

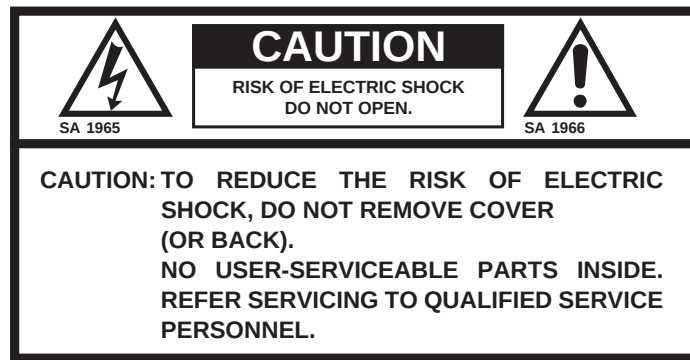


MODEL
HLM-1705WR

FULL HD MULTI FORMAT
LCD COLOR MONITOR

OPERATION MANUAL

Ikegami



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



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 may 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 ventilation, 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°C or over) or cold (less than 0°C), 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.
- 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.

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.

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 them. 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°C or more) or cold (0°C 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 (T_{ma}) 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.

CONTENTS

IMPORTANT SAFETY INSTRUCTIONS

PRECAUTIONS FOR OPERATIONS

Cautions for Rack-Mount.

Precautions Upon Use

For the first-time use after purchase

1. Outline	1	6. Mouse menu function	56
1-1. Outline	1	6-1. Basic procedure of the mouse menu	56
1-2. Features	1	6-2. Basic procedures on the MENU and PRESET MENU screens	58
2. Names of parts and their Functions	4	7. Specifications	59
2-1. Front Controller section	4	7-1. General specifications	59
2-2. Rear panel (left)	6	7-2. Rated performance	59
2-3. Rear panel (video inputs/outputs)	7	7-3. Specifications for LCD module	60
3. Markers	8	7-4. Functions	60
3-1. Types of Markers	8	7-5. Remote control	61
4. MENU Functions	9	8. Applicable Standards	62
4-1. List of MENU	9	8-1. Safety standards	62
4-2. Flow of MENU Operations	12	8-2. Electromagnetic interference	62
4-3. Description of MENU 1 Functions	15	8-3. Environmental regulations	62
4-4. Description of MENU 2 Functions	16	9. Mounting Bracket	62
4-5. Description of MENU 3 Functions	18	10. Options	62
4-6. Description of MENU 4 Functions	21	11. External View	64
4-7. Description of MENU 5 Functions	23	(1) HLM-1705WR	64
4-8. Description of MENU 6 Functions	24	(2) HLM-1705WR+RS-1710 / RS-1770	65
4-9. Description of MENU 7 Functions	26	(3) HLM-1705WR+RS-1710T / RS-1770T	65
4-10. Description of MENU 8	29	(4) HLM-1705WR+STD-1517	66
4-11. Description of MENU 8 Functions (USER MARKER) Functions and Making Settings	32	(5) HLM-1705WR+STD-1517T+GR-1770+PP-1770	66
4-12. Description of MENU 9 Functions	36	Data 1 Parallel Remote Pin Function	67
4-13. Description of MENU 10 Functions	37	Data 2 Control with Remote Controller	68
4-14. Description of MENU 11 Functions	38	Data 3 RS-485 Pin Function	69
4-15. Description of MENU 12 Functions	41		
4-16. Description of MENU 13 Functions	46		
4-17. Description of MENU 14 Functions	49		
4-18. Description of MENU 15 Functions	50		
5. Preset Menu Function	51		
5-1 List of preset menu	51		
5-2 Description of preset menu	51		
5-2-① Selection of files	51		
5-2-② Change of preset data	52		
5-2-③ Display of preset data list	54		
5-2-④ Copying of file data	54		
5-2-⑤ Setting of file change operation at the time of channel change	54		
5-2-⑥ Setting of data protection password	54		

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 Probe 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.

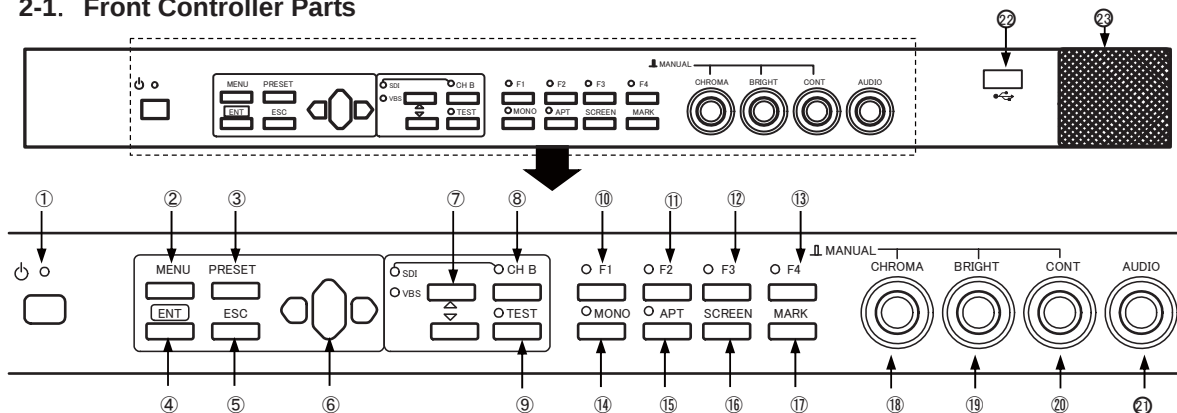
By increasing the number of lines, you can set the IDs and perform individual control for up to 96 devices.

(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

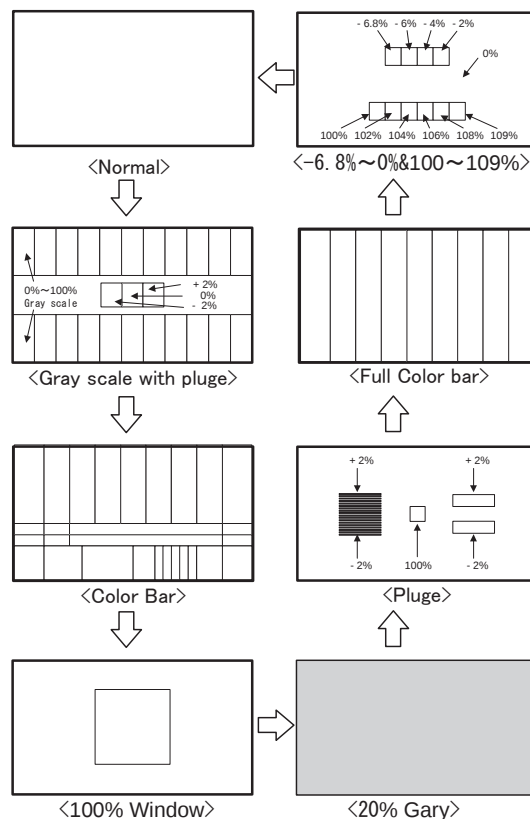
- Use the ▲ and ▼ switches to change input sources.

⑧ **CH-B** switch

- Use this switch to change channels in the SDI or VBS input mode.

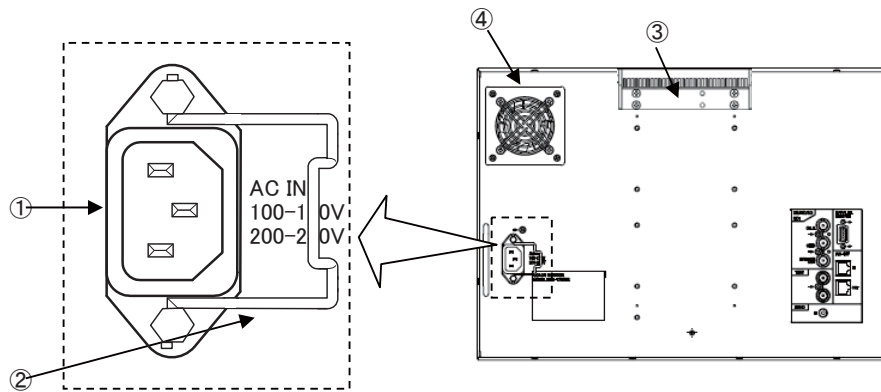
⑨ **TEST** switch

- 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.



- 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.

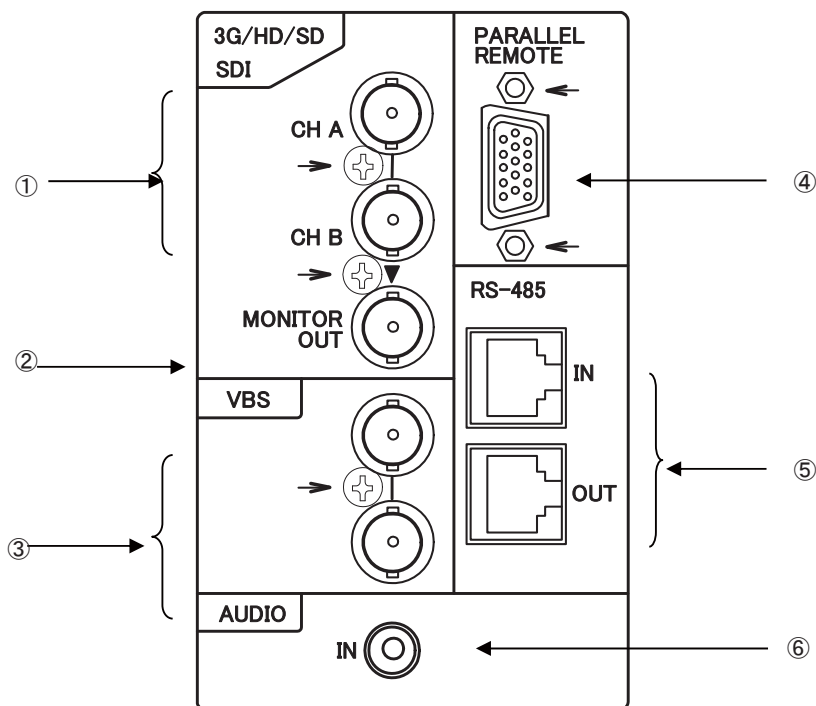
③ GR-1770 (option)

- This handle is the rubber-coated 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 connector here.
- Use a shield wire for the cable.

⑤ RS-485 input/output

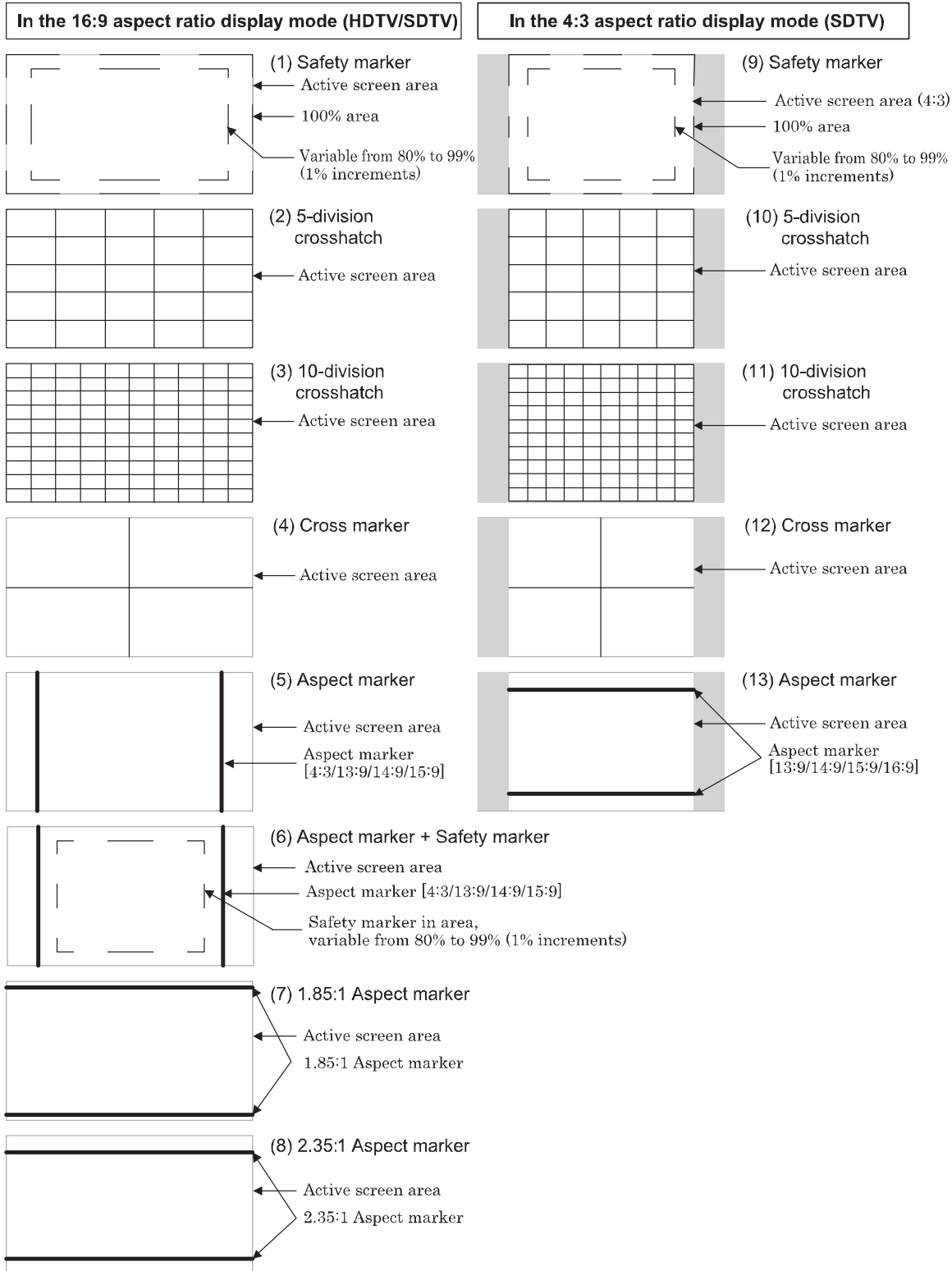
- You can remote control from the optional serial remote controller "SRC-400".
- Up to 32 units can be loop-through-connected.
- Without loop-through connection, use the optional terminating device.
- * Make sure the cable used is shielded.

⑥ Analog audio input

- Feed analog audio signals here.

3. Markers

3-1. Types of Markers

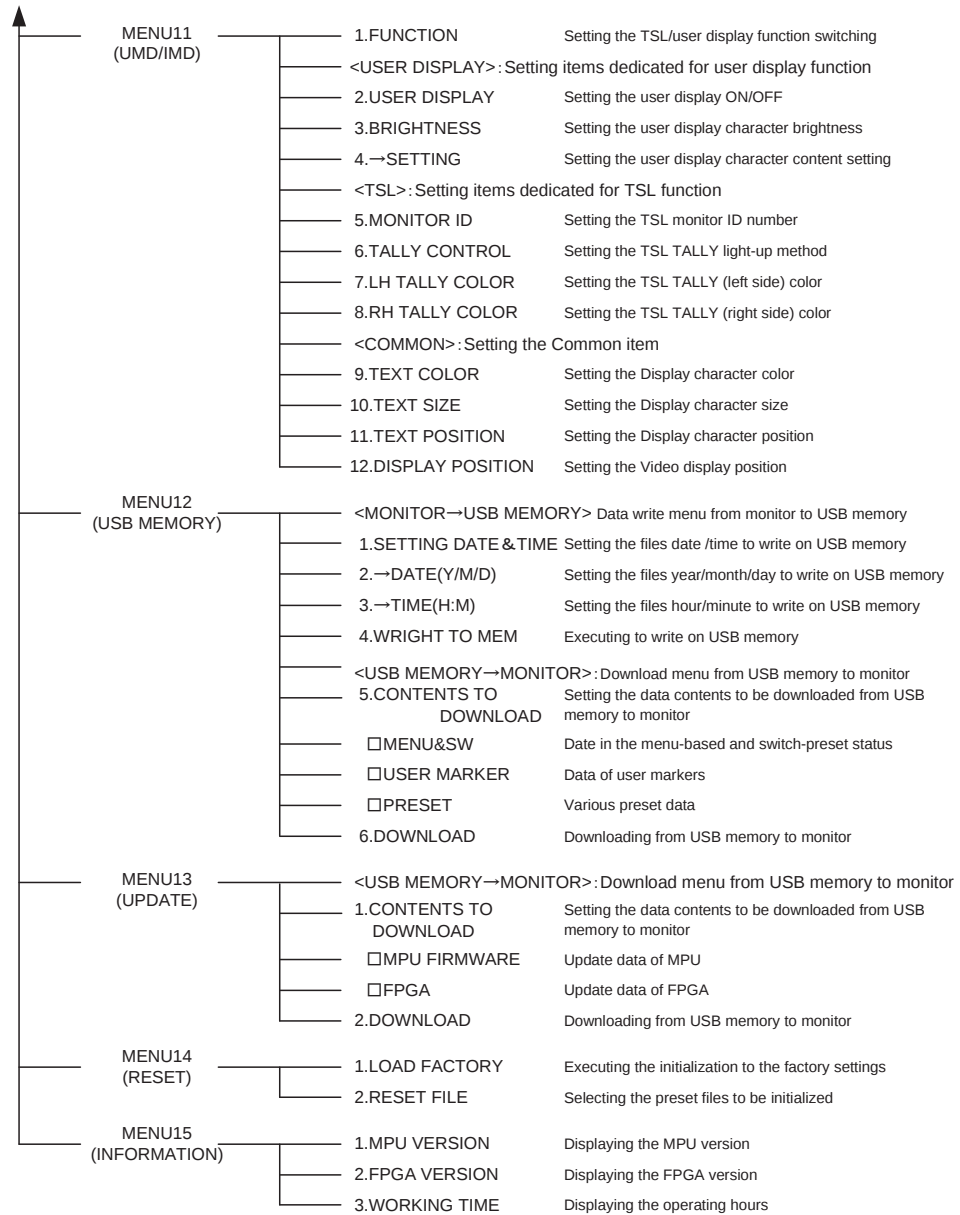


- The displayed markers are set on **MENU8**.
- With no menu onscreen, the image pattern can be changed with the  and  switches, whereas the safety marker percentage setting (1% increments) with the  and  switches.

4. MENU Functions

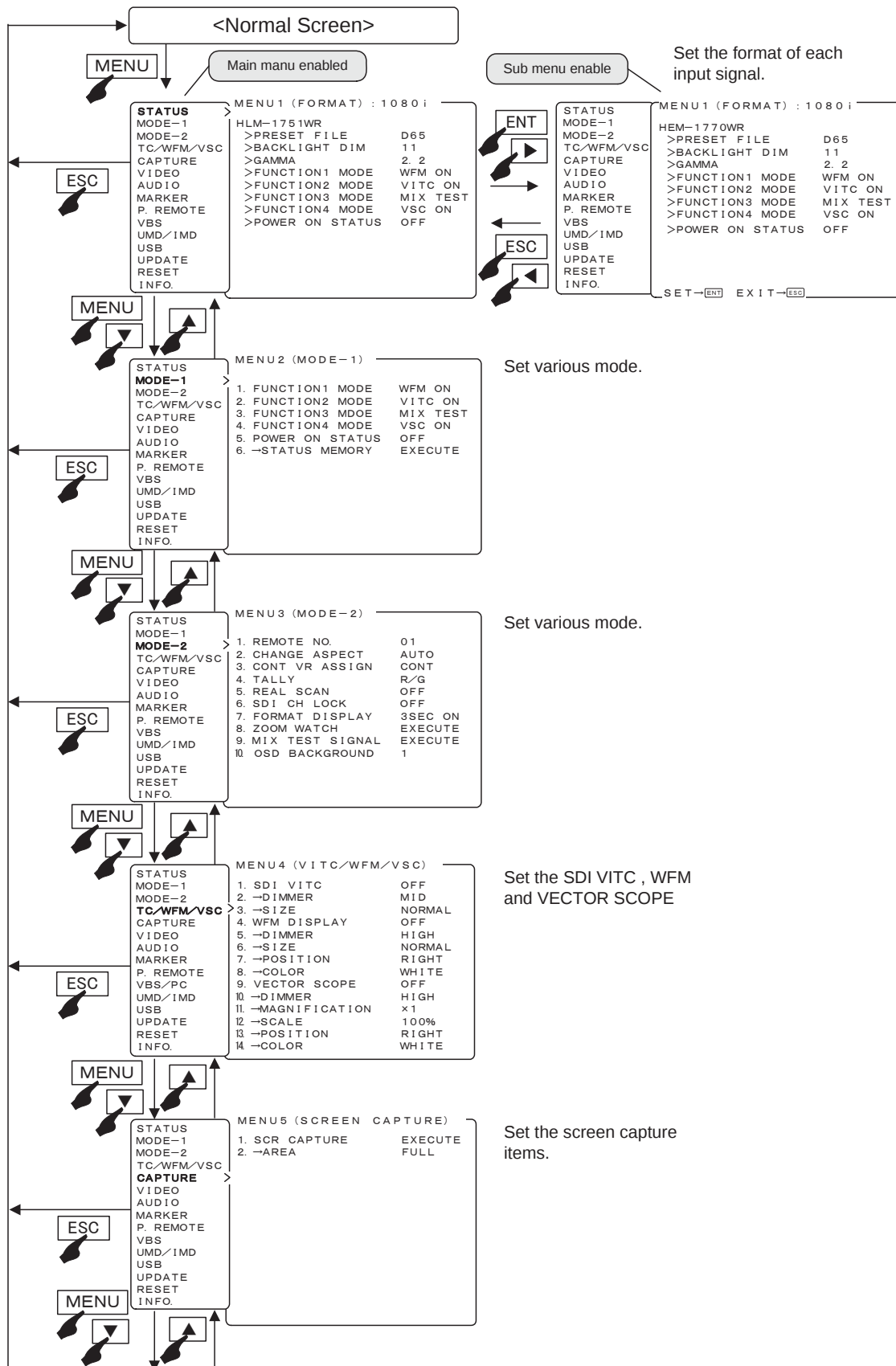
4-1. List of MENU

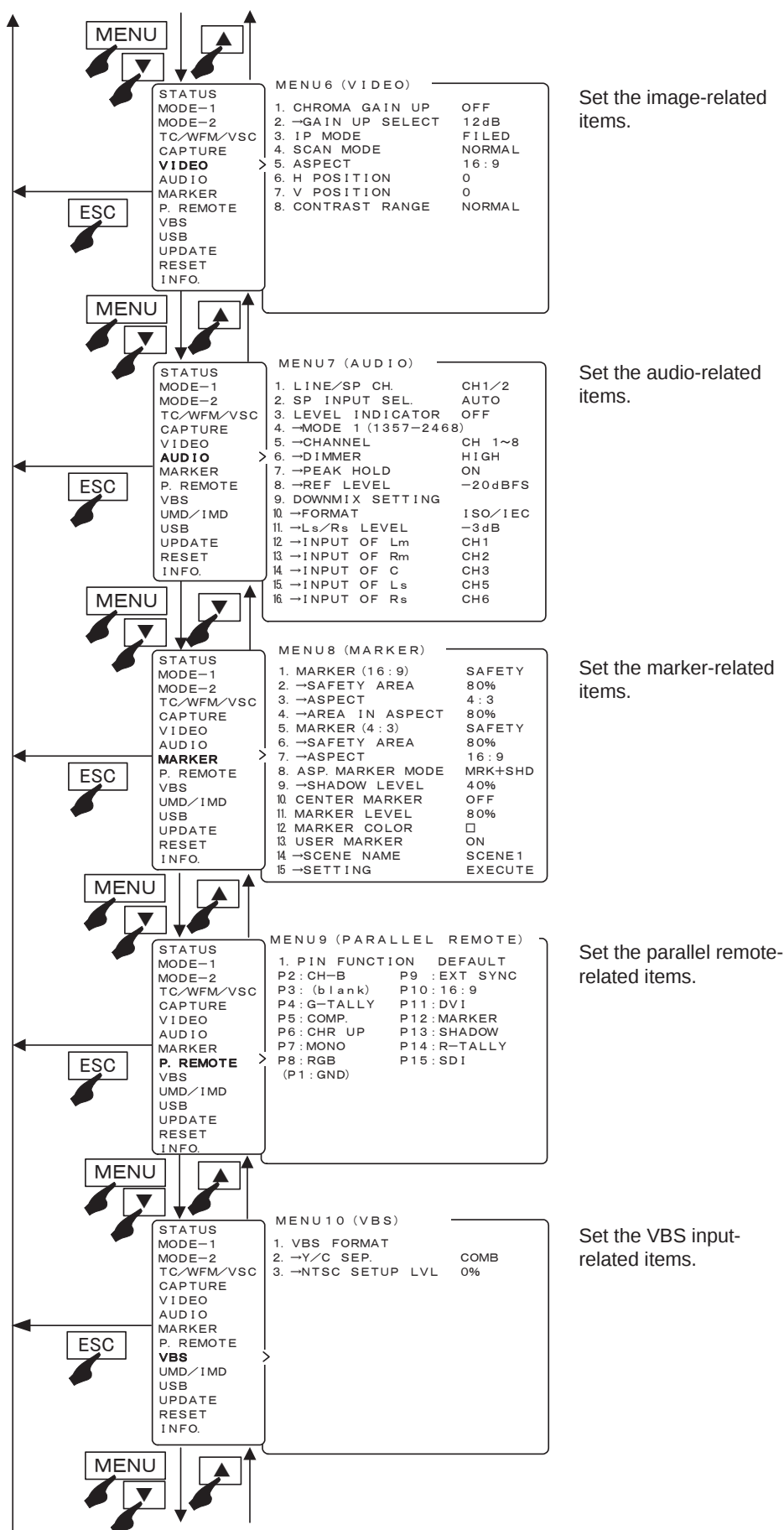
MENU	MENU1 (STATUS)	HLM-1705WR	Displaying the model name
		>PRESET FILE	Setting file status
		>BACKLIGHT DIM	Backlight dimmer status
		>GAMMA	Gamma setting status
		>FUNCTION1 MODE	F1 switch assignment status
		>FUNCTION2 MODE	F2 switch assignment status
		>FUNCTION3 MODE	F3 switch assignment status
		>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 function
		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)			

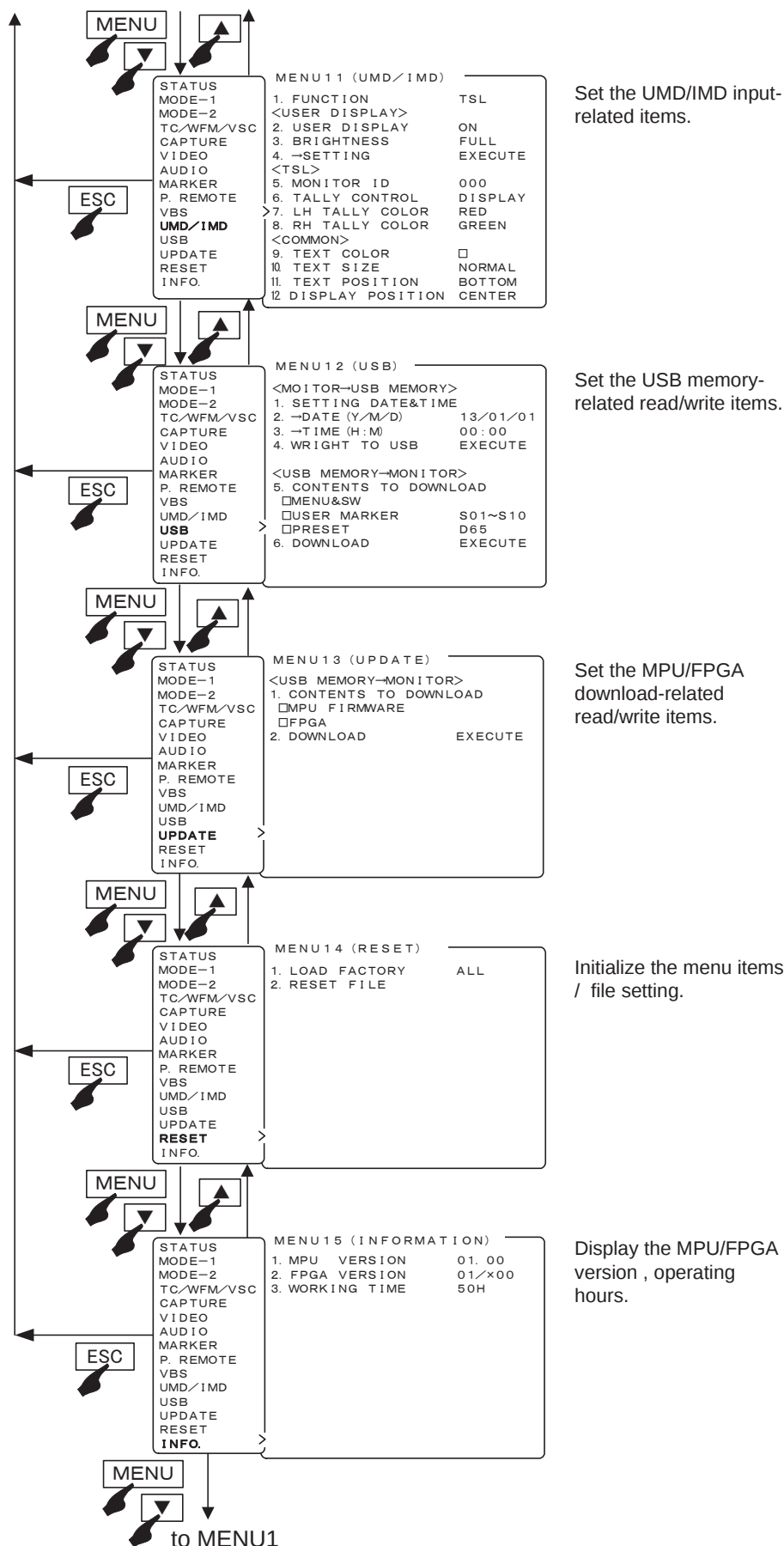


4-2. Flow of MENU Operations

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



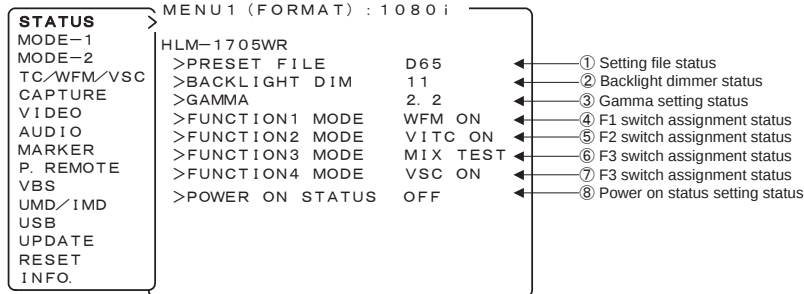




4-3. Description of MENU 1 Functions

* 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).



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.

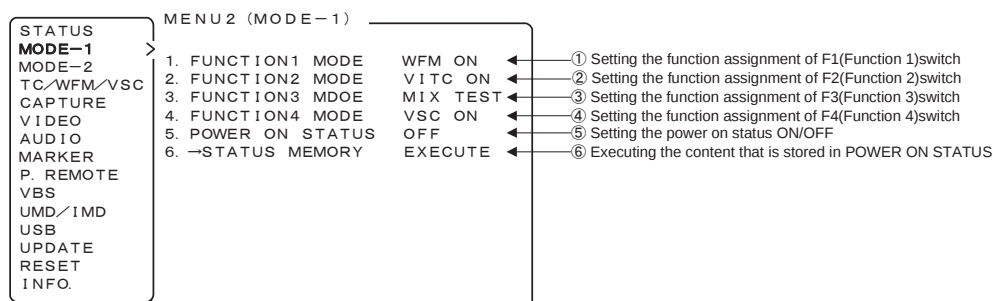
⑦ F4 switch assignment status

- 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



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 magnification 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 magnification 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 **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 **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 **F4** switch on the front panel.
- Default setting is VSC ON.

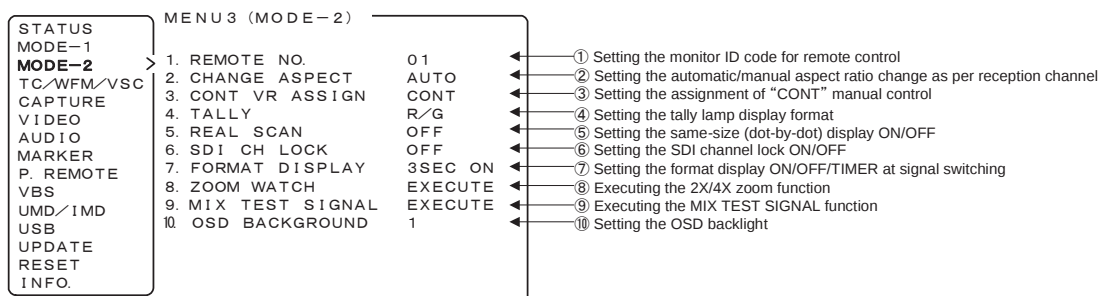
⑤ Setting the power on status ON/OFF

- 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 "LOAD 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



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.

② Setting 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.

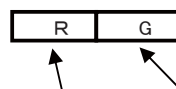
* When switching the ASPECT in the parallel remote mode, set the ASPECT ratio to "MANUAL".

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.

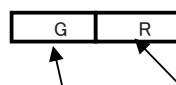
④ Setting the tally lamp indication

- 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-TALLY ON] [G-TALLY ON]

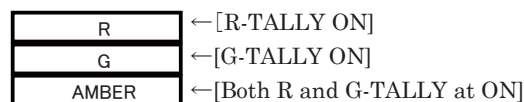
- G/R : G is on the left side and R on the right side, when facing the screen.



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

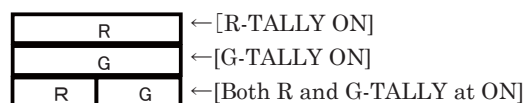
- R+G : The entire tally is displayed.

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/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.



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

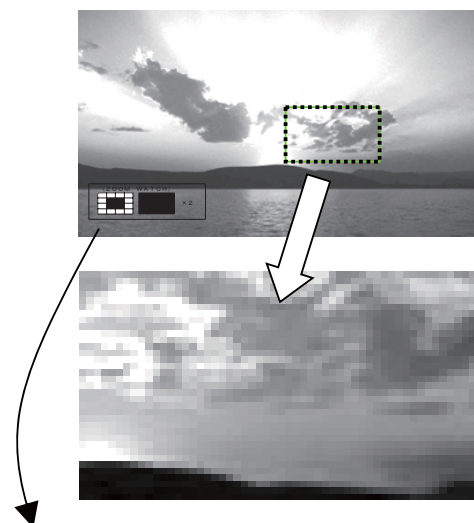
- If you want to prevent the switching between A/B channels of SDI signal from switching, set it to "ON", and then fix the input channel.
- It utilizes the MONITOR OUT terminal and is effective in fixing the channel. It prevents accidental channel switching.
- Default setting is OFF.
- * Before setting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

⑦ Setting the format display ON/OFF before switching signals

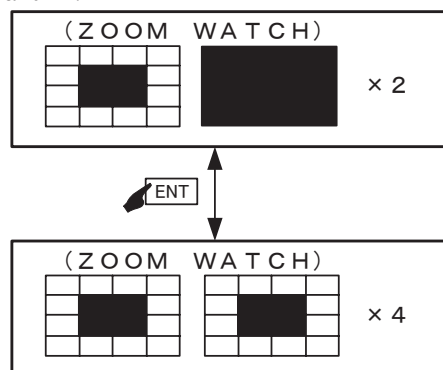
- Used to set whether the channel and signal format are displayed or not.
 - 3SEC ON : Three seconds indication
 - CONT ON : Consecutive indication
 - OFF : Indication off
- Default setting is 3SEC ON.

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.

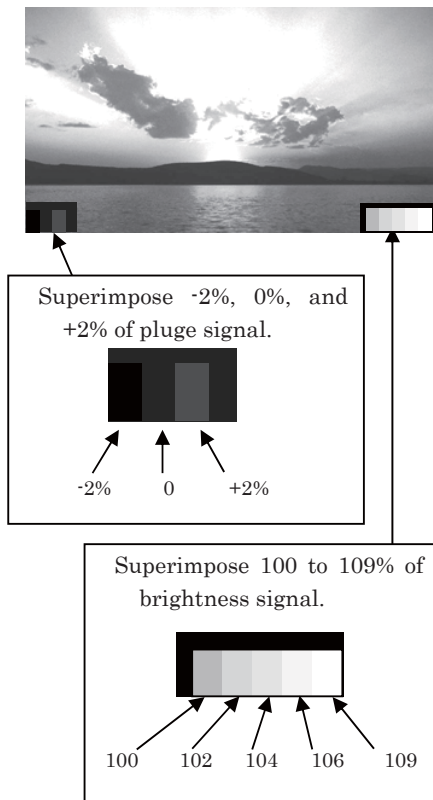


- The ENT switch is used to switch between 2x and 4x.



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 caused 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.



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

STATUS	MENU 4 (VITC/WFM/VSC)		
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

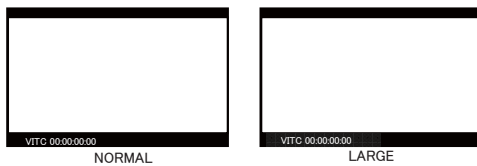
- Used to turn ON or OFF the VITC display multiplexed with HD-SDI signal.
- This function can be assigned with the **[F1]** to **[F4]** switch on the front panel.
- Default setting is **OFF**.

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**.



④ Setting of waveform display ON/OFF

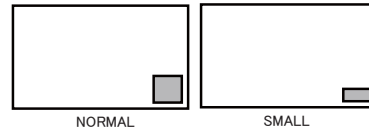
- Used to turn ON or OFF the waveform display of luminance signal.
- This function can be assigned with the **[F1]** to **[F4]** switch on the front panel.
- Default setting is **OFF**.

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**.

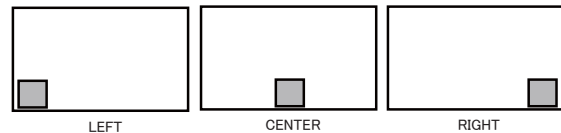
⑥ Setting of waveform display size

- 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**.



⑦ Setting of waveform display position

- Used to set the waveform display position, RIGHT, CENTER or LEFT.
- Default setting is **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 display.
- 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

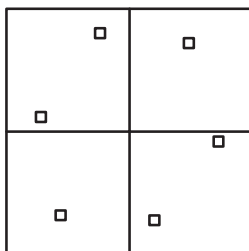
- Used to set the VECTOR SCOPE display brightness in 3 levels: LOW, MID, HIGH and HIGH(M).
- HIGH(M) mode transmits with a picture and displays it.
- Default setting is HIGH.

⑪ Setting the VECTOR SCOPE display magnification ratio

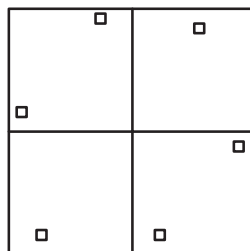
- Used to set the VECTOR SCOPE display magnification in 4 ratios: x1, x2, x4 and x8.
- Default setting is x1.

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

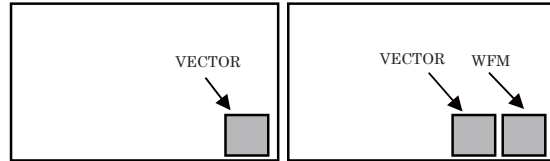


100%SCALE

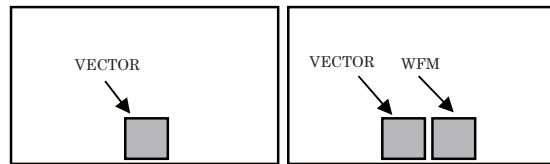
⑬ Setting the VECTOR SCOPE display position

- 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.

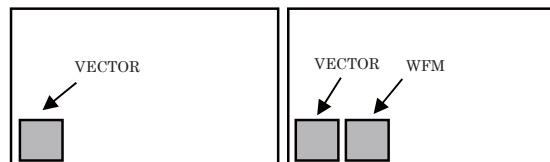
- RIGHT location



- CENTER location



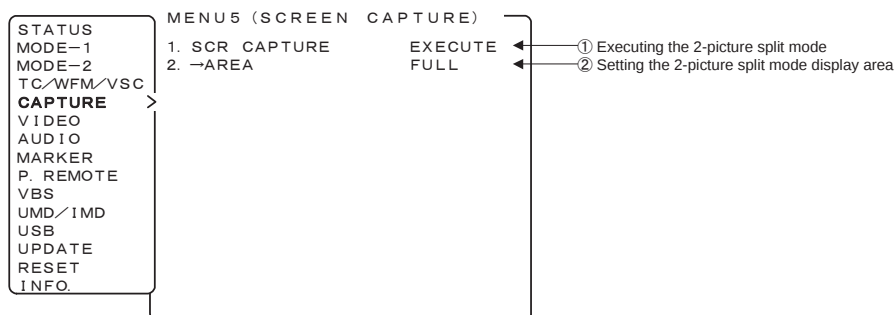
- LEFT location



⑭ Setting the VECTOR SCOPE display color

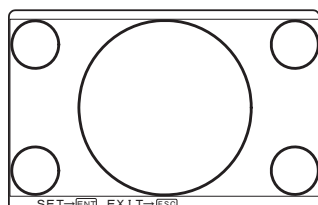
- Used to set the waveform display color to either of GREEN and WHITE.
- Default setting is WHITE.

4-7. Description of MENU 5 Functions

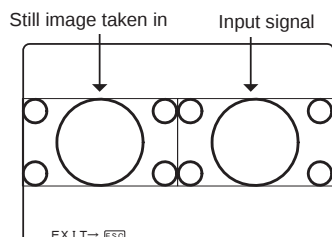


① Executing the 2-picture split mode

- 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.



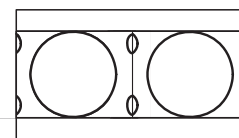
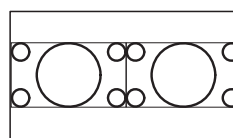
3. Switch the input and compare its image with the taken-in still image. To take in another image or to quit the 2-picture split mode, press the **ESC** switch.



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.



- * 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].

4-8. Description of MENU 6 Functions

STATUS	MENU 6 (VIDEO)		
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	FIELD	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	⑥ Adjusting the horizontal screen position
MARKER	7. V POSITION	0	⑦ 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

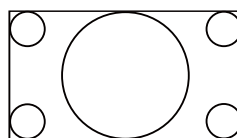
- The mode for I → P conversion is set in the 1035i/1080i/1080psF/480i/575i formats.
- **FRAME** : The information on the previous and subsequent fields is used to convert images to progressive ones. Thanks to this, diagonal interpolation of moving images is enabled for optimum setting.
- **FIELD** : 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.

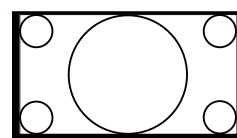
④ Scan size (NORMAL/UNDER) setting

- Switches the image display sizes between NORMAL SCAN and UNDER SCAN.

<16:9NORMAL SCAN> <16:9UNDER SCAN>

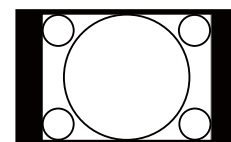
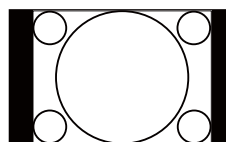


100% display



95% of NORMAL SCAN

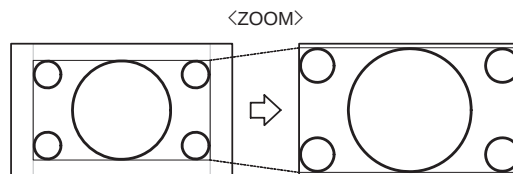
<4:3NORMAL SCAN> <4:3UNDER SCAN>



- 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.



- * 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.

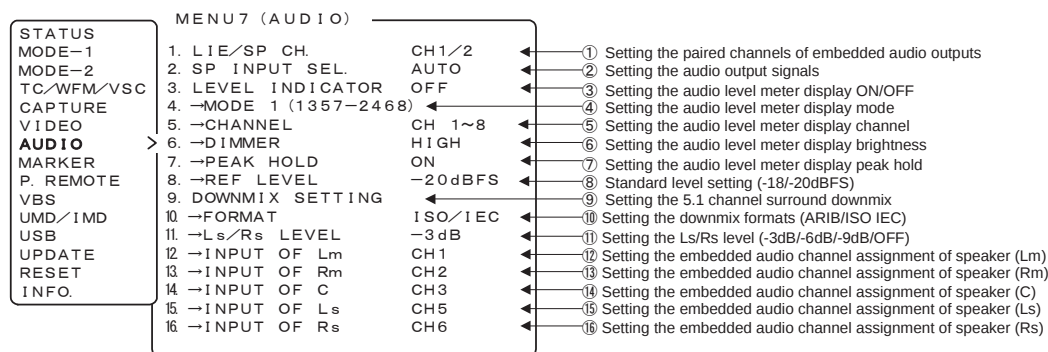
⑦ Adjusting the vertical screen position

- 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 contrast 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



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.

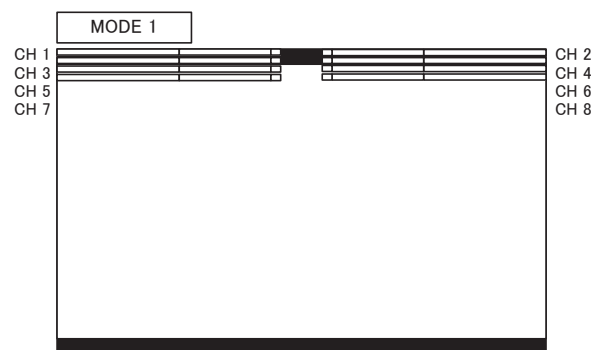
③ Setting the audio level meter display ON/OFF

- 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)



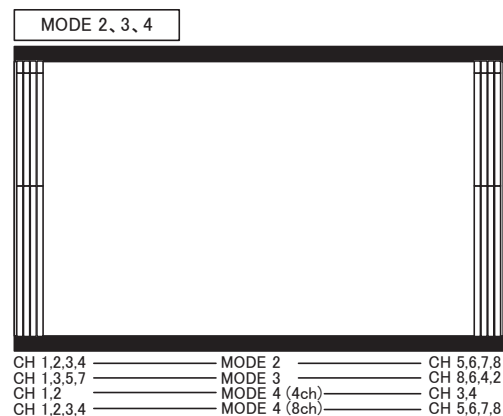
- MODE2 (1234-5678)

MODE3 (1357-8642)

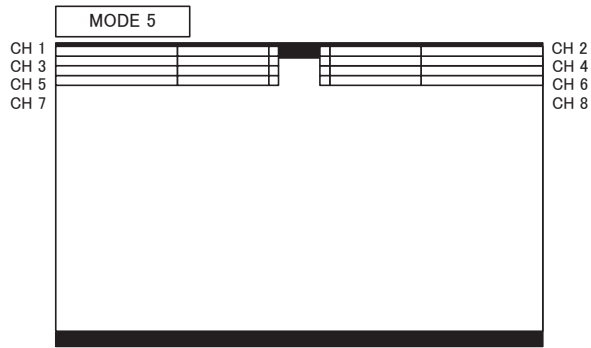
MODE4 (12-34) : During the display mode 1-2ch and 1-4ch settings.

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.



- MODE5 (1357-2468)



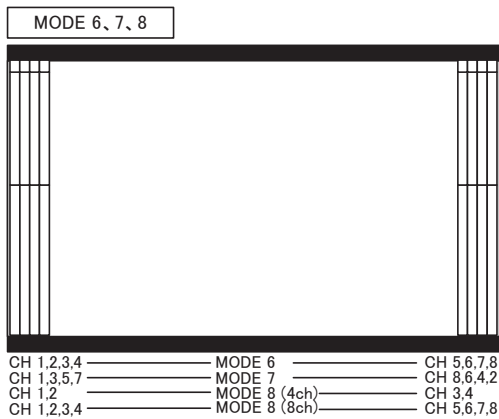
- MODE6 (1234-5678)

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.



- 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 assigned 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 = $-\infty$)
- Default setting is -3dB

⑫ Setting the embedded audio channel assignment 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 assignment 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 assignment 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 assignment 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

STATUS	MENU 8 (MARKER)	
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

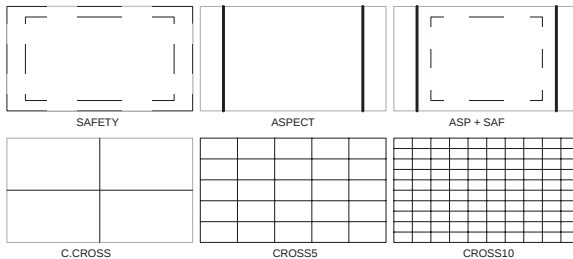
- ① Setting the type of marker displayed at 16:9 aspect ratio
- ② Setting the 16:9 safety marker area (80-99% (1% increments))
- ③ Setting the type of aspect marker at 16:9 display
- ④ Setting the safety marker (80-99% (1% increments)) in aspect marker area
- ⑤ Setting the type of marker displayed at 4:3 aspect ratio
- ⑥ Setting the 4:3 safety marker (80-99% (1% increments))
- ⑦ Setting the type of aspect marker at 4:3 display
- ⑧ Setting the aspect marker display mode
- ⑨ Setting the shadow contrast level with shadow on screen
- ⑩ Setting the center cross marker ON/OFF
- ⑪ Setting the marker display level
- ⑫ Setting the marker display color
- ⑬ Setting the user marker display ON/OFF
- ⑭ Setting each scene of user markers and setting the scene names
- 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.

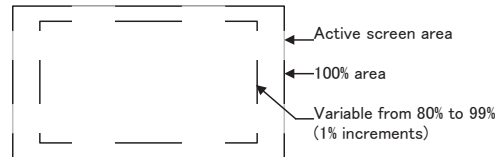
• The types of markers can also be set with the  and  switches on the front panel with no menu displayed.

• Default setting is **SAFETY**.



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.

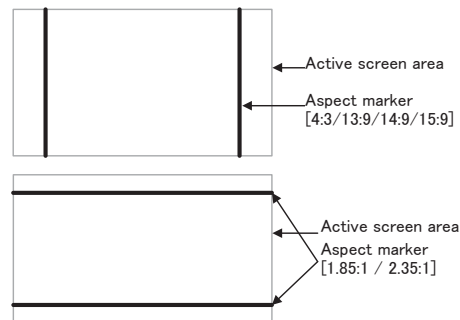


• Somewhere between 80% and 99% can also be set with the  and  switches on the front panel with no menu displayed.

• Default setting is 80% (safety area).

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

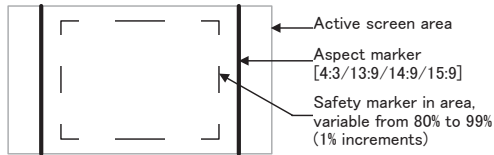
- Used to select the type of aspect marker from "4:3, 13:9, 14:9, 15:9, 1.85:1 and 2.35:1" at 16:9 aspect ratio.



• 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.



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

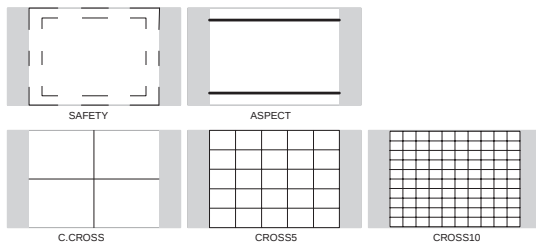
- Default setting is 80% (safety area).

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 to switch on the front panel.

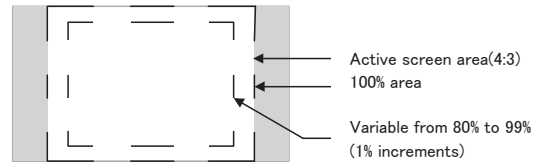
- The types of markers can also be set with the and switches on the front panel with no menu displayed.

- Default setting is SAFETY.



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.

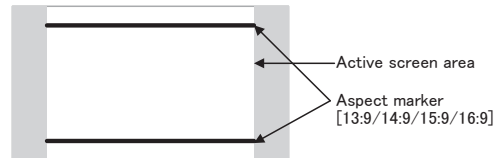


- Somewhere between 80% and 99% can also be set with the and switches on the front panel with no menu displayed.

- 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.



- 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.
- SHADOW** : Displaying the shadow only.
- MRK+SHD** : Displaying both the marker and shadow

- Default setting is MARKER+SHADOW.

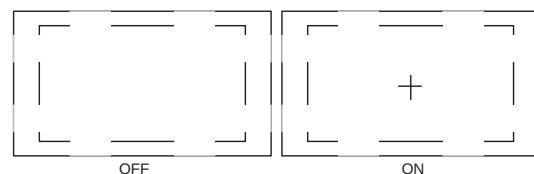


⑨ Setting the aspect marker shadow level

- 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.



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

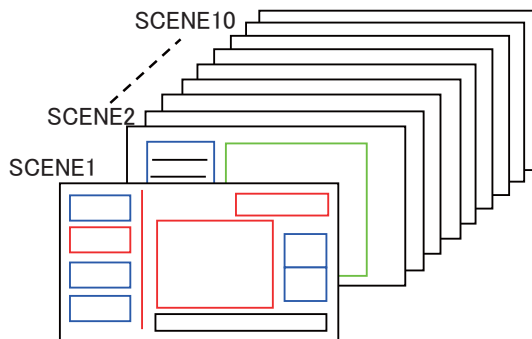
- Used to set the marker display color.
- * The user marker is displayed in the color pre-set on the user marker menu.
- Settings : White, yellow, cyan, green, magenta, red and blue
- Default setting is white.

⑬ Setting the user marker display ON/OFF

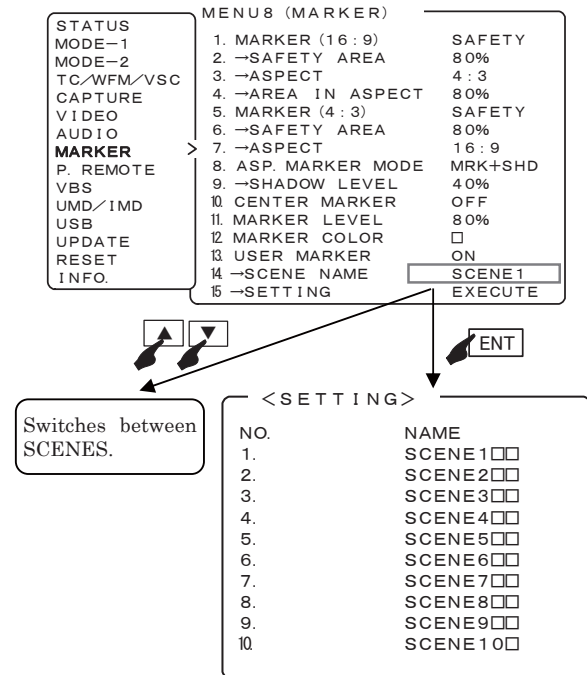
- Used to turn on and off the user marker display.
- This function can be assigned with the **[F1]** to **[F4]** switch on the front panel.
- Default setting is OFF.

⑭ Selecting each scene of user markers and setting 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.



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



- 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 setting menu

- Press **[ENT]** with EXECUTE, and the user markersetting menu shows up. Now various settings 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>

②NO ③COL ④SW ①SCENE NAME ⑤DATA(X Y)

<SETTING OF USER MARKER>

PAGE1

NO.	COL	SW	DATA (X Y)
MK1	☐	ON	S: SCENE1 E: _____ S: _____ E: _____
MK2	☐	ON	S: _____ E: _____ S: _____ E: _____
MK3	☐	ON	S: _____ E: _____ S: _____ E: _____
MK4	☐	ON	S: _____ E: _____ S: _____ E: _____
MK5	☐	ON	S: _____ E: _____ S: _____ E: _____

J (NEXT PAGE)

SET → [ENT] EXIT → [ESC]

<PAGE 2>

<SETTING OF USER MARKER>

PAGE2

NO.	COL	SW	DATA (X Y)
1 (BACK)			
MK6	☐	ON	S: _____ E: _____ S: _____ E: _____
MK7	☐	ON	S: _____ E: _____ S: _____ E: _____
MK8	☐	ON	S: _____ E: _____ S: _____ E: _____
MK9	☐	ON	S: _____ E: _____ S: _____ E: _____
MK10	☐	ON	S: _____ E: _____ S: _____ E: _____

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.

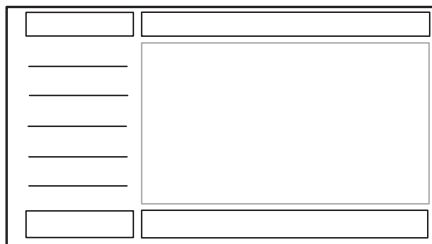
③ The scene name for user marker

- 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

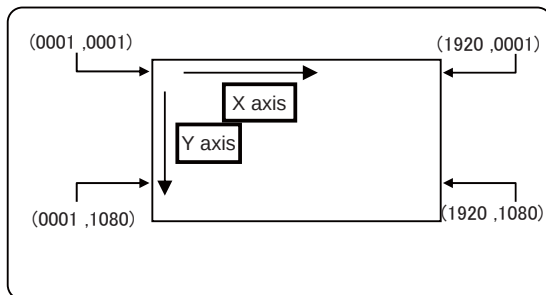
- In the “DATA (X Y)” column, the coordinates for **[S : START POINT]** and **[E : END POINT]** of the currently set user markers are displayed. without such settings, the “-” marker appears.
- Move the cursor to the X/Y data. Using the **[ENT]** switch, new user markers can be drawn or already registered 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 (-).

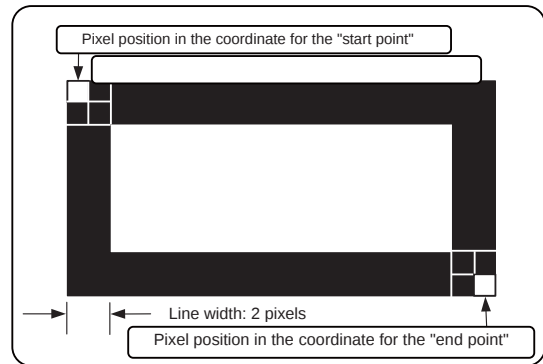
● Coordinate reference point

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).

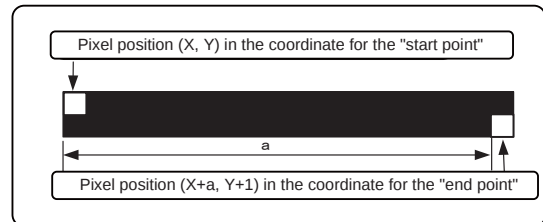


● Marker lines and coordinate values

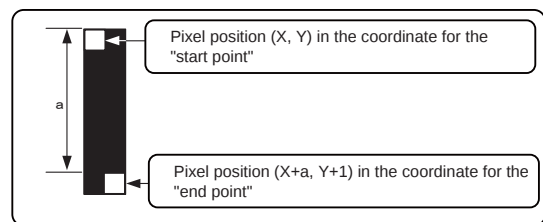
There are 2 line widths for the user markers. However, the coordinate for the start point and that for the end point are different by 1 pixel.



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	☒	
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	☒	
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]	

⑤

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

⑤ Setting the start point

X axis
Y axis

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.

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.

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

⑨ Saving the end point

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

How to modify the user markers

① Setting the marker display ON/OFF

MENU 8 (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	80%	
12. MARKER COLOR	□	
13. USER MARKER	ON	
14. →SCENE NAME	SCENE1	
15. →SETTING	EXECUTE	
SET—[ENT] EXIT—[ESC]		

Move the cursor

② Execute the drawing mode in item 14

MENU 8 (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]		

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]		

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)

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

Set USER MARKER to ON.

Move the cursor to the start point.

Press [ENT] now.

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

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

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.

⑥ Modifying the start point

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

The shifted X-Y coordinate is displayed.

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.

⑧ Shifting the end point

START POINT(X:0250 Y:0200)
END POINT(X:1850 Y:0800)

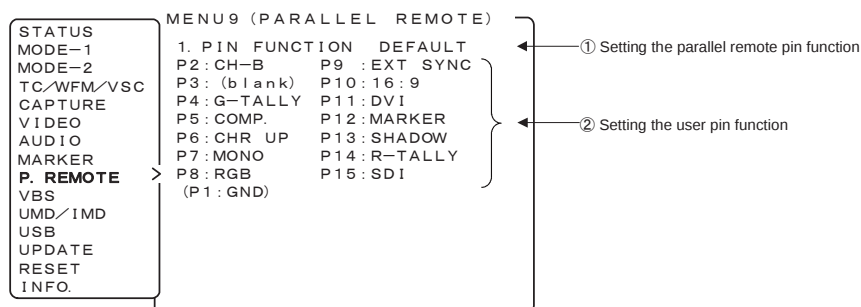
Move the cursor to the end point.

Take the procedure to set a new start point.

⑨ Saving the end point

The cursor moves to the start point.

4-12. Description of MENU 9 Functions



① Setting the functions of parallel remote pins

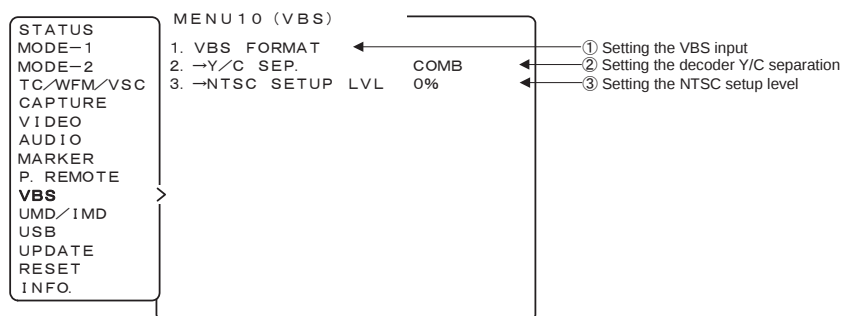
- Select the pre-assigned pin functions of parallel remote control or the individual user-set functions.
- * By default, the pre-assigned pin functions are displayed beneath.

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

4-13. Description of MENU 10 Functions



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.

4-14. Description of MENU 11 Functions

STATUS	MENU 11 (UMD/IMD)		
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

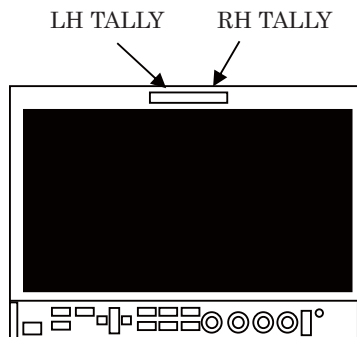
A B C D E F G H I J K L M N O P Q R S T U
V W X Y Z 0 1 2 3 4 5 6 7 8 9 - () [blank]

⑤ Setting the TSL monitor ID number

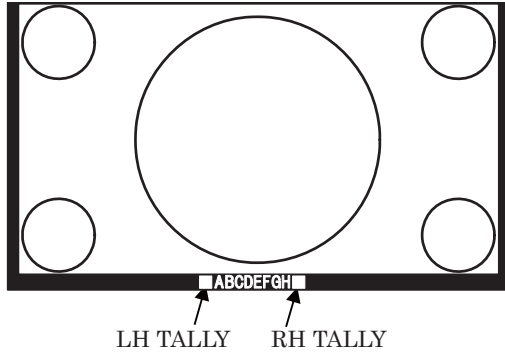
- Here you can set each monitor ID number for controlling the TSL using RS485.
- The ID number can be set between 0 and 126.
- Although the maximum number of devices that can be driven with chain connection is 32 devices per line, you can individually control up to 126 devices by increasing the number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



<TALLY is displayed when it is set to DISPLAY>



⑦ Setting the TSL TALLY (left side) color

- Selects 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 setting item)

- Selects the character color from the seven colors: "WHITE/YELLOW/CYAN/GREEN/MAGENTA/RED/BLUE".
- Default setting is WHITE

⑩ Setting the Display character size (common setting 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 setting 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

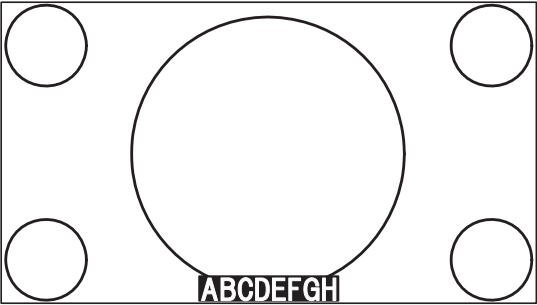
:

BOTTOM

DISPLAY POSITION

:

CENTER



TEXT SIZE

:

NORMAL

TEXT POSITION

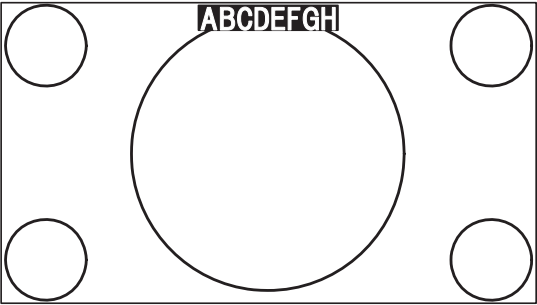
:

TOP

DISPLAY POSITION

:

CENTER



TEXT SIZE

:

SMALL

TEXT POSITION

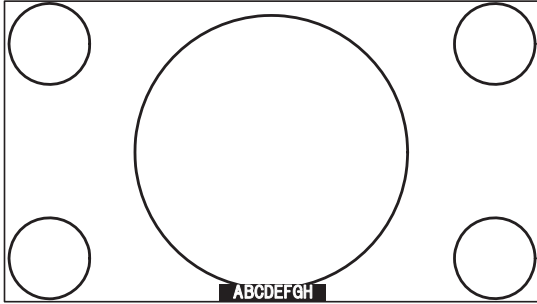
:

BOTTOM

DISPLAY POSITION

:

CENTER



TEXT SIZE

:

SMALL

TEXT POSITION

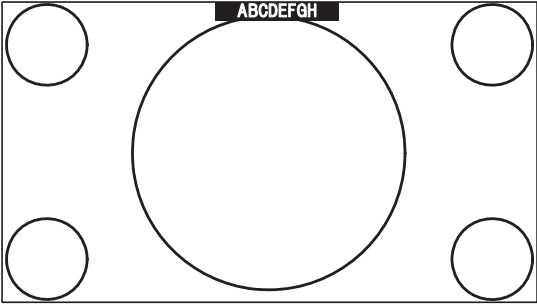
:

TOP

DISPLAY POSITION

:

CENTER



TEXT SIZE

:

TEXT POSITION

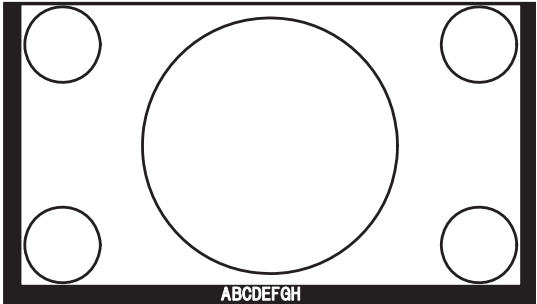
:

BOTTOM

DISPLAY POSITION

:

AUTO



TEXT SIZE

:

TEXT POSITION

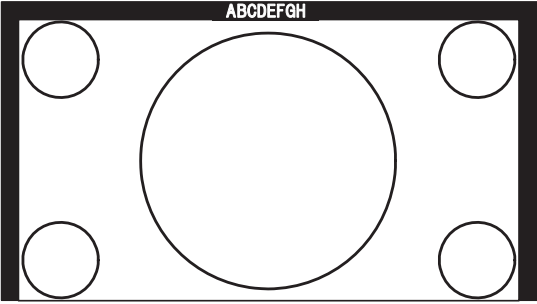
:

TOP

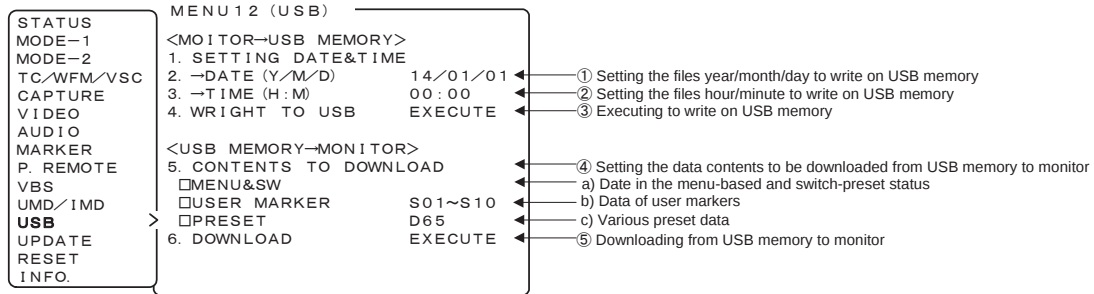
DISPLAY POSITION

:

AUTO



4-15. Description of MENU 12 Functions



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 re-viewing 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 full 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
 - ☐ 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 vice versa.
 - ☐ 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.

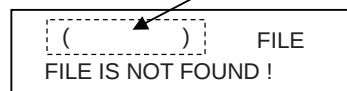
“¥Ikegami_Monitor¥preset_hlm1705_001.txt”

- * 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 vice 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 under 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



◆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.

```

MENU 12 (USB)
<MONITOR-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

```

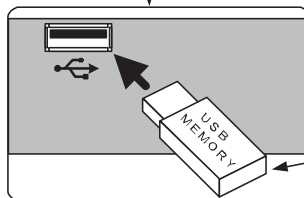
MENU12 (USB MEMORY)
<MONITOR → USB MEMORY>
1. SETTING OF DATE & TIME
2. →DATE Y/M/D 14/01/01
3. →TIME H:M 00:00
4. WRIGH TO MEM EXECUTE
<USB MEMORY → MONITOR>
5. CONTENTS TO DOWNLOAD
  □MENU&SW
  □USER MARKER S01~S10
  □PRESET D65
6. DOWNLOAD EXECUTE

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.

```

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.

In normal state

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.

```

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]
    
```

```

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!
    
```

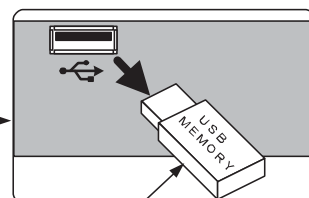
During write

```

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

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.

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
5. <USB MEMORY → MONITOR>
6. CONTENTS TO DOWNLOAD

☒ MENU&SW
☒ USER MARKER S01~S10
☒ PRESET D65
 6. DOWNLOAD EXECUTE

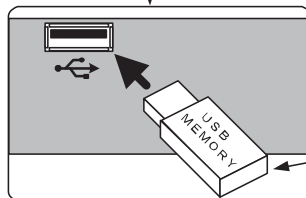
SET → [ENT] EXIT → [ESC]

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.

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
5. <USB MEMORY → MONITOR>
6. 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] switch.

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

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
5. <USB MEMORY → MONITOR>
6. CONTENTS TO DOWNLOAD

☒ MENU&SW
☒ USER MARKER S01~S10
☒ PRESET D65
 6. DOWNLOAD EXECUTE

PROCESSING...

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
5. <USB MEMORY → MONITOR>
6. CONTENTS TO DOWNLOAD

☒ MENU&SW
☒ USER MARKER S01~S10
☒ PRESET D65
 6. DOWNLOAD EXECUTE

DEVICE: USB MEMORY

DOWNLOAD?

OK → [ENT] CANCEL → [ESC]

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

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.

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
5. <USB MEMORY → MONITOR>
6. 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
5. <USB MEMORY → MONITOR>
6. CONTENTS TO DOWNLOAD

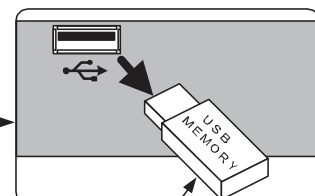
☒ MENU&SW
☒ USER MARKER S01~S10
☒ PRESET D65
 6. DOWNLOAD EXECUTE

JOB COMPLETED!

THE DEVICE CAN BE REMOVED.

EXIT → [ESC]

Download completed



Draw out the USB memory.

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
5. <USB MEMORY → MONITOR>
6. 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
5. <USB MEMORY → MONITOR>
6. CONTENTS TO DOWNLOAD

☐ MENU&SW
☐ USER MARKER S01~S10
☐ PRESET D65
 6. DOWNLOAD EXECUTE

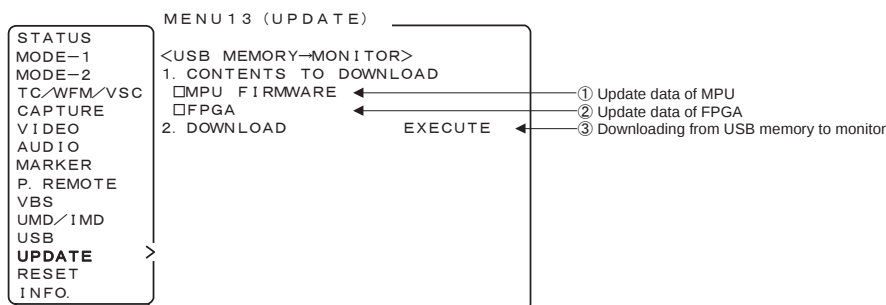
DEVICE: UNSUPPORTED

SET USB MEMORY

CANCEL → [ESC]

The "UNSUPPORTED" message appears.

4-16. Description of MENU 13 Functions



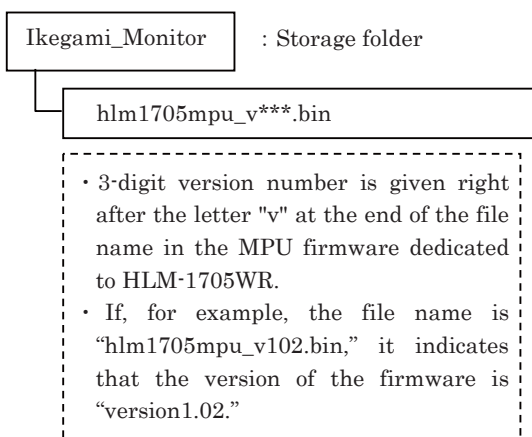
① Selecting items to be updated

- 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.

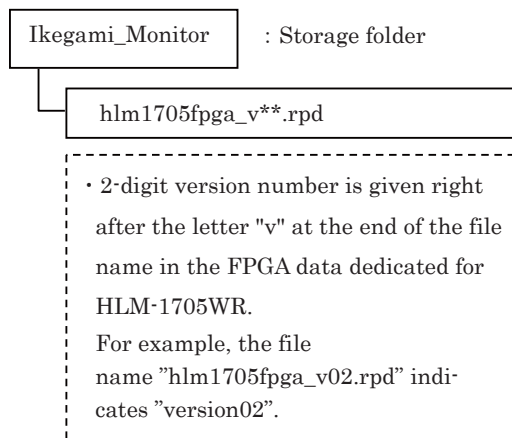
a) ☐ MPU FIRMWARE

- 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.



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.



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

MENU 13 (UPDATE)

<USB MEMORY → MONITOR>

1. CONTENTS TO DOWNLOAD

☒ MPU FIRMWARE

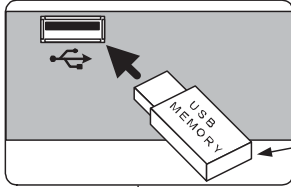
☐ FPGA

2. DOWNLOAD

EXECUTE

SET → [ENT] EXIT → [ESC]

Tick the check box (☐) for MPU item.



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

MENU 13 (UPDATE)

<USB MEMORY → MONITOR>

1. CONTENTS TO DOWNLOAD

☒ MPU FIRMWARE

☐ FPGA

2. 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.

MENU 13 (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.

◆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.

When no USB memory is inserted:

MENU 13 (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:

MENU 13 (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

MENU 13 (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

MENU 13 (UPDATE)

<USB MEMORY → MONITOR>

1. CONTENTS TO DOWNLOAD

☒ MPU FIRMWARE

☐ FPGA

2. DOWNLOAD

EXECUTE

UPDATE MPU 85% DONE

DO NOT REMOVE THE DEVICE!

During update

Automatically resets the software after the update is completed.

Progress

MENU 13 (UPDATE)

<USB MEMORY → MONITOR>

1. CONTENTS TO DOWNLOAD

☒ MPU FIRMWARE

☐ FPGA

2. DOWNLOAD

EXECUTE

MPU : 01.02

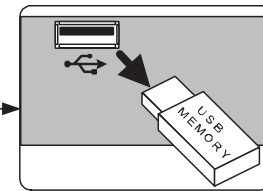
SUCCESSFUL

PLEASE SHUTDOWN!

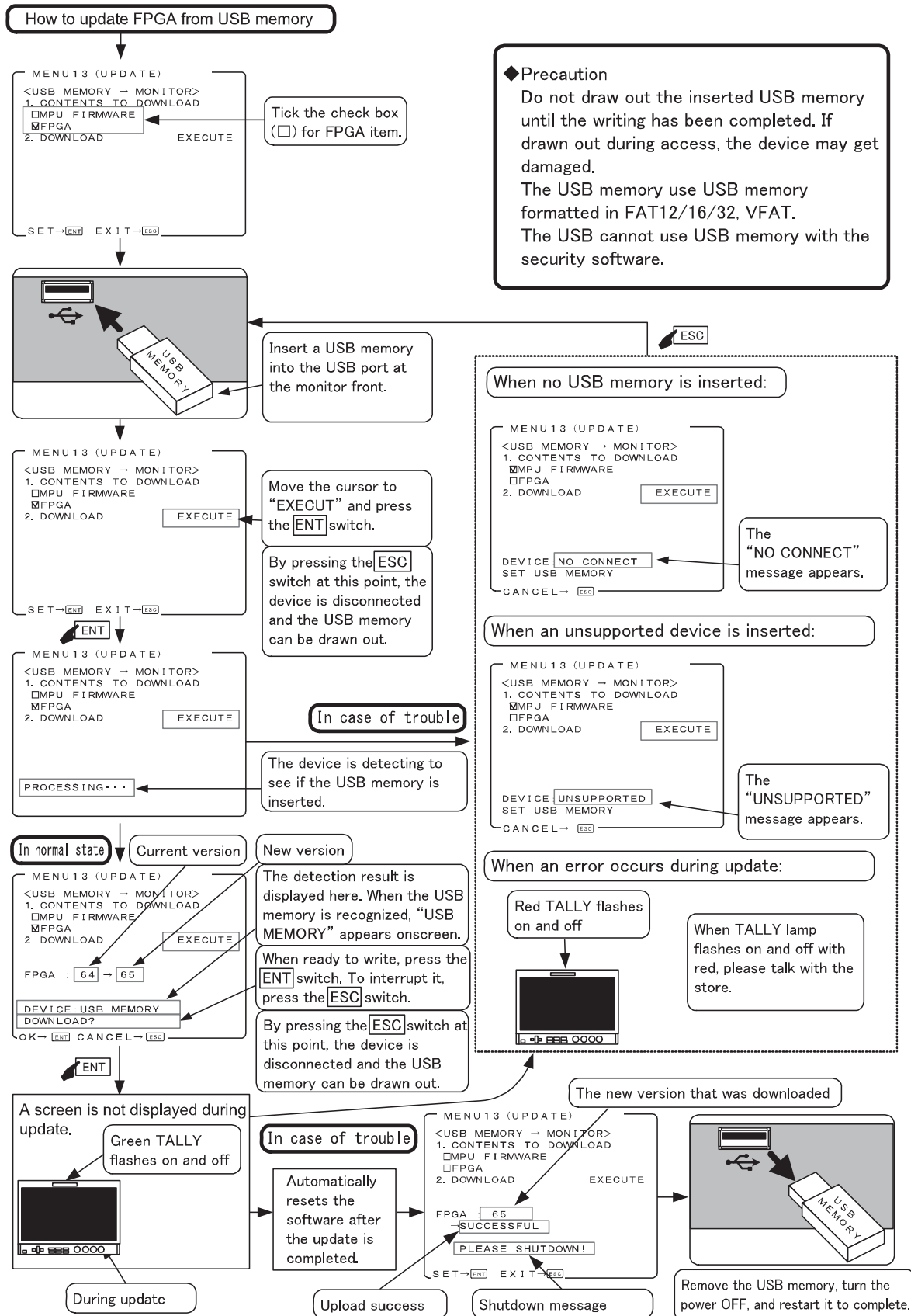
SET → [ENT] EXIT → [ESC]

Upload success

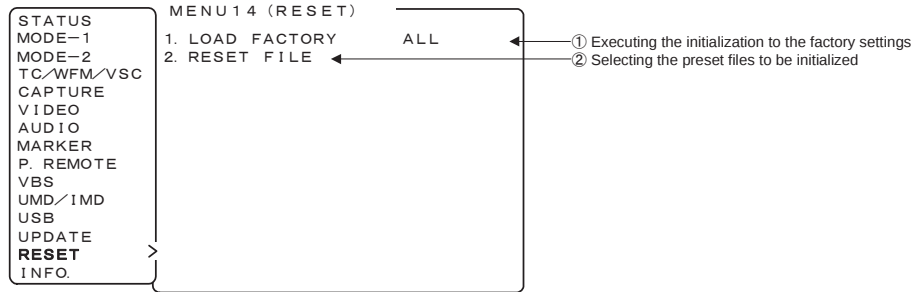
Shutdown message



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



4-17. Description of MENU 14 Functions



① Executing the initialization of set data

- Perform this setting to restore the default settings.
- **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 initialization, just press the **ESC** switch.

* The initialization of data cannot be executed if "DATA LOCK" or "ALL LOCK" is set in "5-2.

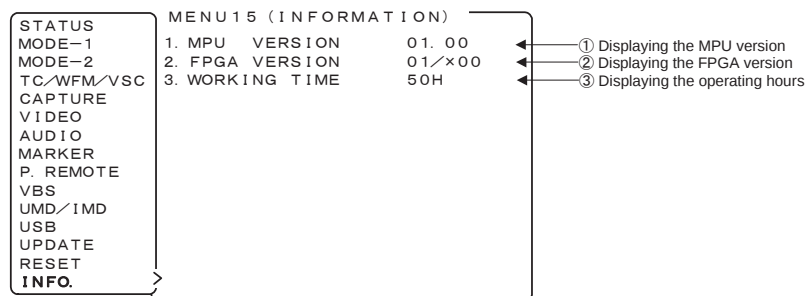
⑥ Setting of data protection password".

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 initialized.
- **D65** : REF D65 only is initialized.
- **D93** : REF D93 only is initialized.
- **D65/D93** : REF D65 and D93 only are initialized.

4-18. Description of MENU 15 Functions



① Displaying the MPU version

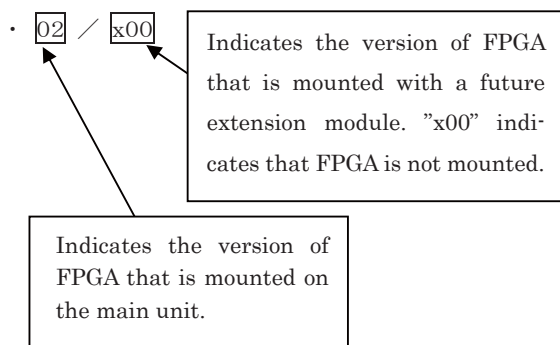
- Displays the current software version.

③ Displaying the working time

- Displays the accumulated time since the power was turned on.

② Displaying the FPGA 1/2 version

- Displays the current software version.

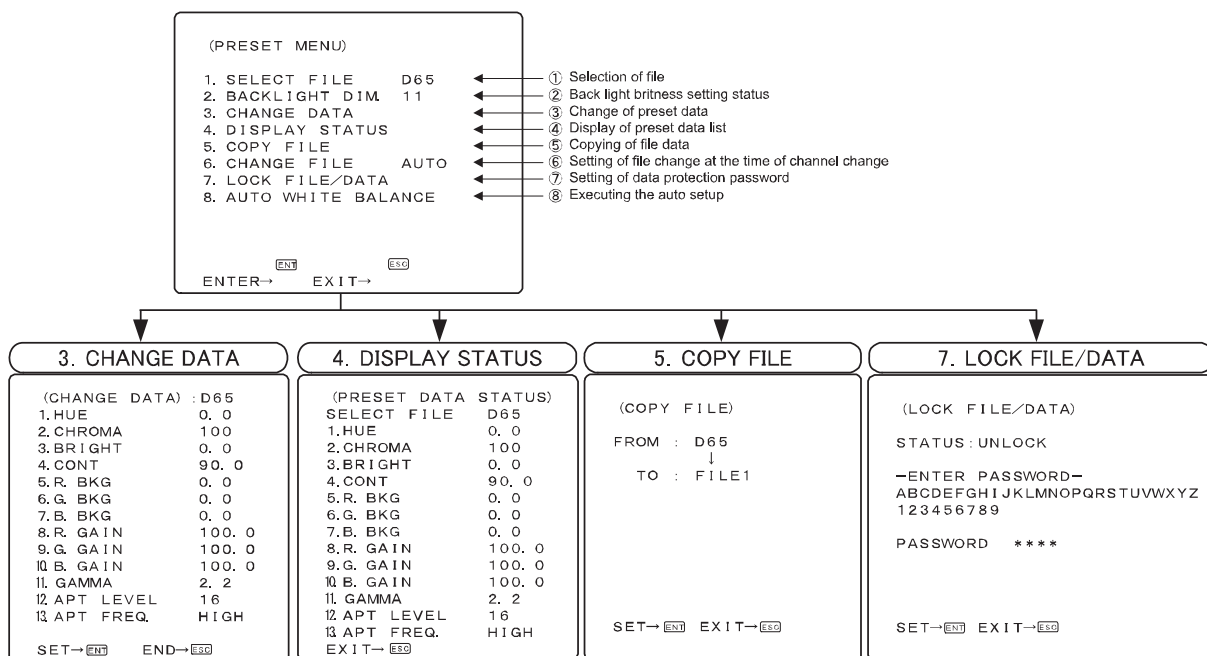


5. Preset Menu Function

5-1. List of preset menu

- To execute the preset menu, press **PRESET**.

* Turn off the menu screen.



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) : 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
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.

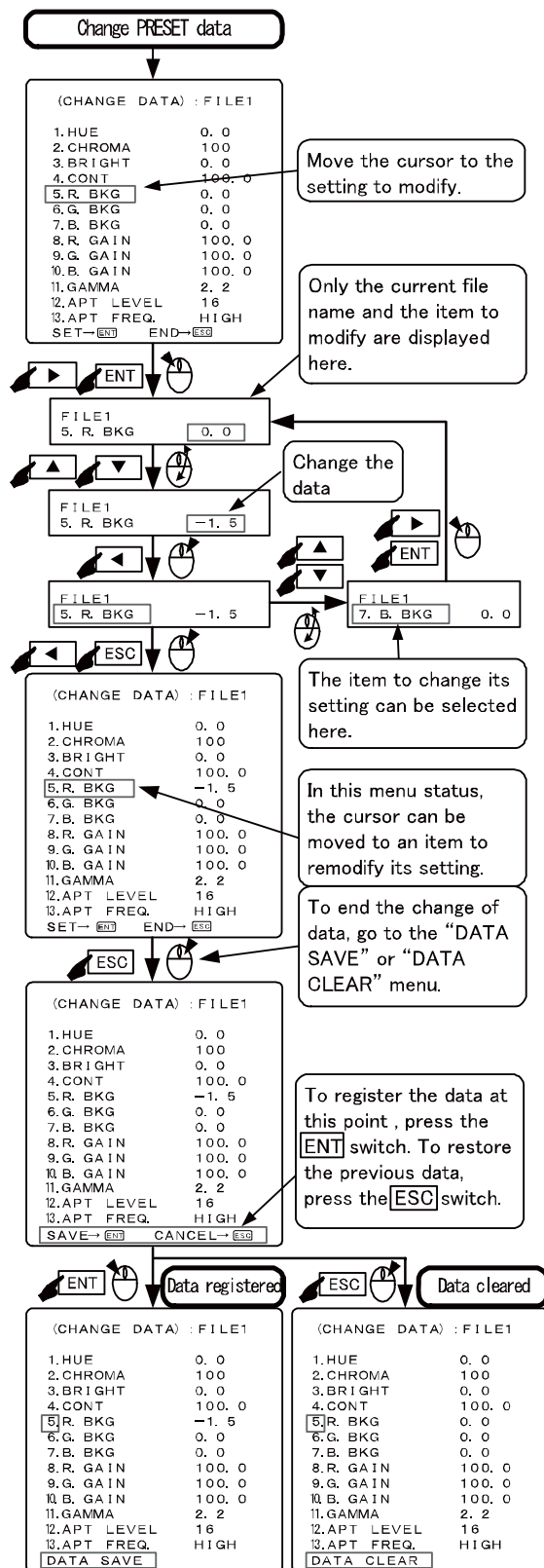
LOW Boosting from approx. 10MHz

MID1 Boosting from approx. 15MHz

MID2 Boosting from approx. 20MHz

HIGH Boosting from approx. 25MHz

- Default setting is HIGH.

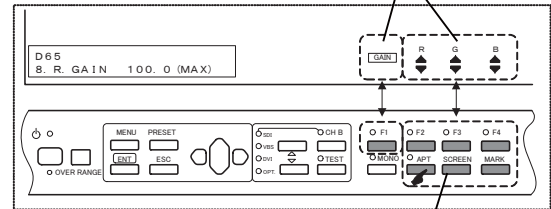


■ White balance adjustment assist function

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.

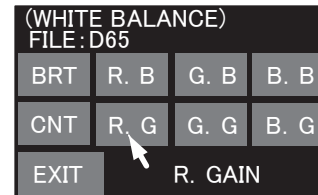


F1 switch is assigned to switch between GAIN and BACK-GROUND.

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.



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.

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
↓
TO : FILE1

SET → ENT EXIT → ESC

(a) Selection of copy source file
(b) Selection of copy destination file

- Select the copy source file (D65, D93, FILEx [x: 1 to 8]) using the ▲/▼ switch and press the ENT switch.
- 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.
- 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 channel: When a channel is changed to another, an automatically stored files 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
-ENTER PASSWORD-
ABCDEFGHIJKL MNOPQRST UVWXYZ
123456789
PASSWORD: ****
SET → ENT EXIT → ESC

(a) Display of currently set lock mode
(b) Password menu

(LOCK FILE/DATA)
STATUS: UNLOCK
-ENTER PASSWORD-
ABCDEFGHIJKL MNOPQRST UVWXYZ
123456789
PASSWORD MODE: ABCD
ALL LOCK
SET → ENT CANCEL → ESC

(c) Password entry
(d) Setting of lock mode

(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

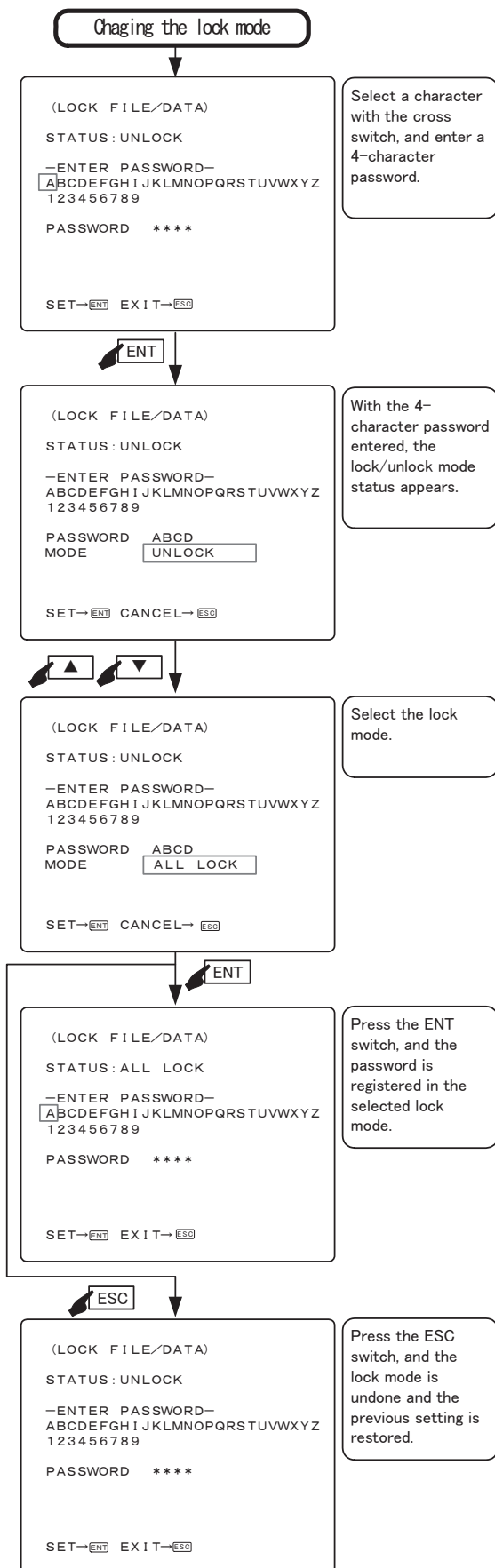
- Select characters from this list using the ▲, ▼, ◀ and ▶ switches and press the ENT switch to set the password.

(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 password for releasing the lock.

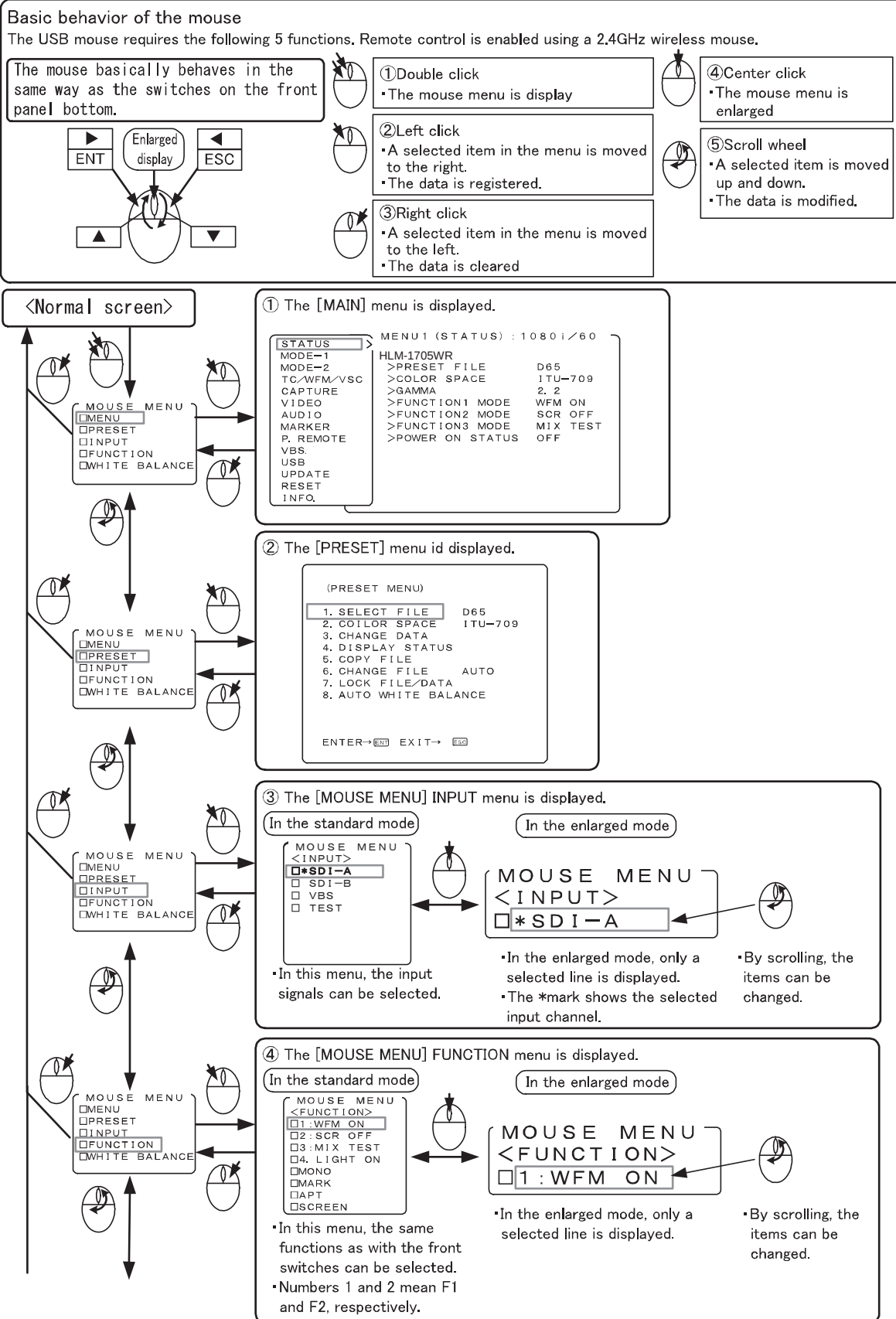
(d) Setting of LOCK mode

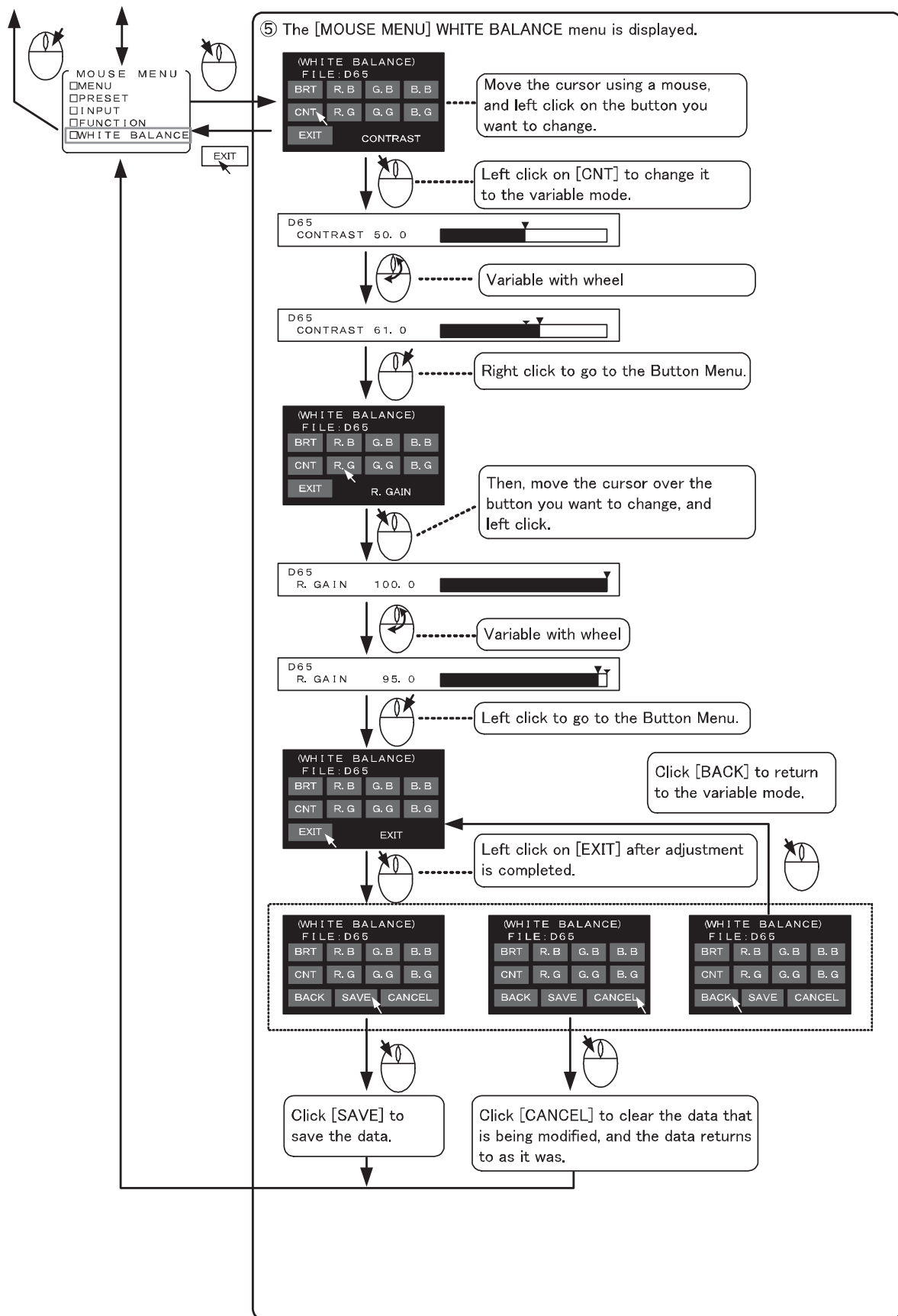
- When the ENT switch is pressed after the password has been entered, the LOCK mode blinks. Execute the setting by pressing the ENT key. To return to the previous state, press the ESC switch.



6. Mouse menu function

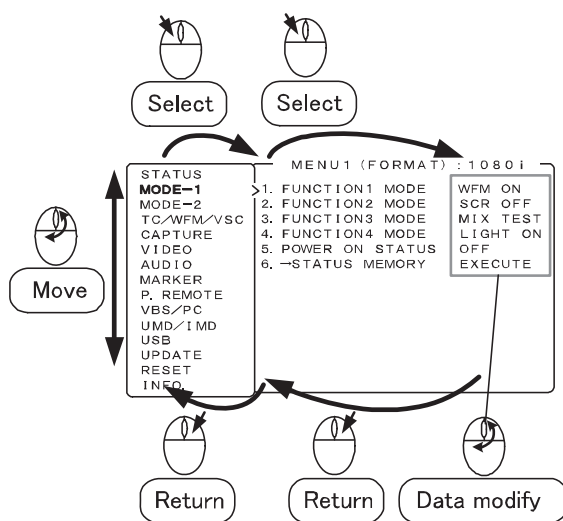
6-1. Basic procedure of the mouse menu





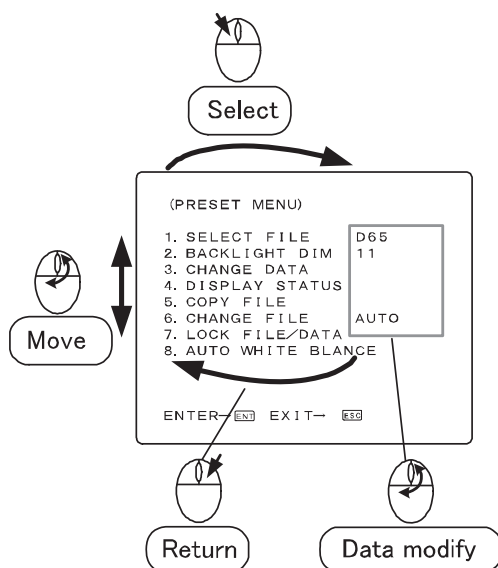
6-2. Basic procedures on the MENU and PRESET MENU screens

① Basic mouse behavior on the MENU screen



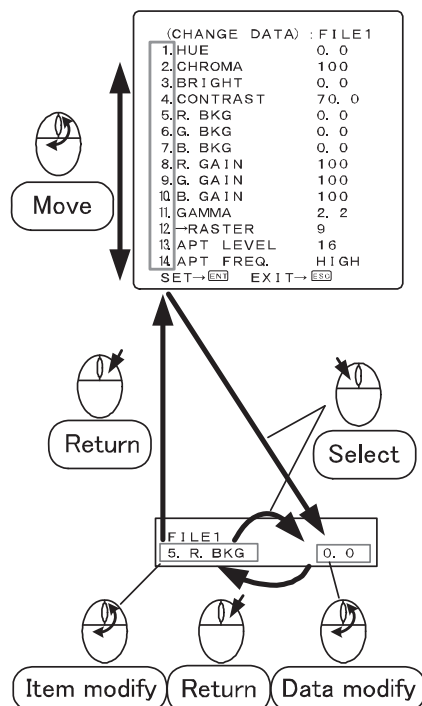
- Left-click the mouse to go to the right of the MENU screen and select an item. Right-click it to return to the left-hand items.
- The scroll wheel is used to move vertically and to change the settings.
- When there are two or more settings to select on the right-hand data like the USB memory's date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

② Basic mouse behavior on the PRESET MENU screen



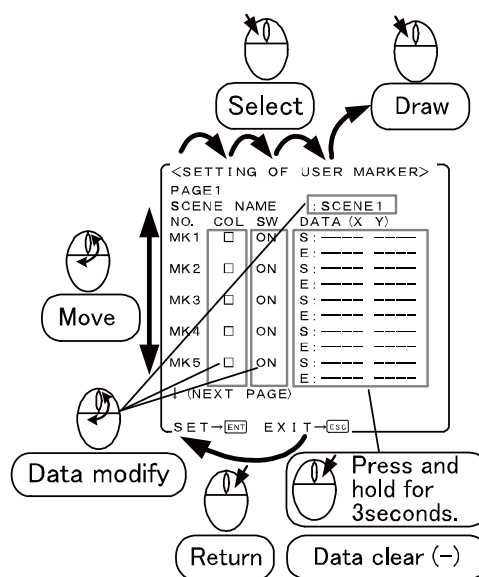
- The behavior is the same as Item ①.

③ Basic mouse behavior on the CHANGE PRE-SET 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 in-
put can be outputted. A signal to be out-
putted 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/m² (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% and 100%

(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.

- No. of types: 100 types: 10 scenes x 10 types (1 scene: 10 types)
 - No. of colors: 6
 - Drawable sizes: 1920 x 1080 pixels
 - 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).

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

- 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.

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

(7) USB memory function

- 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.)

- Connector: RJ-45 (loop-through)
 - 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

* 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.

(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"

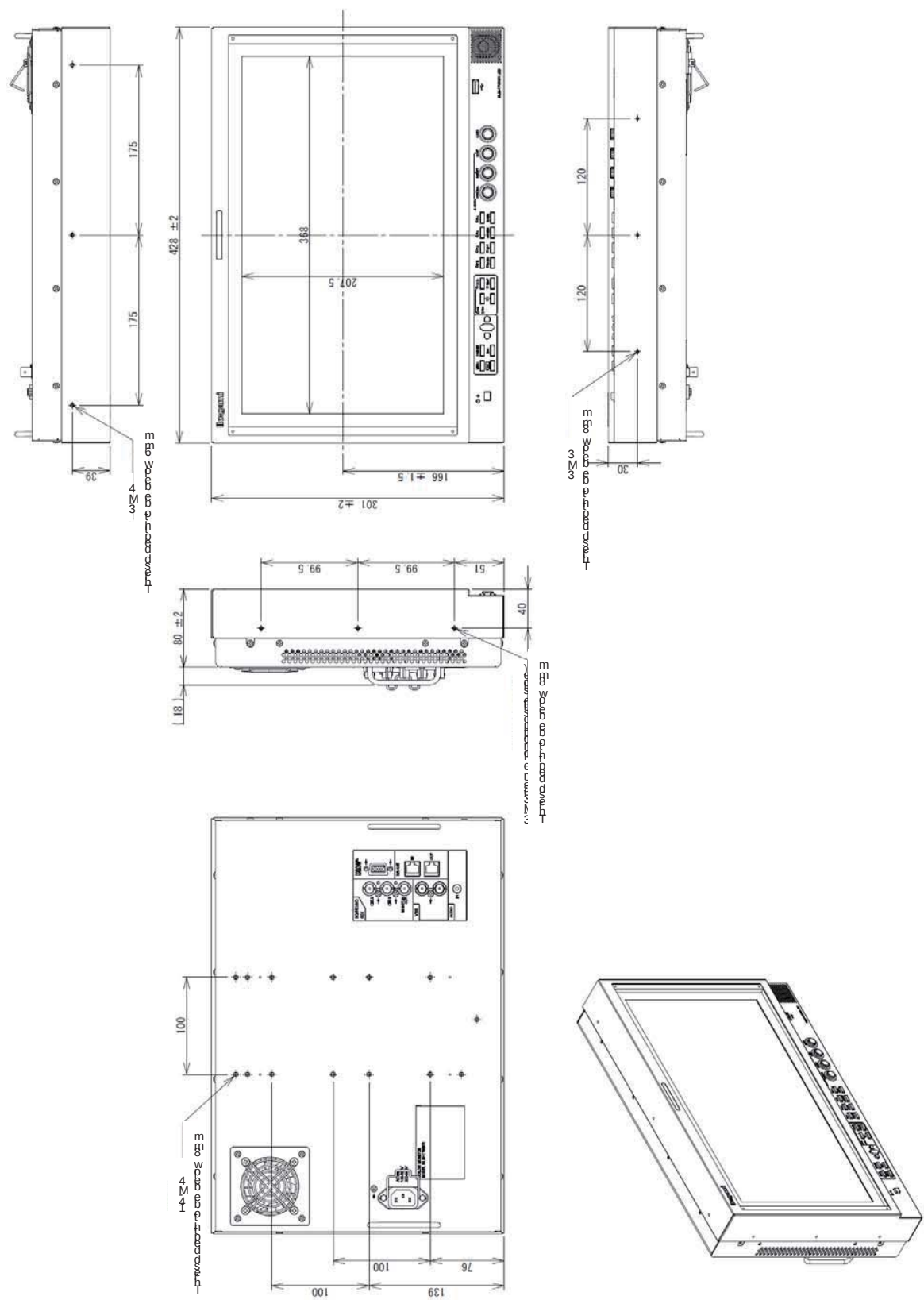
(11) PP-1750

"17-inch protection cover" (anti-reflection)

Protects the LCD screen.

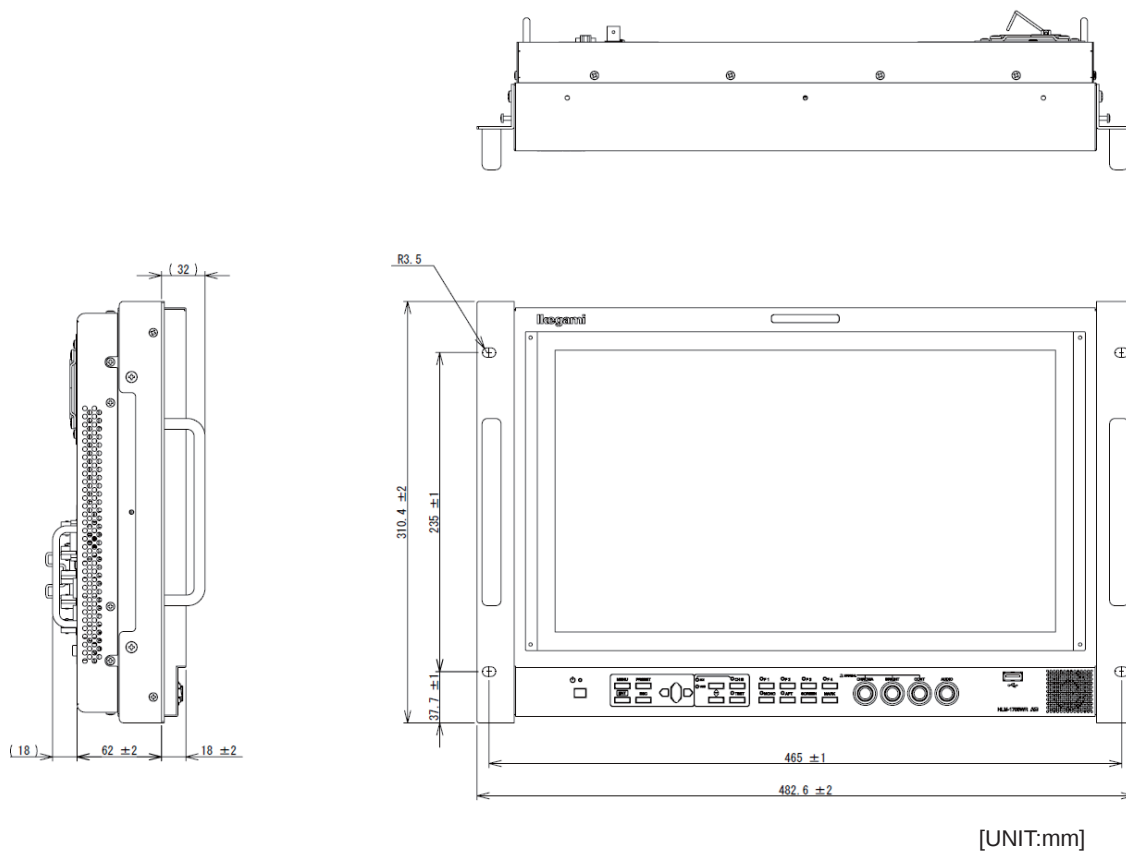
Weight: Approximately 0.33 kg

10. External View
(1) HLM-1705WR

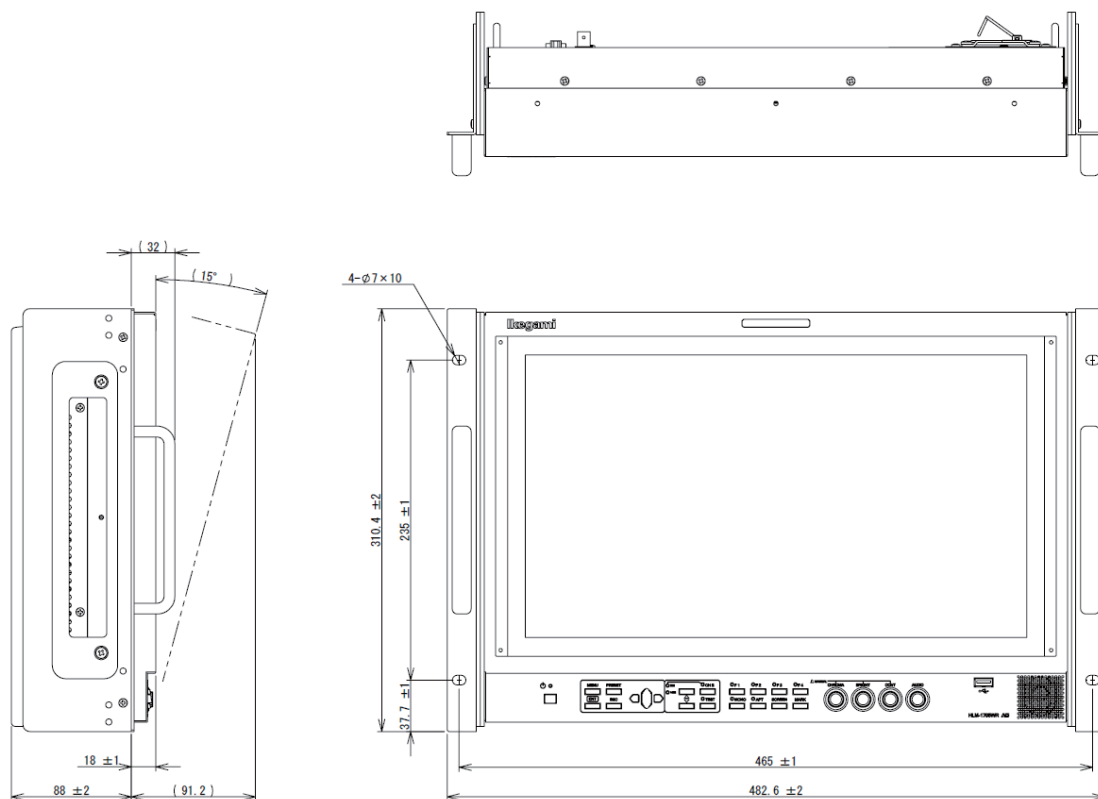


[UNIT:mm]

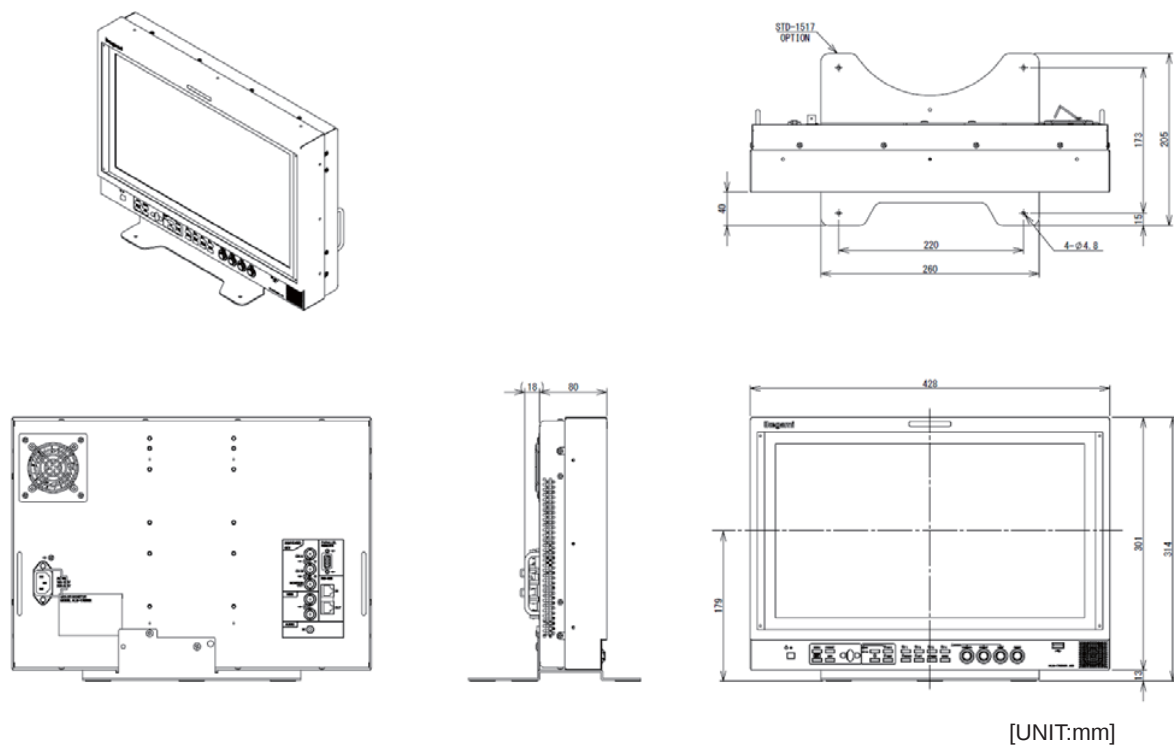
(2) HLM-1705WR+RS-1710 / RS-1770



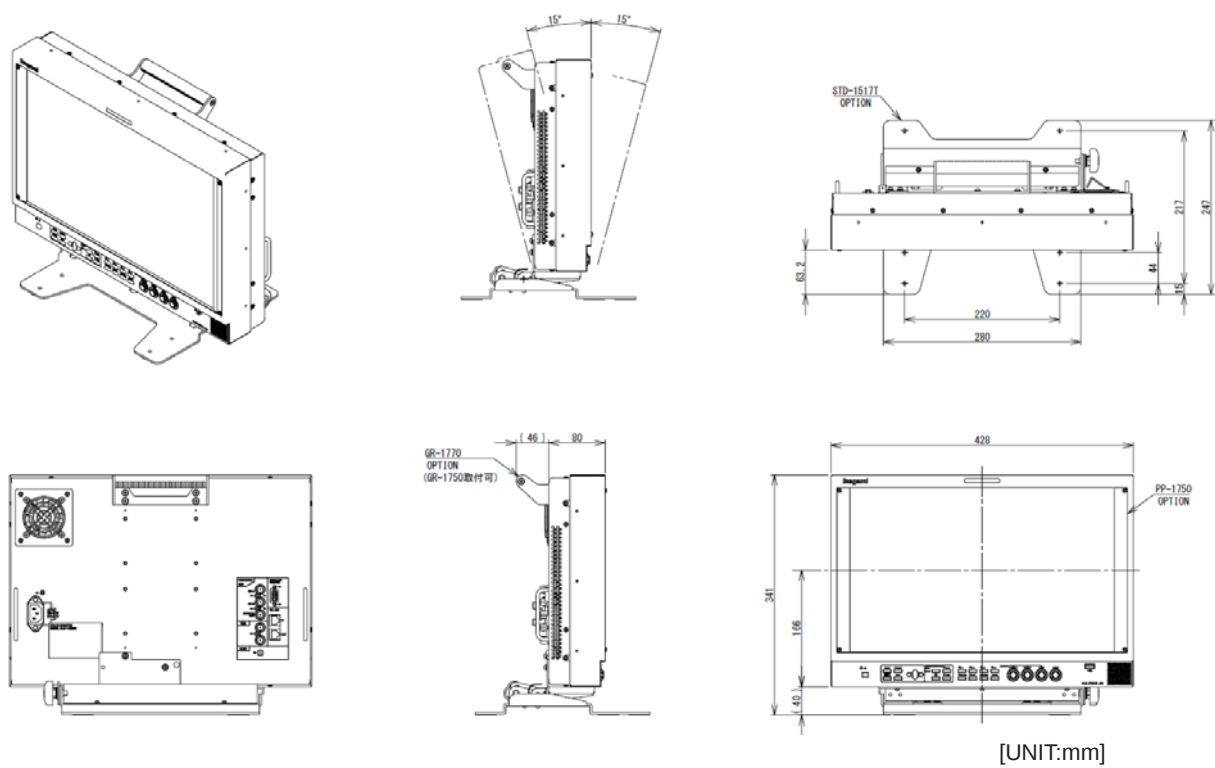
(3) HLM-1705WR+RS-1710T / RS-1770T



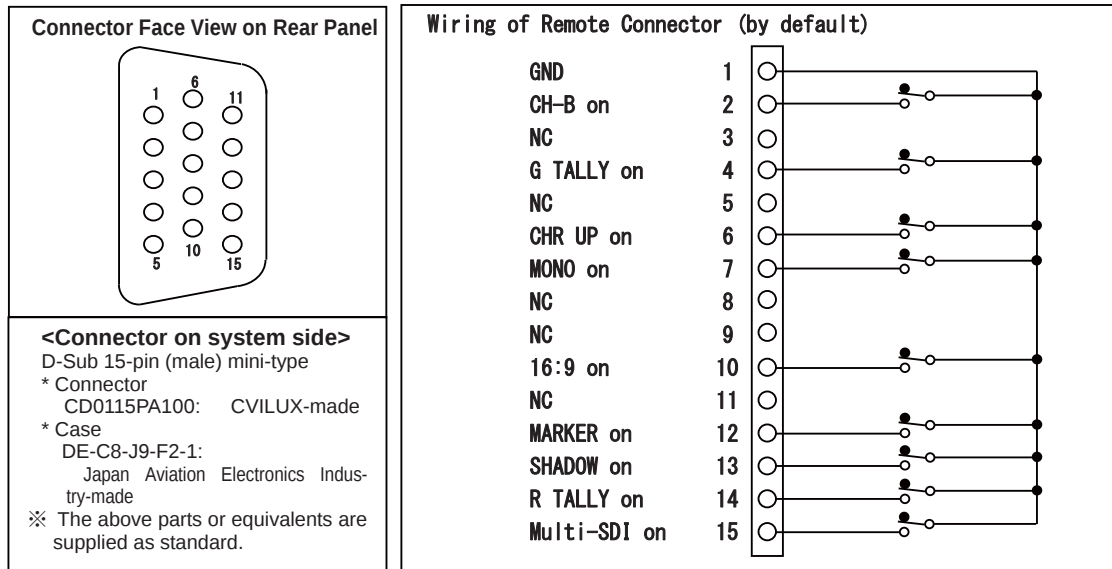
(4) HLM-1705WR+STD-1517



(5) HLM-1705WR+STD-1517T+GR-1770+PP-1750



Data 1 Parallel Remote Pin Function



■ 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	—	O(※1)	
VIDEO A (VBS)	O	—	
VIDEO B (VBS)	—	—	
YPbPr/RGB	—	—	
SDI A	O	—	
SDI B	O	—	
DVI	—	—	
OPTION	—	—	
TEST	O	O(※1)	
APERTURE ON/OFF	O	O	
COLOR/MONO	O	O	
BLUE ONLY ON/OFF	O	O	
DELAY (H/V/PCR)	O	O	Ineffective in VBS input
4:3/16:9 SCAN SELECT	O	O	Ineffective in HDTV input
NORMAL/UNDER SCAN	O		
SYNC INT/EXT	—	O	Ineffective in VBS/SDI input
FILE SELECT	O(※2、※3)	O	
MARKER ON/OFF	O	O	
FUNCTION1-4 ON/OFF	O	—	
MENU/ENT/ESC	O	O	
■ Variable preset level functions			
HUE	O(※2)	O(※2)	
CHROMA	O(※2)	O(※2)	
BRIGHTNESS	O(※2)	O(※2)	
CONTRAST	O(※2)	O(※2)	
APERTURE LEVEL	O(※2)	O(※2)	
R/G/B GAIN	O(※2)	O(※2)	
R/G/B BACKGROUND	O(※2)	O(※2)	

※1 : The switch toggles the modes as follows.

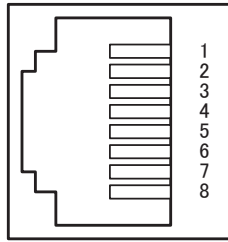
"SDI-A" → "SDI-B" → "VBS" → "SDI-A" → ...

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

Published by Ikegami Tsushinki Co., Ltd.

© Oct. 2014 by Utsunomiya Factory
of Ikegami Tsushinki Co., Ltd.

- All right reserved. Reproduction or duplication, without permission of Ikegami Tsushinki Co., Ltd. of edition or contents in whole in part, any manner, is prohibited.
- Specifications and design are subject to change without notice.

Ikegami

Ikegami Tsushinki Co., Ltd.

5-6-16, Ikegami, Ohta-ku, Tokyo, 146-8567, Japan

Phone: +81-(0)3-5700-4114 Fax: +81-(0)3-5748-2200

E-mail: info_e@ikegami.co.jp

URL: <http://www.ikegami.co.jp/en/>

Ikegami Electronics (U.S.A.), Inc.

37 Brook Avenue, Maywood, New Jersey 07607, U.S.A.

Phone: +1-201-368-9171 Fax: +1-201-569-1626

E-mail: engineering@ikegami.com, service@ikegami.com

URL: <http://www.ikegami.com>

Ikegami Electronics (Europe) GmbH

Ikegami Strasse 1, D-41460 Neuss, GERMANY

Phone: +49-(0)2131-123-0 Fax: +49-(0)2131-102820

E-mail: info@ikegami.de

URL: <http://www.ikegami.de>

Ikegami Electronics (Europe) GmbH-UK

Unit E1, Cologne Court, Brooklands Close,

Sunbury-on-Thames, Middlesex, TW16 7EB, UK.

Phone: +44-(0)1932-76 97 00 Fax: +49-(0)1932-76 97 10

E-mail: technical@ikegami.co.uk, sales@ikegami.co.uk

Property of