Default setting is 1 (semi-transparent).

4-6. Description of MENU 4 Functions

```
                    MENU4 (VITC／WFM／VSC)
STATUS
MODE−1      1. SDI VITC          OFF    ◄────── ① Setting the SDI VITC display ON/OFF
MODE−2      2. →DIMMER           MID    ◄────── ② Setting the SDI VITC display brightness
TC／WFM／VSC ＞3. →SIZE            NORMAL ◄────── ③ Setting the SDI VITC display size
CAPTURE     4. WFM DISPLAY       OFF    ◄────── ④ Setting the waveform display ON/OFF
VIDEO       5. →DIMMER           HIGH   ◄────── ⑤ Setting the waveform display brightness
AUDIO       6. →SIZE             NORMAL ◄────── ⑥ Setting the waveform display size
MARKER      7. →POSITION         RIGHT  ◄────── ⑦ Setting the waveform display position (right/center/left)
P. REMOTE   8. →COLOR            WHITE  ◄────── ⑧ Setting the waveform display color (white/green)
VBS         9. VECTOR SCOPE      OFF    ◄────── ⑨ Setting the VECTOR SCOPE display ON/OFF
UMD／IMD    10. →DIMMER          HIGH   ◄────── ⑩ Setting the VECTOR SCOPE display brightness
USB         11. →MAGNIFICATION   ×1     ◄────── ⑪ Setting the VECTOR SCOPE display magnification ratio
UPDATE      12. →SCALE           100%   ◄────── ⑫ Setting the COLOR BOX scale display (75%/100%)
RESET       13. →POSITION        RIGHT  ◄────── ⑬ Setting the VECTOR SCOPE display position (right/center/left)
INFO.       14. →COLOR           WHITE  ◄────── ⑭ Setting the VECTOR SCOPE display color (white/green)
```

① Setting the SDI VITC display ON/OFF
・Used to turn ON or OFF the VITC display multiplexed with HD-SDI signal.
・This function can be assigned with the F1 to F4 switch on the front panel.
・Default setting is OFF.

② Setting of SDI VITC display brightness
・Used to set the SDI VITC display brightness in three levels, LOW, MID and HIGH.
・Default setting is MID.

③ Setting of SDI VITC display size
・Used to select the SDI VITC display size, NORMAL or LARGE.
・Default setting is NORMAL.

NORMAL   LARGE

④ Setting of waveform display ON/OFF
・Used to turn ON or OFF the waveform display of luminance signal.
・This function can be assigned with the F1 to F4 switch on the front panel.
・Default setting is OFF.

⑤ Setting of waveform display brightness
・Used to set the waveform display brightness in three levels, LOW, MID, HIGH and HIGH(M).
・HIGH(M) mode transmits with a picture and displays it.
・Default setting is HIGH.

⑥ Setting of waveform display size
・Used to set the luminance signal waveform display size, NORMAL or SMALL.
・The SMALL setting displays the waveform half as tall as in the NORMAL setting.
・Default setting is NORMAL.

NORMAL   SMALL
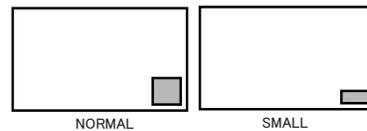
⑦ Setting of waveform display position
・Used to set the waveform display position, RIGHT, CENTER or LEFT.
・Default setting is RIGHT.

LEFT   CENTER   RIGHT

⑧ Setting of waveform display color
・Used to set the waveform display color, GREEN or WHITE.
・Default setting is WHITE.

⑨ **Setting the VECTOR SCOPE display ON/OFF**
　・Used to turn on or off the VECTOR SCOPE dis-
　　play.
　・This function can be assigned with the F1 to
　　F4 switch on the front panel.
　・Default setting is OFF.

⑩ **Setting the VECTOR SCOPE display brightness**
　・Used to set the VECTOR SCOPE display
　　brightness in 3 levels: LOW, MID, HIGH and
　　HIGH(M).
　・HIGH(M) mode transmits with a picture and
　　displays it.
　・Default setting is HIGH.

⑪ **Setting the VECTOR SCOPE display magnifica-
　tion ratio**
　・Used to set the VECTOR SCOPE display mag-
　　nification in 4 ratios: x1, x2, x4 and x8.
　・Default setting is x1.

⑫ **Setting the COLOR BOX scale display**
　・Used to set the VECTOR SCOPE's COLOR BOX
　　according to the input color bar signal: 75% and
　　100%.
　・Default setting is 100%.
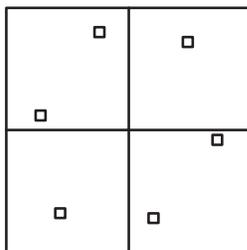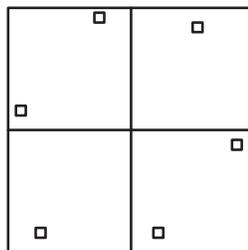
　　　75%SCALE　　　　　100%SCALE

⑬ **Setting the VECTOR SCOPE display position**
　・Used to set the waveform display to any of the
　　RIGHT, CENTER and LEFT positions.
　・When used commonly with WFM, the VECTOR
　　display is located on the left of the WFM one.
　・Default setting is RIGHT.

　・RIGHT location
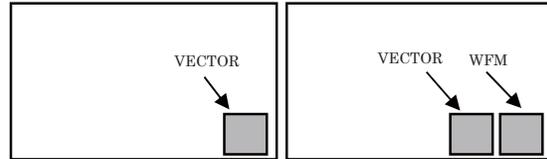
　・CENTER location
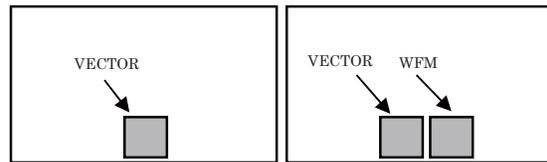
　・LEFT location
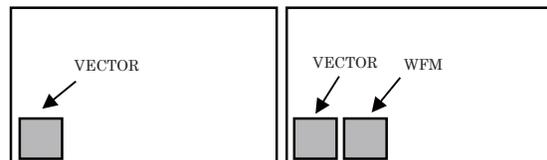
⑭ **Setting the VECTOR SCOPE display color**
　・Used to set the waveform display color to either of
　　GREEN and WHITE.
　・Default setting is WHITE.

4-7. Description of MENU 5 Functions

```
            MENU5 (SCREEN  CAPTURE)
STATUS
MODE−1      1. SCR CAPTURE      EXECUTE  ◄────── ① Executing the 2-picture split mode
MODE−2      2. →AREA            FULL     ◄────── ② Setting the 2-picture split mode display area
TC／WFM／VSC
CAPTURE   >
VIDEO
AUDIO
MARKER
P. REMOTE
VBS
UMD／IMD
USB
UPDATE
RESET
INFO.
```
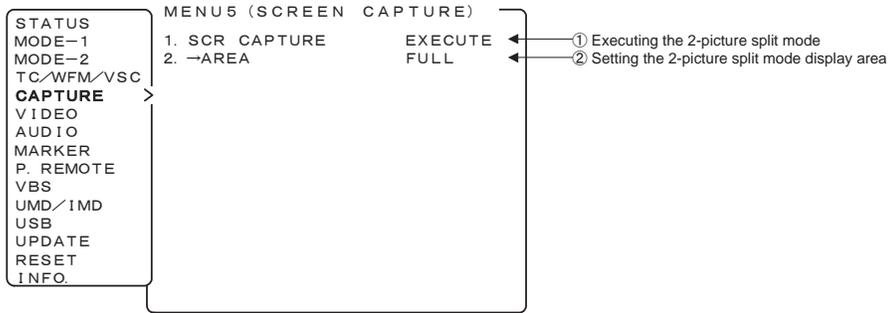
① Executing the 2-picture split mode

・Used to execute this mode to take in the still image of an input signal and compare it with other inputs.

1. With "EXECUTE" flashing in magenta, press the ENT switch.
2. The display changes as shown below. Press the ENT switch again to take in the image.


```
SET→ENT  EXIT→ESC
```
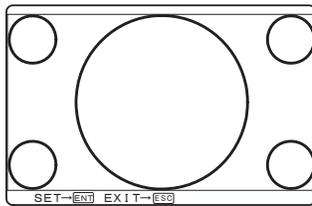
3. Switch the input and compare its image with the taken-in still image. To take in another image or to quit the 2-picture split mode, press the ESC switch.

Still image taken in   Input signal


```
EXIT→ ESC
```

* The 2-picture split mode is operative with the same format signals. If different-format signals are input, the images cannot be properly displayed.
* With ASPECT set at [16:9], the SDTV signal is converted to the [4:3].
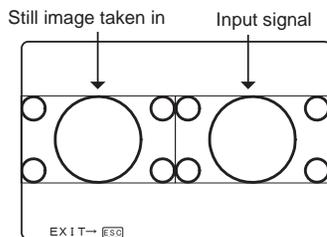
② Setting of 2-picture split display area

・Used to set the display area in the 2-picture split mode.
  ・FULL: Full image displayed
  ・4:3: Image in the central 4:3 area displayed
・Default setting is FULL.

* This function is operative with HDTV-format input signals only.

HDTV < FULL >   HDTV < 4:3 >

4-8. Description of MENU 6 Functions

```
         ┌─ MENU6 (VIDEO) ─────
STATUS   │
MODE−1   │ 1. CHROMA GAIN UP    OFF      ◄────── ① Setting the chroma gain -up ON/OFF
MODE−2   │ 2. →GAIN UP SELECT   12dB     ◄────── ② Gain-up level (9dB/12dB) setting
TC／WFM／VSC │ 3. IP MODE         FILED    ◄────── ③ Setting the IP conversion mode (FIELD/FRAME)
CAPTURE  │ 4. SCAN MODE         NORMAL    ◄────── ④ Scan size (NORMAL/UNDER) setting
VIDEO  > │ 5. ASPECT MODE       16:9      ◄────── ⑤ Aspect (4:3/16:9/ZOOM) setting
AUDIO    │ 6. H POSITION        0         ◄────── ⑤ Adjusting the horizontal screen position
MARKER   │ 7. V POSITION        0         ◄────── ⑥ Adjusting the vertical screen position
P. REMOTE│ 8. CONTRAST RANGE    NORMAL    ◄────── ⑦ Setting the contrast range (Normal/Wide)
VBS      │
UMD／IMD  │
USB      │
UPDATE   │
RESET    │
INFO.    │
```

① Setting the chroma gain-up ON/OFF
・Set the gain-up ON/OFF for chroma signals.
・At the time of ON, setting in item ② the chroma gain increases by "+9 dB/+12dB".
・This function can be assigned with the |F1| to |F4| switch on the front panel.
・Default setting is OFF.

② Setting the gain-up level (9db/12dB)
・Sets the Chroma Gain Up level.
・Selects the Chroma Gain Up level from "+9dB/+12dB".
・Default setting is +12dB.

③ Setting the IP conversion mode
・The mode for I → P conversion is set in the 1035i/1080i/1080psF/480i/575i formats.
・FRAME : The information on the previous and subsequent fields is used to convert images to progressive ones. Thanks to this, diagonal interpolation of moving images is enabled for optimum setting.
・FIELD : The line interpolation in the field is used to convert images to progressive ones. In this way, the signal delay can be minimized.

・This function can be assigned with the |F1| to |F4| switch on the front panel.
* If the delay difference between the image and audio is concerned in the application, you can set to "FIELD" to operate in a short delay mode, which enables operation almost without discomfort.
* The image quality of the FIELD mode tends to have some jaggies on the diagonal videos comparing to the FRAME interpolation.
・Default setting is FIELD.

④ Scan size (NORMAL/UNDER) setting
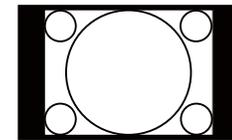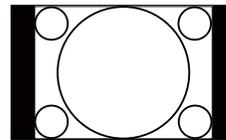・Switches the image display sizes between NORMAL SCAN and UNDER SCAN.

＜16:9NORMAL SCAN＞　　＜16:9UNDER SCAN＞
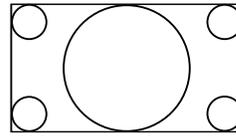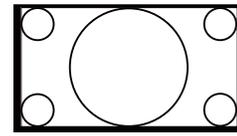
100% display　　　　95% of NORMAL SCAN
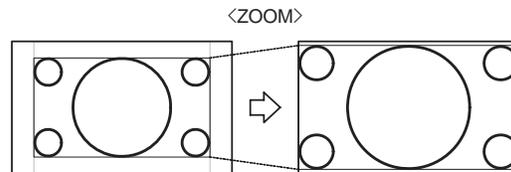
＜4:3NORMAL SCAN＞　　＜4:3UNDER SCAN＞

・Default setting is NORMAL.

⑤ Aspect (4:3/16:9/ZOOM) setting
・Use this switch to change image aspect ratios (4:3/16:9/ZOOM).
・Choose between memorizing the settings for each channel and making the settings for all channels on MENU2.
* "ZOOM" magnifies the image area in the 4:3 letterbox.

〈ZOOM〉

* SDTV format signals (480i/575i) only are effective.
* In the PC input mode, this function is disabled.

⑥ **Adjusting the horizontal screen position**
 ・Adjust the horizontal screen position of VIDEO
　input (SDI, VBS).
 ・The settings are memorized for each channel,
　each format, SYNC INT/EXT.
 ＊ In this setting, the values will not be stored due
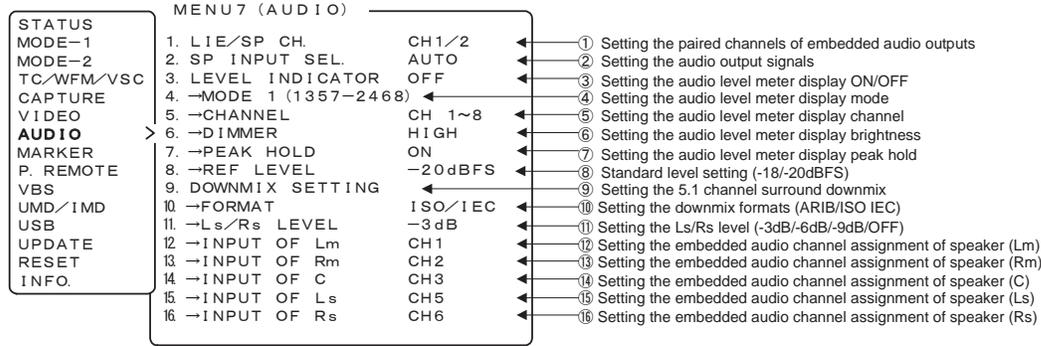　to the "POWER ON STATUS" function.
 ・Default setting is 0.

⑦ **Adjusting the vertical screen position**
 ・Adjust the vertical screen position of VIDEO
　input (SDI, VBS, COMPONENT).
 ・The settings are memorized for each channel,
　each format, SYNC INT/EXT.
 ・Default setting is 0.

⑧ **Setting the contrast range**
 ・NORMAL 　: Set the video level within the range
　　　　　　　with no over-flow even if the con-
　　　　　　　trast level is MAX.
 ・WIDE 　　: The contrast level can be increased
　　　　　　　to two times.
　　　　　　　*The high level video has the
　　　　　　　over-flow.
 ・Default setting is NORMAL.

4-9. Description of MENU 7 Functions

```
┌─────────────────── MENU7 (AUDIO) ───────────────────┐
│ STATUS                                                │
│ MODE−1        1. LIE／SP CH.        CH1／2    ◄──── ① Setting the paired channels of embedded audio outputs
│ MODE−2        2. SP INPUT SEL.      AUTO     ◄──── ② Setting the audio output signals
│ TC／WFM／VSC  3. LEVEL INDICATOR    OFF      ◄──── ③ Setting the audio level meter display ON/OFF
│ CAPTURE       4. →MODE 1 (1357−2468)        ◄──── ④ Setting the audio level meter display mode
│ VIDEO         5. →CHANNEL           CH 1〜8  ◄──── ⑤ Setting the audio level meter display channel
│ AUDIO       > 6. →DIMMER            HIGH     ◄──── ⑥ Setting the audio level meter display brightness
│ MARKER        7. →PEAK HOLD         ON       ◄──── ⑦ Setting the audio level meter display peak hold
│ P. REMOTE     8. →REF LEVEL         −20dBFS  ◄──── ⑧ Standard level setting (-18/-20dBFS)
│ VBS           9. DOWNMIX SETTING             ◄──── ⑨ Setting the 5.1 channel surround downmix
│ UMD／IMD      10. →FORMAT           ISO／IEC  ◄──── ⑩ Setting the downmix formats (ARIB/ISO IEC)
│ USB           11. →Ls／Rs LEVEL     −3dB     ◄──── ⑪ Setting the Ls/Rs level (-3dB/-6dB/-9dB/OFF)
│ UPDATE        12. →INPUT OF Lm      CH1      ◄──── ⑫ Setting the embedded audio channel assignment of speaker (Lm)
│ RESET         13. →INPUT OF Rm      CH2      ◄──── ⑬ Setting the embedded audio channel assignment of speaker (Rm)
│ INFO.         14. →INPUT OF C       CH3      ◄──── ⑭ Setting the embedded audio channel assignment of speaker (C)
│               15. →INPUT OF Ls      CH5      ◄──── ⑮ Setting the embedded audio channel assignment of speaker (Ls)
│               16. →INPUT OF Rs      CH6      ◄──── ⑯ Setting the embedded audio channel assignment of speaker (Rs)
└───────────────────────────────────────────────────────┘
```

① Setting the channel of embedded audio outputs

・Set any of the following pairs of channels of embedded audio to be outputted to the front speaker.

- ・CH1/2 : The output comes out of the paired CH1 and CH2 channels.
- ・CH3/4 : The output comes out of the paired CH3 and CH4 channels.
- ・CH5/6 : The output comes out of the paired CH5 and CH6 channels.
- ・CH7/8 : The output comes out of the paired CH7 and CH8 channels.
- ・DOWNMIX : The output comes out of downmix 5.1ch surround audio.

・This function can be assigned with the F1 to F4 switch on the front panel.

・Default setting is CH1/2.

② Setting the speaker output signals

・Set the signals to be outputted to the speaker and the rear audio monitor output.

- ・AUTO : embedded audios in the SDI input mode, and analog in the VBS input modes
- ・EMBEDDED : fixed at embedded audios
- ・ANALOG : fixed at analog audio

・Default setting is AUTO.

③ Setting the audio level meter display ON/OFF

・Used to turn on and off the audio level meter display.
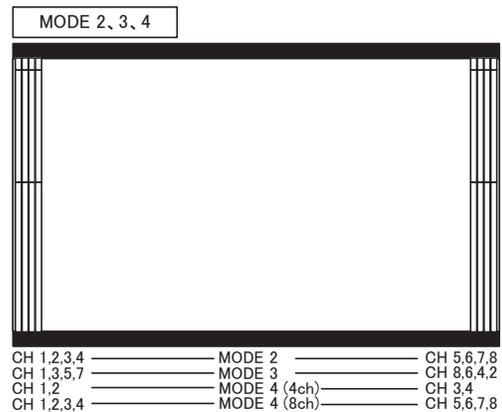
・Default setting is OFF.

④ Setting the mode display of audio level meter

・Set the display mode of the audio level meter.

・The number in parentheses shows the order of display channel.

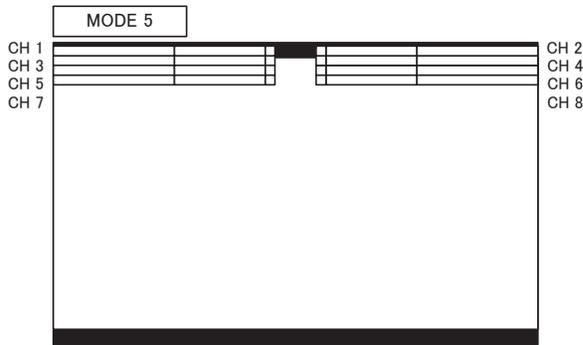・MODES 5 to 8 are obtained by doubling the width of MODE 1 to 4.

・MODE1 (1357-2468)
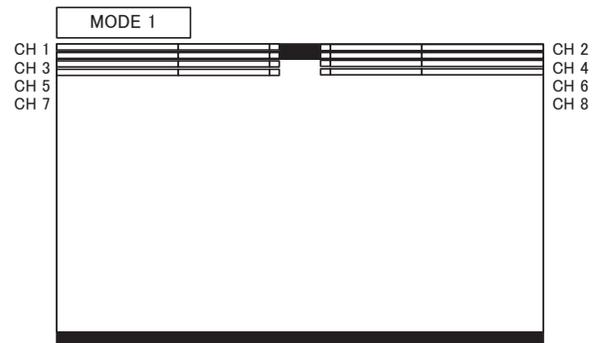
・MODE2 (1234-5678)
MODE3 (1357-8642)
MODE4 (12-34) : During the display mode 1-2ch and 1-4ch settings.
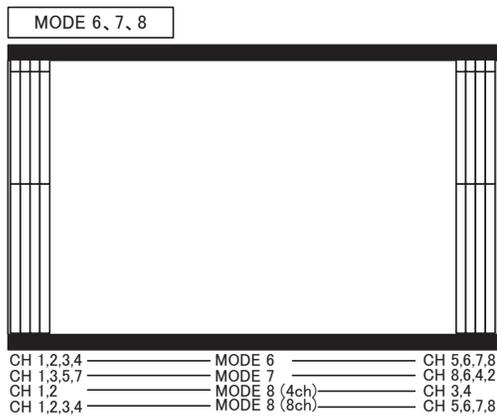MODE4 (1234-5678) : During the display mode 1-8ch settings.

＊ The display of MODE 4 varies depending on the number of channels for the section ⑤.

	MODE 2	CH 5,6,7,8
CH 1,2,3,4	MODE 3	CH 8,6,4,2
CH 1,3,5,7	MODE 4 (4ch)	CH 3,4
CH 1,2	MODE 4 (8ch)	CH 5,6,7,8
CH 1,2,3,4		

・MODE5 (1357-2468)

```
┌─────────────┐
│   MODE 5    │
├─────────────┴──────────────────┐
CH 1 │                            │ CH 2
CH 3 │                            │ CH 4
CH 5 │                            │ CH 6
CH 7 │                            │ CH 8
```

・MODE6 (1234-5678)
MODE7 (1357-8642)
MODE8 (12-34) : During the display mode 1-2ch
and 1-4ch settings.
MODE8 (1234-5678) : During the display mode
1-8ch settings.
* The display of MODE 4 varies depending on
the number of channels for the section ⑤.

```
┌─────────────┐
│  MODE 6、7、8 │
├─────────────┴──────────────────┐
│                                │
│                                │
│                                │
└────────────────────────────────┘
```

CH 1,2,3,4 ─────────── MODE 6 ─────────── CH 5,6,7,8
CH 1,3,5,7 ─────────── MODE 7 ─────────── CH 8,6,4,2
CH 1,2 ───────────── MODE 8 (4ch)─────────── CH 3,4
CH 1,2,3,4 ─────────── MODE 8 (8ch)─────────── CH 5,6,7,8

・Default setting is 1(1357-2468).

⑤ **Setting the channel display of audio level meter**
・Set the display channel of the audio level meter.
・CH 1－2 : CH1 to CH2 is displayed.
・CH 1－4 : CH1 to CH4 is displayed.
・CH 1－8 : CH1 to CH8 is displayed.
・Default setting is CH 1-8.

⑥ **Setting the brightness of audio level meter**
・Set the brightness of the audio level meter.
・The level meter image transmissive mode or
nontransmissive mode can be set.
・LOW
・MID
・HIGH
・LOW (MIX) (Image transmissive mode)
・MID (MIX) (Image transmissive mode)
・HIGH (MIX) (Image transmissive mode)
・Default setting is HIGH.

⑦ **Setting the peak hold display of audio level
meter**
・Used to turn on and off the peak hold display.
・Default setting is ON.

⑧ **Setting the reference level**
・Set the reference level of the audio level meter.
・-18dBFS
・-20dBFS
・Default setting is -20dBFS

⑨ **Downmix setting**
・Set the 5.1 channel surround downmix.
・Mix the 5.1 channel surround audio signal as-
signed to 6 channels of embedded audio into 2
channels and outputs from the speaker, the
headphone and the audio monitor output.
・5.1ch surround super woofer(LFE) channel is not
mixed.

⑩ **Setting the downmix formats**
・Select the mixing method to downmix 5.1ch audio
in "ISO/IEC" and "ARIB".
・Default setting is ISO/IEC

⑪ **Setting the Ls/Rs level**
・Set the coefficient of Ls/Rs to mix.
・Set among -3dB/-6dB/-9dB/OFF.
(OFF ＝ －∞)
・Default setting is －3dB

⑫ **Setting the embedded audio channel assign-
ment of speaker (Lm)**
・Set the channel of embedded audio, which the
audio for 5.1ch surround Lm speaker (left side in
front) should be assigned from.
・Default setting is CH1

⑬ **Setting the embedded audio channel assign-
ment of speaker (Rm)**
・Set the channel of embedded audio, which the
audio for 5.1ch surround Rm speaker (right side
in front) should be assigned from.
・Default setting is CH2

⑭ **Setting the embedded audio channel assign-
ment of speaker (C)**
・Set the channel of embedded audio, which the
audio for 5.1ch surround C speaker (center)
should be assigned from.
・Default setting is CH3

⑮ **Setting the embedded audio channel assign-
ment of speaker (Ls)**
・Set the channel of embedded audio, which the
audio for 5.1ch surround Ls speaker (left side in
rear) should be assigned from.
・Default setting is CH5

⑯ **Setting the embedded audio channel assignment
of speaker (Rs)**
・Set the channel of embedded audio, which the
audio for 5.1ch surround Rs speaker (right side
in rear) should be assigned from.
・Default setting is CH6

4-10. Description of MENU 8 Functions

```
                MENU8 (MARKER)
STATUS          1. MARKER (16:9)      SAFETY    ◄──── ① Setting the type of marker displayed at 16:9 aspect ratio
MODE－1          2. →SAFETY AREA       80%       ◄──── ② Setting the 16:9 safety marker area (80-99% (1% increments))
MODE－2          3. →ASPECT            4:3       ◄──── ③ Setting the type of aspect marker at 16:9 display
TC／WFM／VSC      4. →AREA IN ASPECT    80%       ◄──── ④ Setting the safety marker (80-99% (1% increments)) in aspect marker area
CAPTURE         5. MARKER (4:3)       SAFETY    ◄──── ⑤ Setting the type of marker displayed at 4:3 aspect ratio
VIDEO           6. →SAFETY AREA       80%       ◄──── ⑥ Setting the 4:3 safety marker (80-99% (1% increments))
AUDIO           7. →ASPECT            16:9      ◄──── ⑦ Setting the type of aspect marker at 4:3 display
MARKER    >     8. ASP. MARKER MODE   MRK+SHD   ◄──── ⑧ Setting the aspect marker display mode
P. REMOTE       9. →SHADOW LEVEL      40%       ◄──── ⑨ Setting the shadow contrast level with shadow on screen
VBS             10. CENTER MARKER     OFF       ◄──── ⑩ Setting the center cross marker ON/OFF
UMD／IMD         11. MARKER LEVEL      80%       ◄──── ⑪ Setting the marker display level
USB             12. MARKER COLOR      □         ◄──── ⑫ Setting the marker display color
UPDATE          13. USER MARKER       ON        ◄──── ⑬ Setting the user marker display ON/OFF
RESET           14. →SCENE NAME       SCENE1    ◄──── ⑭ Setting each scene of user markers and setting the scene names
INFO.           15 →SETTING           EXECUTE   ◄──── ⑮ Executing the user marker for the drawing setting menu
```

① Setting the type of marker (at 16:9 aspect ratio)

・Used to set various types of markers displayed at 16:9 aspect ratio.
  ・SAFETY : Displaying the safety marker preset in Item ② .
  ・ASPECT : Displaying the aspect marker preset in Item ③ .
  ・ASP+SAF : Displaying the aspect marker preset in Item ③ and the safety marker in aspect marker area preset in Item ④.
  ・C.CROSS : Cross marker.
  ・CROSS5 : 5-split crosshatch pattern.
  ・CROSS10 : 10-split crosshatch pattern.
・This function can be assigned with the F1 to F4 switch on the front panel.

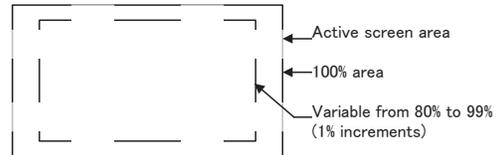> ・The types of markers can also be set with the ◄ and ► switches on the front panel with no menu displayed.

・Default setting is SAFETY.

SAFETY	ASPECT	ASP + SAF
C.CROSS	CROSS5	CROSS10
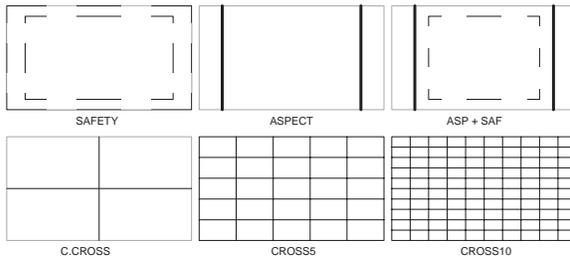
② Setting the safety marker area (at 16:9 aspect ratio)

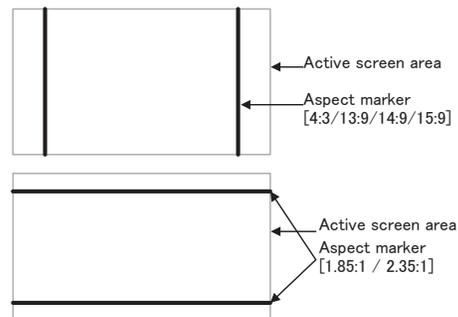・Used to set the safety marker area in the 80%- 99% range with 1% increments at 16:9 aspect ratio.

Active screen area
100% area
Variable from 80% to 99% (1% increments)

> ・Somewhere between 80% and 99% can also be set with the ▲ and ▼ switches on the front panel with no menu displayed.

・Default setting is 80% (safety area).

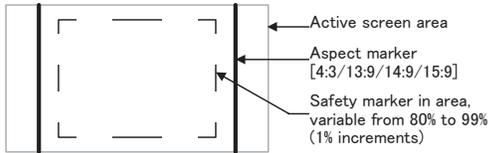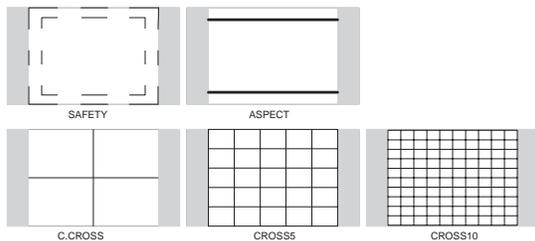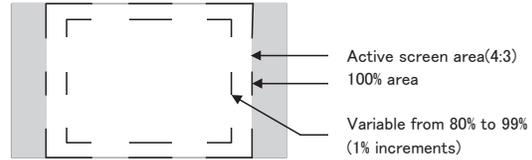### ③ Setting the type of aspect marker (at 16:9 aspect ratio)

・Used to select the type of aspect marker from "4:3, 13:9, 14:9, 15:9, 1.85:1 and 2.35:1" at 16:9 aspect ratio.

Active screen area
Aspect marker [4:3/13:9/14:9/15:9]

Active screen area
Aspect marker [1.85:1 / 2.35:1]

・Default setting is 4:3 marker.

④ **Setting the safety marker area in aspect marker** area (at 16:9)
・Used to set the safety marker in the aspect marker (4:3, 13:9, 14:9 and 15:9) area in the 80%-99% range with 1% increments at 16:9 aspect ratio.

Active screen area

Aspect marker
[4:3/13:9/14:9/15:9]

Safety marker in area, variable from 80% to 99% (1% increments)

・Somewhere between 80% and 99% can also be set with the ▲ and ▼ switches on the front panel with no menu displayed.

・Default setting is 80% (safety area).

⑤ **Setting the type of marker (at 4:3 aspect ratio)**
・Used to set various types of markers displayed at 4:3 aspect ratio.
  ・SAFETY : Displaying the safety marker preset in Item ⑥.
  ・ASPECT : Displaying the aspect marker preset in Item ⑦.
  ・C.CROSS : Cross marker.
  ・CROSS5 : 5-split crosshatch pattern.
  ・CROSS10 : 10-split crosshatch pattern.
・This function can be assigned with the F1 to F4 switch on the front panel.

・The types of markers can also be set with the ◀ and ▶ switches on the front panel with no menu displayed.

・Default setting is SAFETY.

SAFETY ASPECT

C.CROSS CROSS5 CROSS10

⑥ **Setting the safety marker area (at 4:3 aspect ratio)**
・Used to set the safety marker area in the 80%-99% range with 1% increments at 4:3 aspect ratio.

Active screen area(4:3) 100% area

Variable from 80% to 99% (1% increments)

・Somewhere between 80% and 99% can also be set with the ▲ and ▼ switches on the front panel with no menu displayed.

・Default setting is 80% (safety area).

⑦ **Setting the type of aspect marker (at 4:3 aspect ratio)**
・Used to select the type of aspect marker from "13:9, 14:9, 15:9 and 16:9" at 4:3 aspect ratio.

Active screen area

Aspect marker
[13:9/14:9/15:9/16:9]
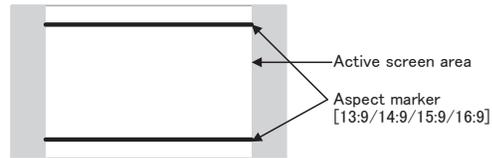
・Default setting is 16:9 marker.

⑧ **Setting the aspect marker display mode**
・Used to set the aspect marker display mode.
  ・MARKER : Displaying the marker only.
  ・SHADLOW : Displaying the shadow only
  ・MRK+SHD : Displaying both the marker and shadow
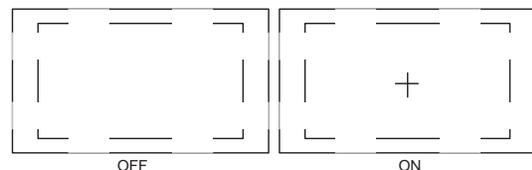・Default setting is MARKER+SHADOW.

MARKER SHADOW MRK+SHD

⑨ **Setting the aspect marker shadow level**
・Used to set the contrast level of the aspect marker shadow, when displayed.
・Settings: 0%, 20%, 40% and 60%
・Default setting is 40%.

⑩ **Setting the center cross marker ON/OFF**
・Used to turn on and off the center cross marker.
・Default setting is OFF.

OFF ON

⑪ **Setting the marker display level**
・Used to set the marker display level.
・Settings: 20%, 40%, 60%, 80% and 100%
・Default setting is 80%.

⑫ **Setting the marker display color**
・Used to set the marker display color.
  * The user marker is displayed in the color pre-
  set on the user marker menu.
・Settings :　White, yellow, cyan, green, magenta,
  red and blue
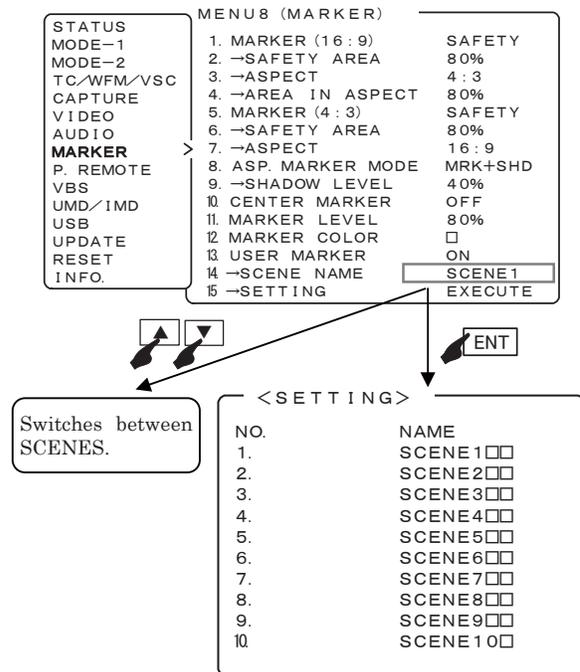・Default setting is white.

⑬ **Setting the user marker display ON/OFF**
・Used to turn on and off the user marker display.
・This function can be assigned with the F1 to F4
  switch on the front panel.
・Default setting is OFF.

⑭ **Selecting each scene of user markers and set-
ting the scene names**
・The user markers can be set for up to 10 scenes;
  you can select from displays of SCENE 1 to
  SCENE 10.

SCENE10
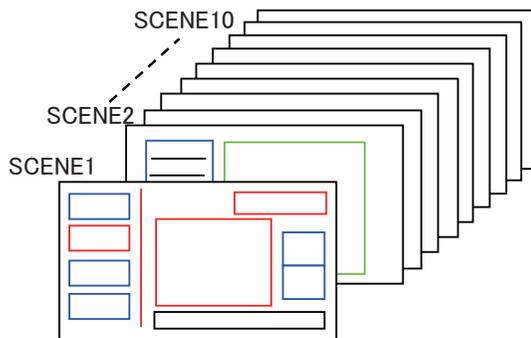
SCENE2

SCENE1

・The name of each scene can be up to 8 char-
  acters in length with the following characters:
  "0-9, A-Z, (), -, □ (blank)".
・If you press ENT on the SCENE, the following
  SETTING MENU is displayed, and there you
  can change the name of each SCENE.

```
MENU8 (MARKER)
STATUS            1. MARKER (16:9)      SAFETY
MODE-1            2. →SAFETY AREA         80%
MODE-2            3. →ASPECT              4:3
TC/WFM/VSC        4. →AREA IN ASPECT      80%
CAPTURE          5. MARKER (4:3)        SAFETY
VIDEO            6. →SAFETY AREA         80%
AUDIO            7. →ASPECT             16:9
MARKER      >    8. ASP. MARKER MODE   MRK+SHD
P. REMOTE        9. →SHADOW LEVEL        40%
VBS             10. CENTER MARKER        OFF
UMD/IMD         11. MARKER LEVEL         80%
USB             12. MARKER COLOR          □
UPDATE          13. USER MARKER          ON
RESET           14. →SCENE NAME        SCENE1
INFO.           15. →SETTING          EXECUTE
```

△ ▽   ENT

Switches between
SCENES.

```
<SETTING>
NO.              NAME
1.               SCENE1□□
2.               SCENE2□□
3.               SCENE3□□
4.               SCENE4□□
5.               SCENE5□□
6.               SCENE6□□
7.               SCENE7□□
8.               SCENE8□□
9.               SCENE9□□
10.              SCENE10□
```

・The switching of the scenes can be assigned to
  the F1 to F4 switches on the previous screen.
・Default setting is SCENE1.

⑮ **Executing the user marker for the drawing set-
ting menu**
・Press ENT with EXECUTE, and the user
  markersetting menu shows up. Now various set-
  tings can be made on this menu.
  For details, refer to Item **4-11.**

4-11. Description of MENU8-15 (USER MARKER) Functions and Making Settings

＜PAGE 1 ＞　　　　　　　　　　　　　　＜PAGE 2 ＞

②NO　　　　　　　③COL　④SW　①SCENE NAME　⑤DATA(X Y)

```
<SETTING OF USER MARKER>          <SETTING OF USER MARKER>
PAGE1                             PAGE2
SCENE NAME    :SCENE1             NO.  COL  SW   DATA (X  Y)
NO.  COL  SW   DATA (X  Y)        ↑ (BACK)
MK1   □   ON  S:————  ————        MK6   □   ON  S:————  ————
              E:————  ————                      E:————  ————
MK2   □   ON  S:————  ————        MK7   □   ON  S:————  ————
              E:————  ————                      E:————  ————
MK3   □   ON  S:————  ————        MK8   □   ON  S:————  ————
              E:————  ————                      E:————  ————
MK4   □   ON  S:————  ————        MK9   □   ON  S:————  ————
              E:————  ————                      E:————  ————
MK5   □   ON  S:————  ————        MK10  □   ON  S:————  ————
              E:————  ————                      E:————  ————
↓(NEXT PAGE)
SET→ENT  EXIT→ESC                 SET→ENT  EXIT→ESC
```

① The scene name for user marker

② Types of user markers

③ Setting the user marker color

④ Setting the user marker display ON/OFF

⑤ User marker coordinates

◆How to turn from PAGE1 to PAGE2
When the blinking cursor is at MK1, use the ▲ switch to go to PAGE2. With the blinking cursor at MK5, use the ▼ switch to go to PAGE2.

③ The scene name for user marker

・ The scene name of the user marker to be set is displayed, and you can use ▼ ▲ switch to change the scene.

② Types of user markers

・ The user markers are presettable in boxes or lines, chosen from 10 types from MK1 to MK10. Up to 10 different display positions of subtitles can therefore be individually preset, depending on programs. Use the ▼ and ▲ switches to select a desired item.

<10 different display examples>
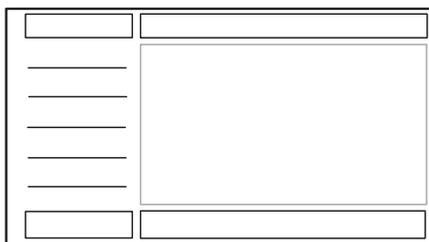
③ Setting the user marker color

・ Using the "COL" item, select a desired display color from 6 colors. The 10 types of user markers can be color-coded to identify them if two or more user markers are used.
・ Settings : White, yellow, cyan, green, red and blue
・ Default setting is white.

④ Setting the user marker display ON/OFF

・ Using the "SW" item, the display can be turned on and off.
・ Default setting is ON.

⑤ **User marker coordinates**
  ・In the "DATA (X Y)" column, the coordinates for
   S : START POINT and E : END POINT of the
   currently set user markers are displayed. with-
   out such settings, the "–" marker appears.
  ・Move the cursor to the X/Y data. Using the ENT
   switch, new user markers can be drawn or al-
   ready registered user markers can be modified.
  ・The setting can be made in 1-pixel increments.
   The top left of the effective screen serves as the
   reference point (0001, 0001) of the coordinates.
   From this point, the coordinates can be adjusted
   in the pixel range of 1920 x 1080.
  ・Default setting is –(unregistered).

● Resetting the data
  ・With the "DATA (X Y)" settings blinking in
   magenta, hold down the ▶ switch (or the
   right-hand button on the mouse) longer than 3
   seconds, and the preset data may be deleted (–).

● Coordinate reference point
   This 1920 x 1080, Full-HD panel has the pixel
   reference point (0001, 0001) at the top left of the
   screen. The pixel at the bottom right on screen is
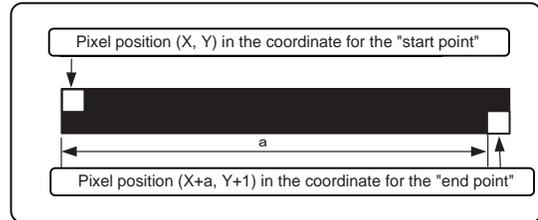   preset as the coordinates (1920, 1080).
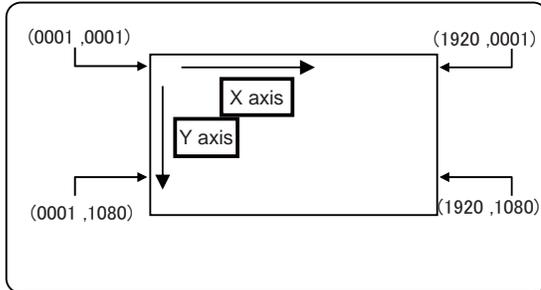
● Marker lines and coordinate values
   There are 2 line widths for the user markers.
   However, the coordinate for the start point and
   that for the end point are different by 1 pixel.
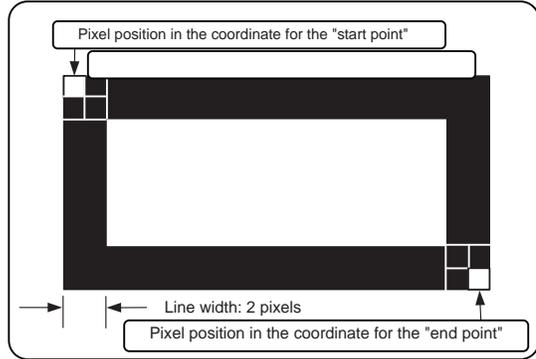
Accordingly, in drawing a horizontal line, the
Y-direction address has a coordinate value with
1 pixel added, as shown below.

When a vertical line is drawn, the X-axis address
has a coordinate value with 1 pixel added, as
shown below.
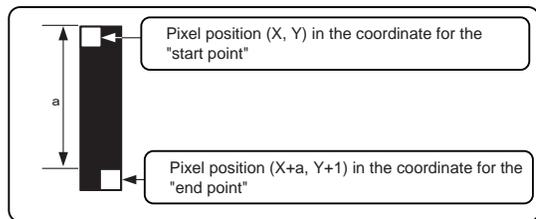
How to preset new user markers

① Setting the marker display ON/OFF

```
┌MENU8 (MARKER)─────────┐
  1. MARKER (16 : 9)      SAFETY
  2. →SAFETY AREA         80%
  3. →ASPECT              4 : 3
  4. →AREA IN ASPECT      80%
  5. MARKER (4 : 3)       SAFETY
  6. →SAFETY AREA         80%
  7. →ASPECT              16 : 9
  8. ASP. MARKER MODE     MRK+SHD
  9. →SHADOW LEVEL        40%
 10. CENTER MARKER        OFF
 11. MARKER LEVEL         60%
 12. MARKER COLOR         □
 13. USER MARKER          ON
 14. →SCENE NAME          SCENE1
 15. →SETTING             EXECUTE
└SET→ENT  EXIT→ESC──────┘
```

Set USER MARKER to ON.

Move the cursor

② Execute the drawing mode in item 14

```
┌MENU8 (MARKER)─────────┐
  1. MARKER (16 : 9)      SAFETY
  2. →SAFETY AREA         80%
  3. →ASPECT              4 : 3
  4. →AREA IN ASPECT      80%
  5. MARKER (4 : 3)       SAFETY
  6. →SAFETY AREA         80%
  7. →ASPECT              16 : 9
  8. ASP. MARKER MODE     MRK+SHD
  9. →SHADOW LEVEL        40%
 10. CENTER MARKER        OFF
 11. MARKER LEVEL         60%
 12. MARKER COLOR         □
 13. USER MARKER          ON
 14. →SCENE NAME          SCENE1
 15. →SETTING             EXECUTE
└SET→ENT  EXIT→ESC──────┘
```

Press ENT now.

③ Setting the individual markers

```
┌<SETTING OF USER MARKER>┐
 PAGE1
 SCENE NAME    :SCENE1
 NO.  COL SW   DATA (X  Y)
 MK1   □   ON  S:──── ────
               E:──── ────
 MK2   □   ON  S:──── ────
               E:──── ────
 MK3   □   ON  S:──── ────
               E:──── ────
 MK4   □   ON  S:──── ────
               E:──── ────
 MK5   □   ON  S:──── ────
               E:──── ────
 ↓ (NEXT PAGE)
└SET→ENT  EXIT→ESC───────┘
```

Set the color and ON/OFF display for individual markers.

④ Going to the drawing menu

```
┌<SETTING OF USER MARKER>┐
 PAGE1
 SCENE NAME    :SCENE1
 NO.  COL SW   DATA (X  Y)
 MK1   □   ON  S:──── ────
               E:──── ────
 MK2   □   ON  S:──── ────
               E:──── ────
 MK3   □   ON  S:──── ────
               E:──── ────
 MK4   □   ON  S:──── ────
               E:──── ────
 MK5   □   ON  S:──── ────
               E:──── ────
 ↓ (NEXT PAGE)
└SET→ENT  EXIT→ESC───────┘
```

ENT

⑤

The menu screen in Step ③ reappears and the settings are displayed at the X–Y coordinate.

X axis

Y axis

⑤ Setting the start point

```
START POINT( X : 0960  Y : 0540 )
END   POINT( X : 0960  Y : 0540 )
+
```
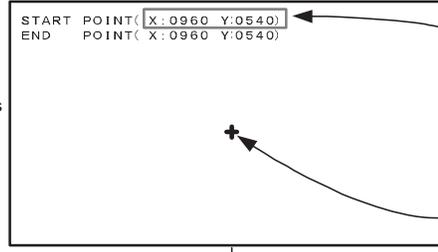
With nothing registered, the initial X–Y coordinate is displayed, and the start-point X–Y coordinate starts blinking.

With nothing registered, the cursor is displayed at the default center.

⑥ Moving the cursor to the start point

```
START POINT( X : 0300  Y : 0250 )
END   POINT( X : 0300  Y : 0250 )
```
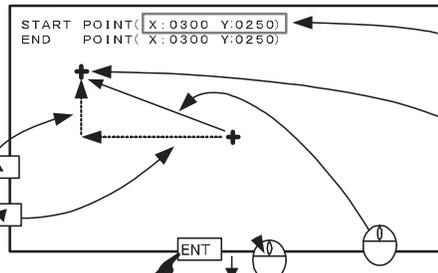
The shifted X–Y coordinate is displayed.

Move the cursor to the start point.

ENT

⑦ Saving the start point
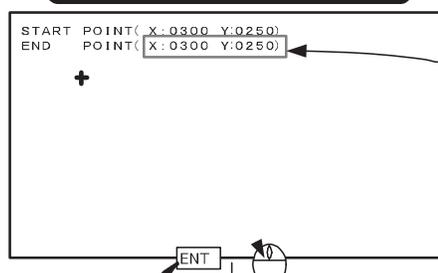
```
START POINT( X : 0300  Y : 0250 )
END   POINT( X : 0300  Y : 0250 )
+
```

The end-point X–Y coordinate starts blinking.

ENT

⑧ Moving the cursor to the end point

```
START POINT( X : 0300  Y : 0250 )
END   POINT( X : 1200  Y : 0500 )
```

Move the cursor to the end point.

Take the procedure to set a new start point

ENT

⑨ Saving the end point

ESC
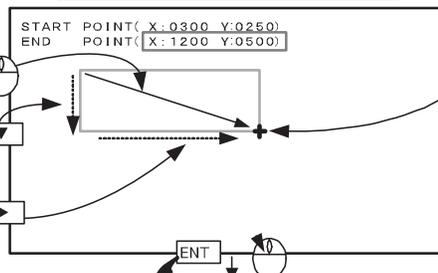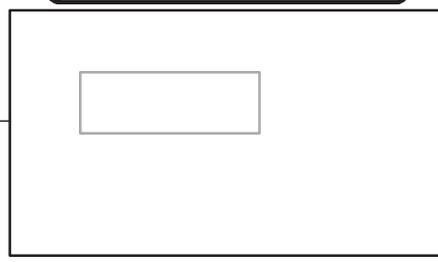
The cursor moves to the start point. Take the procedure in Step ⑤ on the next page.

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How to modify the user markers

① Setting the marker display ON/OFF

```
MENU8 (MARKER)
 1. MARKER (16:9)      SAFETY
 2. →SAFETY AREA       80%
 3. →ASPECT            4:3
 4. →AREA IN ASPECT    80%
 5. MARKER (4:3)       SAFETY
 6. →SAFETY AREA       80%
 7. →ASPECT            16:9
 8. ASP. MARKER MODE   MRK+SHD
 9. →SHADOW LEVEL      40%
10. CENTER MARKER      OFF
11. MARKER LEVEL       60%
12. MARKER COLOR       □
13. USER MARKER        ON
14. →SCENE NAME        SCENE1
15. →SETTING           EXECUTE
SET→ENT  EXIT→ESC
```

Set USER MARKER to ON.

Move the cursor

② Execute the drawing mode in item 14

```
MENU8 (MARKER)
 1. MARKER (16:9)      SAFETY
 2. →SAFETY AREA       80%
 3. →ASPECT            4:3
 4. →AREA IN ASPECT    80%
 5. MARKER (4:3)       SAFETY
 6. →SAFETY AREA       80%
 7. →ASPECT            16:9
 8. ASP. MARKER MODE   MRK+SHD
 9. →SHADOW LEVEL      40%
10. CENTER MARKER      OFF
11. MARKER LEVEL       60%
12. MARKER COLOR       □
13. USER MARKER        ON
14. →SCENE NAME        SCENE1
15. →SETTING           EXECUTE
SET→ENT  EXIT→ESC
```

ENT

Press ENT now.

③ Setting the individual markers

```
<SETTING OF USER MARKER>
PAGE1
SCENE NAME    :SCENE1
NO.  COL  SW   DATA (X  Y)
MK1   ■   ON   S:0300  0250
                E:1200  0500
MK2   □   ON   S:----  ----
                E:----  ----
MK3   □   ON   S:----  ----
                E:----  ----
MK4   □   ON   S:----  ----
                E:----  ----
MK5   □   ON   S:----  ----
                E:----  ----
↓ (NEXT PAGE)
SET→ENT  EXIT→ESC
```

Set the color and ON/OFF display for individual markers.

ENT

④ Setting the modified size

```
<SETTING OF USER MARKER>
PAGE1
SCENE NAME    :SCENE1
NO.  COL  SW   DATA (X  Y)
MK1   □   ON   S:0300  0250
                E:1200  0500
MK2   □   ON   S:----  ----
                E:----  ----
MK3   □   ON   S:----  ----
                E:----  ----
MK4   □   ON   S:----  ----
                E:----  ----
MK5   □   ON   S:----  ----
                E:----  ----
↓ (NEXT PAGE)
SET→ENT  EXIT→ESC
```

(Hold down)
►

ENT

⑤

Hold down the ► switch (or the right-hand button on the mouse), and the data will be initialized (—).

X axis
Y axis

⑤ Setting a new start point

```
START POINT( X:0300 Y:0250 )
END   POINT( X:1200 Y:0500 )
```
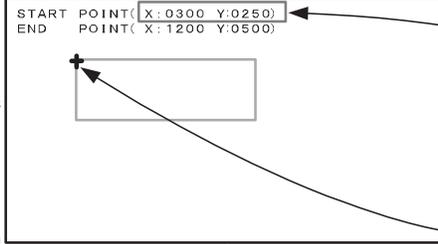
The start-point X-Y coordinate starts blinking.

The magenta-colored cursor appears at the start point.
*If the end point is positioned above or to the left of the start point, the cursor display position depends on the registered data.

Move the cursor to the start point.

⑥ Modifying the start point

```
START POINT( X:0250 Y:0200 )
END   POINT( X:1200 Y:0500 )
```

The shifted X-Y coordinate is displayed.

ENT
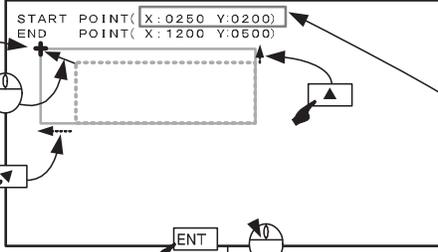
⑦ Modifying the end point

```
START POINT( X:0250 Y:0200 )
END   POINT( X:1200 Y:0500 )
```
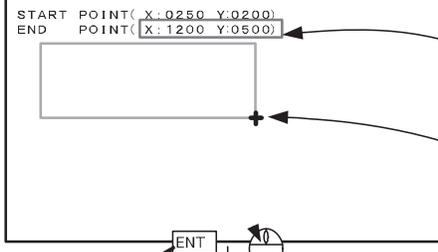
The end-point X-Y coordinate starts blinking.

The magenta-colored cursor appears at the end point.

ENT

⑧ Shifting the end point
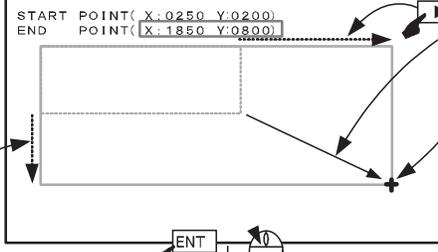
```
START POINT( X:0250 Y:0200 )
END   POINT( X:1850 Y:0800 )
```

Move the cursor to the end point.

Take the procedure to set a new start point.

ENT

⑨ Saving the end point

The menu screen in Step ③ reappears and the new settings are displayed at the X-Y coordinate.

ESC

The cursor moves to the start point.

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4-12. Description of MENU 9 Functions

```
              MENU9 (PARALLEL REMOTE)
STATUS         1. PIN FUNCTION   DEFAULT
MODE-1         P2:CH-B      P9 :EXT SYNC              ①Setting the parallel remote pin function
MODE-2         P3:(blank)   P10:16:9
TC/WFM/VSC     P4:G-TALLY   P11:DVI
CAPTURE        P5:COMP.     P12:MARKER
VIDEO          P6:CHR UP    P13:SHADOW                ②Setting the user pin function
AUDIO          P7:MONO      P14:R-TALLY
MARKER         P8:RGB       P15:SDI
P. REMOTE  >    (P1:GND)
VBS
UMD/IMD
USB
UPDATE
RESET
INFO.
```
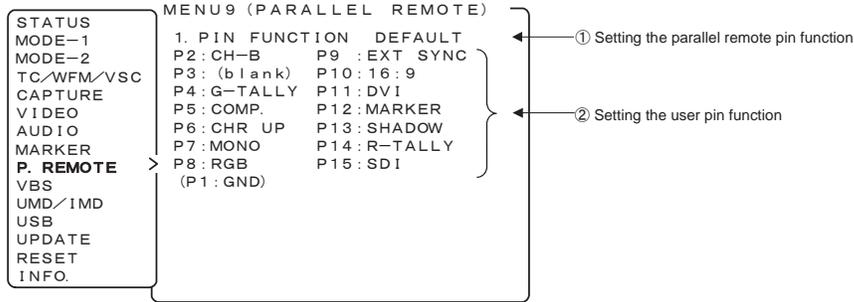
① **Setting the functions of parallel remote pins**
・Select the pre-assigned pin functions of parallel remote control or the individual user-set functions.
 * By default, the pre-assigned pin functions are displayed beneath.

② **Setting the IP conversion mode**
・When "USER" is selected in ① , set the individual pin functions. The settable functions are as follows.

・CH-B	:	selection of CH-B
・SDI	:	selection of SDI input
・DVI	:	selection of DVI input
・COMP.	:	selection of component input
・MONO	:	selection of MONO
・RGB	:	selection of component RGB input
・16:9	:	selection of SDTV aspect ratio 16:9
・EXT SYNC	:	selection of external sync input
・MARKER	:	marker ON
・SHADOW	:	shadow ON at **MENU7**-preset level
・SHADOW0	:	shadow ON at shadow level 0% (Black)
・SHADOW20	:	shadow ON at shadow level 20%
・SHADOW40	:	shadow ON at shadow level 40%
・SHADOW60	:	shadow ON at shadow level 60%
・R-TALLY	:	R tally ON
・G-TALLY	:	G tally ON
・3G-SDI	:	selection of 3G-SDI input
・ANALOG PC	:	selection of Analog PC input
・CHR UP	:	CHROMA UP ON
・UMARK*	:	USER MARKER SCENE* ON
・(blank)	:	unassigned

* "SHADOW0", "SHADOW20", "SHADOW40" and "SHADOW60" functions
・ Select two or more SHADOW settings at once, and "SHADOW0" (Black) is given priority.
・ When any of these functions is turned ON, the **MENU7**-adjusted shadow level is forced to go back to the level remotely preset.
* The functions of the following pins, which are fixed, cannot be changed.
　・ Pin 1 : Make contact GND

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4-13. Description of MENU 10 Functions

```
                    MENU10 (VBS)
STATUS
MODE−1          1. VBS  FORMAT     ◄───────── ① Setting the VBS input
MODE−2          2. →Y／C  SEP.          COMB  ◄── ② Setting the decoder Y/C separation
TC／WFM／VSC     3. →NTSC  SETUP  LVL    0%    ◄── ③ Setting the NTSC setup level
CAPTURE
VIDEO
AUDIO
MARKER
P.  REMOTE
VBS          ＞
UMD／IMD
USB
UPDATE
RESET
INFO.
```
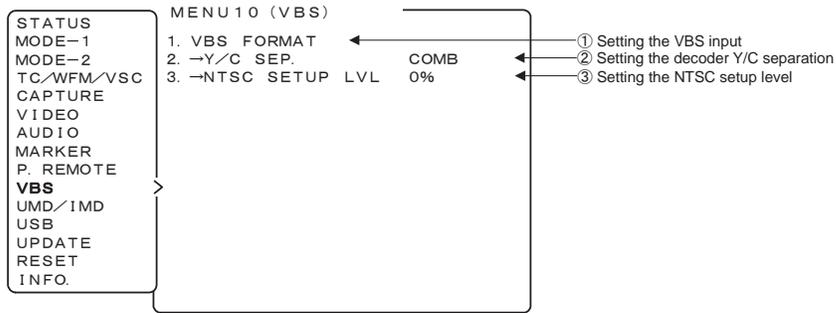
① **Setting the VBS input**
・The settings for the VBS signal are set here.

② **Setting the decoder Y/C separation**
・For the Y/C separation of VBS (composite) signals,
  set any of the following three types of formats.
  ・COMB ：comb filter
  ・TRAP ：trap filter
・This function can be assigned with the F1 to F4
  switch on the front panel.
・Default setting is 2DYCS.

③ **Setting the NTSC setup level**
・Used to set the setup level at the time of NTSC
  signal input. When the black level of the signal
  has 7.5% setup, it is set to "7.5%".
・Default setting is 0%.

・Used to adjust if horizontal stripes appear or the
  characters look blurry onscreen.

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4-14. Description of MENU 11 Functions

```
                MENU11 (UMD/IMD)
STATUS
MODE-1        1. FUNCTION         TSL       ◄────── ① Setting the TSL/user display function switching
MODE-2        <USER DISPLAY>
TC/WFM/VSC    2. USER DISPLAY     ON        ◄────── ② Setting the user display ON/OFF
CAPTURE       3. BRIGHTNESS       FULL      ◄────── ③ Setting the user display character brightness
VIDEO         4. →SETTING         EXECUTE   ◄────── ④ Setting the user display character content setting
AUDIO         <TSL>
MARKER        5. MONITOR ID       000       ◄────── ⑤ Setting the TSL monitor ID number
P. REMOTE     6. TALLY CONTROL    DISPLAY   ◄────── ⑥ Setting the TSL TALLY light-up method
VBS           7. LH TALLY COLOR   RED       ◄────── ⑦ Setting the TSL TALLY (left side) color
UMD/IMD     ▷8. RH TALLY COLOR   GREEN     ◄────── ⑧ Setting the TSL TALLY (right side) color
USB           <COMMON>
UPDATE        9. TEXT COLOR       □         ◄────── ⑨ Setting the Display character color
RESET         10. TEXT SIZE       NORMAL    ◄────── ⑩ Setting the Display character size
INFO.         11. TEXT POSITION   BOTTOM    ◄────── ⑪ Setting the Display character position
              12. DISPLAY POSITION CENTER   ◄────── ⑫ Setting the Video display position
```

① Setting the TSL/USER DISPLAY function switching

・Selects whether the UMD/IMD display is performed by TSL or DISPLAY.
　・TSL: TSL is enabled
　・U.DISP.: USER DISPLAY is enabled
・Default setting is TSL.

② Setting the USER DISPLAY ON/OFF

・Selects whether the USER DISPLAY characters set in the section ④ is displayed on the screen or not.
　・ON: Displays on the screen
　・OFF: Does not display
・Default setting is ON.

③ Setting the USER DISPLAY character brightness

・Sets the brightness of characters that are displayed on the screen.
　・FULL: 100% brightness
　・1/2: 50% brightness
　・1/7: 30% brightness
・Default setting is FULL.

④ Setting the USER DISPLAY character content

・When the "EXECUTE" is performed, the following MENU is displayed, in which you can set the character contents.

```
 ┌─ <SETTING> ─────────────┐
 │                          │
 │  INPUT      USER DISPLAY │
 │  SDI-A      □□□□□□□□     │
 │  SDI-B      □□□□□□□□     │
 │  VBS-A      □□□□□□□□     │
 │  VBS-B      □□□□□□□□     │
 │  DVI        □□□□□□□□     │
 │  OPT-1      □□□□□□□□     │
 │  OPT-2      □□□□□□□□     │
 │  OPT-3      □□□□□□□□     │
 │  OPT-4      □□□□□□□□     │
 └──────────────────────────┘
```

・Here, you can set 8 characters to be displayed on the screen when switching each input channel.
・Character types

```
┌─────────────────────────────────┐
│ A B C D E F G H I J K L M N O P Q R S T U │
│ V W X Y Z 0 1 2 3 4 5 6 7 8 9 - ( ) [blank] │
└─────────────────────────────────┘
```

⑤ Setting the TSL monitor ID number

・Here you can set each monitor ID number for controlling the TSL using RS485.
・The ID number can be set between 0 and 126.
・Although the maximum number of devices that can be driven with chain connection is 32 devices per line, you can individually control up to 126 devices by increasing the number of lines.
・Default setting is 000.

⑥ Setting the TSL TALLY light-up method

・Sets whether to light up the TALLY set on the top of monitor or display it on the screen.
・DISPLAY: Displays on the screen
・LED: LED lights up.
・Default setting is DISPLAY
　<TALLY lights up when it is set to LED>

LH TALLY   RH TALLY

<TALLY is displayed when it is set to DISPLAY>

■ABCDEFGH■

　　　LH TALLY　　　RH TALLY
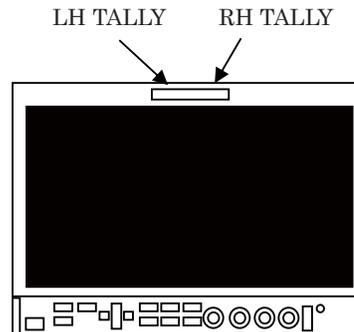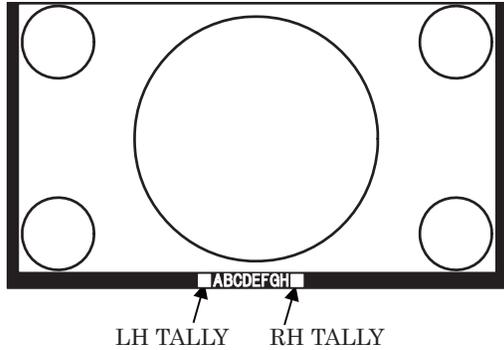
⑦ **Setting the TSL TALLY (left side) color**
　・Slects the display color for the TALLY (left side)
　　from the three colors: "RED/GREEN/AMBER".
　・Default setting is RED

⑧ **Setting the TSL TALLY (right side) color**
　・Selects the display color for the TALLY (right side)
　　from the three colors: "RED/GREEN/AMBER".
　・Default setting is GREEN

⑨ **Setting the Display character color (common set-
　　ting item)**
　・Selects the character color from the seven colors:
　　"WHITE/YELLOW/CYAN/GREEN/MAGENT/RE
　　D/BLUE".
　・Default setting is WHITE

⑩ **Setting the Display character size (common set-
　　ting item)**
　・Selects the character size from the two types:
　　"NORMAL/SMALL".
　　・NORMAL: Character size, large
　　・SMALL: Character size, small
　・Default setting is NORMAL

⑪ **Setting the Display character position (common
　　setting item)**
　・Selects the character position from the two types:
　　"NORMAL/SMALL".
　　・BOTTOM: Displays on the bottom of screen
　　・TOP: Displays on the top of screen
　・Default setting is BOTTOM

⑫ **Setting the Video display position (common set-
　　ting item)**
　・Selects the video display position from the two
　　types: "CENTER/AUTO".
　　・CENTER：Always displays the video on the
　　　　　　　　center of screen
　　・AUTO：　Automatically sets the image on the top
　　　　　　　or bottom depending on the
　　　　　　　TOP/BOTTOM setting in the TEXT
　　　　　　　The display character is forcibly set to
　　　　　　　"SMALL".
　・Default setting is CENTER

UMD／IMD Indication Table

```
TEXT SIZE          : NORMAL
TEXT POSITION      : BOTTOM
DISPLAY POSITION   : CENTER
```

ABCDEFGH
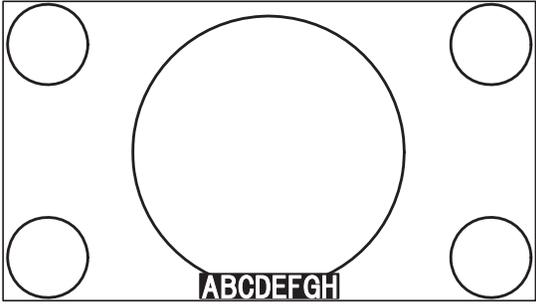
```
TEXT SIZE          : NORMAL
TEXT POSITION      : TOP
DISPLAY POSITION   : CENTER
```

ABCDEFGH
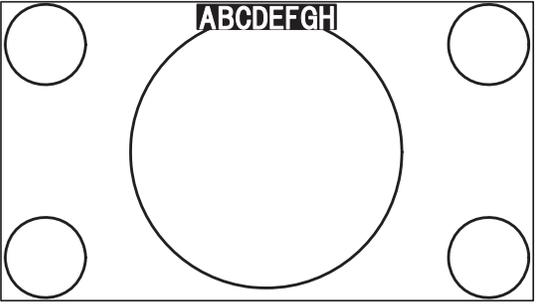
```
TEXT SIZE          : SMALL
TEXT POSITION      : BOTTOM
DISPLAY POSITION   : CENTER
```

ABCDEFGH
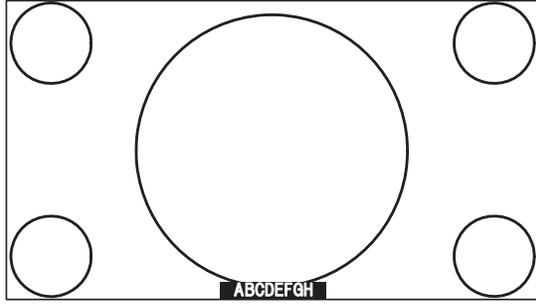
```
TEXT SIZE          : SMALL
TEXT POSITION      : TOP
DISPLAY POSITION   : CENTER
```

ABCDEFGH
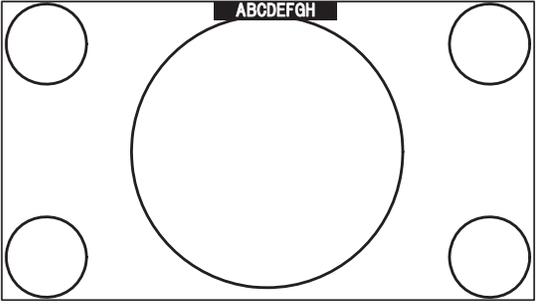
```
TEXT SIZE          : ----------
TEXT POSITION      : BOTTOM
DISPLAY POSITION   : AUTO
```

ABCDEFGH

```
TEXT SIZE          : ----------
TEXT POSITION      : TOP
DISPLAY POSITION   : AUTO
```

ABCDEFGH

4-15. Description of MENU 12 Functions

```
                    MENU12 (USB)
STATUS
MODE-1              <MOITOR→USB MEMORY>
MODE-2              1. SETTING DATE&TIME
TC/WFM/VSC          2. →DATE (Y/M/D)        14/01/01  ◄──── ① Setting the files year/month/day to write on USB memory
CAPTURE             3. →TIME (H:M)          00:00     ◄──── ② Setting the files hour/minute to write on USB memory
VIDEO               4. WRIGHT TO USB        EXECUTE   ◄──── ③ Executing to write on USB memory
AUDIO
MARKER              <USB MEMORY→MONITOR>
P. REMOTE           5. CONTENTS TO DOWNLOAD           ◄──── ④ Setting the data contents to be downloaded from USB memory to monitor
VBS                  □MENU&SW                         ◄──── a) Date in the menu-based and switch-preset status
UMD/IMD              □USER MARKER          S01~S10    ◄──── b) Data of user markers
USB            >     □PRESET               D65        ◄──── c) Various preset data
UPDATE              6. DOWNLOAD            EXECUTE    ◄──── ⑤ Downloading from USB memory to monitor
RESET
INFO.
```
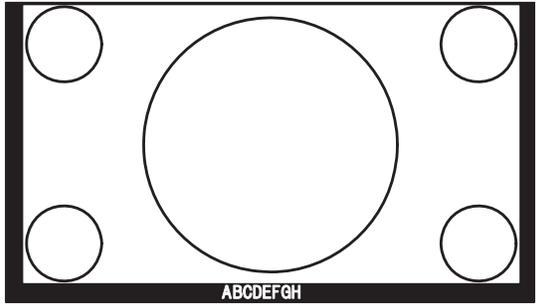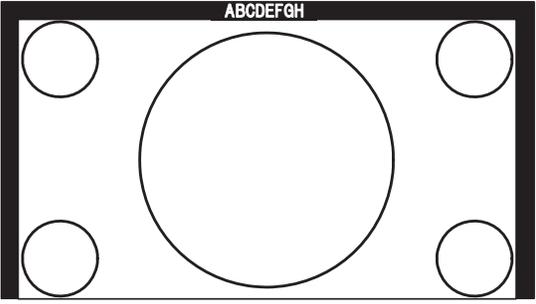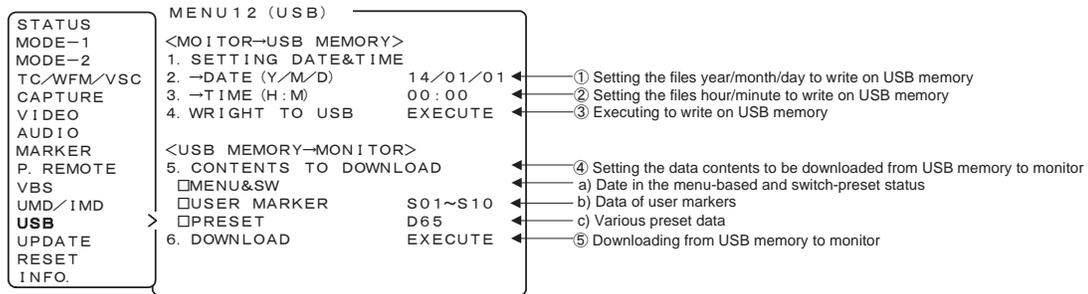

Writing from monitor to USB memory

① Setting the date of a file to be written on USB memory

・Used to set the editing date of a file to be written on a USB memory. Enter a date when you are going to write on the USB memory. When reviewing files on a computer, the date entered here will be displayed as the date of the file.

・Enter "Y (year)/M (month)/D (day)" in this order.

・If no date is entered, the file will be edited as of the date appearing currently on the menu.

② Setting the time of a file to be written on USB memory

・Used to set the editing time of a file in a way similar to Item ① .

・Enter "H (hour) : M (minute)" in this order. If no time is entered, the file will be edited as of the time appearing currently on the menu.

③ Writing to USB memory

・To write all the setting data from the monitor to a USB memory, select "EXECUTE" and press the ENT switch. For writing details, refer to "How to write from monitor to USB memory" .

・**File format for writing to USB memory**

Files to be written from the monitor to a USB memory are created in the following 3 text files in the Ikegami Monitor folder that is automatically prepared.

Ikegami_Monitor : Automatically prepared folders

menu_sw_h1m1705_001.txt

・File to save the menu (USER MARKER and PRESET MENU not included) status and the switch settings.

・Data capacity: Approx. 3 Kbyte

・This file is specific for the HLM-1751WR.
The MENU&SW data of the other models cannot be downloaded.

user_marker_001.txt (for SCENE1)
user_marker_002.txt (for SCENE2)
・
・
user_marker_010.txt (for SCENE10)

・File to save various setting data of the user markers that are preset in MENU8.

・Data capacity: Approx. 2 Kbyte

・Files common for the ful HD models.

preset_hlm1705_001.txt

・File to save the PRESET menu settings as well as all the D65, D93 and FILE1 thru -8 data.
The password lock and the password itself are not saved, however.

・Data capacity: Approx. 3 Kbyte

・This file is specific for the HLM-1751WR.
The PRESET data of the other models cannot be downloaded.

◆Precautions on writing

・With a USB connected to the monitor, do not turn ON/OFF the monitor or disconnect the inserted USB memory while writing is going on, or else the USB memory may possibly be damaged.　Be sure to disconnect the USB memory in accordance with the procedure described under "How to write from monitor to USB memory".

・Do not change the name of an automatically generated folder or a file, or else downloading to the monitor will be disabled.　Do not modify the data in a file, or else the order of the data may be altered, disabling writing of the data.

・If there is a file already in the specified folder, the data of a new file will be overwritten on the existing file.

・High-security USB memories could not be possibly recognized.

Downloading from USB memory to monitor

④ **Selecting items to be downloaded**

・Select the items of data to be downloaded from the USB memory to the monitor. Tick the check box.

・Contents of individual items

　a) □MENU&SW

　　・Tick this check box to download the setting statuses of all the menus (excluding USER MARKER MENU and PRESET MENU) and the switch setting status.

　　・The following files that are dedicated to each model are loaded as they are model-specific files.

　　　　"¥Ikegami_Monitor¥menu_sw_hlm1705_001.txt"

　　＊ Since this is a model-specific file, you cannot download the data that was stored with a different model or vise versa.

　b) □USER MARKER

　　・Check this box if you want to download the various settings (color, ON/OFF, XY coordinates) of "S01 (SCENE1) to S10 (SCENE10)" that were set in the USER MARKER of MENU 8.

　　・The files for each scene of
　　　"¥Ikegami_Monitor¥user_marker_001.txt" to
　　　"¥Ikegami_Monitor¥user_marker_010.txt"
　　　will be downloaded.

　　・By changing the settings of "S01 to S10", you can download the user markers of each scene by group or individually.

＊ Full HD-compatible HLM-1750WR/2450W*/3250W supports only 1 scene, and you can only download the file "user_marker_001.txt". In that case, make the setting items "S01 to S01".

c) □PRESET

　・To download the items set on the PRESET MENU and all of the data of D65, D93, and FILE 1 ~ 8, tick this check box.　If an individual FILE is specified, only the data of the specified FILE will be downloaded.

　・The following files that are dedicated to each model are loaded as they are model-specific files.

　　　"¥Ikegami_Monitor¥preset_hlm1705_001.txt"

　＊ If the data is locked with a password, you cannot check the box. Please enter the password and unlock it before downloading.

　＊ Since this is a model-specific file, you cannot download the data that was stored with a different model or vise versa.

　＊ It is possible to download the file from the same model. However, the color temperature data stored in the FILE is different for each device; therefore the same color temperature cannot be achieved even if you download the data. For this reason, the PRESET data should be downloaded for the purpose of data backup on each monitor.

⑤ **Executing the downloading**

・To download the data of the items selected udder Item ④ from the USB memory to the monitor, press ENT under "EXECUTE."
Refer to "How to download from USB memory to monitor" for the details of writing.

・If the file specified under Item ④ does not exist in the specific folder of the USB memory, the following message will appear:

The missing file name displayed here

(　　　　　)　　FILE
FILE IS NOT FOUND !

◆Precautions on downloading

・With a USB memory connected to the monitor, do not turn ON/OFF the monitor or disconnect the inserted USB memory while downloading is going on, or else the USB memory may possibly be damaged.　Be sure to disconnect the USB memory in accordance with the procedure described under "How to download from USB memory to monitor".

・Do not change the name of an automatically generated folder or a file, or else downloading to the monitor will be disabled.　Do not modify the data in a file, or else the order of the data may be altered, disabling writing of the data.

・If a data in the monitor is locked with a password, "DATA LOCK" will appear on the MENU as shown on the diagram below.
Enter the password to unlock the data first and download the data.

```
MENU12 (USB)
<MOITOR→USB MEMORY>
1. SETTING DATE&TIME
2. →DATE (Y/M/D)      14/01/01
3. →TIME (H:M)        00:00
4. WRIGHT TO USB     EXECUTE

<USB MEMORY→MONITOR>
5. CONTENTS TO DOWNLOAD
  □MENU&SW
  □USER MARKER       S01~S10
  □PRESET            D65
6. DOWNLOAD          EXECUTE

**** DATA LOCK ****
```

・It is possible in some cases that a high-security USB memory may not be recognized by the monitor.

◆Error messages during writing or downloading

ILLEGAL DATA:	Checksum error
FILE IS NOT FOUND:	File is not found.
ERROR01:	A file system error is detected
ERROR02;	A device other than a USB memory or a high-security USB memory is detected.
ERROR03~17:	Various errors on access

How to write from monitor to USB memory

```
┌─ MENU12 (USB MEMORY) ─┐
│                        │
│ <MONITOR → USB MEMORY> │
│ 1. SETTING OF DATE & TIME
│ 2. →DATE Y/M/D    14/01/01
│ 3. →TIME H:M      00:00
│ 4. WRIGH TO MEM   EXECUTE
│ <USB MEMORY → MONITOR> │
│ 5. CONTENTS TO DOWNLOAD│
│    □MENU&SW            │
│    □USER MARKER   S01~S10
│    □PRESET        D65  │
│ 6. DOWNLOAD       EXECUTE
│                        │
│ SET→ENT  EXIT→ESC      │
└────────────────────────┘
```

Enter the data and time of a file to be written on a USB memory.
*If no data and time is entered here, the already entered setting will be upheld.

◆Precaution
Do not draw out the inserted USB memory until the writing has been completed. If drawn out during access, the device may get damaged.

Insert a USB memory into the USB port at the monitor front.

```
┌─ MENU12 (USB MEMORY) ─┐
│                        │
│ <MONITOR → USB MEMORY> │
│ 1. SETTING OF DATE & TIME
│ 2. →DATE Y/M/D    14/01/01
│ 3. →TIME H:M      00:00
│ 4. WRIGH TO MEM   EXECUTE
│ <USB MEMORY → MONITOR> │
│ 5. CONTENTS TO DOWNLOAD│
│    □MENU&SW            │
│    □USER MARKER   S01~S10
│    □PRESET        D65  │
│ 6. DOWNLOAD       EXECUTE
│                        │
│ SET→ENT  EXIT→ESC      │
└────────────────────────┘
```

Move the cursor to "EXECUTE" and press the ENT switch.

By pressing the ESC switch at this point, the device is disconnected and the USB memory can be drawn out.

ENT

```
┌─ MENU12 (USB MEMORY) ─┐
│                        │
│ <MONITOR → USB MEMORY> │
│ 1. SETTING OF DATE & TIME
│ 2. →DATE Y/M/D    14/01/01
│ 3. →TIME H:M      00:00
│ 4. WRIGH TO MEM   EXECUTE
│ <USB MEMORY → MONITOR> │
│ 5. CONTENTS TO DOWNLOAD│
│    □MENU&SW            │
│    □USER MARKER   S01~S10
│    □PRESET        D65  │
│ 6. DOWNLOAD       EXECUTE
│                        │
│ PROCESSING···          │
└────────────────────────┘
```

In case of trouble

The device is detecting to see if the USB memory is inserted.

When no USB memory is inserted:

```
┌─ MENU12 (USB MEMORY) ─┐
│                        │
│ <MONITOR → USB MEMORY> │
│ 1. SETTING OF DATE & TIME
│ 2. →DATE Y/M/D    14/01/01
│ 3. →TIME H:M      00:00
│ 4. WRIGH TO MEM   EXECUTE
│ <USB MEMORY → MONITOR> │
│ 5. CONTENTS TO DOWNLOAD│
│    □MENU&SW            │
│    □USER MARKER   S01~S10
│    □PRESET        D65  │
│ 6. DOWNLOAD       EXECUTE
│                        │
│ DEVICE:NO_CONNECT      │
│ SET USB MEMORY         │
│ CANCEL→ ESC            │
└────────────────────────┘
```

The "NO CONNECT" message appears.

When an unsupported device is inserted:

```
┌─ MENU12 (USB MEMORY) ─┐
│                        │
│ <MONITOR → USB MEMORY> │
│ 1. SETTING OF DATE & TIME
│ 2. →DATE Y/M/D    14/01/01
│ 3. →TIME H:M      00:00
│ 4. WRIGH TO MEM   EXECUTE
│ <USB MEMORY → MONITOR> │
│ 5. CONTENTS TO DOWNLOAD│
│    □MENU&SW            │
│    □USER MARKER   S01~S10
│    □PRESET        D65  │
│ 6. DOWNLOAD       EXECUTE
│                        │
│ DEVICE:UNSUPPORTED     │
│ SET USB MEMORY         │
│ CANCEL→ ESC            │
└────────────────────────┘
```

The "UNSUPPORTED" message appears.

In normal state

```
┌─ MENU12 (USB MEMORY) ─┐
│                        │
│ <MONITOR → USB MEMORY> │
│ 1. SETTING OF DATE & TIME
│ 2. →DATE Y/M/D    14/01/01
│ 3. →TIME H:M      00:00
│ 4. WRIGH TO MEM   EXECUTE
│ <USB MEMORY → MONITOR> │
│ 5. CONTENTS TO DOWNLOAD│
│    □MENU&SW            │
│    □USER MARKER   S01~S10
│    □PRESET        D65  │
│ 6. DOWNLOAD       EXECUTE
│                        │
│ DEVICE:USB_MEMORY      │
│ WRITE TO USB MEMORY?   │
│ OK→ENT  CANCEL→ESC     │
└────────────────────────┘
```

The detection result is displayed here. When the USB memory is recognized, USB MEMORY" appears onscreen.

When ready to write press the ENT switch.
To interrupt it, press the ESC switch.

By pressing the ESC switch at this point, the device is disconnected and the USB memory can be drawn out.

ENT

```
┌─ MENU12 (USB MEMORY) ─┐
│                        │
│ <MONITOR → USB MEMORY> │
│ 1. SETTING OF DATE & TIME
│ 2. →DATE Y/M/D    14/01/01
│ 3. →TIME H:M      00:00
│ 4. WRIGH TO MEM   EXECUTE
│ <USB MEMORY → MONITOR> │
│ 5. CONTENTS TO DOWNLOAD│
│    □MENU&SW            │
│    □USER MARKER   S01~S10
│    □PRESET        D65  │
│ 6. DOWNLOAD       EXECUTE
│                        │
│ WRITING···             │
│ DO NOT REMOVE THE DEVICE!
└────────────────────────┘
```

During write

```
┌─ MENU12 (USB MEMORY) ─┐
│                        │
│ <MONITOR → USB MEMORY> │
│ 1. SETTING OF DATE & TIME
│ 2. →DATE Y/M/D    14/01/01
│ 3. →TIME H:M      00:00
│ 4. WRIGH TO MEM   EXECUTE
│ <USB MEMORY → MONITOR> │
│ 5. CONTENTS TO DOWNLOAD│
│    □MENU&SW            │
│    □USER MARKER   S01~S10
│    □PRESET        D65  │
│ 6. DOWNLOAD       EXECUTE
│                        │
│ JOB COMPLETED!         │
│ THE DEVICE CAN BE REMOVED.
│ EXIT→ ESC              │
└────────────────────────┘
```

Write complete

Draw out the USB memory

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How to download from USB memory to monitor

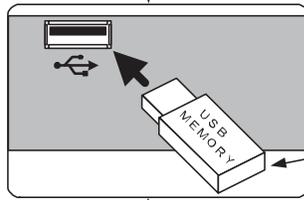MENU12 (USB MEMORY)

<MONITOR → USB MEMORY>
1. SETTING OF DATE & TIME
2. →DATE Y/M/D   14/01/01
3. →TIME H:M   00:00
4. WRIGH TO MEM   EXECUTE
<USB MEMORY → MONITOR>
5. CONTENTS TO DOWNLOAD
   ☑MENU&SW
   ☑USER MARKER   S01~S10
   ☑PRESET   D65
6. DOWNLOAD   EXECUTE

SET→[ENT] EXIT→[ESC]

Tick the check box (ES) (☑) for items to be downloaded from a USB memory to the monitor.

The USER MARKER can be preset for any from MK1 thru MK10.

◆Precaution
Do not draw out the inserted USB memory until the writing has been completed. If drawn out during access, the device may get damaged.

Insert a USB memory into the USB port at the monitor front.

[ESC]

When no USB memory is inserted:

MENU12 (USB MEMORY)

<MONITOR → USB MEMORY>
1. SETTING OF DATE & TIME
2. →DATE Y/M/D   14/01/01
3. →TIME H:M   00:00
4. WRIGH TO MEM   EXECUTE
<USB MEMORY → MONITOR>
5. CONTENTS TO DOWNLOAD
   ☐MENU&SW
   ☐USER MARKER   S01~S10
   ☐PRESET   D65
6. DOWNLOAD   EXECUTE

DEVICE:[NO CONNECT]
SET USB MEMORY
CANCEL→ [ESC]

The "NO CONNECT" message appears.

MENU12 (USB MEMORY)

<MONITOR → USB MEMORY>
1. SETTING OF DATE & TIME
2. →DATE Y/M/D   14/01/01
3. →TIME H:M   00:00
4. WRIGH TO MEM   EXECUTE
<USB MEMORY → MONITOR>
5. CONTENTS TO DOWNLOAD
   ☑MENU&SW
   ☑USER MARKER   S01~S10
   ☑PRESET   D65
6. DOWNLOAD   EXECUTE

SET→[ENT] EXIT→[ESC]

Move the cursor to "EXECUT" and press the [ENT] wsitch.

By pressing the [ESC] switch at this point, the device is disconnected and the USB memory can be drawn out.

[ENT]

In case of trouble

MENU12 (USB MEMORY)

<MONITOR → USB MEMORY>
1. SETTING OF DATE & TIME
2. →DATE Y/M/D   14/01/01
3. →TIME H:M   00:00
4. WRIGH TO MEM   EXECUTE
<USB MEMORY → MONITOR>
5. CONTENTS TO DOWNLOAD
   ☑MENU&SW
   ☑USER MARKER   S01~S10
   ☑PRESET   D65
6. DOWNLOAD   EXECUTE

[PROCESSING・・・]

The device is detecting to see if the USB memory is inserted.

When an unsupported device is inserted:
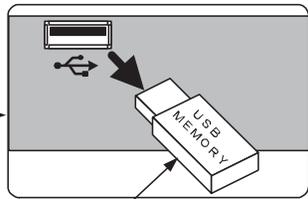
MENU12 (USB MEMORY)

<MONITOR → USB MEMORY>
1. SETTING OF DATE & TIME
2. →DATE Y/M/D   14/01/01
3. →TIME H:M   00:00
4. WRIGH TO MEM   EXECUTE
<USB MEMORY → MONITOR>
5. CONTENTS TO DOWNLOAD
   ☐MENU&SW
   ☐USER MARKER   S01~S10
   ☐PRESET   D65
6. DOWNLOAD   EXECUTE

DEVICE:[UNSUPPORTED]
SET USB MEMORY
CANCEL→ [ESC]

The "UNSUPPORTED" message appears.

In normal state

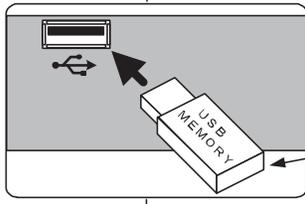MENU12 (USB MEMORY)

<MONITOR → USB MEMORY>
1. SETTING OF DATE & TIME
2. →DATE Y/M/D   14/01/01
3. →TIME H:M   00:00
4. WRIGH TO MEM   EXECUTE
<USB MEMORY → MONITOR>
5. CONTENTS TO DOWNLOAD
   ☑MENU&SW
   ☑USER MARKER   S01~S10
   ☑PRESET   D65
6. DOWNLOAD   EXECUTE

DEVICE:USB MEMORY
DOWNLOAD?
OK→[ENT] CANCEL→[ESC]

The detection result is displayed here. When the USB memory is recognized, "USB MEMORY" appears onscreen.

When ready to write, press the [ENT] switch. To interrupt it, press the [ESC] switch.

By pressing the [ESC] switch at this point, the device is disconnected and the USB memory can be drawn out.

[ENT]

MENU12 (USB MEMORY)

<MONITOR → USB MEMORY>
1. SETTING OF DATE & TIME
2. →DATE Y/M/D   14/01/01
3. →TIME H:M   00:00
4. WRIGH TO MEM   EXECUTE
<USB MEMORY → MONITOR>
5. CONTENTS TO DOWNLOAD
   ☑MENU&SW
   ☑USER MARKER   S01~S10
   ☑PRESET   D65
6. DOWNLOAD   EXECUTE

LOADING・・・
DO NOT REMOVE THE DEVICE!

During download

MENU12 (USB MEMORY)

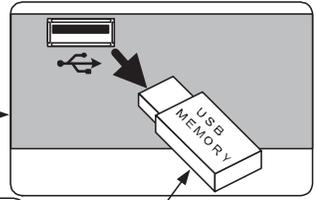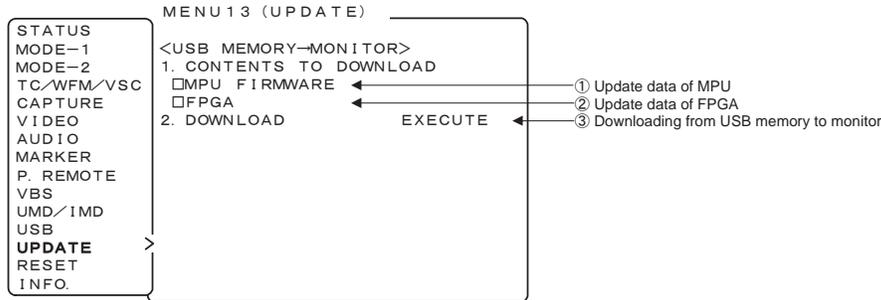<MONITOR → USB MEMORY>
1. SETTING OF DATE & TIME
2. →DATE Y/M/D   14/01/01
3. →TIME H:M   00:00
4. WRIGH TO MEM   EXECUTE
<USB MEMORY → MONITOR>
5. CONTENTS TO DOWNLOAD
   ☑MENU&SW
   ☑USER MARKER   S01~S10
   ☑PRESET   D65
6. DOWNLOAD   EXECUTE

JOB COMPLETED!
THE DEVICE CAN BE REMOVED.
EXIT→[ESC]

Download completed

Draw out the USB memory.

4-16. Description of MENU 13 Functions

```
                    M E N U 1 3  ( U P D A T E )
┌─────────────┬──────────────────────────────────────┐
│ STATUS      │ <USB MEMORY→MONITOR>                  │
│ MODE−1      │ 1. CONTENTS TO DOWNLOAD              │
│ MODE−2      │    □MPU FIRMWARE  ◄──────────── ① Update data of MPU
│ TC／WFM／VSC │    □FPGA          ◄──────────── ② Update data of FPGA
│ CAPTURE     │ 2. DOWNLOAD          EXECUTE ◄── ③ Downloading from USB memory to monitor
│ VIDEO       │                                      │
│ AUDIO       │                                      │
│ MARKER      │                                      │
│ P. REMOTE   │                                      │
│ VBS         │                                      │
│ UMD／IMD    │                                      │
│ USB         │                                      │
│ UPDATE    > │                                      │
│ RESET       │                                      │
│ INFO.       │                                      │
└─────────────┴──────────────────────────────────────┘
```

① Selecting items to be updated

・When updating the monitor by using the data stored in the USB memory, tick the check box of the items to be updated.
It is possible to download both items simultaneously.

a) □MPU FIRMWARE

・When updating the MPU firmware, tick the check box here.
・It takes approximately 45 seconds to update the MPU.
・Check the "Ikegami_Monitor" folder located on the root of the USB memory for existence of the data for HLM-1705WR.

| Ikegami_Monitor | : Storage folder |

| hlm1705mpu_v***.bin |

┌─────────────────────────────────────┐
│ ・3-digit version number is given right │
│ after the letter "v" at the end of the file │
│ name in the MPU firmware dedicated │
│ to HLM-1705WR. │
│ ・If, for example, the file name is │
│ "hlm1705mpu_v102.bin," it indicates │
│ that the version of the firmware is │
│ "version1.02." │
└─────────────────────────────────────┘

b) □FPGA

・When updating FPGA, tick the check box here.
・Check the "Ikegami_Monitor" folder located on the root of the USB memory for existence of the data for HLM-1705WR.

| Ikegami_Monitor | : Storage folder |

| hlm1705fpga_v**.rpd |

┌─────────────────────────────────────┐
│ ・2-digit version number is given right │
│ after the letter "v" at the end of the file │
│ name in the FPGA data dedicated for │
│ HLM-1705WR. │
│ For example, the file │
│ name "hlm1705fpga_v02.rpd" indi- │
│ cates "version02". │
└─────────────────────────────────────┘

② Execution of download

・Execute the updating of the item or items selected by ticking under item ①.
・Please refer to "How to update MPU from USB memory" on page 54 for the method of updating MPU.
・Please refer to "How to update FPGA from USB memory" on page 55 for the method of updating FPGA.
・When updating both MPU and FPGA simultaneously, update FPGA first and, even if an error should occur then, update MPU next.

How to update MPU from USB memory

```
MENU13 (UPDATE)

<USB MEMORY → MONITOR>
1. CONTENTS TO DOWNLOAD
  ☑MPU FIRMWARE
  ☐FPGA
2. DOWNLOAD          EXECUTE




SET→ENT  EXIT→ESC
```

Tick the check box (☐) for MPU item.

◆Precaution
Do not draw out the inserted USB memory until the writing has been completed. If drawn out during access, the device may get damaged.
The USB memory use USB memory formatted in FAT12/16/32, VFAT.
The USB cannot use USB memory with the security software.

Insert a USB memory into the USB port at the monitor front.

ESC

When no USB memory is inserted:

```
MENU13 (UPDATE)

<USB MEMORY → MONITOR>
1. CONTENTS TO DOWNLOAD
  ☑MPU FIRMWARE
  ☐FPGA
2. DOWNLOAD          EXECUTE




DEVICE NO CONNECT
SET USB MEMORY
CANCEL→ ESC
```

The "NO CONNECT" message appears.

```
MENU13 (UPDATE)

<USB MEMORY → MONITOR>
1. CONTENTS TO DOWNLOAD
  ☑MPU FIRMWARE
  ☐FPGA
2. DOWNLOAD          EXECUTE




SET→ENT  EXIT→ESC
```

Move the cursor to "EXECUT" and press the ENT switch.

By pressing the ESC switch at this point, the device is disconnected and the USB memory can be drawn out.

ENT

When an unsupported device is inserted:

```
MENU13 (UPDATE)

<USB MEMORY → MONITOR>
1. CONTENTS TO DOWNLOAD
  ☑MPU FIRMWARE
  ☐FPGA
2. DOWNLOAD          EXECUTE




DEVICE UNSUPPORTED
SET USB MEMORY
CANCEL→ ESC
```
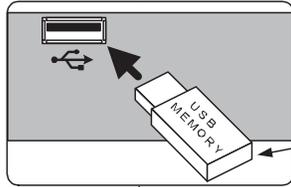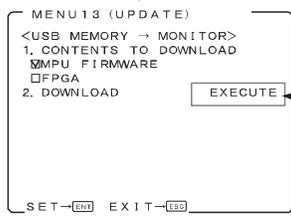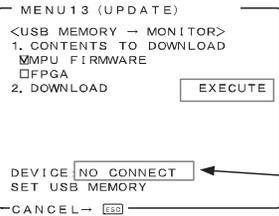
The "UNSUPPORTED" message appears.

```
MENU13 (UPDATE)

<USB MEMORY → MONITOR>
1. CONTENTS TO DOWNLOAD
  ☑MPU FIRMWARE
  ☐FPGA
2. DOWNLOAD          EXECUTE




PROCESSING···
```

In case of trouble

The device is detecting to see if the USB memory is inserted.

In normal state

```
MENU13 (UPDATE)

<USB MEMORY → MONITOR>
1. CONTENTS TO DOWNLOAD
  ☑MPU FIRMWARE
  ☐FPGA
2. DOWNLOAD          EXECUTE

MPU : 01.00 → 01.02

DEVICE:USB MEMORY
DOWNLOAD?
OK→ ENT CANCEL→ ESC
```

Current version

New version

The detection result is displayed here. When the USB memory is recognized, "USB MEMORY" appears onscreen.

When ready to write, press the ENT switch. To interrupt it, press the ESC switch.

By pressing the ESC switch at this point, the device is disconnected and the USB memory can be drawn out.

The new version that was downloaded

ENT

```
MENU13 (UPDATE)

<USB MEMORY → MONITOR>
1. CONTENTS TO DOWNLOAD
  ☑MPU FIRMWARE
  ☐FPGA
2. DOWNLOAD          EXECUTE

UPDATA MPU  85% DONE

DO NOT REMOVE THE DEVICE!
```

Automatically resets the software after the update is completed.

```
MENU13 (UPDATE)

<USB MEMORY → MONITOR>
1. CONTENTS TO DOWNLOAD
  ☐MPU FIRMWARE
  ☐FPGA
2. DOWNLOAD          EXECUTE

MPU : 01.02
    → SUCCESSFUL

PLEASE SHUTDOWN!
SET→ENT  EXIT→ESC
```

Remove the USB memory, turn the power OFF, and restart it to complete.

Progress

During update

Upload success

Shutdown message

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How to update FPGA from USB memory

```
MENU13 (UPDATE)

<USB MEMORY → MONITOR>
1. CONTENTS TO DOWNLOAD
  □MPU FIRMWARE
  ☑FPGA
2. DOWNLOAD          EXECUTE




SET→[ENT] EXIT→[ESC]
```
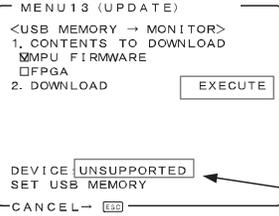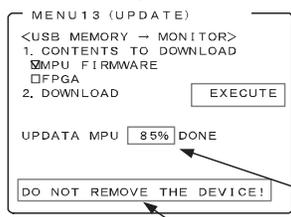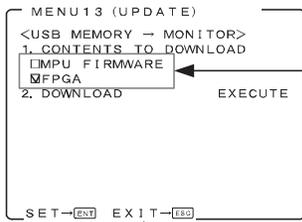
Tick the check box (□) for FPGA item.

◆Precaution
Do not draw out the inserted USB memory until the writing has been completed. If drawn out during access, the device may get damaged.
The USB memory use USB memory formatted in FAT12/16/32, VFAT.
The USB cannot use USB memory with the security software.
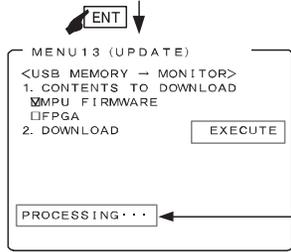
[ESC]

Insert a USB memory into the USB port at the monitor front.

```
MENU13 (UPDATE)

<USB MEMORY → MONITOR>
1. CONTENTS TO DOWNLOAD
  □MPU FIRMWARE
  ☑FPGA
2. DOWNLOAD        EXECUTE




SET→[ENT] EXIT→[ESC]
```

Move the cursor to "EXECUT" and press the [ENT] switch.

By pressing the [ESC] switch at this point, the device is disconnected and the USB memory can be drawn out.

[ENT]

```
MENU13 (UPDATE)

<USB MEMORY → MONITOR>
1. CONTENTS TO DOWNLOAD
  □MPU FIRMWARE
  ☑FPGA
2. DOWNLOAD        EXECUTE




PROCESSING・・・
```

In case of trouble

The device is detecting to see if the USB memory is inserted.

When no USB memory is inserted:

```
MENU13 (UPDATE)

<USB MEMORY → MONITOR>
1. CONTENTS TO DOWNLOAD
  ☑MPU FIRMWARE
  □FPGA
2. DOWNLOAD          EXECUTE




DEVICE NO CONNECT
SET USB MEMORY
CANCEL→ [ESC]
```

The "NO CONNECT" message appears.

When an unsupported device is inserted:

```
MENU13 (UPDATE)

<USB MEMORY → MONITOR>
1. CONTENTS TO DOWNLOAD
  ☑MPU FIRMWARE
  □FPGA
2. DOWNLOAD          EXECUTE




DEVICE UNSUPPORTED
SET USB MEMORY
CANCEL→ [ESC]
```

The "UNSUPPORTED" message appears.
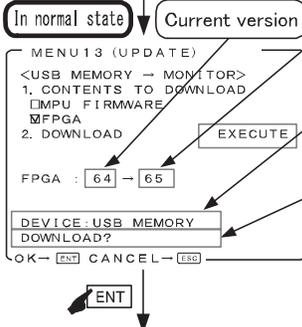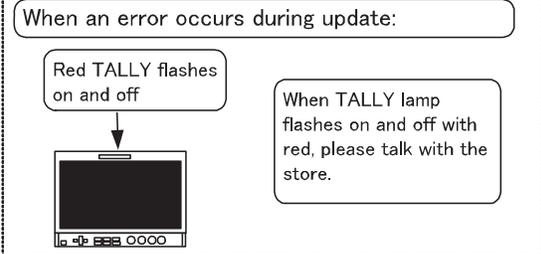
In normal state | Current version | New version

```
MENU13 (UPDATE)

<USB MEMORY → MONITOR>
1. CONTENTS TO DOWNLOAD
  □MPU FIRMWARE
  ☑FPGA
2. DOWNLOAD        EXECUTE

FPGA : [64] → [65]

DEVICE:USB MEMORY
DOWNLOAD?
OK→ [ENT] CANCEL→ [ESC]
```
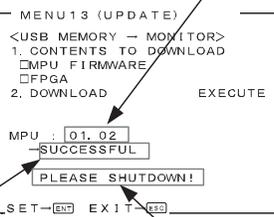
The detection result is displayed here. When the USB memory is recognized, "USB MEMORY" appears onscreen.

When ready to write, press the [ENT] switch. To interrupt it, press the [ESC] switch.

By pressing the [ESC] switch at this point, the device is disconnected and the USB memory can be drawn out.

[ENT]

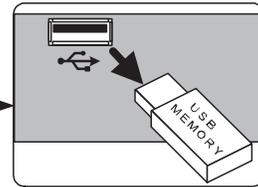A screen is not displayed during update.

Green TALLY flashes on and off

During update

In case of trouble

Automatically resets the software after the update is completed.

When an error occurs during update:

Red TALLY flashes on and off

When TALLY lamp flashes on and off with red, please talk with the store.

The new version that was downloaded

```
MENU13 (UPDATE)

<USB MEMORY → MONITOR>
1. CONTENTS TO DOWNLOAD
  □MPU FIRMWARE
  □FPGA
2. DOWNLOAD          EXECUTE

FPGA : [65]
  →SUCCESSFUL

PLEASE SHUTDOWN!

SET→[ENT] EXIT→[ESC]
```

Upload success | Shutdown message

Remove the USB memory, turn the power OFF, and restart it to complete.

4-17. Description of MENU 14 Functions

```
          MENU14 (RESET)
STATUS
MODE—1      1. LOAD FACTORY      ALL      ←——① Executing the initialization to the factory settings
MODE—2      2. RESET FILE   ←——————————————② Selecting the preset files to be initialized
TC／WFM／VSC
CAPTURE
VIDEO
AUDIO
MARKER
P. REMOTE
VBS
UMD／IMD
USB
UPDATE
RESET      >
INFO.
```
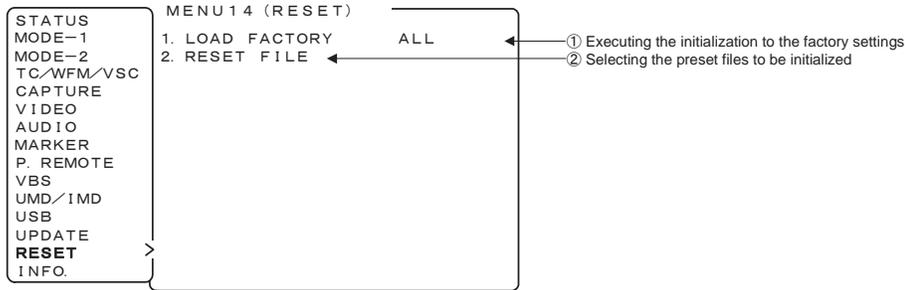
① **Executing the initialization of set data**

・Perform this setting to restore the default set-
　tings.
　　・ALL 　　　　: 　Factory settings are restored for
　　　　　　　　　　　all PRESET data, all MENUs
　　　　　　　　　　　and switches.
　　・PRESET 　　: 　Factory settings are restored for
　　　　　　　　　　　all PRESET data.
　　・MENU&SW : 　Factory settings are restored for
　　　　　　　　　　　all MENUs and switches.
・To initialize, select an item to be initialized with
　the 　▲ and ▼ switches and press the ENT
　switch. The confirmation message appears. Press
　the ENT switch again. To cancel the initializa-
　tion, just press the ESC switch.
　* The initialization of data cannot be executed if
　　 "DATA LOCK" or "ALL LOCK" is set in "5-2.
　　⑥ Setting of data protection password".
　　To initialize the data, unlock.

② **Selecting the preset files to be initialized**

・When "PRESET" is selected in ① , select a
　file for restoring the set data to the factory-set
　one.
　　・ALL 　　　: 　All the preset files are initialized.
　　・FILEx 　　: 　FILEx only is initialized.
　　 (x:1 to 8)
　　・FILE1-8 　: 　FILE1 to FILE8 only are initial-
　　　　　　　　　　ized.
　　・D65 　　　: 　REF D65 only is initialized.
　　・D93 　　　: 　REF D93 only is initialized.
　　・D65/D93 　: 　REF D65 and D93 only are ini-
　　　　　　　　　　tialized.

4-18．Description of MENU 15 Functions

```
                     MENU15 (INFORMATION)
STATUS
MODE−1          1. MPU   VERSION        01. 00    ◄────────① Displaying the MPU version
MODE−2          2. FPGA  VERSION        01／×00   ◄────────② Displaying the FPGA version
TC／WFM／VSC     3. WORKING  TIME        50H       ◄────────③ Displaying the operating hours
CAPTURE
VIDEO
AUDIO
MARKER
P. REMOTE
VBS
UMD／IMD
USB
UPDATE
RESET
INFO.           ＞
```
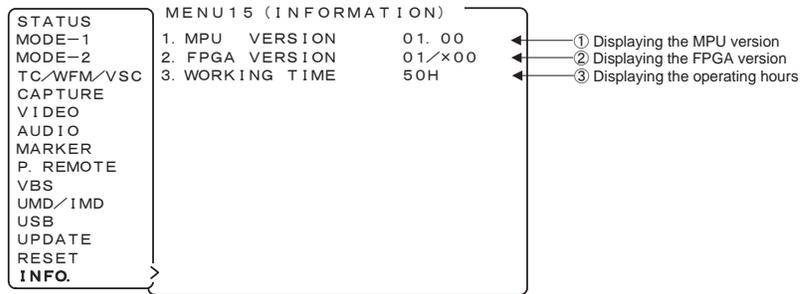
① **Displaying the MPU version**
・Displays the current software version.

② **Displaying the FPGA 1/2 version**
・Displays the current software version.

・ 02 ／ x00

Indicates the version of FPGA that is mounted with a future extension module. "x00" indicates that FPGA is not mounted.

Indicates the version of FPGA that is mounted on the main unit.

③ **Displaying the working time**
・Displays the accumulated time since the power was turned on.
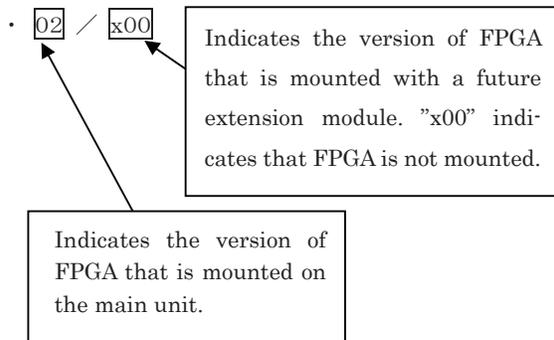
5. Preset Menu Function

5-1. List of preset menu
・To execute the preset menu, press PRESET .

* Turn off the menu screen.

```
(PRESET MENU)

1. SELECT FILE       D65        ◄──── ① Selection of file
2. BACKLIGHT DIM.  11          ◄──── ② Back light britness setting status
3. CHANGE  DATA               ◄──── ③ Change of preset data
4. DISPLAY  STATUS            ◄──── ④ Display of preset data list
5. COPY  FILE                 ◄──── ⑤ Copying of file data
6. CHANGE  FILE      AUTO     ◄──── ⑥ Setting of file change at the time of channel change
7. LOCK  FILE/DATA            ◄──── ⑦ Setting of data protection password
8. AUTO  WHITE  BALANCE       ◄──── ⑧ Executing the auto setup


            ENT            ESC
ENTER→     EXIT→
```

3. CHANGE DATA	4. DISPLAY STATUS	5. COPY FILE	7. LOCK FILE/DATA

(CHANGE DATA) :D65
1.HUE   0. 0
2.CHROMA   100
3.BRIGHT   0. 0
4.CONT   90. 0
5.R. BKG   0. 0
6.G. BKG   0. 0
7.B. BKG   0. 0
8.R. GAIN   100. 0
9.G. GAIN   100. 0
10.B. GAIN   100. 0
11.GAMMA   2. 2
12.APT LEVEL   16
13.APT FREQ.   HIGH
 	
SET→ENT   END→ESC
	(PRESET DATA STATUS)
	SELECT FILE D65
	1.HUE 0. 0
	2.CHROMA 100
	3.BRIGHT 0. 0
	4.CONT 90. 0
	5.R. BKG 0. 0
	6.G. BKG 0. 0
	7.B. BKG 0. 0
	8.R. GAIN 100. 0
	9.G. GAIN 100. 0
	10.B. GAIN 100. 0
	11.GAMMA 2. 2
	12.APT LEVEL 16
	13.APT FREQ. HIGH
	EXIT→ ESC
		(COPY FILE)
		
		FROM : D65
		      ↓
		  TO : FILE1
		
		SET→ ENT EXIT→ ESC
			(LOCK FILE/DATA)
			
			STATUS:UNLOCK
			
			—ENTER PASSWORD—
			ABCDEFGHIJKLMNOPQRSTUVWXYZ
			123456789
			
			PASSWORD ****
			
			SET→ ENT EXIT→ ESC

5-2. Description of preset menu

① Selection of files
・Select a file from among D65, D93 and FILE1 to FILE8.
　・D65   : 6500K
　・D93   : 9300K
　・FILE1-8 : User files
・The following data is memorized on these 10 files.
　・HUE   : Hue data (only for NTSC signals)
　・CHROMA   : CHROMA data
　・BRIGHT   : BRIGHTNESS data
　・CONT   : CONTRAST data
　・R.GAIN   : R.GAIN data
　・G.GAIN   : G.GAIN data
　・B.GAIN   : B.GAIN data
　・R.BKG   : R.BACKGROUND data
　・G.BKG   : G.BACKGROUND data
　・B.BKG   : B.BACKGROUND data
　・GAMMA   : Gamma data
　・APT LEVEL   : Aperture level

　・APT FREQ.   : Aperture frequency

*The D65 and D93 have been factory-set for the color temperatures of 6500K and 9300K, respectively. The FILE1 thru -8 data have been factory-set to be the same as for the D65.

② Change of preset data

```
(CHANGE  DATA) : D 6 5   ◄──── (a) File being selected

 1. HUE            0. 0    ◄──── (b) HUE data
 2. CHROMA         100     ◄──── (c) CHROMA data
 3. BRIGHT         0. 0    ◄──── (d) BRIGHTNESS data
 4. CONTRAST       90. 0   ◄──── (e) CONTRAST data
 5. R. BKG         0. 0    ◄──── (f) R. BACKGROUND data
 6. G. BKG         0. 0    ◄──── (g) G. BACKGROUND data
 7. B. BKG         0. 0    ◄──── (h) B. BACKGROUND data
 8. R. GAIN        100. 0  ◄──── (i) R. GAIN data
 9. G. GAIN        100. 0  ◄──── (j) G. GAIN data
10. B. GAIN        100. 0  ◄──── (k) B. GAIN data
11. GAMMA          2. 2    ◄──── (l) GAMMA data
12. APT LEVEL      16      ◄──── (m) Aperture level
13. APT FREQ.      HIGH    ◄──── (n) Aperture frequency
SET→ ENT   EXIT→ ESC
```

・Change the data of a file selected in **"① Selection of files"** on the preceding page.

・How to change data

Select "CHANGE DATA" and press the ENT switch. The following "CHANGE DATA" menu appears.

・Adjustable

・HUE

Used to set the hue (only for NTSC signals).

Variable range : -22.5～+22.0

・ Default setting is 0.0.

・CHROMA

Used to set the color density.

Variable range : 0.0～200.0

・ Default setting is 100.

・BRIGHT（BRIGHTNESS）

Used to set the black level.

Variable range : -60.0～+60.0

・ Default setting is 0.0.

・CONT（CONTRAST）

Used to set the white level.

Variable range : 0.0～120.0（WIDE : 0.0～200.0）

・R.BKG（R.BACKGROUND）

Used to set the black balance (red component) in the dark zone.

Variable range : -25.0～+25.0

・ Default setting is 0.0.

・G.BKG（G.BACKGROUND）

Used to set the black balance (green component)in the dark zone.

Variable range : -25.0～+25.0

・ Default setting is 0.0.

・B.BKG（B.BACKGROUND）

Used to set the black balance (blue component)in the dark zone.

Variable range : -25.0～+25.0

・ Default setting is 0.0.

・R.GAIN

Used to set the white balance (red component) in the bright zone.

Variable range : 0.0～200.0

・ Default setting is 100.0.

・G.GAIN

Used to set the white balance (green component)in the bright zone.

Range : 0.0～200.0

・ Default setting is 100.0.

・B.GAIN

Used to set the white balance (blue component)in the bright zone.

Range : 0.0～200.0

・ Default setting is 100.0.

・GAMMA

Sets the gamma setting.

Range : 2.2, 2.4

・ Default setting is 2.2.

・APT LEVEL

Used to set the aperture level.

Variable range : 0～63

・ Default setting is 16.

・APT FREQ.

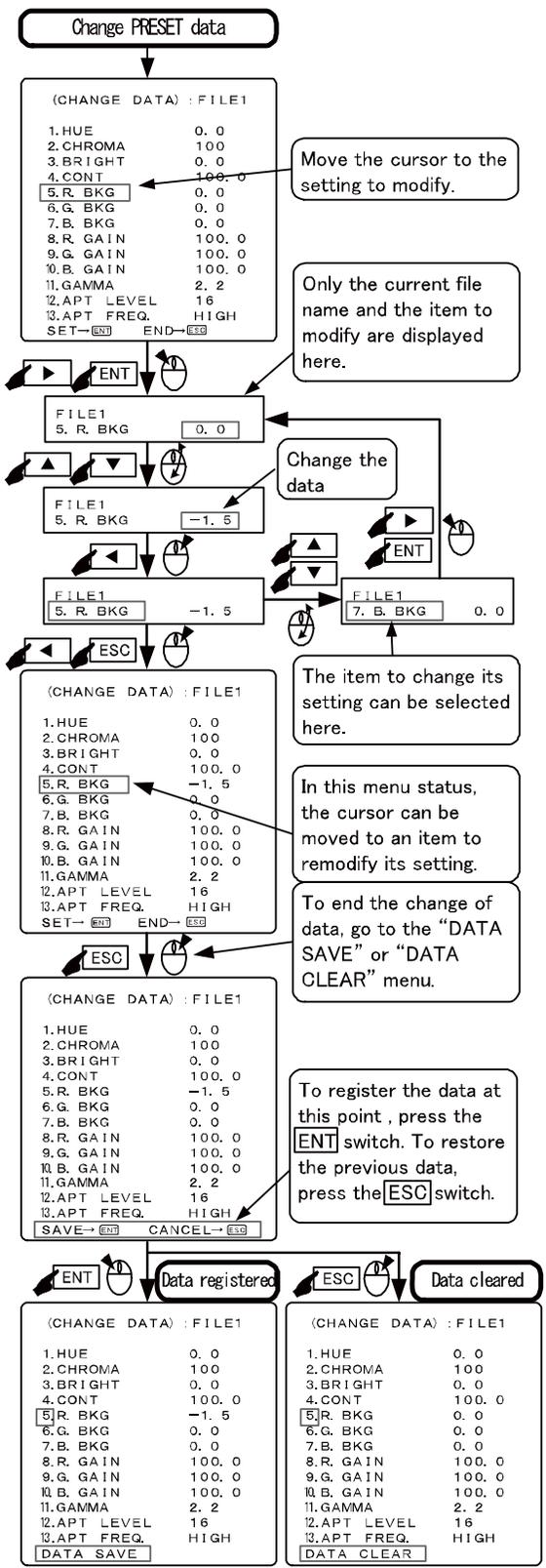Used to set the aperture frequency.

LOW Boosting from approx. 10MHz

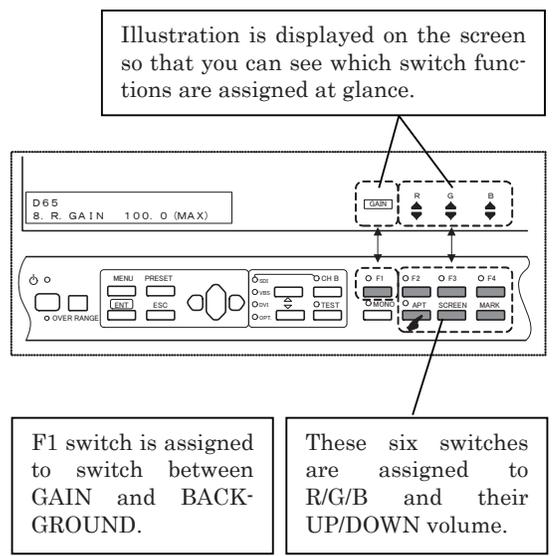MID1 Boosting from approx. 15MHz

MID2 Boosting from approx. 20MHz

HIGH Boosting from approx. 25MHz

・ Default setting is HIGH.

Change PRESET data

```
(CHANGE DATA) :FILE1

1.HUE          0. 0
2.CHROMA       100
3.BRIGHT       0. 0
4.CONT         100. 0
5.R. BKG       0. 0
6.G. BKG       0. 0
7.B. BKG       0. 0
8.R. GAIN      100. 0
9.G. GAIN      100. 0
10.B. GAIN     100. 0
11.GAMMA       2. 2
12.APT LEVEL   16
13.APT FREQ.   HIGH
SET→ ENT    END→ ESC
```

Move the cursor to the setting to modify.

Only the current file name and the item to modify are displayed here.

▶ ENT

```
FILE1
5. R. BKG       0. 0
```

▲ ▼

Change the data

```
FILE1
5. R. BKG      −1. 5
```

▶ ENT

```
FILE1
5. R. BKG      −1. 5
```

◀ ESC

```
FILE1
7. B. BKG       0. 0
```

The item to change its setting can be selected here.

```
(CHANGE DATA) :FILE1

1.HUE          0. 0
2.CHROMA       100
3.BRIGHT       0. 0
4.CONT         100. 0
5.R. BKG       −1. 5
6.G. BKG       0. 0
7.B. BKG       0. 0
8.R. GAIN      100. 0
9.G. GAIN      100. 0
10.B. GAIN     100. 0
11.GAMMA       2. 2
12.APT LEVEL   16
13.APT FREQ.   HIGH
SET→ ENT    END→ ESC
```

In this menu status, the cursor can be moved to an item to remodify its setting.

To end the change of data, go to the "DATA SAVE" or "DATA CLEAR" menu.

ESC

```
(CHANGE DATA) :FILE1

1.HUE          0. 0
2.CHROMA       100
3.BRIGHT       0. 0
4.CONT         100. 0
5.R. BKG       −1. 5
6.G. BKG       0. 0
7.B. BKG       0. 0
8.R. GAIN      100. 0
9.G. GAIN      100. 0
10.B. GAIN     100. 0
11.GAMMA       2. 2
12.APT LEVEL   16
13.APT FREQ.   HIGH
SAVE→ ENT    CANCEL→ ESC
```

To register the data at this point , press the ENT switch. To restore the previous data, press the ESC switch.

ENT → Data registered   ESC → Data cleared

```
(CHANGE DATA) :FILE1

1.HUE          0. 0
2.CHROMA       100
3.BRIGHT       0. 0
4.CONT         100. 0
5.R. BKG       −1. 5
6.G. BKG       0. 0
7.B. BKG       0. 0
8.R. GAIN      100. 0
9.G. GAIN      100. 0
10.B. GAIN     100. 0
11.GAMMA       2. 2
12.APT LEVEL   16
13.APT FREQ.   HIGH
DATA SAVE
```

```
(CHANGE DATA) :FILE1

1.HUE          0. 0
2.CHROMA       100
3.BRIGHT       0. 0
4.CONT         100. 0
5.R. BKG       0. 0
6.G. BKG       0. 0
7.B. BKG       0. 0
8.R. GAIN      100. 0
9.G. GAIN      100. 0
10.B. GAIN     100. 0
11.GAMMA       2. 2
12.APT LEVEL   16
13.APT FREQ.   HIGH
DATA CLEAR
```

■ **White balance adjustment assist function**

a) Direct adjustment with the front switch

When the PRESET data is changed, the six types of adjustment items for each white balance of "R/G/B BKG" and "R/G/B GAIN" are directly assigned to the switches on the front panel, and the illustration is displayed on the top of screen to show the switch function.

Illustration is displayed on the screen so that you can see which switch functions are assigned at glance.

```
D65
8. R. GAIN   100. 0 (MAX)
```

F1 switch is assigned to switch between GAIN and BACKGROUND.

These six switches are assigned to R/G/B and their UP/DOWN volume.

b) Color temperature adjustment function with button screen using a mouse.

The mouse menu in the section 6 includes a function that displays a button to adjust the white balance on the screen as shown in the figure below, which allows you to adjust the color temperature with ease.

```
(WHITE BALANCE)
FILE:D65
BRT   R. B   G. B   B. B
CNT   R. G   G. G   B. G
EXIT         R. GAIN
```
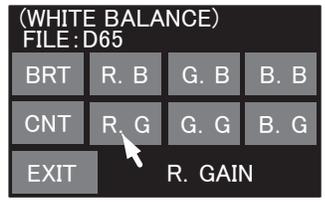
By moving the pointer over the item you want to adjust and clicking it, you can adjust the color temperature from the remote area while comparing to other models.

See the section 6-1 for details on the adjustment method.

- 53 -

③ Display of preset data list

```
 (PRESET DATA STATUS)
 SELECT FILE      D65    ◄──── (a) File being selected
 1. HUE           0. 0   ◄──── (b) HUE data
 2. CHROMA        100    ◄──── (c) CHROMA data
 3. BRIGHT        0. 0   ◄──── (d) BRIGHTNESS data
 4. CONTRAST      90. 0  ◄──── (e) CONTRAST data
 5. R. BKG        0. 0   ◄──── (f)  R. BACKGROUND data
 6. G. BKG        0. 0   ◄──── (g) G. BACKGROUND data
 7. B. BKG        0. 0   ◄──── (h) B. BACKGROUND data
 8. R. GAIN       100. 0 ◄──── (i)  R. GAIN data
 9. G. GAIN       100. 0 ◄──── (j)  G. GAIN data
 10 B. GAIN       100. 0 ◄──── (k) B. GAIN data
 11. GAMMA        2. 2   ◄──── (l)  GAMMA data
 12 APT LEVEL     16     ◄──── (m) Aperture level
 13 APT FREQ.     HIGH   ◄──── (n) Aperture frequency
 EXIT→ ESC
```

・Display a list of the settings of file data.
・To change files, use the ◄ and ► switches at the SELECT FILE setting.

④ Copying of file data

```
 (COPY FILE)

 FROM  :  D65     ◄──── (a) Selection of copy
           ↓                    source file
   TO  :  FILE1   ◄──── (b) Selection of copy
                               destination file




 SET→ ENT  EXIT→ ESC
```

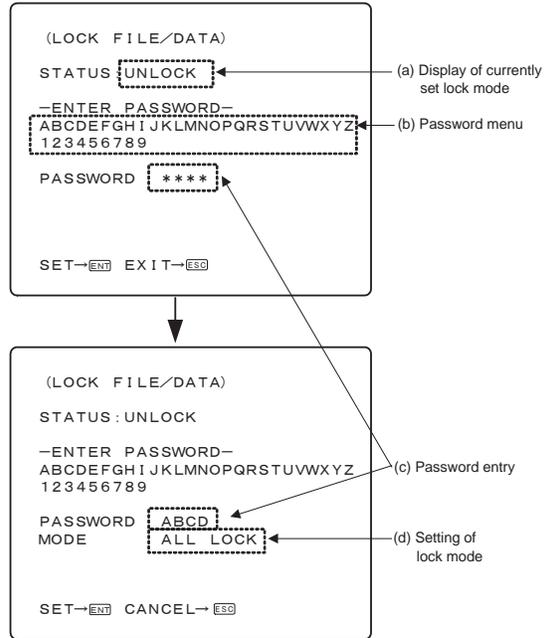(a) Select the copy source file (D65, D93, FILEx [x: 1 to 8]) using the ▲/▼ switch and press the ENT switch.
(b) Select the copy destination file (FILEx [x: 1 to 8], FILE1 - FILE8) using the ▲/▼ switch.
  * When FILE1 - FILE8 are selected, data is copied to FILE1 through FILE8.
(c) When the ENT switch is pressed, the copy confirmation message appears. To copy, press the ENT switch again. If not, press the ESC switch.

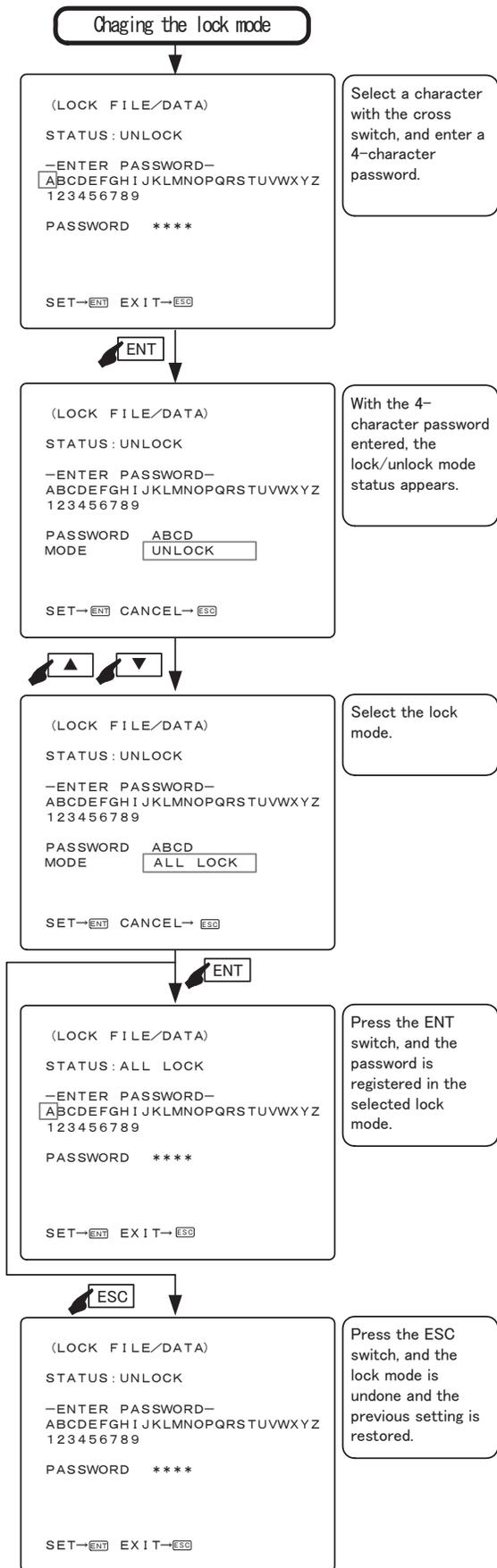### ⑤ Setting of file change operation at the time of channel change
・Set the association of channel change with file change.
  ・AUTO: Files are memorized for each chan- nel: When a channel is changed to another, an automatically stored fil- lies picked up.
  ・MANUAL: Just one file preset for all channels is fixed.
  ・ Default setting is AUTO.

⑥ Setting of data protection password
・A password is set to prevent modifications of the preset data and the initialization.

```
 (LOCK FILE/DATA)

 STATUS UNLOCK          ◄──── (a) Display of currently
                                   set lock mode
 ─ENTER PASSWORD─
 ABCDEFGHIJKLMNOPQRSTUVWXYZ ◄── (b) Password menu
 123456789

 PASSWORD   ****

 SET→ ENT  EXIT→ ESC
```

```
 (LOCK FILE/DATA)

 STATUS : UNLOCK

 ─ENTER PASSWORD─
 ABCDEFGHIJKLMNOPQRSTUVWXYZ  ◄── (c) Password entry
 123456789

 PASSWORD   ABCD
 MODE       ALL LOCK    ◄──── (d) Setting of
                                   lock mode

 SET→ ENT  CANCEL→ ESC
```

(a) Display of currently set lock mode
・The currently set lock mode is displayed.
  ・UNLOCK   : The lock is released and all data can be changed.
  ・DATA LOCK : Preset data change is locked, although file change impossible.
  ・ALL LOCK   : Preset data change and file change are impossible.
(b) Password menu
・Select characters from this list using the ▲, ▼, ◄ and ► switches and press the ENT switch to set the password.
(c) Password entry
・When setting the lock mode to ALL LOCK or DATA LOCK or when releasing the lock mode(UNLOCK), select characters from the menu in ② and enter a four-digit password here.
  * If you forget the registered password, contact Ikegami's service office. They have a pass- word for releasing the lock.
(d) Setting of LOCK mode
・When the ENT switch is pressed after the pass- word has been entered, the LOCK mode blinks. Execute the setting by pressing the ENT key. To return to the previous state, press the ESC switch.
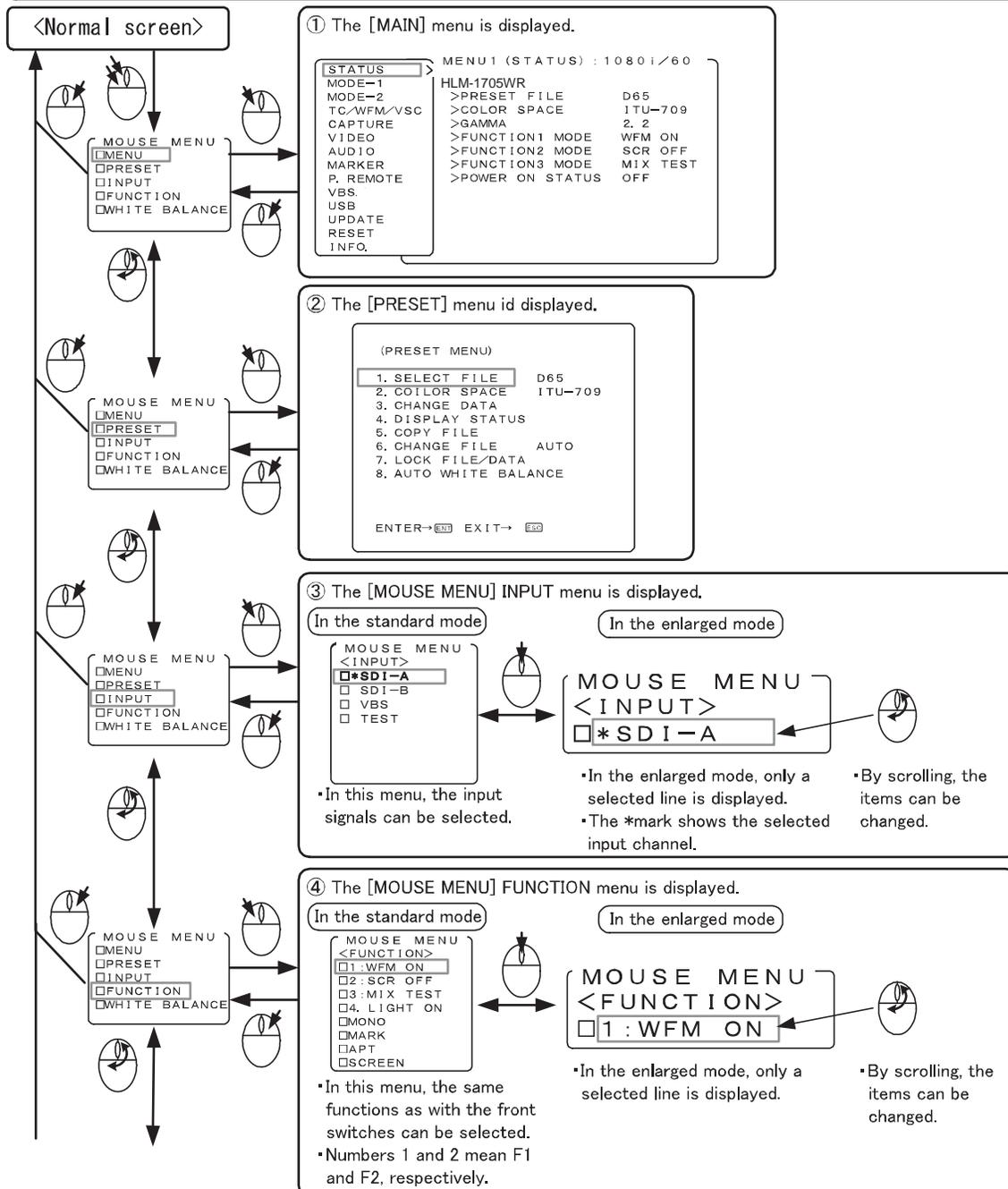
Chaging the lock mode

```
 (LOCK FILE/DATA)

 STATUS:UNLOCK

 -ENTER PASSWORD-
 ABCDEFGHIJKLMNOPQRSTUVWXYZ
 123456789

 PASSWORD  ****



 SET→ENT EXIT→ESC
```

Select a character with the cross switch, and enter a 4-character password.

ENT

```
 (LOCK FILE/DATA)

 STATUS:UNLOCK

 -ENTER PASSWORD-
 ABCDEFGHIJKLMNOPQRSTUVWXYZ
 123456789

 PASSWORD   ABCD
 MODE       UNLOCK



 SET→ENT CANCEL→ESC
```

With the 4-character password entered, the lock/unlock mode status appears.

▲ ▼

```
 (LOCK FILE/DATA)

 STATUS:UNLOCK

 -ENTER PASSWORD-
 ABCDEFGHIJKLMNOPQRSTUVWXYZ
 123456789

 PASSWORD   ABCD
 MODE       ALL LOCK



 SET→ENT CANCEL→ESC
```

Select the lock mode.

ENT

```
 (LOCK FILE/DATA)

 STATUS:ALL LOCK

 -ENTER PASSWORD-
 ABCDEFGHIJKLMNOPQRSTUVWXYZ
 123456789

 PASSWORD  ****



 SET→ENT EXIT→ESC
```

Press the ENT switch, and the password is registered in the selected lock mode.

ESC

```
 (LOCK FILE/DATA)

 STATUS:UNLOCK

 -ENTER PASSWORD-
 ABCDEFGHIJKLMNOPQRSTUVWXYZ
 123456789

 PASSWORD  ****



 SET→ENT EXIT→ESC
```

Press the ESC switch, and the lock mode is undone and the previous setting is restored.
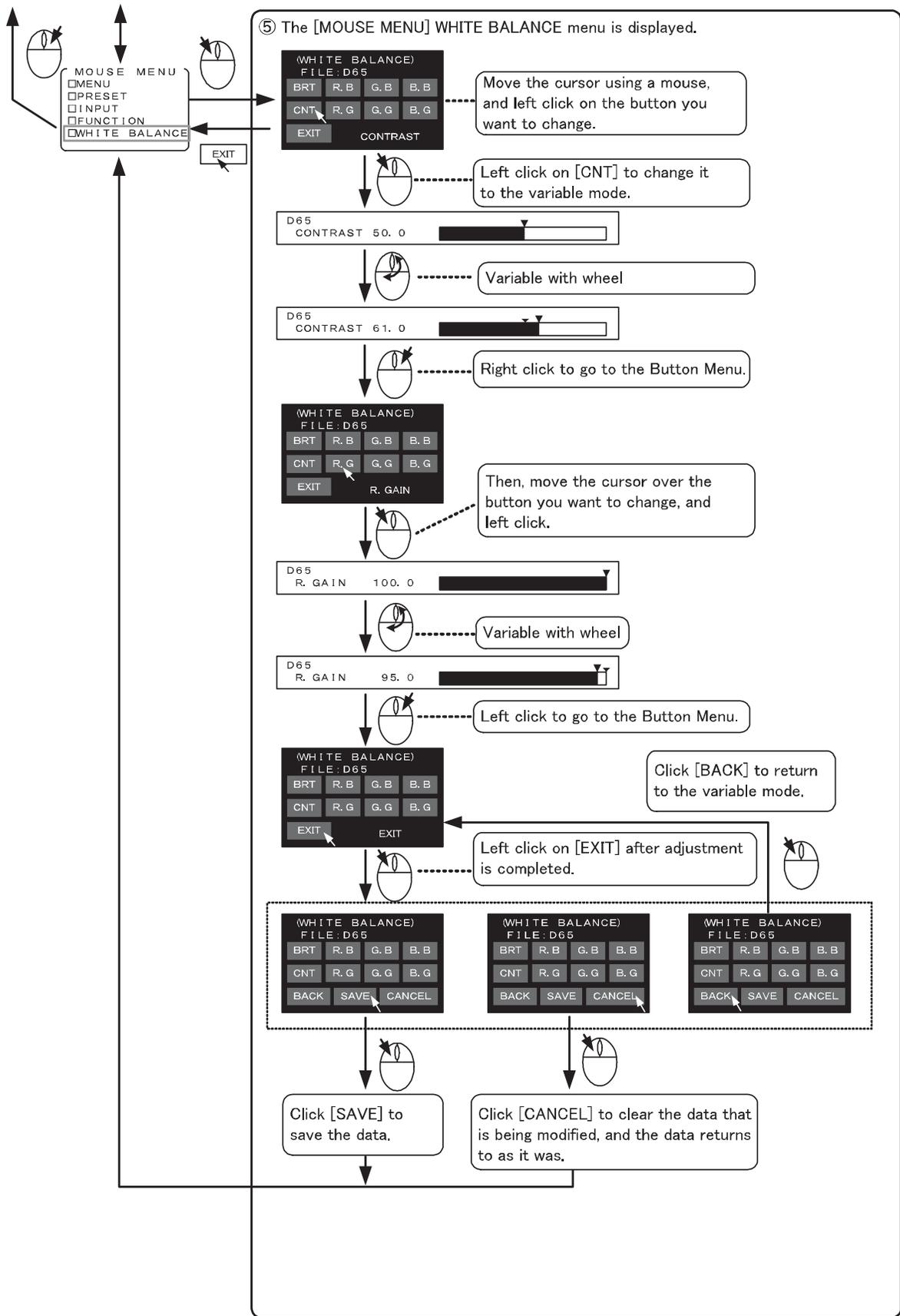
6. Mouse menu function

6-1．Basic procedure of the mouse menu

Basic behavior of the mouse

The USB mouse requires the following 5 functions. Remote control is enabled using a 2.4GHz wireless mouse.

```
The mouse basically behaves in the
same way as the switches on the front
panel bottom.

        ▶    Enlarged    ◀
       ENT   display    ESC

        ▲              ▼
```
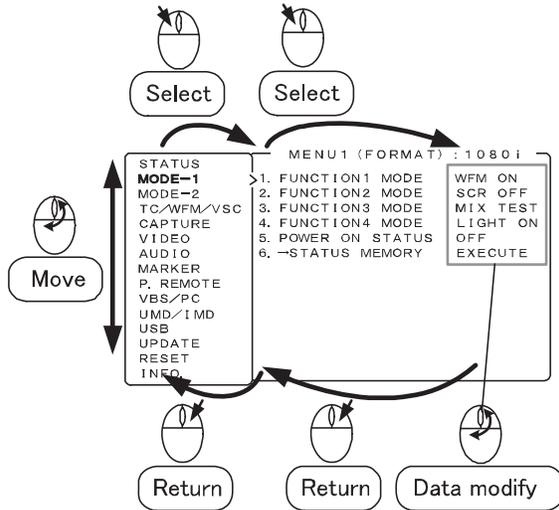
①Double click
・The mouse menu is display

②Left click
・A selected item in the menu is moved to the right.
・The data is registered.

③Right click
・A selected item in the menu is moved to the left.
・The data is cleared

④Center click
・The mouse menu is enlarged

⑤Scroll wheel
・A selected item is moved up and down.
・The data is modified.

**〈Normal screen〉**

```
MOUSE MENU
□MENU
□PRESET
□INPUT
□FUNCTION
□WHITE BALANCE
```

① The [MAIN] menu is displayed.

```
STATUS      >     MENU1 (STATUS) : 1080i/60
MODE-1
MODE-2            HLM-1705WR
TC/WFM/VSC         >PRESET FILE      D65
CAPTURE            >COLOR SPACE      ITU-709
VIDEO             >GAMMA            2.2
AUDIO             >FUNCTION1 MODE   WFM ON
MARKER            >FUNCTION2 MODE   SCR OFF
P. REMOTE         >FUNCTION3 MODE   MIX TEST
VBS.              >POWER ON STATUS  OFF
USB
UPDATE
RESET
INFO.
```

```
MOUSE MENU
□MENU
□PRESET
□INPUT
□FUNCTION
□WHITE BALANCE
```

② The [PRESET] menu id displayed.

```
   (PRESET MENU)

1. SELECT FILE      D65
2. COILOR SPACE     ITU-709
3. CHANGE DATA
4. DISPLAY STATUS
5. COPY FILE
6. CHANGE FILE      AUTO
7. LOCK FILE/DATA
8. AUTO WHITE BALANCE


ENTER→ENT  EXIT→ ESC
```

```
MOUSE MENU
□MENU
□PRESET
□INPUT
□FUNCTION
□WHITE BALANCE
```

③ The [MOUSE MENU] INPUT menu is displayed.

(In the standard mode)   (In the enlarged mode)

```
MOUSE MENU
<INPUT>
□*SDI-A
□ SDI-B
□ VBS
□ TEST
```

```
MOUSE MENU
<INPUT>
□*SDI-A
```

・In this menu, the input signals can be selected.

・In the enlarged mode, only a selected line is displayed.
・The *mark shows the selected input channel.

・By scrolling, the items can be changed.

```
MOUSE MENU
□MENU
□PRESET
□INPUT
□FUNCTION
□WHITE BALANCE
```

④ The [MOUSE MENU] FUNCTION menu is displayed.

(In the standard mode)   (In the enlarged mode)

```
MOUSE MENU
<FUNCTION>
□1:WFM ON
□2:SCR OFF
□3:MIX TEST
□4. LIGHT ON
□MONO
□MARK
□APT
□SCREEN
```

```
MOUSE MENU
<FUNCTION>
□1:WFM ON
```

・In this menu, the same functions as with the front switches can be selected.
・Numbers 1 and 2 mean F1 and F2, respectively.

・In the enlarged mode, only a selected line is displayed.

・By scrolling, the items can be changed.

⑤ The [MOUSE MENU] WHITE BALANCE menu is displayed.

MOUSE MENU
□MENU
□PRESET
□INPUT
□FUNCTION
□WHITE BALANCE

EXIT

(WHITE BALANCE)
FILE:D65
BRT | R.B | G.B | B.B
CNT | R.G | G.G | B.G
EXIT   CONTRAST

Move the cursor using a mouse, and left click on the button you want to change.

Left click on [CNT] to change it to the variable mode.

D65
CONTRAST 50. 0

Variable with wheel

D65
CONTRAST 61. 0

Right click to go to the Button Menu.

(WHITE BALANCE)
FILE:D65
BRT | R.B | G.B | B.B
CNT | R.G | G.G | B.G
EXIT   R. GAIN

Then, move the cursor over the button you want to change, and left click.

D65
R. GAIN   100. 0

Variable with wheel

D65
R. GAIN   95. 0

Left click to go to the Button Menu.

(WHITE BALANCE)
FILE:D65
BRT | R.B | G.B | B.B
CNT | R.G | G.G | B.G
EXIT   EXIT

Click [BACK] to return to the variable mode.

Left click on [EXIT] after adjustment is completed.

(WHITE BALANCE)
FILE:D65
BRT | R.B | G.B | B.B
CNT | R.G | G.G | B.G
BACK | SAVE | CANCEL

(WHITE BALANCE)
FILE:D65
BRT | R.B | G.B | B.B
CNT | R.G | G.G | B.G
BACK | SAVE | CANCEL

(WHITE BALANCE)
FILE:D65
BRT | R.B | G.B | B.B
CNT | R.G | G.G | B.G
BACK | SAVE | CANCEL

Click [SAVE] to save the data.

Click [CANCEL] to clear the data that is being modified, and the data returns to as it was.

6-2. Basic procedures on the MENU and PRESET MENU screens

① **Basic mouse behavior on the MENU screen**

・Left-click the mouse to go to the right of the MENU screen and select an item. Right-click it to return to the left-hand items.
・The scroll wheel is used to move vertically and to change the settings.
・When there are two or more settings to select on the right-hand data like the USB memory's date setting, left-click the mouse to go to the settings to modify.

② **Basic mouse behavior on the PRESET MENU screen**
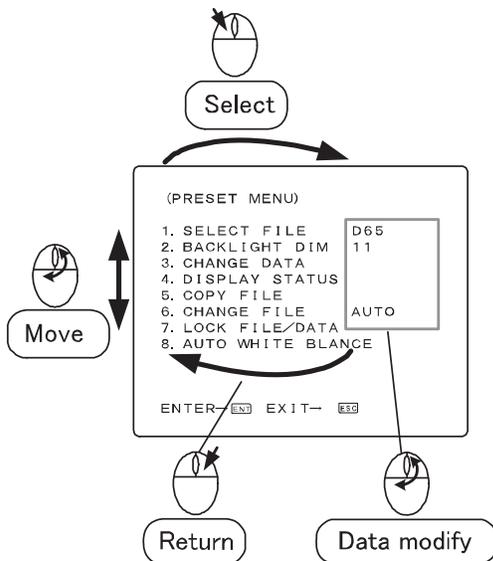
・The behavior is the same as Item ①.

③ **Basic mouse behavior on the CHANGE PRESET screen**
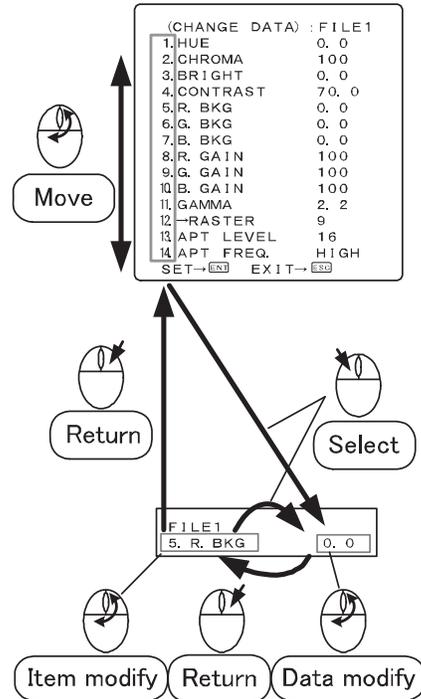
・The behavior is the same as Item ①.

④ **Basic mouse behavior on the USER MARKER screen**
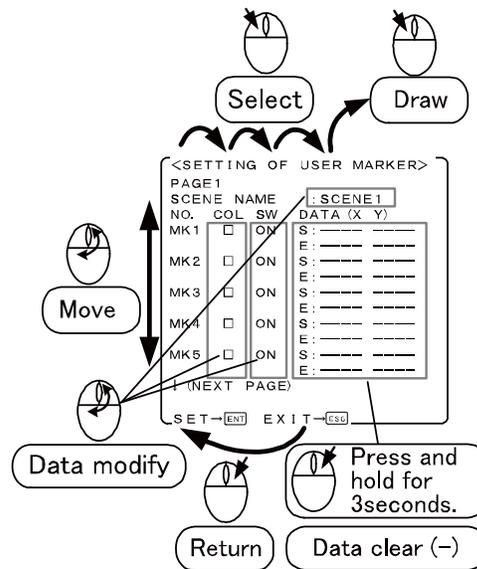
・The behavior is the same as Item ①.

7. Specifications

7-1. General specifications

(1) Supply voltage
AC input
- 100V～120V±10%　50／60Hz
- 200V～240V±10%　50／60Hz

(2) Power consumption
AC input: 40W max
- AC100V～120V : 0.4A max
- AC200V～240V : 0.25A max

(3) Ambient operating temperature/humidity, ambient storage temperature/humidity
Operation:　0°C to +40°C, 20% to 85% (no condensing)
Storage:　-20°C to +60°C, 5% to 85% (no condensing)
Maximum wet-bulb temperature: 29°C

(4) Outside dimensions (excluding protrusions)
428mm(W)×301mm(H)×80mm(D), 7U

(5) Weight
Approx.6kg (excluding the stand and option)

(6) Standard accessories
Operation manual, Parallel remote connector, AC Power cable
x1 each

7-2. Rated performance

(1) SDI signal (supported as standard)
a) Input/output terminal
Input:　BNC 2 lines
Output:　BNC 1 line (Active loop through for only one line selected)
b) Input signal format (Auto detection)
- 3G-SDI　: SMPTE425M-A/B

1080p/60,59.94	1080p/50

- HD-SDI　: SMPTE292M

1035i/60,59.94	1080p/25
1080i/60,59.94	1080p/24,23.98
1080i/50	720p/60,59.94
1080psF/30,29.97	720p/50
1080psF/25	720p/30,29.97
1080psF/24,23.98	720p/25
1080p/30,29.97	720p/24,23.98

- SD-SDI（4:2:2）: SMPTE 259M

480i/59.94	575i/50

c) Input level
Rating: 800mVp-p±10%
d) Transmission speed
3G-SDI:　2.970Gb/s
HD-SDI:　1.485Gb/s
SD-SDI:　270Mb/s

e) Quantization bit rate
10 bits
f) Input/output impedance
75Ω
g) Transmission distance
Over 100m (5CFB, 2.97Gb/s)

(2) Analog composite (NTSC/PAL) signal (supported as standard)
a) Input terminal
BNC 1 lines (Loop through)
b) Input signal format
NTSC composite signal (SMPTE 170M)
PAL composite signal (EBU)
c) Input level
VS:　　　1.0Vp-p, Positive polarity
V:　　　0.714Vp-p (NTSC)/0.7Vp-p (PAL), Positive polarity
d) Input impedance
High impedance bridge connection or 75Ω termination
(75Ω termination plug is optional.)

(3) Embedded audio common specifications
a) Input signal format
- SMPTE 425M-A/B

1080p/60, 59.94	1080p/50

- SMPTE 299M

1035i/60, 59.94	1080p/25
1080i/60, 59.94	1080p/24, 23.98
1080i/50	720p/60, 59.94
1080psF/30,29.97	720p/50
1080psF/25	720p/30,29.97
1080psF/24,23.98	720p/25
1080p/30,29.97	720p/24,23.98

- SMPTE 272M

480i/59.94 (4:2:2)	575i/50 (4:2:2)

b) Format detection
Auto detection
c) Sampling frequency
48kHz (Synchronized with video clock)
d) Embedded audio output
By selecting one of the pair channels of ch1/2, ch3/4, ch5/6, and ch7/8 and DOWNMIX, the audio can be output from built-in　speaker.

(4) Embedded audio level meter
a) Display method
Superimposition on screen
b) Display channel
8 ch
c) Display position
4 types

d) Display mode
8 modes
e) Display segment
26 segments (including -∞)
f) Segment point
-∞, -60, -54, -48, -44, -40, -38, -36, -34, -32, -30, -28, -26, -24, -22, -20, -18, -16, -14, -12, -10, -8, -6, -4, -2, 0dB
g) Display color
Reference level (-18dBFS or -20dBFS) is select in MENU.
- -20dBFS
  - -∞ ~ -22dB: Green
  - -20 ~ -2dB: Yellow
  - 0dB: Red
- -18dBFS
  - -∞ ~ -20dB: Green
  - -18 ~ -2dB: Yellow
  - 0dB: Red
h) Peak hold
About 1 sec
* It can be set to "OFF" with the MENU setting.
i) Release time
About 0.4 sec

(5) Analog audio input
a) Input terminal
ϕ 3.5 stereo mini jack
b) Input level
0dBV max

(6) Speaker output
a) Output
1W (distortion factor: 1.5%)
b) Input signal source
Analog audio input or embedded audio input can be outputted. A signal to be outputted is set on MENU (DOWNMIX, CH1/2, CH3/4, CH5/6, CH7/8).

(7) Color temperature setting
10 types: D65, D93, and USER setting: 8 types (FILE 1 to 8)

(8) Gamma setting
2 types: 2.2, 2.4

7-3. Specifications for LCD module
(1) Number of pixels
1920 (H) x 1080 (V) dots

(2) Pixel pitch
0.1905 (H) x 0.1905 (V) dots

(3) Screen size (display area)
365.76mm(H)×205.74mm(V)
(Diagonal 42 cm, 16.5 V type)

(4) Peak brightness (brightness performance for the single panel)
450 cd/m^2 (typ)
(at full white input)

(5) Drive system
a-Si TFT active matrix, line sequential
(non-interlace)

(6) Pixel arrangement
RGB vertical stripe

(7) Response speed
Ton + Toff: 13ms typ. (Ta = 25°C)

(8) Contrast ratio
1000:1 (typ.)

(9) Number of display colors
1000.7 million colors (10bits)

(10) Viewing angle
Vertical/horizontal: 178° (contrast ratio: 10:1 or more)

7-4. Functions
(1) Front operation
- Switch
POWER ON/OFF、CH A/B、INPUT(SDI/VBS)、MONO、APT、MARKER、SCREEN、F1、F2、F3、F4、MENU、PRESET、ENT、ESC、TEST
- Volume
CHROMA, BRIGHTNESS, CONTRAST, AUDIO

(2) Marker function
a) Center marker
(Set to ON/OFF using MENU settings)
b) Safety marker
Any of the following markers is displayed according to the image aspect ratio (4:3/16:9). The numbers in parentheses show the aspect at the time of marker display.
<Types>
- "Safety area marker" + 100% (4:3/16:9)
The "safety area markers" are effective over the entire screen and can be preset 1% by 1% in the range of 80-99%.

- ・ 5 divided crosshatch　　(4:3/16:9)
- ・ 10 divided crosshatch　　(4:3/16:9)
- ・ Cross　　　　　　　(4:3/16:9)
- ・ 16:9 aspect marker　(4:3)
- ・ 15:9 aspect marker　(4:3/16:9)
- ・ 14:9 aspect marker　(4:3/16:9)
- ・ 13:9 aspect marker　(4:3/16:9)
- ・ 4:3 aspect marker　　(16:9)
- ・ 1.85:1 aspect marker　　　(16:9)
- ・ 2.35:1 aspect marker　　　(16:9)
- ・ "Each aspect marker" + "Safety marker in aspect" (4:3/16:9)

The "safety marker in aspect" refers to the safety marker with respect to the aspect marker display zone, and can be preset 1% by 1% in the range of 80-99%.

Corresponding to each aspect marker.

<Marker level>
- ・ Set in five steps of 20%, 40%, 60%, 80% and100%

(3) Shadow function

Creates a shadow outside the aspect areas with 4:3 (16:9 mode), 13:9, 14:9, 15:9, 16:9 (4.3 mode), 1.85:1 (16:9 mode) and 2.35:1 (16:9 mode).

<Types>
- ・ "Various aspect markers" + "Shadow"
- ・ "Various aspect markers" + "Safety marker in aspect" + "Shadow"
- ・ Shadow only

<Shadow contrast level>
- ・ Set in four steps of 0%, 20%, 40% and 60%.

(4) User marker function

Function for the user to draw their desired lines and boxes in the unit of pixels.

- a) No. of types: 100 types: 10 scenes x 10 types (1 scene: 10 types)
- b) No. of colors: 6
- c) Drawable sizes: 1920 x 1080 pixels
- d) Drawing method: Switch or USB mouse
  * Patent pending

(5) UMD/IMD display with TSL protocol

Material display function controlled by RS485 Either TSL or user display should be selected for the UMD/IMD display (MENU selection).

- a) Standard: RS485
- b) Connector: R J-45 (loop through)
- c) Number of connections: up to 32 devices (per line)
- d) Protocol: TSL UMD V3.1
- e) Characters: ASCII (alphanumeric), up to 8 characters, 7 colors
- f) TALLY display: Red/Green/Amber Display in the screen or LED display

- g) Display position: Top/bottom

(6) UMD/IMD display with user display

A function used to set an arbitrary material name on the channel basis (SDI-A, SDI-B, VBS-A, VBS-B, option module) and display the material name when switching the inputs.

- a) Characters: ASCII (alphanumeric), up to 8 characters, 7 colors
- b) Display position: Top/bottom

(7) USB memory function

- a) Content of the memory
  - ・ MENU setting
  - ・ User marker
  - ・ PRESET data

7-5．Remote Control

(1) Parallel remote control

Input connector: HD D-SUB 15-pin
- ・ CH A/B switching
- ・ SDI ON/OFF
- ・ COLOR/MONO switching
- ・ 4:3/16:9 switching
- ・ MARKER ON/OFF
- ・ SHADOW ON/OFF
- ・ R TALLY ON/OFF
- ・ G TALLY ON/OFF
- ・ CROMA UP ON/OFF
- ・ SHADOW0 ON/OFF (★)
- ・ SHADOW20 ON/OFF (★)
- ・ SHADOW40 ON/OFF (★)
- ・ SHADOW60 ON/OFF (★)
- ・ USER MARKER SCENE* ON/OFF (★)
  * : 1～10
- * For the pin function, refer to **"Data 2 Parallel Remote Pin Function"**.
- * In addition to default setting, user setting is possible.
  The "★" marked settings are used in the USER mode.

(2) RS485 remote control

(The controller SRC-400 is optional.)
- a) Connector: RJ-45 (loop-through)
- b) Maximum number of connections: 32 units Extension by increasing the number of lines is possible.

8. Applicable Standards
8-1. Safety standards
- UL1419
- UL60950-1

8-2. Electromagnetic interference
- FCC(Class-A)
- EN55103-1　E4
- EN55103-2　E4
- EN55022(Class-A)

8-3. Environmental regulations
- Compliant with RoHS Directive

9．Mounting Bracket
Equipped with "100mm x 100mm" mounting holes compliant with the VESA mount interface standards.
Other mounting holes also available.
(Refer to the external view.)

10. Options

(1) ASP-100 (Rev 01 or later)
"Auto setup probe"
It can automatically adjust the color temperature for each gradation with PC-less operation.
Chromaticity and brightness can be also measure.
Weight: Approximately 100 g

(2) SRC-400
"Serial remote controller"
A serial remote controller that allows you to remote control the monitor with RS485 interface by loop-through connection via LAN cable. One controller can control all functions of monitors. By connecting the monitors with the loop-through connection via LAN cable, one line can control 32 monitors, and three lines can control up to 96 monitors individually or all at once.
Since the controller can be also connected with PC and Ethernet, it is possible to individually control each monitor from the PC screen through the network control.

(3) RS-1710/1770
"19-inch rack mount bracket (fixing type)"
Height: 7U
Weight: Approximately 0.76kg
Color: Gray (RS-1710), black (RS-1770)

(4) RS-1710T/1770T
"19-inch rack mount bracket (angle fixing type)"
Tilt angle: Adjustable on 4 levels with angle (pitch) of 3.75°
15°　Max.
Height: 7U
Weight: Approximately 1.4kg
Color: Gray (RS-1710T), black (RS-1770T)

(5) STD-1517
"Fixed stand"
Color: Gray

(6) STD-1517T
"Tilt-Stand"
Weight: Approximately 2.0kg
Color: Gray

(7) STD-1722M

"Fixing stand for monitor shelf"

The top/bottom and left/right position can be adjusted with the VESA mount type stand.
Weight: Approximately 2.7kg
Color: Gray

(8) GR-1770

"Handle"
Color: Blue

(9) MH-1750

"Food for 17-inch model"
Weight: Approximately 0.83kg

(10) CC-1705

"Hard carrying case for 17-inch model"
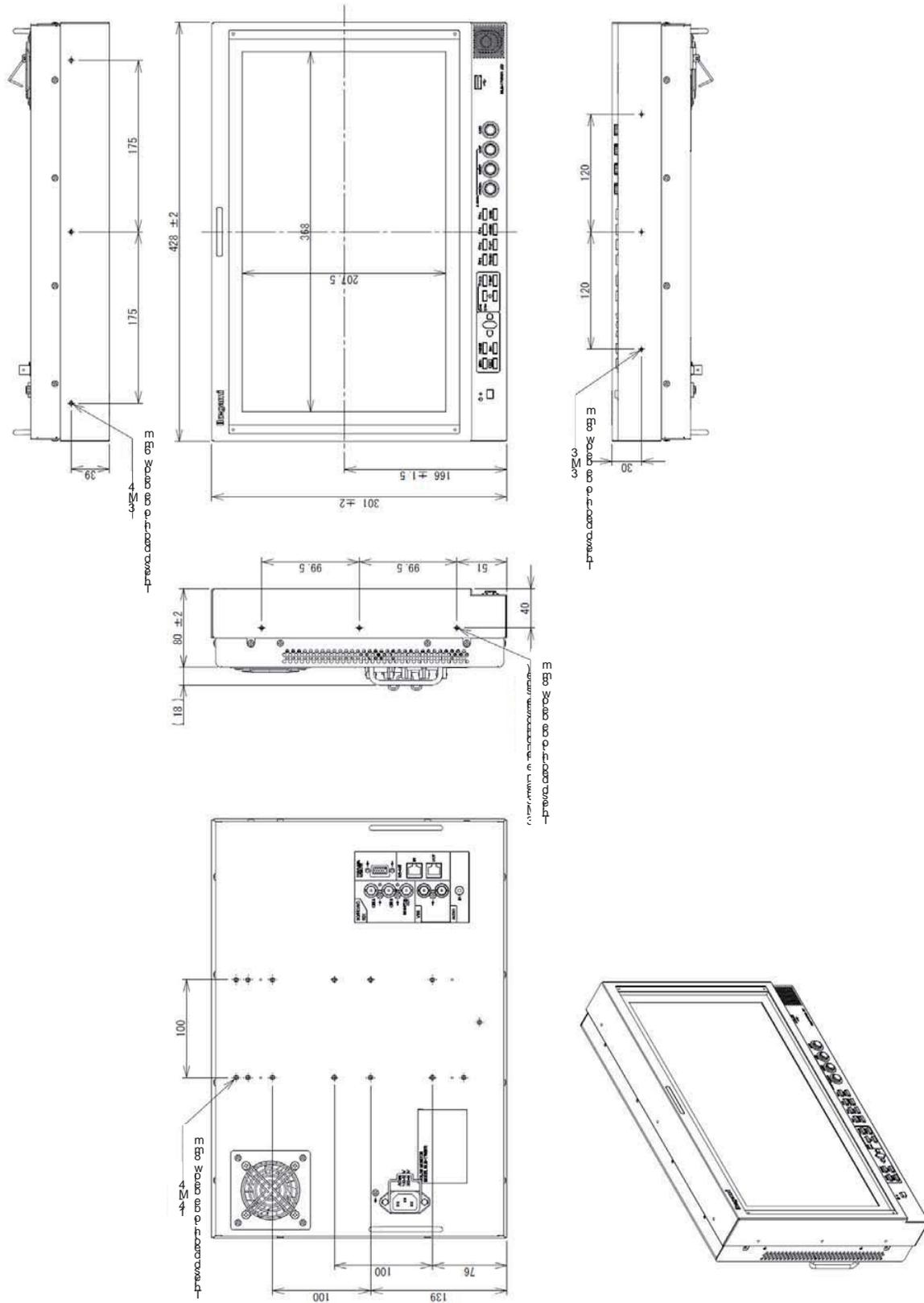
(11) PP-1750

"17-inch protection cover" (anti-reflection)
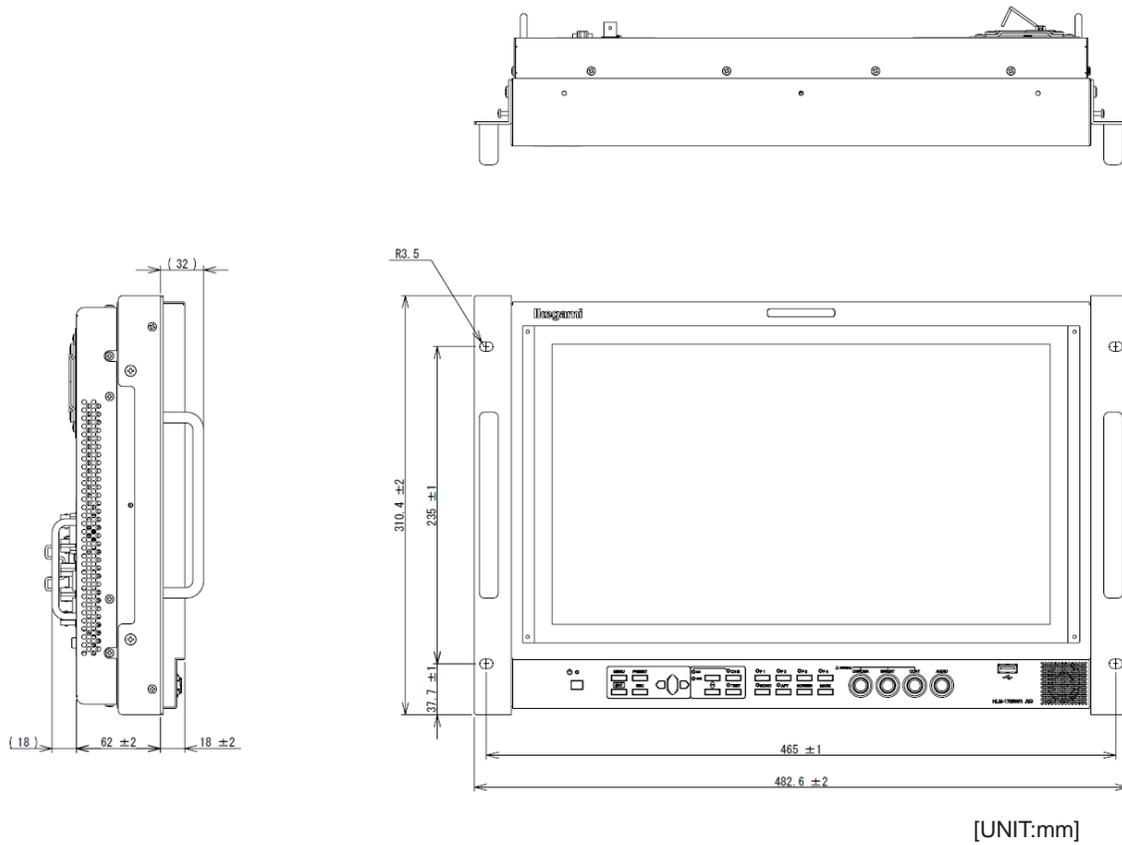
Protects the LCD screen.
Weight: Approximately 0.33 kg

* The specifications and appearance of this product are subject to change for product improvements without notice.
* Black spots and luminescent spots may occur in 0.01% or less of the effective pixels of this product. This is not a failure.

10．External View

(1) HLM-1705WR

[UNIT:mm]

(2) HLM-1705WR＋RS-1710 / RS-1770

[UNIT:mm]

(3) HLM-1705WR＋RS-1710T / RS-1770T
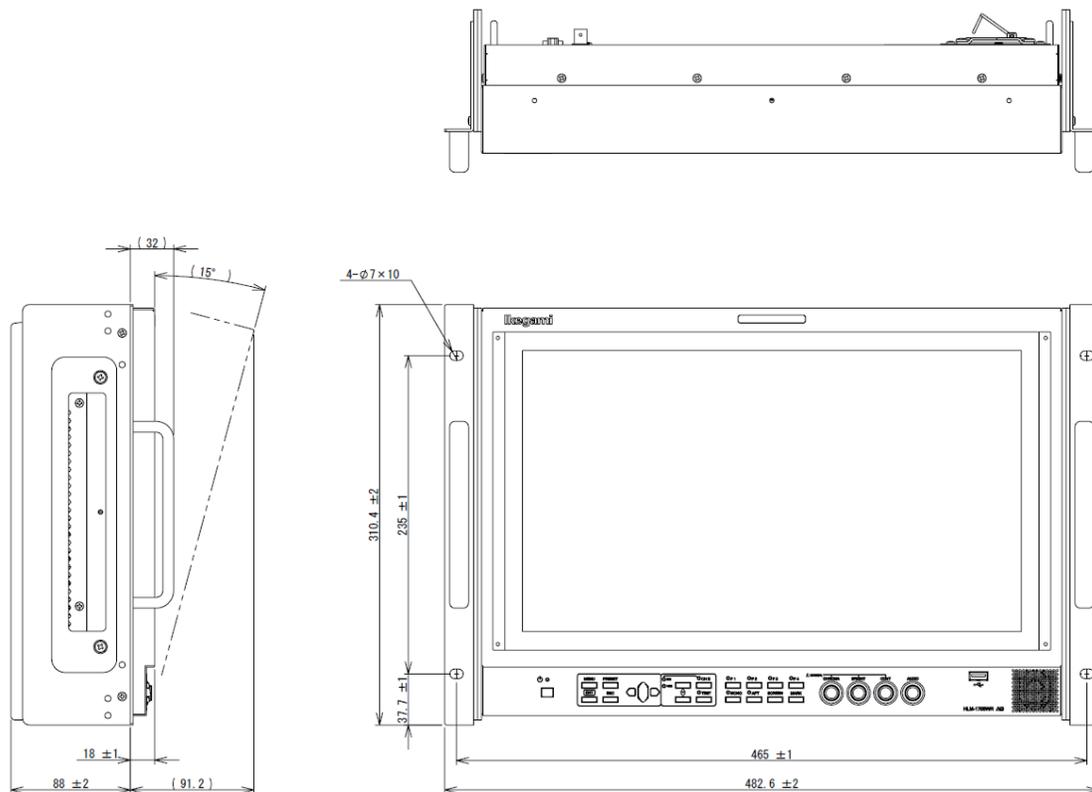
(4) HLM-1705WR＋STD-1517
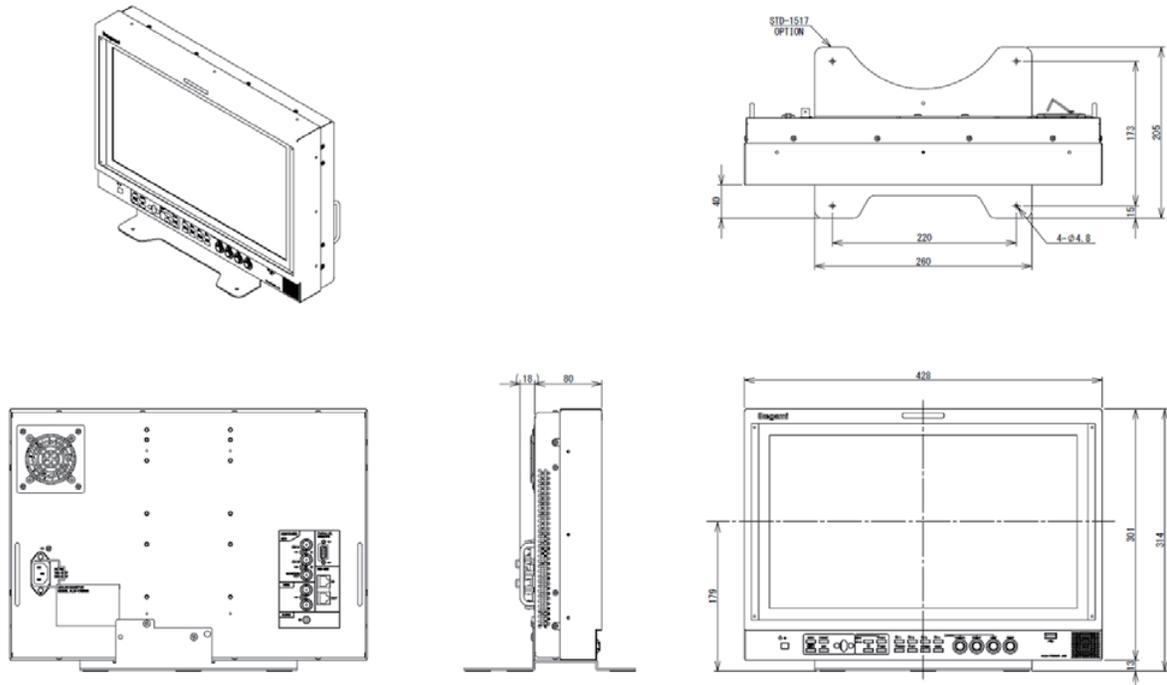
[UNIT:mm]

(5) HLM-1705WR＋STD-1517T+GR-1770+PP-1750
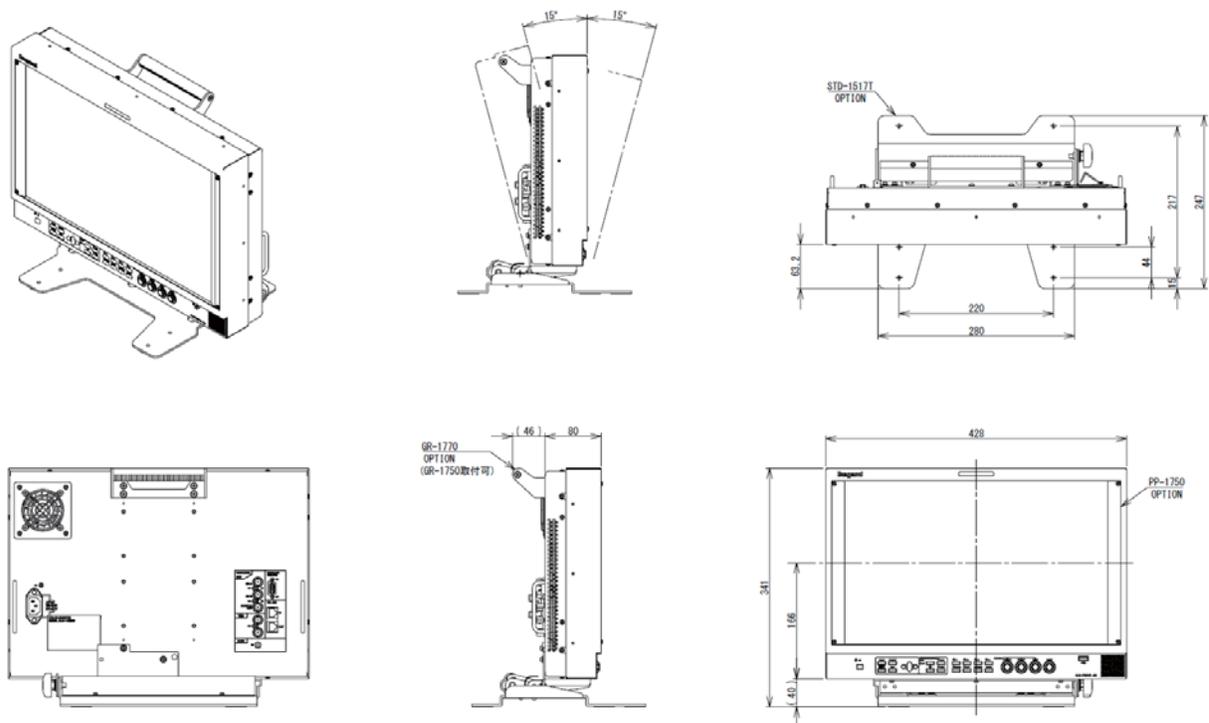
[UNIT:mm]

Data 1   Parallel Remote Pin Function

Connector Face View on Rear Panel	Wiring of Remote Connector (by default)

<Connector on system side>
D-Sub 15-pin (male) mini-type
* Connector
  CD0115PA100:   CVILUX-made
* Case
  DE-C8-J9-F2-1:
    Japan Aviation Electronics Indus-
    try-made
※ The above parts or equivalents are
  supplied as standard.
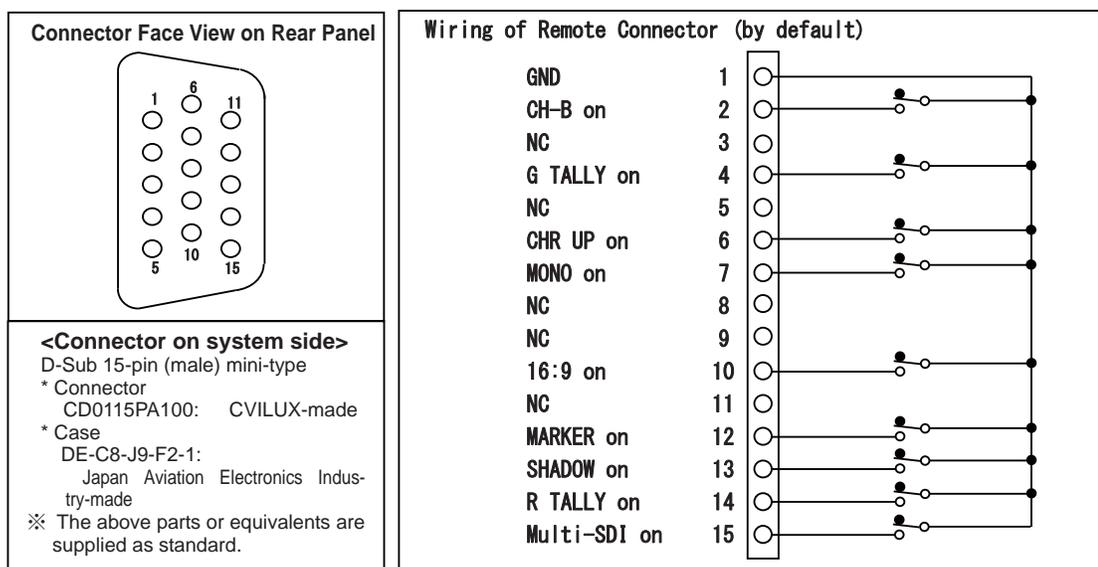
■ **Pin functions by default**

Pin No.	Function	External Assignment for Function
1	GND	Connecting remote terminals to this pin enables ON control.
2	CH-B on	Connect to Pin 1 to select B channel in the Multi-SDI input mode. * When Pin 2 is OPEN, the A channel will be selected.
3	NC	No connection
4	G TALLY on	Connect to Pin 1 to set G TALLY to ON.
5	NC	No connection
6	CHR UP on	Connect to Pin 1 to set CHROMA GAIN UP function to ON.
7	MONO on	Connect to Pin 1 to switch the COLOR/MONO setting to MONO.
8	NC	No connection
9	NC	No connection
10	16:9 on	Connect to Pin 1 to change the aspect (4:3/16:9) of SDTV signals to 16:9. * If the setting is to be controlled simultaneously with channel switching, set [CHANGE ASPECT] to [MANUAL] in **MENU 3-2**.
11	NC	No connection
12	MARKER on	Connect to Pin 1 to set MARKER to ON.
13	SHADOW on	Connect to Pin 1 to set SHADOW to ON. * The shadow is displayed in the **MENU8**-preset level.
14	R TALLY on	Connect to Pin 1 to set Red TALLY to ON.
15	Multi-SDI on	Connect to Pin 1 to select the Multi-SDI input module. Use together with Pin 2 to switch between channels A and B. * When Pins 5, 11, 15 are open, the analog composite will be selected.

■ **Additional user-set functions**

Pin No.	Function	External Assignment for Function
User setting	SHADOW0 on	Connect to Pin 1 for running with the shadow level 0% (black). * Priority is given to this pin function if any other shadow setting pin is pressed at once.
User setting	SHADOW20 on	Connect to Pin 1 for running with the shadow level 20%.
User setting	SHADOW40 on	Connect to Pin 1 for running with the shadow level 40%.
User setting	SHADOW60 on	Connect to Pin 1 for running with the shadow level 60%.

* The functions of pins other than 1 are freely user-settable on MENU.

Data 2 Control with Remote Controller

| Control item	Serial remote SRC-400	Wireless remote RCT-20A/30A	Remarks
■Switch functions			
VIDEO SELECT	−	○(※1)	
VIDEO A (VBS)	○	−	
VIDEO B (VBS)	−	−	
YPbPr/RGB	−	−	
SDI A	○	−	
SDI B	○	−	
DVI	−	−	
OPTION	−	−	
TEST	○	○(※1)	
APERTURE ON/OFF	○	○	
COLOR/MONO	○	○	
BLUE ONLY ON/OFF	○	○	
DELAY (H/V/PCR)	○	○	Ineffective in VBS input
4:3/16:9 SCAN SELECT	○	○	Ineffective in HDTV input
NORMAL/UNDER SCAN	○		
SYNC INT/EXT	−	○	Ineffective in VBS/SDI input
FILE SELECT	○(※2、※3)	○	
MARKER ON/OFF	○	○	
FUNCTION1-4 ON/OFF	○	−	
MENU/ENT/ESC	○	○	
■Variable preset level functions			
HUE	○(※2)	○(※2)	
CHROMA	○(※2)	○(※2)	
BRIGHTNESS	○(※2)	○(※2)	
CONTRAST	○(※2)	○(※2)	
APERTURE LEVEL	○(※2)	○(※2)	
R/G/B GAIN	○(※2)	○(※2)	
R/G/B BACKGROUND	○(※2)	○(※2)	

※1 : The switch toggles the modes as follows.

"SDI-A" → "SDI-B" → "VBS" → "SDI-A" → …

To give the TEST signal, hold down the VIDEO switch for about 3 seconds.

※2 : Adjustments through MENU operation.

※3 : Operation with the FUNCTION switch

Data 3　RS-485 Pin Function
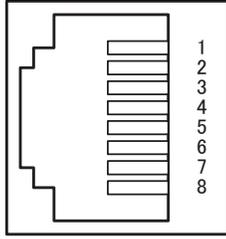
＜Female terminal＞

Pin No.	IN terminal	OUT terminal
1	TXD＋	TXD＋
2	TXD－	TXD－
3	RXD＋	RXD＋
4	GND	GND
5	GND	GND
6	RXD－	RXD－
7	NC	NC
8	NC	NC

MODEL **HLM-1705WR**

FULL HD MULTI FORMAT
LCD COLOR MONITOR

OPERATION MANUAL

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