LEADER

LV 5333 MULTI SDI MONITOR

LV 5333 OP70 BATTERY ADAPTER V MOUNT
LV 5333 OP71 BATTERY ADAPTER QR GOLD MOUNT

INSTRUCTION MANUAL

LEADER
ELECTRONIC MEASURING INSTRUMENTS

TABLE OF CONTENTS

GENERAL SAFETY SUMMARY

■ Read This before Using the Instrument

This instrument should only be used by persons with sufficient knowledge of electronics who thoroughly understand the contents of this manual.

This instrument is not designed or manufactured for households or ordinary consumers.
If unqualified personnel are to use the instrument, be sure the instrument is handled under the supervision of qualified personnel (those who have electrical knowledge). This is to prevent the possibility of personal injury or damage to the instrument.

■ Note about Reading This Manual

The contents of this manual contain specialized terminology and may be difficult to understand. If you have any questions about the contents of this manual, please contact your local LEADER agent.

■ Symbols and Terms

The following symbols and terms are used in this instruction manual and on the instrument to indicate important warnings and notes.

<Symbol> 	This symbol appears in this instruction manual and on the instrument to indicate an area where improper handling could result in personal injury, damage to the instrument, or malfunction of the instrument or devices connected to it. When you encounter this symbol on the instrument, be sure to refer to the information in this instruction manual that corresponds to the area that the symbol marks.
<Term> 	Ignoring the precautions that this term indicates could lead to death or serious injury.
<Term> 	Ignoring the precautions that this term indicates could lead to personal injury or damage to the instrument.

GENERAL SAFETY SUMMARY

Read the warnings and information below thoroughly to avoid death, personal injury, and damage and deterioration of the instrument.

■ Warnings Concerning the Case and Panels

Do not remove the instrument's case or panels for any reason. Touching the internal components of the instrument could lead to fire or electric shock.
Also, do not allow foreign materials, such as liquids, combustible matter, and metal, to enter the instrument. Turning the instrument on when such materials are inside it could lead to fire, electric shock, damage to the instrument, or some other accident.

■ Installation Environment

- Operating Temperature Range
  Use this instrument in a 0 to 40 °C environment. Using the instrument with its vents blocked or in a high temperature environment could lead to fire.
  Drastic changes in temperature, such as might be caused by moving the instrument between two rooms with different temperatures, can damage the instrument by causing condensation to form within it. If there is a possibility that the instrument has condensation within it, wait for approximately 30 minutes before turning on the power.
- Operating Humidity Range
  Use this instrument in an environment whose relative humidity is 85 %RH or less where there is no threat of condensation forming.
  Also, do not operate this instrument with wet hands. Doing so could lead to electric shock or fire.
- Do Not Operate in an Explosive Atmosphere
  Using this instrument in an environment where flammable gasses, explosive gasses, or steam is emitted or stored could lead to an explosion or fire. Do not use the instrument in such an environment.
- Do Not Insert Foreign Materials
  Do not insert foreign materials, such as metal and flammable objects, through the vents or allow liquid to enter the instrument. Such acts can lead to fire, electric shock, damage to the instrument, or some other accident.

■ If You Notice Something Wrong during Operation

If you notice smoke, fire, a strange smell, or something else that is wrong with the instrument while you are operating it, stop operation immediately. Failing to do so could lead to fire. Turn OFF the power switch, and remove the power cord from the outlet. After making sure that fire has not spread anywhere, contact your local LEADER agent.

GENERAL SAFETY SUMMARY

■ Warnings Concerning the Power Source

Do not use a power source with a voltage other than the rated power source voltage for the instrument. Doing so could lead to fire.
Confirm the voltage of the power source before you connect the power cord to it.
Only use a power source whose frequency is 50/60 Hz.

Use a power cord that is appropriate for the voltage of the power source. Also, use a power cord that meets the safety standards of the country that you are using it in.
Using a power cord that does not meet the standards could lead to fire. If the power cord is damaged, stop using it, and contact your local LEADER agent. Using a damaged power cord could lead to electrical shock or fire.
When removing the power cord from the power outlet, do not pull on the cord. Pull from the plug.

■ Warnings Concerning Grounding

The instrument has a ground terminal to protect the user and the instrument from electric shock. Ensure that the product is properly grounded for safe operation.

■ Warnings Concerning the Panel

Sections of the panel are made out of glass. If the glass breaks, the broken glass may lead to injury. Do not apply a strong shock to the panel, cut it with sharp metal, or damage it in any similar manner.

■ Cautions Concerning the Input and Output Connectors

To avoid damaging the instrument, only apply signals to the input connectors that conform to the specifications in this instruction manual. Do not short or apply external voltage to the output connectors. Doing so could damage the instrument.

■ Cautions Concerning the Ethernet Port

When you are connecting the instrument to the communication provider's equipment, connect to the Ethernet port through a hub that is authorized for use in the country that you are using the instrument in.

GENERAL SAFETY SUMMARY

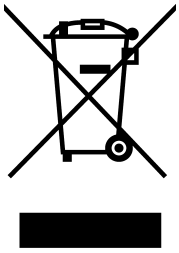
■ Calibration and Repairs

This instrument has been carefully examined at the factory to ensure that its performance is in accordance with the standards. However, because of factors such as parts wearing out over time, the performance of the instrument may degrade. To ensure stable performance, we recommend that you have the instrument calibrated regularly. Also, if the instrument malfunctions, repairs are necessary. For repairs and calibration, contact your local LEADER agent.

■ Routine Maintenance

When you clean the instrument, remove the power plug from the outlet.
Do not use thinner or benzene when you clean the instrument's case, panels, or knobs. Doing so could lead to paint chipping and the corrosion of plastic components. To clean the case, panels, and knobs, use a soft cloth with mild detergent, and wipe gently. While cleaning, make sure that foreign materials, such as water and detergent, do not enter the instrument. If liquid or a metal object enters into the instrument, fire or electric shock may result.

■ About the European WEEE Directive



This instrument and its accessories are subject to the European WEEE Directive.
Follow the applicable regulations of your country or region when discarding this instrument or its accessories. Follow the EU Battery Directive when discarding the batteries that you removed from this instrument.
(WEEE stands for Waste Electrical and Electronic Equipment.)

Follow the warnings and precautions that have been listed in this section to use the instrument correctly and safely. Precautions are also contained in various other sections of this instruction manual. To use the instrument correctly, be sure to follow those precautions as well.

If you have any questions or comments about this instruction manual, please contact your local LEADER agent.

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1. INTRODUCTION

Thank you for purchasing this LEADER instrument. To use this instrument safely, read this instruction manual thoroughly, and make sure that you know how to use the instrument properly.

If some point about the operation of this instrument is still unclear after you have read this instruction manual, refer to the contact information on the back cover of the manual to contact LEADER, or contact your local LEADER agent.
After you have finished reading this manual, keep it in a convenient place so that you can refer to it when necessary.

1.1 Scope of Warranty

This LEADER instrument has been manufactured under the strictest quality control guidelines.

LEADER shall not be obligated to furnish the following free services during the warranty period.

1. Repair of malfunction or damages resulting from fire, natural calamity, or improper voltage applied by the user.
2. Repair of an instrument that has been improperly repaired, adjusted, or modified by personnel other than a factory-trained LEADER representative.
3. Repair of malfunctions or damages resulting from improper use.
4. Repair of malfunctions caused by devices other than this instrument.
5. Repair of malfunctions or damages without the presentation of a proof of purchase or receipt bill for the instrument.

1.2 Handling Precautions

1.2.1 Power Supply Voltage

The operating supply voltage range of this instrument's DC power supply is 10 to 18 V. Do not apply a voltage that exceeds this range. Doing so may damage the instrument or lead to fire.

1.2.2 Maximum Allowable Input Voltage

Table 1-1 indicates the maximum signal voltage that can be applied to the input connectors. Do not apply excessive voltage to the connectors. Doing so may damage the instrument or lead to injury.

Table 1-1 Maximum allowable input voltage

Input Connector	Maximum Allowable Input Voltage
INPUT SDI A, INPUT SDI B	±2V (DC + peak AC)
EXT REF	±5 V (DC + peak AC)
REMOTE	0 to +5 V

1.2.3 Mechanical Shock

This instrument contains sensitive components, such as a crystal oscillator, so it may be damaged if it is dropped or otherwise exposed to a strong shock.

1.2.4 Electrostatic Damage

Electronic components can be damaged by static discharge. Static electricity can build up in the core wire of a coaxial cable. Before connecting a coaxial cable to the instrument, short the core wire of the cable with an external conductor.

1.2.5 Warming Up

To achieve more accurate measurements, turn on the instrument approximately 30 minutes before you intend to use it to allow its internal temperature to stabilize.

1.3 Trademark Acknowledgments

The company and product names in this document are trademarks or registered trademarks of their respective holders.

1.4 Terminology Used in This Manual

● 1-Screen Display

The state that the LV 5333 enters when any of the following keys is pressed: PICTURE, CINELITE, CINEZONE, WFM, VECTOR, STATUS, AUDIO A single measurement mode is displayed.

● Multi-Screen Display

The state that the LV 5333 enters when the MULTI key is pressed. Multiple measurement modes are displayed in combination.

● Input Format

The following names are used for the various input formats.

able 1-2 Input format

Name	Description
SD	SD-SDI
HD	HD-SDI
3G-A	3G-SDI level A
3G-B-DL	3G-SDI level B dual link mapping
3G-B-DS	3G-SDI level B dual stream mapping
3G	Collective name for 3G links
3G-B	Collective name for 3G-B-DL and 3G-B-DS

● Underlining (_)

Underlined options indicate the default values.

2. SPECIFICATIONS

2.1 General

The LV 5333 is a multi SDI monitor that supports triple-rate SDI (3G, HD, and SD). It is a small, light-weight, low-power-consuming device designed for use in video content production sites. It features not only picture display, video signal waveform display, vectorscope display, and audio level display but also data analysis, equivalent cable length meter function, and frequency deviation measurement function for SDI signals. Therefore, it can be used to accurately measure and monitor SDI signals. In addition, the LV 5333 is standard equipped with CINELITE II, which can be used to quickly adjust the lighting at the filming site.

2.2 Features

● Triple-rate SDI I/O

Two triple-rate-compatible (3G, HD, SD) SDI inputs (A and B) are available, and the SDI signal of the selected input can be monitored. The SDI signal of the selected input is serially reclocked and then output from the SDI output connector.

● TFT LCD

The LV 5333 is equipped with a 6.5 inch XGA (1024×768) color TFT LCD.
Video-signal-waveform, vectorscope, picture, audio level, and status displays can be shown on the LCD. Multi-screen display, which shows a combination of these displays, is also available.

● CINELITE II and CINELITE Advanced

The LV 5333 is standard-equipped with CINELITE II (CINELITE and CINEZONE) and CINELITE Advanced, which are video signal luminance information analysis tools.
In CINELITE display, luminance information of the three points that you select with cursors can be displayed using f Stop, percentage, or gradation values.
In CINEZONE display, the display brightness is shown using colors, making it possible to check the luminance distribution of the whole display at a glance. This makes it easy to verify gradation of dark areas as well as overexposure and underexposure.
The CINELITE Advanced feature makes it possible to synchronize measurements with CINELITE, video signal waveform display, and vectorscope display.

● Equivalent Cable Length Measurement

The attenuation of the input SDI signal is displayed in terms of a 75 Ω coaxial cable length. This can be used to check the transmission system margin.

● Frequency Deviation Measurement

The deviation in the SDI signal sampling frequency can be measured. This can be used to verify the deviations in the field frequency and frame frequency.

● Stereo Headphone Output and Digital Audio Output

The LV 5333 can separate the embedded audio from the SDI signal and output the two specified channels in stereo to the headphone output connector and digital audio output connector.

● Time Code Display

The LV 5333 can decode SMPTE ST 12-2 ANC time codes (LTC or VITC) and SMPTE ST 266 time codes (D-VITC) and display them. These can be used as timestamps in event logs.

● Screen Capture

The displayed screen can be captured and displayed by itself or superimposed with input signals. Screen captures can be saved in a USB memory device or output as BMP data to a PC or the like via the Ethernet port.

● Presets

The LV 5333 can store up to 30 frequently used panel setting configurations.

● Remote Connector and Ethernet Port

The remote connector can be used to execute actions such as recalling preset settings and enabling the tally display.
The Ethernet port can be used to remotely control the panel, transfer files, and monitor errors.

● Tripod and VESA Mounting

There are 75 mm VESA compliant mounting holes on the back of the LV 5333, so it can be mounted on a stand. In addition, the tripod adapter attached to the bottom of the LV 5333 can be used to mount the LV 5333 on a camera tripod or arm. The tripod adapter can be removed and attached to the top of the LV 5333.

● Power Supply

The LV 5333 is equipped with an XLR DC input connector. It runs of 12 VDC power.

● AC adapter (SPU40-105)

An AC adapter, sold separately, is also available, so commercial AC power can also be used.

● Battery Mount (LV 5333 OP70, LV 5333 OP71)(*1)

As a factory option, a battery adapter V mount (LV 5333 OP70) or battery adapter QR gold mount (LV 5333 OP71) can be attached. This makes it possible to run the LV 5333 using a battery for video cameras and the like.

* If a battery adapter is attached, the 75 mm VESA compliant mounting holes cannot be used.

2.3 Specifications

2.3.1 Video Signal Formats and Standards

Table 2-1 SDI interface and compliant standards

SDI Format	Bit Rate	Compliant Standard
SD	270Mbps	SMPTE ST 259
HD	1.485 Gbps, 1.485/1.001 Gbps	SMPTE ST 292
3G	2.970 Gbps, 2.970/1.001 Gbps	SMPTE ST 424 SMPTE ST 425

Table 2-2 SD image format and compliant standards

Color System	Quantization	Image	Field Frequency/Scanning	Compliant Standard
YC_BC_R 4:2:2	10bit	720×487	59.94 /I	SMPTE ST 259
		720×576	50 /I	

Table 2-3 HD image format and compliant standards

Color System	Quantization	Image	Frame (Field) Frequency/Scanning	Compliant Standard
YC_BC_R 4:2:2	10bit	1280×720	60/59.94/50/30/29.97/25/24/23.98 /P	SMPTE ST 296
		1920×1080	60/59.94/50 /I	SMPTE ST 274
			30/29.97/25/24/23.98 /P	
			30/29.97/25/24/23.98 /PsF	

Table 2-4 3G-A image format and compliant standards

Color System	Quantization	Image	Frame (Field) Frequency/Scanning	Compliant Standard
YC_BC_R 4:2:2	10bit	1920×1080	60/59.94/50 /P	SMPTE ST 274
	12bit	1920×1080	60/59.94/50 /I	
			30/29.97/25/24/23.98 /P	
			30/29.97/25/24/23.98 /PsF	
YC_BC_R 4:4:4	10bit	1280×720	60/59.94/50/30/29.97/25/24/23.98 /P	SMPTE ST 296
		1920×1080	60/59.94/50 /I	SMPTE ST 274
			30/29.97/25/24/23.98 /P	
			30/29.97/25/24/23.98 /PsF	
	12bit	1920×1080	60/59.94/50 /I	
			30/29.97/25/24/23.98 /P	
RGB 4:4:4	10bit	1280×720	60/59.94/50/30/29.97/25/24/23.98 /P	SMPTE ST 296
		1920×1080	60/59.94/50 /I	SMPTE ST 274
			30/29.97/25/24/23.98 /P	
			30/29.97/25/24/23.98 /PsF	
	12bit	1920×1080	60/59.94/50 /I	
			30/29.97/25/24/23.98 /P	
		2048×1080	24/23.98 /P	SMPTE ST 2048-2
			24/23.98 /PsF	

* External sync mode does not work for 30/29.97/25/24/23.98 /P for 1280×720.

Table 2-5 3G-B-DL image format and compliant standards

Color System	Quantization	Image	Frame (Field) Frequency/Scanning	Compliant Standard
YC_BC_R 4:2:2	10bit	1920×1080	60/59.94/50 /P	SMPTE ST 274
	12bit	1920×1080	60/59.94/50 /I	
			30/29.97/25/24/23.98 /P	
			30/29.97/25/24/23.98 /PsF	
YC_BC_R 4:4:4	10bit	1920×1080	60/59.94/50 /I	
			30/29.97/25/24/23.98 /P	
			30/29.97/25/24/23.98 /PsF	
	12bit	1920×1080	60/59.94/50 /I	
			30/29.97/25/24/23.98 /P	
			30/29.97/25/24/23.98 /PsF	
RGB 4:4:4	10bit	1920×1080	60/59.94/50 /I	
			30/29.97/25/24/23.98 /P	
			30/29.97/25/24/23.98 /PsF	
	12bit	1920×1080	60/59.94/50 /I	
			30/29.97/25/24/23.98 /P	
			30/29.97/25/24/23.98 /PsF	
		2048×1080	24/23.98 /P	SMPTE ST 2048-2
			24/23.98 /PsF	

Table 2-6 3G-B-DS image format and compliant standards

Color System	Quantization	Image	Frame (Field) Frequency/Scanning	Compliant Standard
YC_BC_R 4:2:2	10bit	1280×720	60/59.94/50/30/29.97/25/24/23.98 /P	SMPTE ST 296
		1920×1080	60/59.94/50 /I	SMPTE ST 274
			30/29.97/25/24/23.98 /P	
			30/29.97/25/24/23.98 /PsF	

2.3.2 Video Format Settings

Format Setting Mode	Automatic and manual
Automatic	
3G	Detects the format information within the payload ID (SMPTE ST 352) and automatically sets the format
HD, SD	Determines the format from the input signal's synchronization information and automatically sets the format.
Manual	The video signal format is set manually.
External Synchronization	Set automatically from the supported formats

2.3.3 Embedded Audio Playback Format

Compliant Standard	
3G, HD	SMPTE ST 299
SD	SMPTE ST 272
Format	L-PCM
Sampling Frequency	48kHz
Quantization	24bit
Clock Generation	Generated from the video clock
Synchronization	All audio signals must be synchronized to the video clock.
Phases	All phases must be in-sync.
Channel Separation	Select 2 groups of 8 channels each.

2.3.4 I/O Connectors

SDI Input Connectors	
Connector Type	BNC connector, 2 inputs (switching between A and B)
Input Impedance	75 Ω
Input Return Loss	≤ 15 dB for 5 MHz to the serial clock frequency
Maximum Input Voltage	±2V (DC + peak AC)
SDI Output Connector	
Function	Reclocks and transmits the selected SDI input signal
Connector Type	BNC connector, 1 output
Output Impedance	75 Ω
Output Voltage	800 mVp-p ± 10%
External Sync Input(*1)	
Input Signals	Tri-level sync or NTSC/PAL black burst signal
Connector Type	BNC connectors, 2 connectors 1 input
Input Impedance	15 kΩ passive loop-through
Input Return Loss	≤ 30 dB for 50 kHz to 30 MHz
Maximum Input Voltage	±5V (DC + peak AC)

Digital Audio Output Connectors

Function	Extracts and transmits two channels of the audio signals embedded in an SDI signal.
Connector Type	BNC
Output Impedance	75 Ω
Output Voltage	1.0 Vp-p ± 10% (into 75 Ω)
Compliant Standard	AES-3id

Headphone Output

Function	Extracts and transmits two channels of the audio signals embedded in an SDI signal.
Channel Settings	Assign any of the channels in the selected audio group to L and R.
Connector Type	One stereo miniature jack
Volume Adjustment	From the menu
Impedance	32 Ω (16 to 600 Ω)

*1 If the video signal waveform or the phase difference is displayed using an external sync signal as a reference, the waveform phase one clock before or after an SDI signal is inserted or the power is turned on is indefinite.
External sync mode does not work for 30/29.97/25/24/23.98 /P for 3G-A, 1280×720.

2.3.5 Control Connectors

USB Port

Function	Saves screen captures, preset data, event log data, and data dumps
Compliant Standard	USB 2.0
Media	Only USB memory devices are supported.

Remote Connector

Function	Load preset settings, switch input channels, enable the tally display, and transmit the alarm signal.
Control Signal	TTL level (low active)
Control Connectors	15-pin D-sub (female)
Locking Screws	Inch screws (No.4-40UNC)

Ethernet Port

Function	Control the LV 5333 from a PC and monitor errors and other events
Compliant Standard	IEEE802.3
Supported Protocols	TELNET, FTP, SNMP
I/O Connector	1 RJ-45 jack
Type	10Base-T/100Base-TX auto switching

2.3.6 LCD

LCD Type	6.5-inch color TFT
Resolution	XGA. The effective area is 1,024 × 768 dots.
Backlight Brightness	HIGH, LOW
Auto Shutoff	LCD can be automatically turned off after a set period of

time.

2.3.7 Display Format

1-Screen Display	Picture display, CINELITE display, CINEZONE display, video signal waveform display, vectorscope display, status display, audio display
2-Screen Display	Picture display and video signal waveform display (vertical, horizontal, overlapped) Picture display and vectorscope display (overlapped) Video signal waveform display and vectorscope display (horizontal) Video signal waveform display and audio display (horizontal)
4-Screen Display	Vectorscope display, video signal waveform display, status display, picture display (The status display can be changed to audio display or 5 BAR display)
Format Display	Displays the video signal format at the top of the screen
Color System Display	Displays the video signal color system at the top of the screen
Date Display	Displays the time based on the internal clock at the top of the screen
Time and Time Code Display	Displays the time based on the internal clock or time code at the top of the screen
Time Code	LTC, VITC, D-VITC
Compliant Time Code Standards	
LTC, VITC	SMPTE ST 12-2
D-VITC	SMPTE ST 266

2.3.8 Video Signal Waveform Display

Waveform Control	
Intensity Adjustment	
Waveform Display	-128 to 127
Scale Display	-8 to 7
Display Mode	
Overlay	Overlays component signals
Parade	Displays component signals side by side
Blanking Interval	Show or hide
RGB Conversion	Converts a YC_BC_R signal into an RGB signal and displays the result
Channel Assignment	GBR or RGB order
Luminance Signal	GBR, RGB, YGBR, YRGB
Coloring	Assign to each of the RGB waveforms
Pseudo-Composite Display	Artificially converts component signals into composite signals and displays the result
Setup	0%, 7.5%
Line Select	Displays the selected line

Sweep Modes	H, V
Vertical Axis	
Gain	×1, ×5
Variable Gain	×0.2 to ×2.0
Amplitude Accuracy	
×1	±0.5%
×5	±0.2%
Frequency response of 1080 format and 720p format other than 1080p/60, 59.94, 50	
Y Signal	±0.5% (1 to 30 MHz)
C_BC_R Signal	±0.5% (0.5 to 15MHz)
Low-Pass Filter Attenuation	≥ 20 dB (at 20 MHz)
SD Frequency Response	
Y Signal	±0.5% (1 to 5.75MHz)
C_BC_R Signal	±0.5% (0.5 to 2.75MHz)
Low-Pass Filter Attenuation	≥ 20 dB (at 3.8 MHz)
Horizontal Axis	
Line Display	×1, ×10, ×20, ACTIVE, BLANK
Field Display	×1, ×20, ×40
Cursor Measurement	
Composition	
Horizontal Cursors	2 (REF and DELTA)
Vertical Cursors	2 (REF and DELTA)
Amplitude Measurement	%, mV, R%, DEC, HEX
Time Measurement	sec
Frequency Display	Computes and displays the frequency with the length of one period set to the time between two cursors [Hz]
Scale	
Type	%, V, HEX, DEC, FS DEC
Color	7 colors to choose from
75% marker	Displays the level equivalent to the peak of the 75% color bar’s chrominance signal

2.3.9 Vectorscope Display

Waveform Control	
Intensity Adjustment	
Waveform Display	-128 to 127
Scale Display	-8 to 7
Gain	×1, ×5, IQ-MAG
Variable Gain	×0.2 to ×2.0
Blanking Interval	Masked(*1)
Pseudo-Composite Display	Artificially converts component signals into composite signals and displays the result
Line Select	Displays the selected line
Amplitude Accuracy	±0.5%

Scale	
Color Bar Saturation	75%, 100%
IQ Axis	Show or hide
Color	7 colors to choose from
Marker	Displays the position, hue, and distance of the selected marker
Cb	Displays the C_B position as a percentage
Cr	Displays the C_R position as a percentage
deg	Displays the hue in degrees.
d	Displays the distance from the center as a percentage

*1 On the multi-screen display, the blanking period depends on the video signal waveform display's blanking display settings.

2.3.10 5 Bar Display

Function	Displays the peak levels of Y, R, G, B and composite
Scale	%, mV
Error Level	Based on gamut error level and composite gamut error level settings.
Filter	1 MHz LPF,2.8MHz LPF (HD only) (removes transient errors; can be turned on and off)
Line Select	Displays the selected line

2.3.11 Phase Difference Display

Display	Displays the phase difference between an SDI signal and the external sync signal both numerically and graphically
Display Range	
Vertical	Approx. ±1/2 frame
Horizontal	±1 line

2.3.12 Picture Screen

Color Temperatures	3200K, 6500K, 9300K, THROUGH
Image Quality Adjustment	Brightness, contrast, chroma, and aperture
Display Sizes	Full display, dot by dot, ×2, full screen
Color Selection	Color, monochrome, RGB colors
Frame Rate	The frame rate is converted and displayed using the internal sync signal.
Marker Displays	
Center Marker	ON, OFF
Aspect Marker	Select the aspect ratio according to the format
3G, HD	2.35:1, 1.85:1, 1.66:1, 14:9, 13:9, 4:3
SD	2.35:1, 1.85:1, 1.66:1, 16:9, 14:9, 13:9
Shadow	ON, OFF
Safe Action Marker	95%, 93%, 90%
Safe Title Marker	88%, 80%
Line Select	Marks the selected line

Error Indication	Displays gamut, luminance, and chroma level error locations over the picture
Superimpose	Displays English closed captions over the picture.
Compliant Standard	
EIA/CEA-608-B (EIA-708-B)	SMPTE ST 334
EIA/CEA-608-B (EIA/CEA-608-B)	SMPTE ST 334
VBI (EIA/CEA-608-B Line21)	CIA/EIA-608-B
Histogram	Displayed at the bottom of the picture display. The menu disappears automatically.
Display Types	YRGB, Y
Adjustment Function	Adjusts the intensity of histograms and scales; selects the scale color
Scale Unit	%, hexadecimal (10 bit), decimal (10 bit)

2.3.13 CINELITE Display

CINELITE Display

Function	f Stop display, percentage display, and 256 level gradation display
f Stop Display	Displays f Stop values relative to a reference point Set in reference to an object with an 18% reflectance
f Stop Gamma Correction	
Fundamental Gamma	0.45 (ITU-R BT.709)
User Correction Table	3 types
% Display	Displays the luminance level or RGB level as a percentage
Gradation Display	RGB components are displayed with 8-bit, 256-level gradation.
Measured Points	3
Measurement Sizes	1 x 1 pixel, 3 x 3 pixels, and 9 x 9 pixels

CINELITE Advanced Display

Function	Synchronizes the markers on the waveform display or vectorscope display to the points selected with CINELITE
Waveform Display Link Markers	.....Synchronizes the markers on the waveform display to the points selected with CINELITE
Number of Link Markers	Up to 16 (for YRGB, YGBR display)
Vector Link Markers	Synchronizes the markers on the vectorscope display to the points selected with CINELITE
Number of Link Markers	Up to 4
Vector Numeric Display	Displays numerically the active marker position
Cb	Displays the C_B position as a percentage
Cr	Displays the C_R position as a percentage

deg	Displays the hue in degrees.
d	Displays the distance from the center as a percentage

2.3.14 CINEZONE Display

CINEZONE Display

Function	Adds colors to the display in accordance with luminance levels
Color	Linear (1024 colors), step (12 colors)
Upper Limit	-6.3 to 109.4% (values equal to or greater than the upper limit are displayed in white)
Lower Limit	-7.3 to 108.4% (values less than the lower limit are displayed in black)

Level Search Display

Function	Displays the specified luminance level range with different gradations of colors
Luminance Level	-7.3 to 109.4%
Luminance Level Range Setting	0.5 to 100.0% (values greater than or equal to the specified range are displayed in white; values less than or equal to the range are displayed in black)

2.3.15 Audio Levels

Level Meter Display	Bar Display, Numeric Display
Displayed Channels	8ch
Meters	60 dB peak level, 90 dB peak level, average response
Reference Level	-20dB, -18dB, -12dB, -9dB
Scale	dBFS with the reference level set to 0 dB
Peak Hold Time	0.5 to 5.0 s, HOLD (when displaying the peak level)

Channel

Group Selection	Any two groups from groups 1, 2, 3, and 4

2.3.16 Status Display

SDI Signal Error Detection

Signal Detection	Detects the presence of an SDI signal
Format (Unknown)	Checks whether the signal matches an unsupported SDI format or a format set manually
TRS Error	Detects TRS position and protection bit errors
Line Number Error	Detects 3G/HD signal line number errors
CRC Error	Detects 3G/HD signal transmission errors
EDH Error	Detects SD signal transmission errors
Gamut Error	Detects gamut errors
Detection Range Upper Limit	90.8 to 109.4%
Detection Range Lower Limit	-7.2 to 6.1%
Filter	1 MHz LPF,2.8MHz LPF (HD only) (removes transient errors; can be turned on and off)
Composite Gamut Error	Detects level errors that occur when component signals

are converted to composite signals
- Detection Range Upper Limit: 90.0 to 135.0%
- Detection Range Lower Limit: -40.0 to -20.0%
- Filter: 1 MHz LPF,2.8MHz LPF (HD only)
  (removes transient errors; can be turned on and off)
- Level Error: Detects level errors in luminance and chroma signals of SD/HD signals
- Parity Error: Detects ancillary data header parity errors
- Checksum Error: Detects ancillary data transmission errors
- BCH Error: Detects transmission errors of embedded audio signals in 3G/HD signals
- Audio CRC Error: Detects CRC errors in channel status bits
- Audio Information Detection: Detects presence of audio for each channel
- Equivalent Cable Length Measurement Feature.....Displays SDI signal attenuation in terms of cable length
  - Supported Cables
    - 3G, HD: LS-5CFB, 1694A
    - SD: L-5C2V, 8281
  - Display Range
    - 3G: < 10 m, 10 to 105 m, > 105 m
    - HD: < 5 m, 5 to 130 m, > 130 m
    - SD: < 50 m, 50 to 300 m, > 300 m
  - Resolution: 5m
  - Accuracy: ±20m
- Error Count: Up to 100000 errors
  (counts only the specified errors)
  - Count Period: Once regardless of the number of times the same error occurs within 1 second or 1 frame
- Elapsed Time Display: Displays the elapsed time since the error count was cleared

Event Log Display
- Log Capacity: Up to 1000 events
- Operation: Logs all events from start to finish
- Logged Events: Errors, changes in input type, timestamps, etc.
- Data Output: Data is saved as text files to a USB memory device or to a PC or the like over an Ethernet.

Data Dump Display
- 3G-B-DS, HD, SD Display Format.....Displays data separated by serial data sequence or by channel
- 3G-B-DL Display Format: Stream 1, stream 2, or stream 1 and stream 2 simultaneously
- Line Select: Displays the selected line
- Sample Select: Displays from the selected sample
- Jump Feature: Jumps to an EAV or SAV
- Data Output: Data is saved as text files to a USB memory device or to a PC or the like over an Ethernet.

Audio Status Display

Control Packet Display	Analysis display of audio control packets in SDI signals
Channel Status Display	Analysis display and dump display of the channel status of embedded audio signals

EDH Display

Compliant Standard	SMPTE RP 165
Displayed Contents	Analysis display of received EDH packets

Payload ID Display

Compliant Standard	SMPTE ST 352, ARIB STD-B39
Displayed Contents	Analysis display of the format ID

Closed Caption Display

Compliant Standard	ARIB STD-B37
Displayed Contents	Analysis display of closed caption signals
Display Format	Text, hexadecimal, binary

Inter-Stationary Control Signal Display (NET-Q)

Compliant Standard	ARIB STD-B39
Displayed Contents	Analysis display of inter-stationary control signals
Display Format	Text, hexadecimal, binary

2.3.17 Screen Capture

Function	Captures the screen
Display	Displays only the captured image or overlays the captured image over the input signal
Media	Internal memory (RAM) and USB memory You can only save one screen capture to the internal memory.
Data Output	Screen captures can be saved to a USB memory device or over Ethernet in bitmap format or in a file format that can be loaded into the LV 5333.
Data Input	Data saved to a USB memory device can be loaded and displayed on the LV 5333.

2.3.18 Presets

Function	Saving and loading of panel settings (*1)
Number of Presets	30
Preset Loading Method	Front panel, remote connector,(*2) Ethernet
Copying	Copies all preset configurations to or from a USB memory device

*1 Remote control, Ethernet, license, time, and remote mode settings are not saved.

*2 The number of presets loaded from the remote connector can be 8 or 30.

2.3.19 Initialization

Default Settings	Initializes the operating conditions (*1)
Factory Default Settings	Initializes all settings

*1 Ethernet settings, license settings, time, presets (including the preset registered to the SHORT CUT key), user-defined correction table of CINELITE display are not initialized.

2.3.20 Front Panel

Key LEDs	All the keys are lit at all times, or you can light all the keys by pressing the SHORTCUT key.
Power Switch	Electronic switch (which remembers whether the instrument is on or off)
Last Memory	Backs up the panel settings to memory (*1)

*1 If the backup battery is empty, the message “BACKUP DATA LOST” appears when the power is turned on, and the LV 5333 starts with the default settings.

2.3.21 Rear Panel

Stand	75 mm VESA compliant mounting
Battery adapter (*1)	A separately sold option can be used to attach a V mount or QR gold mount battery.

*1 If a battery adapter is attached, the 75 mm VESA compliant mounting holes cannot be used.

2.3.22 General Specifications

Environmental Conditions	
Operating Temperature	0 to 40°C
Operating Humidity Range	85 %RH or less (no condensation)
Optimal Temperature	10 to 30°C
Operating Environment	Indoors
Elevation	Up to 2,000 m
Overvoltage Category	I
Pollution Degree	2
Power Requirements	
Voltage	10 to 18 VDC
Power Consumption	28W max.
Dimensions	215 (W) × 128 (H) × 63 (D) mm (excluding protrusions)
Weight	1.5 kg (excluding options)
Accessories	Instruction Manual..... 1
	15-pin D-sub connector..... 1
	15-pin D-sub connector cover..... 1
	VESA spacer..... 1
	Ferrite core..... 1

3. PANEL DESCRIPTION

3.1 Front Panel

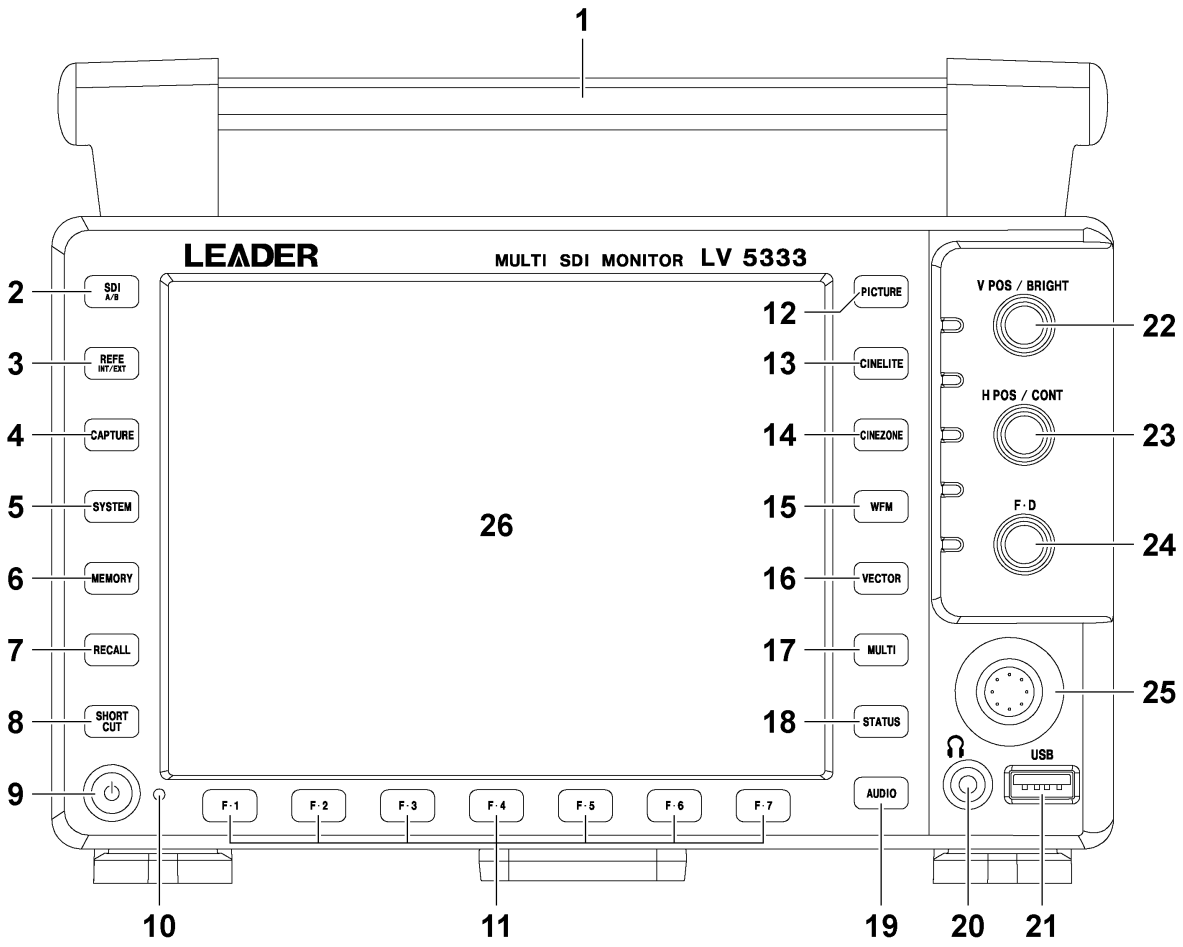


Figure 3-1 Front panel

Table 3-1 Front panel description

No.	Name	Description
1	Handle	Use this to carry the LV 5333.
2	SDI A/B	Switches the SDI signal input channel. See section 4.6.1, “SDI Signal Input.”
3	REFE INT/EXT	Switches between the internal sync signal and an external sync signal. See section 4.6.3, “External Sync Signal Input.”
4	CAPTURE	Captures the screen See chapter 6, “CAPTURE FEATURE.”
5	SYSTEM	Configures the settings See chapter 5, “SYSTEM SETTINGS.”
6	MEMORY	Press this key to register or delete a single preset setting, or copy all preset settings. See chapter 7, “PRESET SETTINGS”
7	RECALL	Press this key to recall a preset setting configuration. See section 7.2, “Recalling Presets.”
8	SHORT CUT	Press this key to execute one of the following actions assigned to the key: turn on the LEDs, capture the screen, load a preset, adjust the volume, adjust the contrast.□See section 5.6, “Setting the Short Cut Key.”

No.	Name	Description
9	Power Switch	Press this switch to turn the instrument on. Hold this switch down to turn the instrument off. See section 4.4, “Turning the Instrument On and Off.”
10	Power LED	The LED lights when the power is on and turns off when the power is off.
11	F•1 to F•7	Carries out the corresponding function menu operation. See section 4.7, “Function Menu Operations.”
12	PICTURE	Shows the picture display. See chapter 8, “PICTURE DISPLAY.”
13	CINELITE	Shows the CINELITE display. See chapter 9, “CINELITE DISPLAY.”
14	CINEZONE	Shows the CINEZONE display. See chapter 10, “CINEZONE DISPLAY.”
15	WFM	Shows the video signal waveform display. See chapter 11, “VIDEO SIGNAL WAVEFORM DISPLAY.”
16	VECTOR	Shows vectors. See chapter 12, “VECTORSCOPE DISPLAY.”
17	MULTI	Shows a combination of measurement screens. See chapter 15, “MULTI-SCREEN DISPLAY.”
18	STATUS	Shows the status. See chapter 13, “STATUS DISPLAY.”
19	AUDIO	Display audio levels. See chapter 14, “AUDIO DISPLAY.”
20	Headphone Jack	This is a mini-plug headphone jack. It outputs the audio embedded in the SDI signal. See section 14.6, “Headphone Settings.”
21	USB	Used to connect USB memory. See section 4.5, “Connecting a USB Memory Device.”
22	V POS, BRIGHT	Turn to adjust the vertical position of the video signal waveform and the brightness of the picture. Press to return to the reference position or default value. See section 11.2, “Setting the Display Position,” and section 8.2.1, “Adjusting the Brightness.”
23	H POS, CONT	Turn to adjust the horizontal position of the video signal waveform and the contrast of the picture. Press to return to the reference position or default value. See section 11.2, “Setting the Display Position,” and section 8.2.2, “Adjusting the Contrast.”
24	F•D	Turn to specify a numeric value or to move cursors. In most cases, press to reset the value to its default value. See section 4.7, “Function Menu Operations.”
25	Control stick	Used to move the picture and cursor. See section 4.7, “Function Menu Operations.”
26	LCD	Displays measurement and setup screens

3.2 Rear Panel

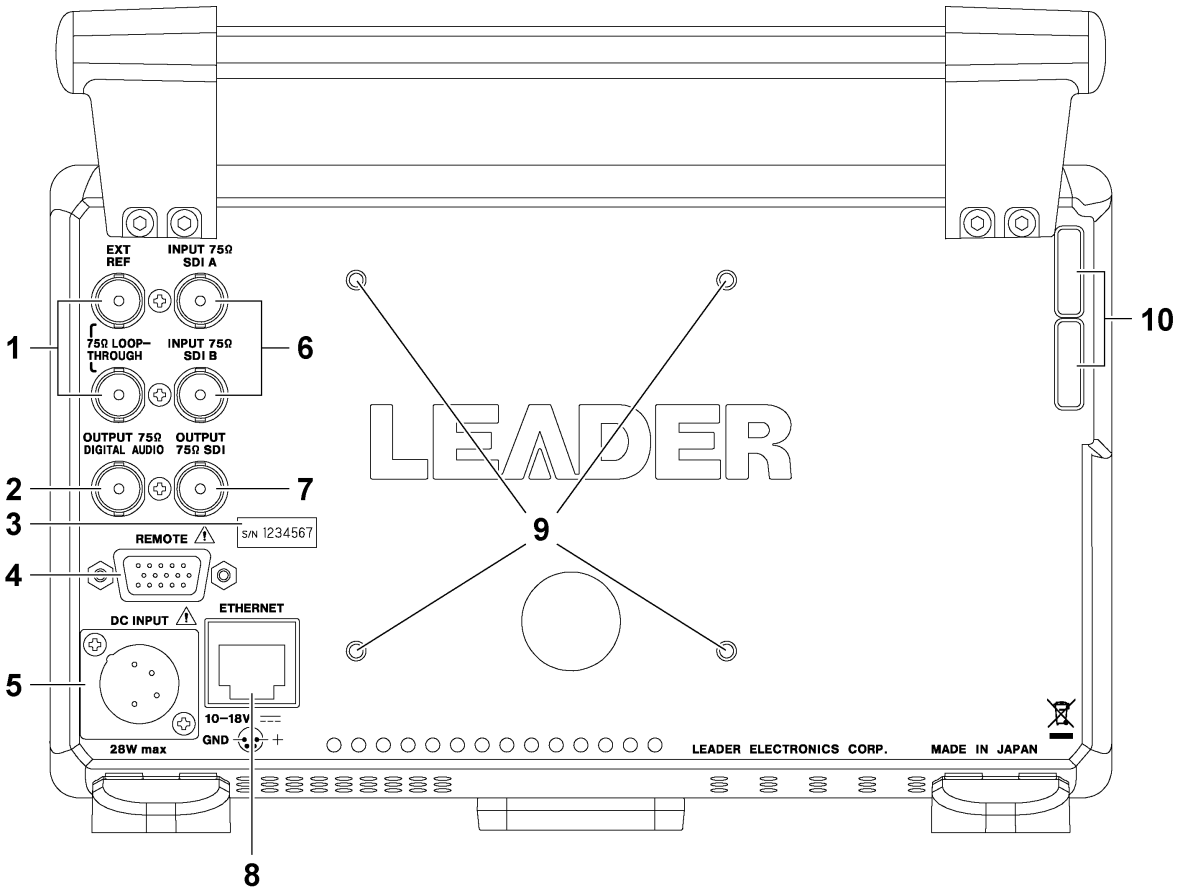


Figure 3-2 Rear panel

Table 3-2 Rear panel description

No.	Name	Description
1	EXT REF	External reference input connector. They are loop-through connectors. See section 4.6.3, “External Sync Signal Input.”
2	OUTPUT DIGITAL AUDIO	Audio signal output connectors. It outputs the audio embedded in the SDI signal. See section 4.6.4, “Digital Audio Output.”
3	Serial number label	The serial number is printed on this label.
4	REMOTE	15-pin D-sub remote control connector. This can be used to execute actions such as recalling preset settings. See section 16.1, “Remote Control Feature.”
5	DC INPUT	DC inlet. See section 4.4, “Turning the Instrument On and Off.”
6	INPUT SDI	SDI signal input connectors. Press the SDI A/B key to switch the input channel. See section 4.6.1, “SDI Signal Input.”
7	OUTPUT SDI	SDI signal output connector Outputs the currently selected channel See section 4.6.2, “SDI Signal Output.”
8	ETHERNET	Ethernet port. This port supports TELNET, FTP, and SNMP.
9	VESA mounting holes	These are 75 × 75 mm VESA compliant mounting holes.
10	Fan	Cooling fan for the instrument.

3.3 Bottom Panel

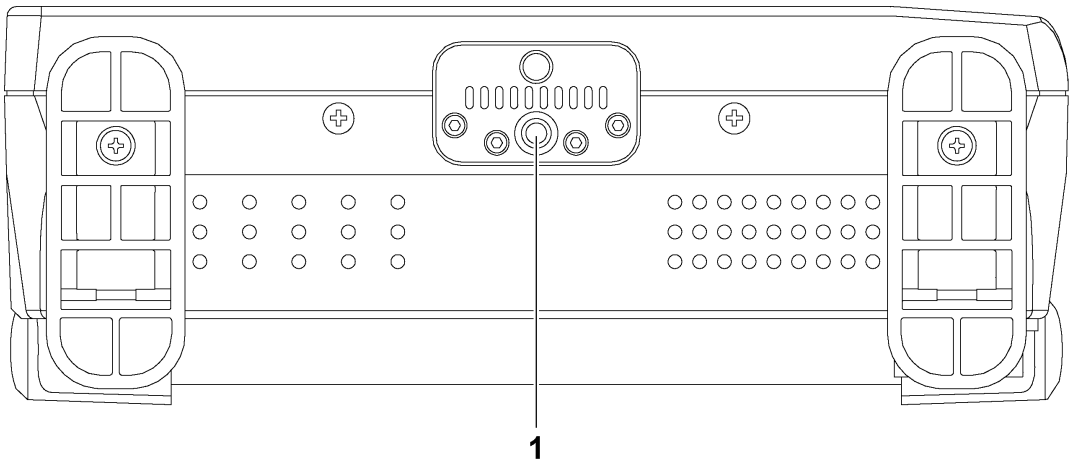


Figure 3-3 Bottom panel

Table 3-3 Bottom panel description

No.	Name	Description
1	Tripod adapter	Used to attach a tripod. The adapter can be moved to the top panel. See section 4.1, “Attaching a Tripod.”

4. BEFORE YOU BEGIN MEASURING

4.1 Attaching a Tripod

A tripod can be attached to the tripod adapter on the bottom panel of the LV 5333.
The adapter can be moved to the top panel. To do so, you will need a hex key (2 mm). Please use your own hex key.

4.2 Installing a VESA Stand

You can attach an off-the-shelf VESA compliant (75 mm × 75 mm) stand to the VESA mounting holes on the rear panel of the LV 5333.
When you attach the stand, insert the supplied VESA spacer between the LV 5333 and the stand.

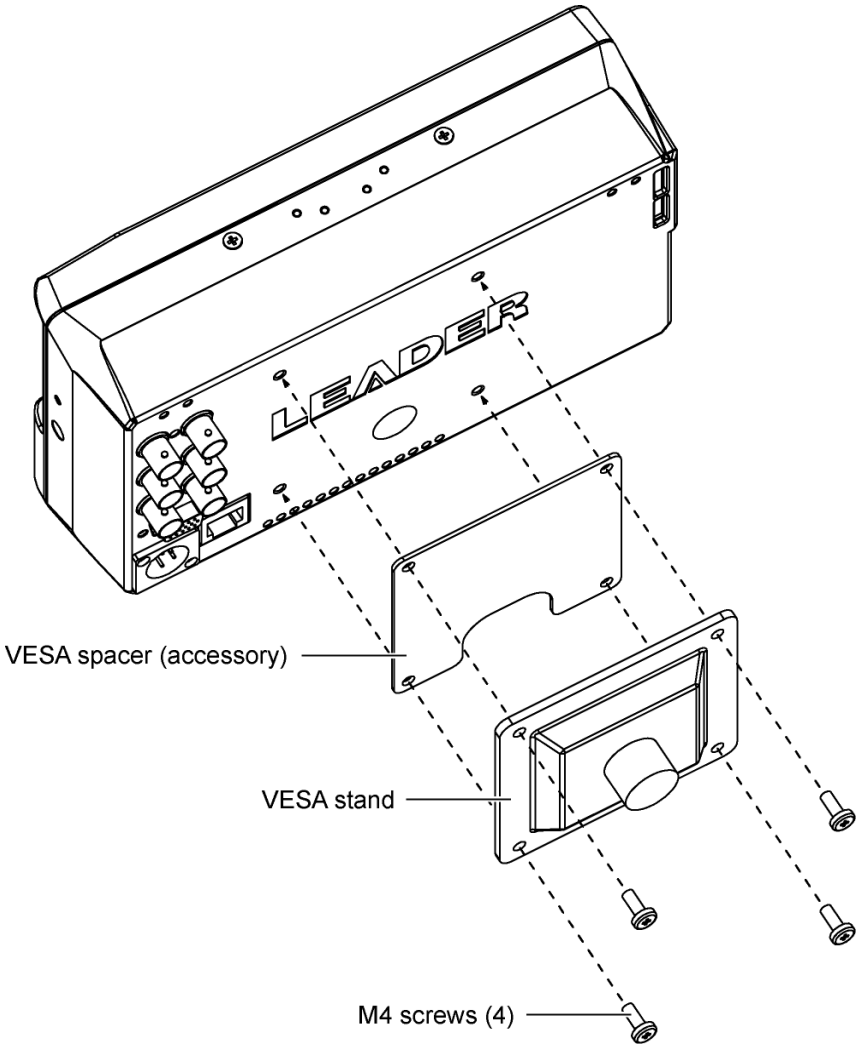


Figure 4-1 Attaching a VESA stand

4.3 About Options

The following options (sold separately) can be installed in the LV 5333.

Table 4-1 Types of options

Type	Option	Name
Factory option	LV 5333 OP70	Battery adapter V mount
	LV 5333 OP71	Battery adapter QR gold mount

● Factory Option

If you want to install an option, contact your local LEADER agent.

● License Format

If you want to install an option, provide your local LEADER agent with the LV 5333's MAC address (see the license screen) and serial number (see the rear panel). We will issue a license key.
When you receive the license key, install the option by referring to section 5.4.4, "Setting the License." Each LV 5333 requires a unique license key. You cannot use the same key for multiple instruments.

4.4 Turning the Instrument On and Off

● Applying DC Power

The DC input and its pinout are shown below. Apply +12 V to pin 4.
When power is applied, the internal microcomputer is in standby mode, and some power is consumed even if the power switch is turned off. If you do not intend to use the LV 5333 for an extended period of time, disconnect the power supply.

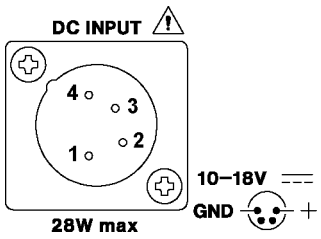


Figure 4-2 DC INPUT connector diagram

Table 4-2 DC INPUT pinout

Pin No.	Pin Name
1	GND
2	NC (*)
3	NC (*)
4	+12V

* Do not connect anything.

- Turning the Power On

  To turn on the power, press the power switch. The LED next to the power switch and the instrument will turn on. When you turn on the power, the LV 5333 starts up with the same panel settings that were set when it was last turned off.

- Turning the Power Off

  To turn off the power, hold down the power switch for at least 2 seconds. The LED next to the power switch and the instrument will turn off.

4.5 Connecting a USB Memory Device

You can save various types of data in a USB memory device. Connect a USB memory device to the USB port on the front panel. You can connect and disconnect a USB memory device with the power turned on.

When a USB memory devices is connected, a USB icon appears in the upper left of the screen.
Do not turn the power off or remove the USB memory device while it is being accessed.

Note that some USB memory devices cannot be recognized by the LV 5333. If the icon does not appear when a USB memory device is connected to the LV 5333, restart the LV 5333, and then connect a different USB memory device.

4.6 Signal I/O

4.6.1 SDI Signal Input

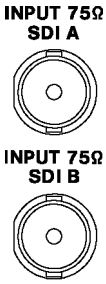


Figure 4-3 SDI input connectors

Apply the signals that are specified in section 2.3.1, “Video Signal Formats and Standards,” to INPUT SDI A or B. Press the SDI A/B key to switch the measurement channel.
By factory default, the input format is detected automatically, but you can also set it manually.

Reference 5.1, “Setting the Input Format”

If you switch the input signal between 3G and SD/HD, the LV 5333 performs a system configuration and may take about 30 seconds for the switching to finish.

The connectors are terminated internally at 75 Ω, so there is no need to connect terminators to them. Connect cables with a characteristic impedance of 75 Ω.

4.6.2 SDI Signal Output

Figure 4-4 SDI output connectors

Of the signal received through INPUT SDI A and B, the reclocked signal of the signal selected with the SDI A/B key is transmitted through these connectors.

4.6.3 External Sync Signal Input

Figure 4-5 External sync signal input connectors

On the video-signal-waveform and vectorscope displays, you can apply an external sync signal to display waveforms. Apply a tri-level sync signal or an NTSC/PAL black burst signal to the connectors, and then press REFE INT/EXT. The input format is detected automatically.

As shown in the figure below, the external sync signal input connectors are loop-through. Apply the input signal to one of the two connectors, and terminate the other connector at 75 Ω, or connect it to another 75 Ω device. If you connect to another device, be sure to terminate the device at the end of the chain at 75 Ω. Connect cables with a characteristic impedance of 75 Ω.

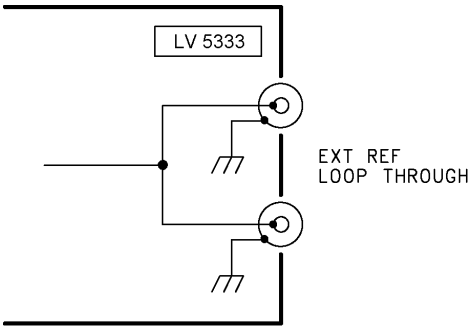


Figure 4-6 Loop-through

*1 External sync mode does not work for 30/29.97/25/24/23.98 /P for 3G-A, 1280×720.

External sync signals that are compatible with each input signal are indicated with a check mark in the following table.
Proper measurement is possible only for combinations that are indicated with check marks.

Table 4-3 External sync signal formats (SD, HD)

		Input Signal Format																						
		525i/59.94	625i/50	1080i/60	1080i/59.94	1080i/50	1080PsF/30	1080PsF/29.97	1080PsF/25	1080PsF/24	1080PsF/23.98	1080p/30	1080p/29.97	1080p/25	1080p/24	1080p/23.98	720p/60	720p/59.94	720p/50	720p/30	720p/29.97	720p/25	720p/24	720p/23.98
External Sync Signal Format	NTSC with 10 field ID (59.94Hz)(*1)	✓			✓			✓			✓		✓			✓		✓			✓			✓
	NTSC (59.94Hz)	✓			✓			✓					✓					✓			✓			
	PAL (50Hz)		✓			✓			✓					✓					✓			✓		
	1080i/60			✓			✓																	
	1080i/59.94				✓			✓																
	1080i/50					✓			✓															
	1080PsF/30						✓																	
	1080PsF/29.97							✓																
	1080PsF/25								✓															
	1080PsF/24									✓														
	1080PsF/23.98										✓													
	1080p/30											✓												
	1080p/29.97												✓											
	1080p/25													✓										
	1080p/24														✓									
	1080p/23.98															✓								
	720p/60																✓							
	720p/59.94																	✓						
	720p/50																		✓					
	720p/30																			✓				
	720p/29.97																				✓			
	720p/25																					✓		
	720p/24																						✓	
	720p/23.98																							✓

*1 If the input signal is 1080PsF/23.98 or 1080p/23.98, the 10 field ID is automatically detected.

Table 4-4 External sync signal formats (3G)

		Input Signal Format																		
		1080p/60	1080p/59.94	1080p/50	1080i/60	1080i/59.94	1080i/50	1080PsF/30	1080PsF/29.97	1080PsF/25	1080PsF/24	1080PsF/23.98	1080p/30	1080p/29.97	1080p/25	1080p/24	1080p/23.98	720p/60	720p/59.94	720p/50
External Sync Signal Format	NTSC with 10 field ID (59.94Hz)(*1)		✓			✓			✓			✓		✓			✓		✓	
	NTSC (59.94Hz)		✓			✓			✓					✓					✓	
	PAL (50Hz)			✓			✓			✓					✓					✓
	1080i/60	✓			✓			✓												
	1080i/59.94		✓			✓			✓											
	1080i/50			✓			✓			✓										
	1080PsF/30							✓												
	1080PsF/29.97								✓											
	1080PsF/25									✓										
	1080PsF/24										✓									
	1080PsF/23.98											✓								
	1080p/30												✓							
	1080p/29.97													✓						
	1080p/25														✓					
	1080p/24															✓				
	1080p/23.98																✓			
	720p/60																	✓		
	720p/59.94																		✓	
	720p/50																			✓

*1 If the input signal is 1080PsF/23.98 or 1080p/23.98, the 10 field ID is automatically detected.

4.6.4 Digital Audio Output

Figure 4-7 Digital audio output connectors

Of the audio signals embedded in the SDI signal, two channels selected with AES/EBU OUTPUT of the AUDIO menu are transmitted through these connectors.

Reference 14.4, “Selecting the Audio Output Channels”

4.6.5 Headphone Output

Figure 4-8 Headphone Output Jack

Of the audio signals embedded in the SDI signal, two channels selected with PHONES L CH and PHONES R CH of the AUDIO menu are transmitted through these connectors.

Reference 14.6, “Configuring the Headphone Settings”

4.7 Function Menu Operations

Use the function menu to change the various settings.
This section explains how to operate the function menu, using the CINEZONE menu as an example.

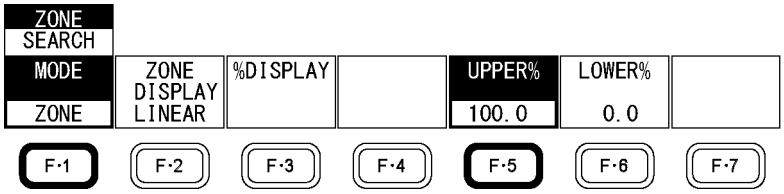


Figure 4-9 CINEZONE menu

● Selecting Settings

To select a setting from a list like the one shown in the figure above for F•1 MODE, press F•1 repeatedly to select the setting you want. The setting changes each time you press F•1. After you stop pressing F•1, the setting is confirmed and the pop-up menu disappears. Note that the pop-up menu may not appear in some cases (e.g., toggle setting).

● Specifying Values

To set the value of a setting like F•5 UPPER%, which is shown in the figure above, press F•5, and then turn the function dial (F•D). You can reset most settings to their default values by pressing the function dial (F•D).

● Control Stick Operation

You can use the control stick to move the screen on the picture display or move the cursor on the CINELITE display. Tilt the control stick in the direction you want to move. If you press the control stick first and then tilt, the movement will be faster.

4.8 Measurement Screen Description

This section explains the common elements in all measurement screens.

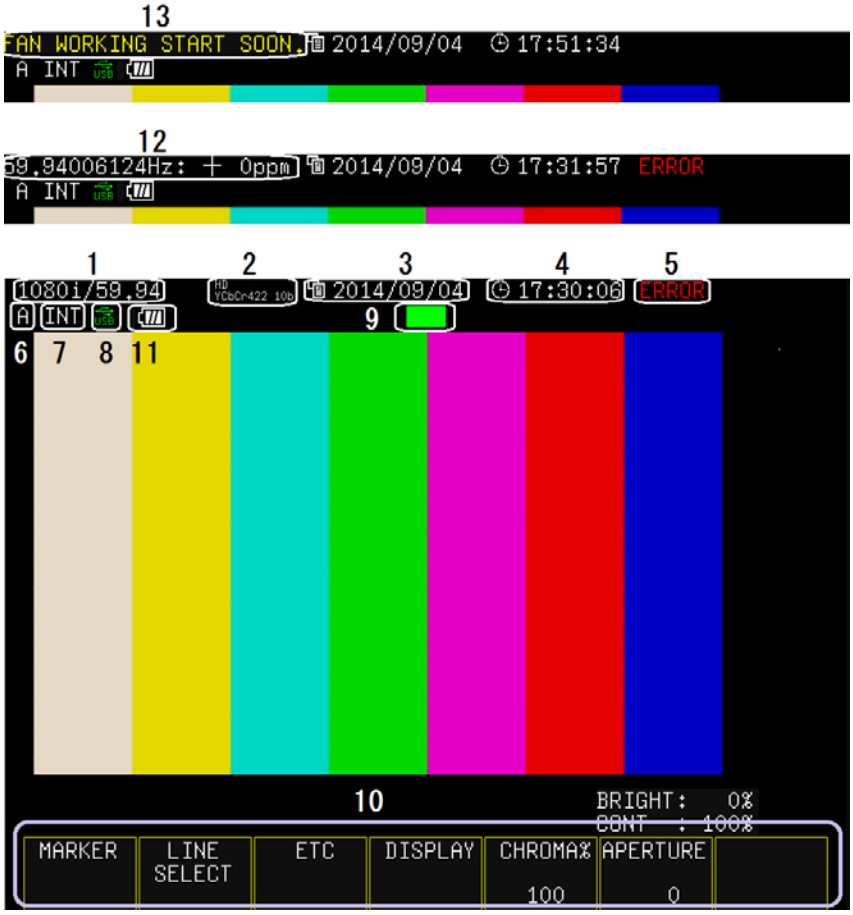


Figure 4-10 Measurement screen description

Table 4-5 Measurement screen description

No.	Name	Description
1	Input format	The input signal format is indicated. You can also choose to hide this information. If no signal is being received or if a signal different from the format specified manually is being received, "----------" is displayed. Reference 5.3.1, "Format Display" 5.1, "Setting the Input Format"
2	Color System	The input signal color system and quantization accuracy are displayed. You can also choose to hide this information. If no signal is being received or if a signal different from the format specified manually is being received, "----------" is displayed. Reference 5.1.4, "Setting the Format." 5.3.4, "Color System Display"
3	Date	The date set on the SYSTEM menu is displayed. You can set the display format to Y/M/D, M/D/Y, D/M/Y, or OFF. Reference 5.5, "Setting the Time," 5.3.2, "Displaying the Date"
4	Time	The time set on the SYSTEM menu or the SDI input signal timecode is displayed. You can also choose to hide this

No.	Name	Description
		information. You can set the time code to VITC, LTC, or D-VITC. Reference 5.5, “Setting the Time,” 5.3.3, “Displaying the Time” 5.3.5, “Setting the Timecode Display Format”
5	ERROR	This appears when an error specified on the status display occurs or when an input format error occurs. Reference 13.6, “Configuring Error Settings”
	NO_SIGNAL	This appears when there is no input signal.
	It...stops.	This appears when the temperature inside the instrument exceeds 80°C. If this appears, contact your nearest LEADER agent.
	FAN ALARM	This appears when the fan malfunctions. If this appears, contact your nearest LEADER agent.
6	Input channel	The input channel (A or B) is displayed. Press the SDI A/B key to switch the channel.
7	Sync signal	“INT” is displayed in internal sync mode; “EXT” is displayed in external sync mode. Press the REFE INT/EXT key to switch the mode.
8	USB icon	This appears when a USB memory device is connected. See section 4.5, “Connecting a USB Memory Device.”
9	Tally	This appears in green when pin 13 of the remote connector is connected to ground. It is not displayed on some screens. See section 16.1, “Remote Control Feature.”
10	Function menu	A menu for configuring settings. See section 4.7, “Function Menu Operations.”
11	Battery level	The battery level is displayed when an OP70 or OP71 is installed. Reference 5.3.9, “Displaying the Battery Level (OP70, OP71)”
12	Frequency deviation	The input signal frequency deviation is displayed. You can also choose to hide this information. If no signal is being received or if a signal different from the format specified manually is being received, “----------” is displayed. Reference 5.3.1, “Format Display” 5.1, “Setting the Input Format”
13	FAN WORKING START SOON.	This appears when the fan is not running and the temperature inside the instrument exceeds 40°C. After this is displayed for 1 minute, the fan will start running.
	POWER OFF START SOON.	This appears when the temperature inside the instrument exceeds 85°C. After this is displayed for 1 minute, the power will turn off.

5. SYSTEM SETTINGS

The system settings can be used to configure the LV 5333 settings.
Press SYSTEM, and use the SYSTEM menu.

SYSTEM →

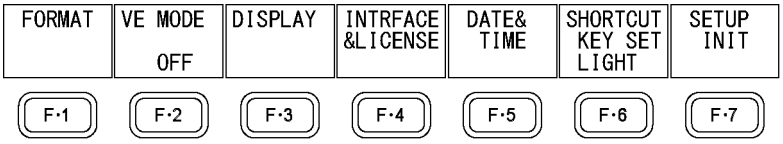


Figure 5-1 SYSTEM menu

5.1 Setting the Input Format

To set the input format, press F•1 FORMAT on the SYSTEM menu.

SYSTEM → F•1 FORMAT →

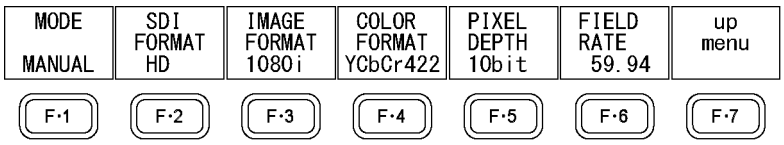


Figure 5-2 FORMAT menu

5.1.1 Selecting the Detection Method

To select whether to detect the input format automatically or to set it manually, follow the procedure below.

Procedure

SYSTEM → F•1 FORMAT → F•1 MODE: AUTO / MANUAL

5.1.2 Selecting the Display Format

Even if you set F•1 MODE to AUTO, the LV 5333 will be unable to distinguish between the following formats.

- 1080i/60 and 1080sF/30
- 1080i/59.94 and 1080sF/29.97
- 1080i/50 and 1080sF/25

When F•1 MODE is set to AUTO, to select whether to display using interlaced or segmented frame, follow the procedure below.

Procedure

SYSTEM → F•1 FORMAT → F•2 i/PsF SELECT: INTERLAC / SEG.FRM

5.1.3 Selecting the Stream

When F•1 MODE is set to AUTO and the input signal is 3G-B-DS, to select the stream to display, follow the procedure below.

Procedure

SYSTEM → F•1 FORMAT → F•3 STREAM SELECT: 3G-B_S1 / 3G-B_S2

5.1.4 Setting the Format

When F•1 MODE is set to MANUAL, to set the input format, follow the procedure below.
If a signal with a format different from the one specified here is received, an error will occur.

Procedure

SYSTEM → F•1 FORMAT
→ F•2 SDI FORMAT: HD / SD / 3G-A / 3G-B(DL) / 3G-B_S1 / 3G-B_S2
→ F•3 IMAGE FORMAT: 1080i / 1080p / 1080sF / HD1080i / HD1080p / HD1080sF / 2K1080p / 2K1080sF / 720p / 525i / 625i
→ F•4 COLOR FORMAT: YCbCr422 / YCbCr444 / RGB444
→ F•5 PIXEL DEPTH: 10bit / 12bit
→ F•6 FIELD RATE: 60 / 59.94 / 50 (i)
→ F•6 FRAME RATE: 60 / 59.94 / 50 / 30 / 29.97 / 25 / 24 / 23.98 (p or sF)

The possible format combinations are shown below.

Table 5-1 List of formats

F•2 SDI FORMAT	F•3 IMAGE FORMAT	F•4 COLOR FORMAT	F•5 PIXEL DEPTH	F•6 FIELD RATE F•6 FRAME RATE
HD/ 3G-B_S1/ 3G-B_S2	1080i	YCbCr422	10bit	60/59.94/50
	1080p	YCbCr422	10bit	30/29.97/25/24/23.98
	1080sF	YCbCr422	10bit	30/29.97/25/24/23.98
	720p	YCbCr422	10bit	60/59.94/50/ 30/29.97/25/24/23.98
SD	525i	YCbCr422	10bit	59.94
	625i	YCbCr422	10bit	50
3G-A	HD1080i	YCbCr422	12bit	60/59.94/50
		YCbCr444	10bit/12bit	60/59.94/50
		RGB444	10bit/12bit	60/59.94/50
	HD1080p	YCbCr422	10bit	60/59.94/50
			12bit	30/29.97/25/24/23.98
		YCbCr444	10bit/12bit	30/29.97/25/24/23.98
		RGB444	10bit/12bit	30/29.97/25/24/23.98
	HD1080sF	YCbCr422	12bit	30/29.97/25/24/23.98
		YCbCr444	10bit	30/29.97/25/24/23.98
		RGB444	10bit	30/29.97/25/24/23.98
	2K1080p	RGB444	12bit	24/23.98
	2K1080sF	RGB444	12bit	24/23.98
	720p	YCbCr444	10bit	60/59.94/50/ 30/29.97/25/24/23.98
		RGB444	10bit	60/59.94/50/ 30/29.97/25/24/23.98

F•2 SDI FORMAT	F•3 IMAGE FORMAT	F•4 COLOR FORMAT	F•5 PIXEL DEPTH	F•6 FIELD RATE F•6 FRAME RATE
3G-B(DL)	HD1080i	YCbCr422	12bit	60/59.94/50
		YCbCr444	10bit/12bit	60/59.94/50
		RGB444	10bit/12bit	60/59.94/50
	HD1080p	YCbCr422	10bit	60/59.94/50
			12bit	30/29.97/25/24/23.98
		YCbCr444	10bit/12bit	30/29.97/25/24/23.98
		RGB444	10bit/12bit	30/29.97/25/24/23.98
	HD1080sF	YCbCr422	12bit	30/29.97/25/24/23.98
		YCbCr444	10bit/12bit	30/29.97/25/24/23.98
		RGB444	10bit/12bit	30/29.97/25/24/23.98
	2K1080p	RGB444	12bit	24/23.98
	2K1080sF	RGB444	12bit	24/23.98

5.2 Setting the VE Mode

To change the configuration of the WFM and VECTOR menus for VE mode, follow the procedure below.

Reference WFM menu → 11.3, “Menu Display in VE Mode”
VECTOR menu → 12.3, Menu Display in VE Mode”

Procedure

SYSTEM → F•2 VE MODE: ON / OFF

5.3 Configuring the Display Settings

To configure the display settings, press F•3 DISPLAY on the SYSTEM menu.

SYSTEM → F•3 DISPLAY →

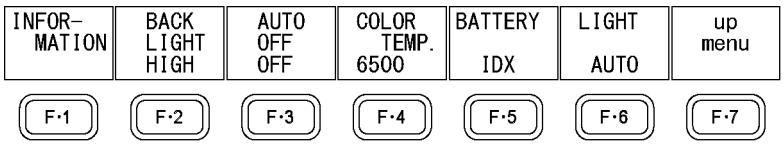


Figure 5-3 DISPLAY menu

5.3.1 Displaying the Format

To display the format, press F•1 INFORMATION on the DISPLAY menu.

SYSTEM → F•3 DISPLAY → F•1 INFORMATION →

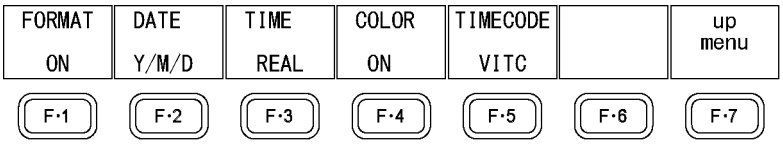


Figure 5-4 INFORMATION menu

To turn on or off the format display (e.g., 1080i/59.94 HD) at the top of the screen, follow the procedure below.
If set to FREQ, the frequency deviation is displayed at the top of the screen and on the status screen.

Procedure

SYSTEM → F•3 DISPLAY → F•1 INFORMATION → F•1 FORMAT: ON / FREQ / OFF

5.3.2 Displaying the Date

To select the display format of the date shown at the top of the screen, follow the procedure below. The date is also displayed on the event log screen and USB memory screen.

Procedure

SYSTEM → F•3 DISPLAY → F•1 INFORMATION → F•2 DATE: Y/M/D / M/D/Y / D/M/Y / OFF

Settings

Y/M/D:	The date is displayed in this order: year, month, day.
M/D/Y:	The date is displayed in this order: month, day, year.
D/M/Y:	The date is displayed in this order: day, month, year.
OFF:	The date at the top of the screen is not displayed. Other dates are displayed in Y/M/D format.

5.3.3 Displaying the Time

To select the display format of the time shown at the top of the screen, follow the procedure below. The time is also displayed on the event log screen and USB memory screen.

Procedure

SYSTEM → F•3 DISPLAY → F•1 INFORMATION → F•3 TIME: REAL / TIMECODE / OFF

Settings

REAL:	The time set on the SYSTEM menu is displayed.
TIMECODE:	The input signal timecode is displayed.
OFF:	The time at the top of the screen is not displayed. In other areas, the time set on the SYSTEM menu is displayed.

5.3.4 Displaying the Color System

To turn on or off the color system display (e.g., YCbCr422 10b) at the top of the screen, follow the procedure below. If F•1 FORMAT is set to FREQ, ON cannot be selected.

Procedure

SYSTEM → F•3 DISPLAY → F•1 INFORMATION → F•4 COLOR: ON / OFF

5.3.5 Displaying the Time Code

When F•3 TIME is set to TIMECODE, to select the time code display format, follow the procedure below.

Procedure

SYSTEM → F•3 DISPLAY → F•1 INFORMATION → F•5 TIMECODE: LTC / VITC / D-VITC

5.3.6 Setting the Backlight

To select the backlight brightness, follow the procedure below.

Procedure

SYSTEM → F•3 DISPLAY → F•2 BACK LIGHT: HIGH / LOW

5.3.7 Selecting the Auto Shutoff Time

To select the length of time that must elapse since the last key operation before the backlight is automatically turned off, follow the procedure below. If OFF is selected, the backlight will not turn off automatically.
If the backlight turns off, press any key except the power key to turn it on again.

Procedure

SYSTEM → F•3 DISPLAY → F•3 AUTO OFF: OFF / 5min / 30min / 60min

5.3.8 Selecting the Color Temperature

To select the monitor's color temperature, follow the procedure below. If THROUGH is selected, the color temperature will not be corrected.

Procedure

SYSTEM → F•3 DISPLAY → F•2 COLOR: 3200 / 6500 / 9300 / THROUGH

5.3.9 Displaying the Battery Level (OP70, OP71)

To display the battery level when an OP70 or OP71 is installed, follow the procedure below.

Procedure

SYSTEM → F•3 DISPLAY → F•5 BATTERY: IDX / ANTON / OTHERS / OFF

Settings

IDX:	The accurate battery level is displayed when an IDX battery is in use. Do not select this when an OP71 is installed.
ANTON:	The accurate battery level is displayed when an Anton/Bauer battery is in use. Do not select this when an OP70 is installed.
OTHERS:	The accurate battery level is displayed when a 14.4 V lithium-ion battery (such as that of Sony) is in use.
OFF:	The battery level is not displayed.

5.3.10 Configuring the Key LEDs

To select how the key LEDs light, follow the procedure below.

Procedure

SYSTEM → F•3 DISPLAY → F•6 LIGHT: AUTO / ON

Settings

AUTO:	All the key LEDs are turned off. If F•6 SHORTCUT KEY SET is set to LIGHT, however, all the key LEDs light when you press SHORT CUT.
ON:	All the key LEDs are lit at all times.

5.4 Configuring the External Interface

To configure the external interface, press F•4 INTRFACE&LICENSE on the SYSTEM menu.

SYSTEM → F•4 INTRFACE&LICENSE →

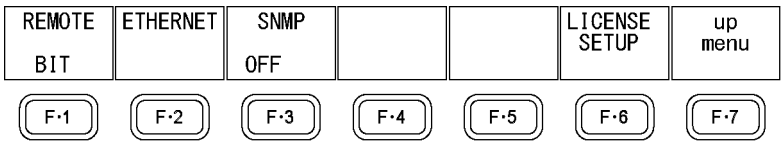


Figure 5-5 INTRFACE&LICENSE menu

5.4.1 Configuring the Remote Connector

You can use /P1 through /P8 of the remote connector to load presets.
To select the recall mode, follow the procedure below.

Reference 16.1, “Remote Control Feature”

Procedure

SYSTEM → F•4 INTRFACE&LICENSE → F•1 REMOTE: BIT / BINARY

Settings

BIT:	/P1 through /P8 are assigned to preset numbers 1 through 8, and you can load one of the eight presets.
BINARY:	/P5 is set to the MSB, and /P1 is set to the LSB. You can load one of any of the 30 presets by specifying a binary value.

5.4.2 Configuring Ethernet Settings

To configure the Ethernet settings, press F•2 ETHERNET on the INTRFACE&LICENSE menu.
The setting configured here is valid after you restart the LV 5333. They are not reset even if you initialize the settings.

SYSTEM → F•4 INTRFACE&LICENSE → F•2 ETHERNET →

Figure 5-6 ETHERNET screen

To select DHCP or IP, follow the procedure below.

Procedure
SYSTEM → F•4 INTRFACE&LICENSE → F•2 ETHERNET → F•1 DHCP/IP SELECT: DHCP / IP

Settings	
DHCP:	DHCP is enabled. IP_ADDRESS, SUBNET_MASK, and GATEWAY are assigned automatically.
IP:	IP_ADDRESS, SUBNET_MASK, and GATEWAY are assigned manually.

To set IP_ADDRESS, SUBNET_MASK, and GATEWAY, follow the procedure below.
Use F•5 ← or F•6 → to move the cursor and function dial (F•D) to change the value.

Procedure
SYSTEM → F•4 INTRFACE&LICENSE → F•2 ETHERNET → F•2 IP ADRS: 0.0.0.0 - 255.255.255.255 → F•3 SUBNET MASK: 0.0.0.0 - 255.255.255.255 → F•4 GATEWAY: 0.0.0.0 - 255.255.255.255

5.4.3 Setting the SNMP Access Mode

To select the SNMP access mode, follow the procedure below.

Procedure
SYSTEM → F•4 INTRFACE&LICENSE → F•3 SNMP: OFF / RD ONRY / RD/WR

Settings	
OFF:	Settings cannot be read or written.
RD ONRY:	Settings can be read, but they cannot be written.
RD/WR:	Settings can be read and written.

5.4.4 Setting the SNMP Community Names

To change the SNMP community names, follow the procedure below.
These settings take effect when you restart the LV 5333. They are not reset even if you initialize the settings.
The factory default community names are shown below.

Read community: LDRUser
Write community: LDRAdm
TRAP community: LDRUser

1. Press SYSTEM → F•4 INTRFACE&LICENSE → F•4 SNMP COMM.

   The SNMP community name setup screen appears.

Figure 5-7 SNMP community name setup screen

2. Press F•2 READ, F•3 WRITE, or F•4 TRAP or F•5 ← or F•6 → to select the community you want to change.
3. Press F•1 COMMENT INPUT.

   The comment input screen appears.

Figure 5-8 Comment input screen

4. Enter a comment of up to 12 characters.

   You can use the following keys on the comment input screen.

F•1 CLEAR ALL	Deletes all characters
F•2 DELETE	Deletes the character at the cursor
F•4 ←	Moves the cursor to the left
F•5 →	Moves the cursor to the right
F•6 CHAR SET	Enters the character
Function dial (F•D)	Turn to select a character, and press to enter the character.

5. Restart the LV 5333.

5.4.5 Configuring License Settings

To configure the license settings, press F•6 LICENSE SETUP on the INTRFACE&LICENSE menu.
In addition to installing licensed options, you can also view the MAC address, firmware version, and the status of registered options.
Options installed here are not initialized even when you initialize the settings.

Reference 5.7, “Initialization”

SYSTEM → F•4 INTRFACE&LICENSE → F•6 LICENSE SETUP →

Figure 5-9 LICENSE SETUP screen

Have your license key ready, and follow the procedure below to install the option.

1. Enter the license key.

   Turn the function dial (F•D) to select the number, and press to enter it. You can also enter the number by pressing F•5 CHAR SET.
   Press F•1 CLEAR ALL to clear the license key and F•5 ← or F•6 → to move the cursor.

2. Press F•6 REGISTER.

   “ACCEPTED” appears after a license key has been entered correctly, and its corresponding option becomes usable. The name of the option that has been installed appears in the LICENSE LIST.
   “FAILED” appears if the license key is not correct. Reenter the license key correctly.
   To uninstall an option, press F•2 CLEAR LICENSE → F•1 CLEAR YES.

5.5 Setting the Date and Time

To configure the display settings, press F•5 DATE&TIME on the SYSTEM menu.
The settings that you specify here will not be initialized even if you initialize the LV 5333.

SYSTEM → F•5 DATE&TIME →

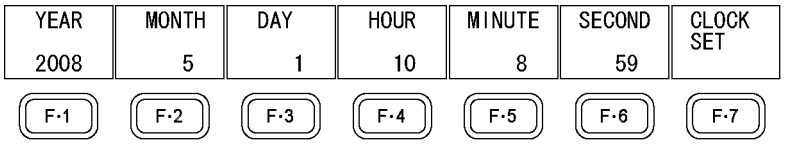


Figure 5-10 DATE&TIME menu

To set the date and time, follow the procedure below.
The date and time are applied when you press F•7 CLOCK SET. To cancel, press SYSTEM.

Procedure

SYSTEM → F•5 DATE&TIME
→ F•1 YEAR: 2000 - 2200
→ F•2 MONTH: 1 - 12
→ F•3 DAY: 1 - 31
→ F•4 HOUR: 0 - 23
→ F•5 MINUTE: 0 - 59
→ F•6 SECOND: 0 - 59

5.6 Setting the Short Cut Key

To assign a function to the SHORT CUT key, follow the procedure below.

Procedure

SYSTEM → F•6 SHORTCUT KEY SET: LIGHT / CAP USB / DIRECT_K / VOLUME / CONTRAST

Settings

LIGHT:	All the key LEDs light when you press SHORT CUT. Use this setting in a dark environment when the keys are difficult to see. The key LEDs turn off when you perform the next operation.
CAP USB:	A screen capture will be taken when you press SHORT CUT and saved to a USB memory device.
DIRECT_K:	A previously registered preset will be loaded when you press SHORT CUT. To register a preset, press MEMORY and then SHORT CUT. The key LED blinks twice, and the preset is registered.
VOLUME:	When you press SHORT CUT, you can adjust the headphone volume with the function dial (F•D). The adjustment mode is cleared when you perform the next operation.
CONTRAST:	Pressing the SHORT CUT key switches the picture contrast in this order: 50%, 100%, and 200%.

5.7 Initialization

There are two methods of initializing the LV 5333 settings: “standard initialization” executed from the SYSTEM menu and “factory default initialization” executed by restarting the LV 5333 in a special way. The two methods differ in the items that are initialized as shown below. In the following table, items that are initialized are marked as “Yes” and those that are not as “No.”

All other items not listed in the table are initialized regardless of the method. For information about the default values, see chapter 17, “Menu Tree.” The default values are underlined.

Table 5-2 Items that are initialized

Item	Standard initialization	Factory default initialization
Ethernet settings	No	Yes
License settings	No	No
Date and time	No	No
Presets(*1)	No	Yes
User-defined correction table for CINELITE display	No	Yes

*1 Include the preset assigned to the SHORT CUT key

5.7.1 Standard initialization

To initialize the settings to their default values, follow the procedure below. To cancel the initialization, press F•3 INIT CANCEL.

Procedure

SYSTEM → F•7 SETUP INIT → F•1 INIT YES

5.7.2 Factory default initialization

To initialize the settings to their factory default values, follow the procedure below.

1. Turn the LV 5333 off.
2. Turn on the power while holding down the V POS and H POS knobs.
3. Release the knobs when the following message appears.

   ERROR_SRAM FILE SYSTEM
   PRESET DATA LOST!!!
   PUSH [WFM] KEY

4. Press WFM.

6. SCREEN CAPTURE FEATURE

The screen capture feature acquires the current screen as still image data and stores the data in the LV 5333. You can save the captured data to a USB memory device or overlay it on the input signal on the LV 5333 display.

6.1 Capturing the Screen

To take a screen capture, follow the procedure below.
You can only take screen captures of the measurement screen. (You cannot take a screen capture of the file list screen.)

1. Display the screen you want to capture.
2. Press CAPTURE.

   The screen is captured to the internal memory. If the CAPTURE menu is displayed, you can also press F•1 HOLD to capture the screen.

   Note that if you perform one of the following operations after taking a screen capture, the captured data will be deleted.

   • Change the measurement screen
   • Press the SYSTEM, MEMORY, or RECALL key
   • Turn off the power

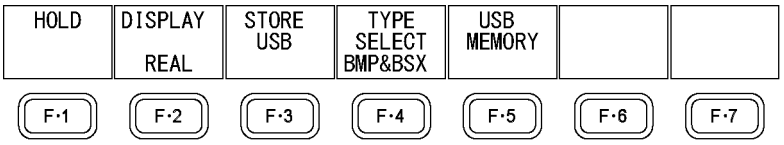


Figure 6-1 CAPTURE menu

6.2 Displaying Screen Capture Data

Press CAPTURE to display the acquired screen capture data on the LV 5333 or overlay it on the current input signal.

You can display captured video signal waveforms, vectors, pictures, and audio meters on the LV 5333. Other kinds of data (such as status and scale data) cannot be displayed. However, these other kinds of data can be saved to a USB memory device as BMP files.

To display screen capture data, press F•2 DISPLAY on the CAPTURE menu.

REAL:	The current input signal is displayed.
HOLD:	The screen capture data is displayed.
BOTH:	The current input signal and the screen capture data are overlaid with their intensities halved.

6.3 Saving to a USB Memory Device

Captured data acquired by pressing CAPTURE is deleted when you perform an operation such as changing the measurement screen. However, by saving the screen capture data to a USB memory device in BSX format, you will be able to display the screen capture data on the LV 5333 even after it is restarted.
Also, if you save the screen capture data in BMP format, you can view the captured data on a PC.

Note that you can save the screen capture to a USB memory device simply by pressing the SHORT CUT key if you set SHORTCUT KEY SET on the SYSTEM menu to CAP USB.
Reference SHORTCUT KEY SET → 5.6, “Setting the Short Cut Key.”

1. Connect a USB memory device to the LV 5333.
2. Press F•4 TYPE SELECT to select the file format.

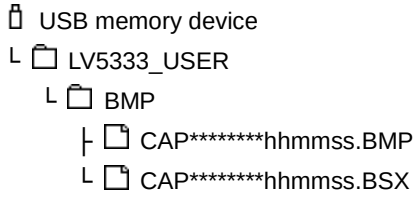
BMP&BSX:	Files are saved to a USB memory device in BMP and BSX formats. You can view the saved files on a PC or redisplay it on the LV 5333.
BMP:	Files are saved to a USB memory device in BMP format. You can view the saved files on a PC.
BSX:	Files are saved to a USB memory device in BSX format. You can view the saved files on the LV 5333.

3. Press F•3 STORE USB.

   The message “PLEASE WAIT - STORING FILE” is displayed on the screen, and the screen capture data is saved to the USB memory device.

   The file name is automatically set to “CAP+the date and time set on the SYSTEM menu.” The date is in the display format set on the SYSTEM menu. The time is in the format hour, minute, second.
   (Example: CAP20140501100859.bmp)

   Screen capture data is saved to the following locations.



6.4 Displaying Screen Capture Data from a USB Memory Device

To display or overlay on the current input signal the BSX screen capture data that has been saved to a USB memory device, follow the procedure below.
(Screen capture data that has been saved in BMP format and screen capture data that has been saved in BSX format on a different model cannot be displayed on the LV 5333.)

1. Connect a USB memory device to the LV 5333.
2. Press CAPTURE.

   The CAPTURE menu appears.
3. Press F•5 USB MEMORY.

   The file list screen appears.

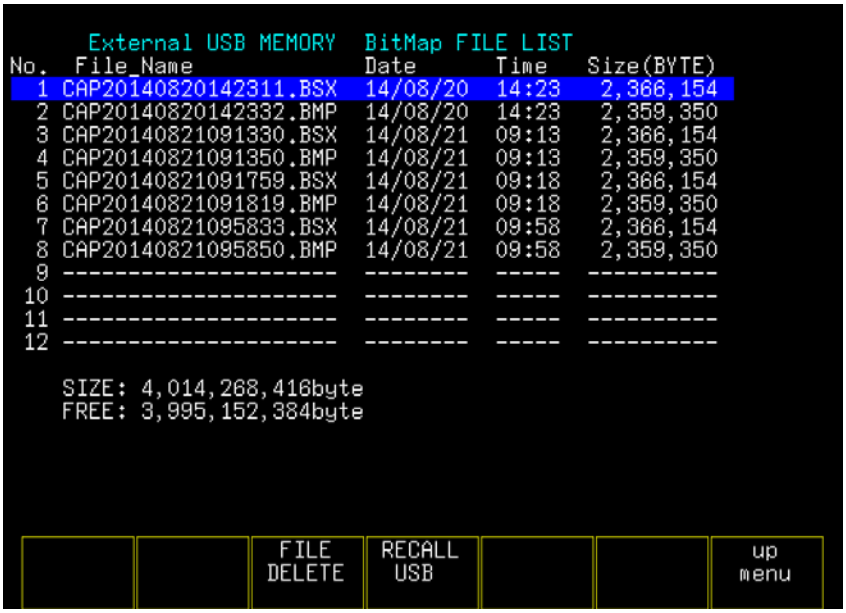


Figure 6-2 File list screen

4. Turn the function dial (F•D) to select the BSX file that you want to display.
5. Press F•4 RECALL USB.

   The file list screen closes, and the CAPTURE menu appears.
6. Press F•2 DISPLAY to select the display format.

   After you press F•4 RECALL USB, the display format is BOTH.

6.5 Deleting Screen Capture Data from a USB Memory Device

To delete screen capture data from a USB memory device, follow the procedure below. (You can also delete the data on the PC.)

1. Connect a USB memory device to the LV 5333.
2. Press CAPTURE.

   The CAPTURE menu appears.
3. Press F•5 USB MEMORY.

   The file list screen appears.

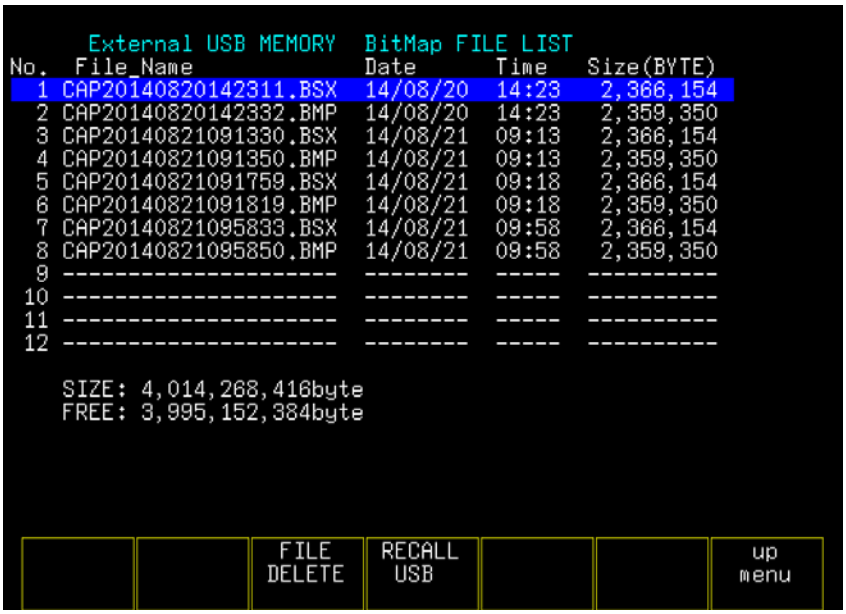


Figure 6-3 File list screen

4. Turn the function dial (F•D) to select the file that you want to delete.
5. Press F•3 FILE DELETE.

   The FILE DELETE menu appears.

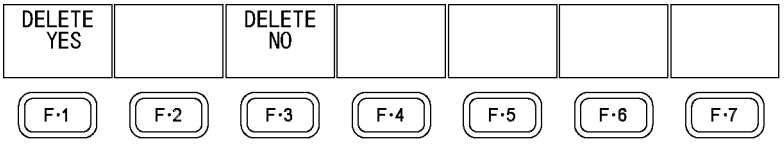


Figure 6-4 FILE DELETE menu

6. Press F•1 DELETE YES.

   To cancel the operation, press F•3 DELETE NO.

7. PRESET SETTINGS

The preset feature stores up to 30 sets of panel settings. It can be used to easily recall fixed settings. Also, you can use the same settings on multiple LV 5333s by copying presets to USB memory.

All items except the items below are stored in a preset. Stored items are not deleted even if you initialize the settings.

- Remote control settings
- Ethernet settings
- License settings
- Date and time
- Recall mode

7.1 Registering Presets

To register a preset, follow the procedure below.

1. Display the screen you want to register.
2. Press MEMORY.

   The preset registration screen appears.

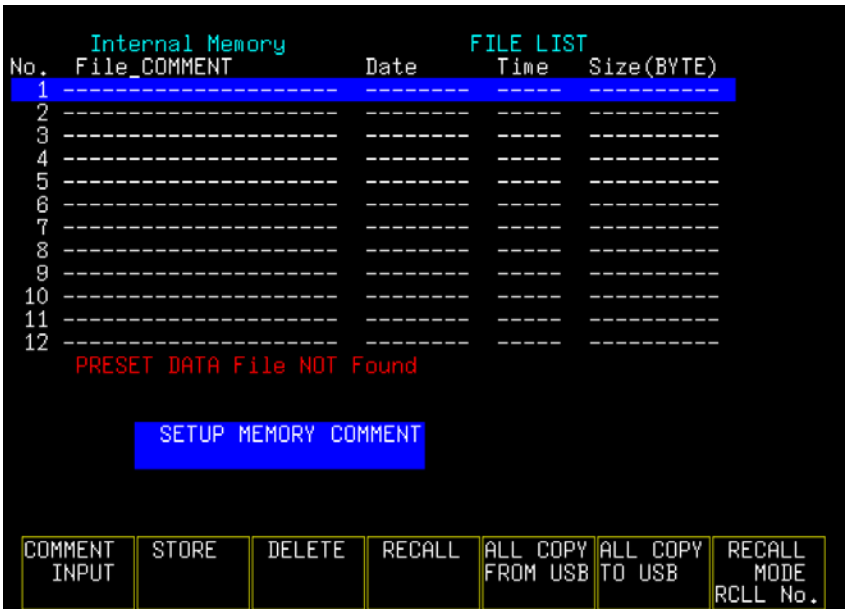


Figure 7-1 Preset registration screen

3. Press F•1 COMMENT INPUT.

   The comment input screen appears.

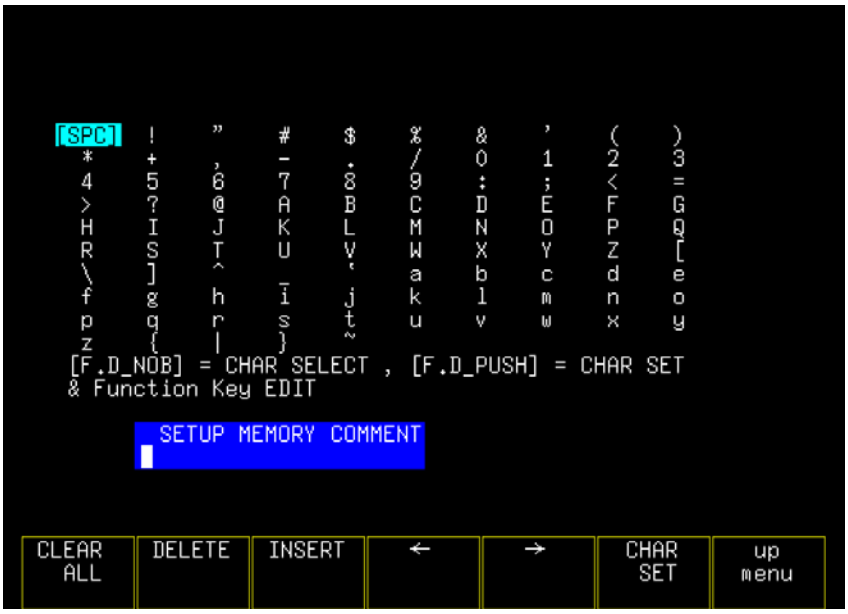


Figure 7-2 Comment input screen

4. Enter a comment of up to 16 characters.

   You can use the following keys on the comment input screen.

F•1 CLEAR ALL	Deletes all characters
F•2 DELETE	Deletes the character at the cursor
F•3 INSERT	Inserts a space at the cursor position.
F•4 ←	Moves the cursor to the left
F•5 →	Moves the cursor to the right
F•6 CHAR SET	Enters the character
Function dial (F•D)	Turn to select a character, and press to enter the character.

5. Press F•7 up menu.
6. Turn the function dial (F•D) to select the number of the preset you want to register.
7. Press F•2 STORE.

   The STORE menu appears.

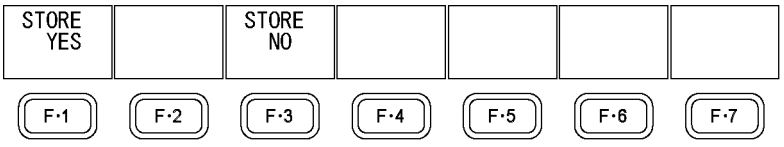


Figure 7-3 STORE menu

8. Press F•1 STORE YES.

   If there is already a preset registered at the selected number, it will be overwritten. To cancel the operation, press F•3 STORE NO.

7.2 Recalling Presets

To recall a preset, follow the procedure below.
Note that you can recall a preset simply by pressing the SHORT CUT key if you set SHORTCUT KEY SET on the SYSTEM menu to DIRECT_K.

Reference SHORTCUT KEY SET → 5.6, “Setting the Short Cut Key.”

1. Press RECALL.

   The RECALL menu appears.

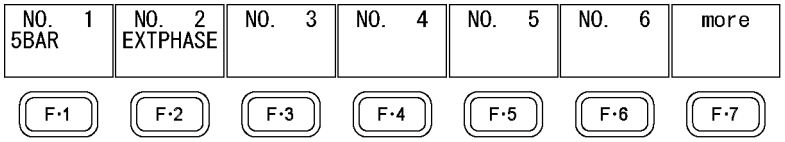


Figure 7-4 RECALL menu

2. Press a key from F•1 No.1 to F•6 No.6.

   If the preset that you want to recall is number 7 or greater, press F•7 more.
   The menu that appears immediately after recalling a preset is either the RECALL menu (RCLL No.) or the measurement menu (FUNCTION) depending on the RECALL MODE on the MEMORY menu.

7.3 Deleting Presets

To delete a preset, follow the procedure below.

1. Press MEMORY.

   The preset registration screen appears.

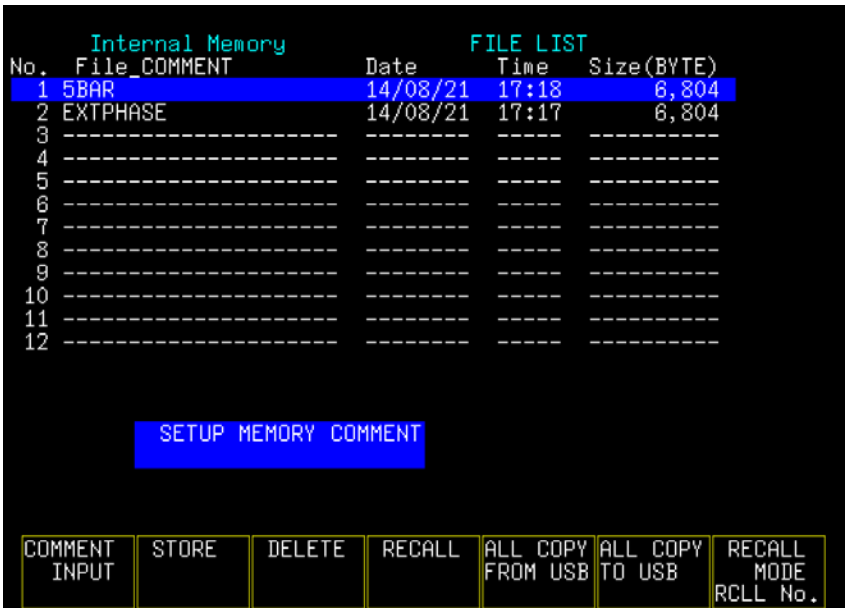


Figure 7-5 Preset registration screen

2. Turn the function dial (F•D) to select the file that you want to delete.
3. Press F•3 DELETE.

   The DELETE menu appears.

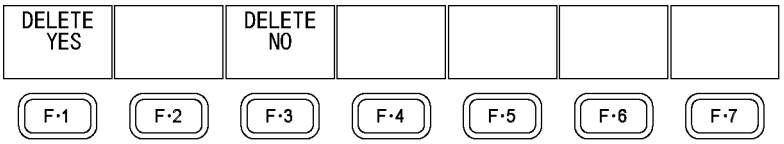


Figure 7-6 DELETE menu

4. Press F•1 DELETE YES.

   To cancel the operation, press F•3 DELETE NO.

7.4 Copying Presets

To copy a preset, follow the procedure below.

1. Press MEMORY.

   The preset registration screen appears.

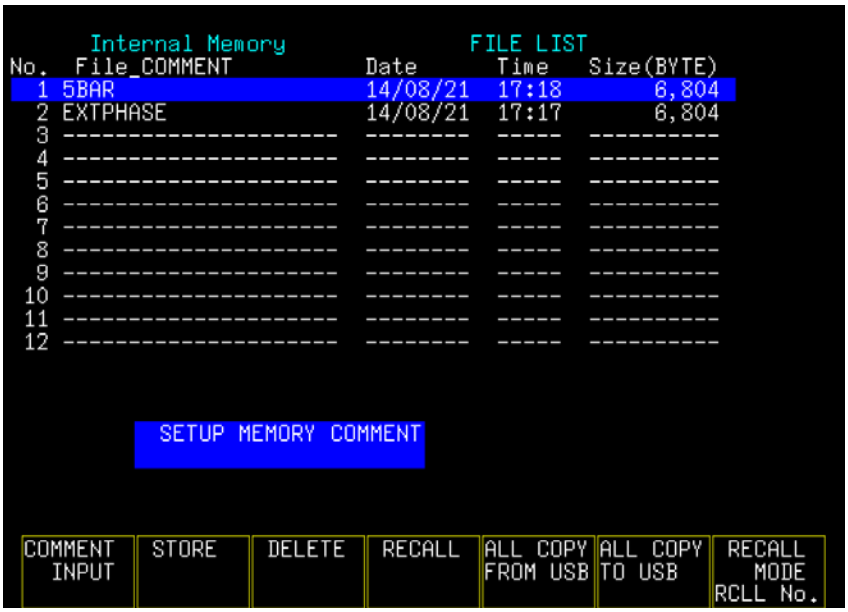


Figure 7-7 Preset registration screen

2. Turn the function dial (F•D) to select the file that you want to copy from.
3. Press F•4 RECALL.

   The copy source file name appears under SETUP MEMORY COMMENT.

4. Turn the function dial (F•D) to select the file that you want to copy to.
5. Press F•2 STORE.

   The STORE menu appears.

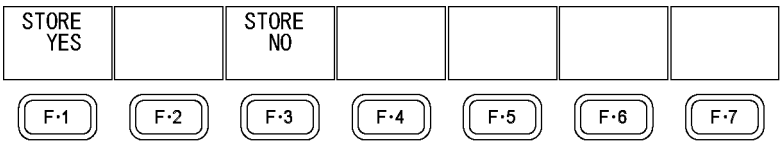


Figure 7-8 STORE menu

6. Press F•1 STORE YES.

   If there is already a preset registered at the selected number, it will be overwritten. To cancel the operation, press F•3 STORE NO.

7.5 Copying All Presets from the LV 5333 to a USB Memory Device

To copy all the presets from the LV 5333 to a USB memory device, follow the procedure below.

1. Connect a USB memory device to the LV 5333.
2. Press MEMORY.

   The preset registration screen appears.

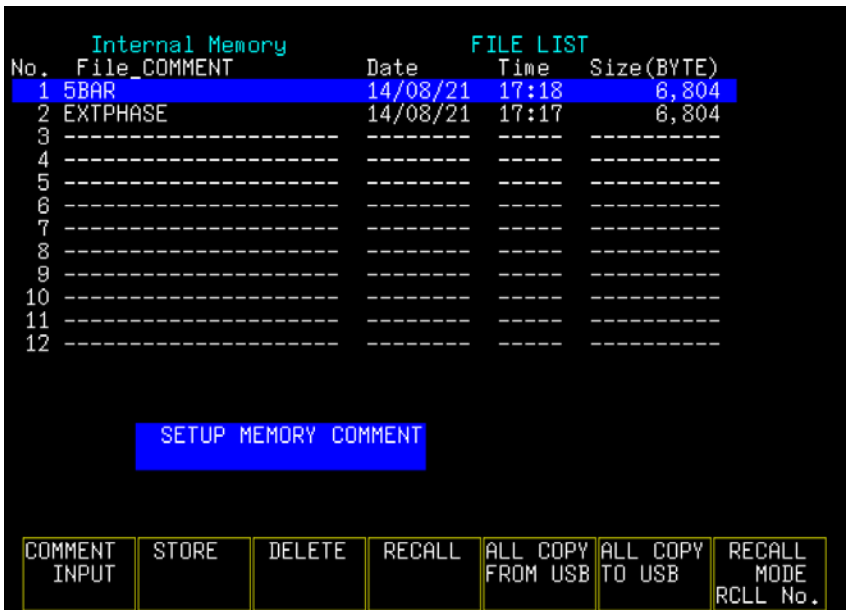


Figure 7-9 Preset registration screen

3. Press F•6 ALL COPY TO USB.

   The ALL COPY TO USB menu appears.

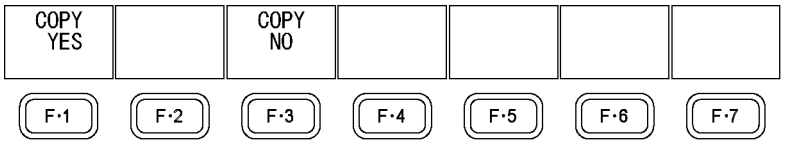


Figure 7-10 ALL COPY TO USB menu

4. Press F•1 COPY YES.

   To cancel the copy operation, press F•3 COPY NO. If the USB memory device already contains presets, they will be overwritten.

   Presets are saved to the following location.
   Note that if you use a PC to change the names of the files stored in the USB memory device, you will no longer be able to copy the altered presets from the USB memory device to an LV 5333.

USB memory device
└ LV5333_USER
  └ PRESET
    └ 00.LVX (to 29.LVX)

7.6 Copying All Presets from a USB Memory Device to the LV 5333

To copy all the presets from a USB memory device to the LV 5333, follow the procedure below.

1. Connect a USB memory device to the LV 5333.
2. Press MEMORY.

   The preset registration screen appears.

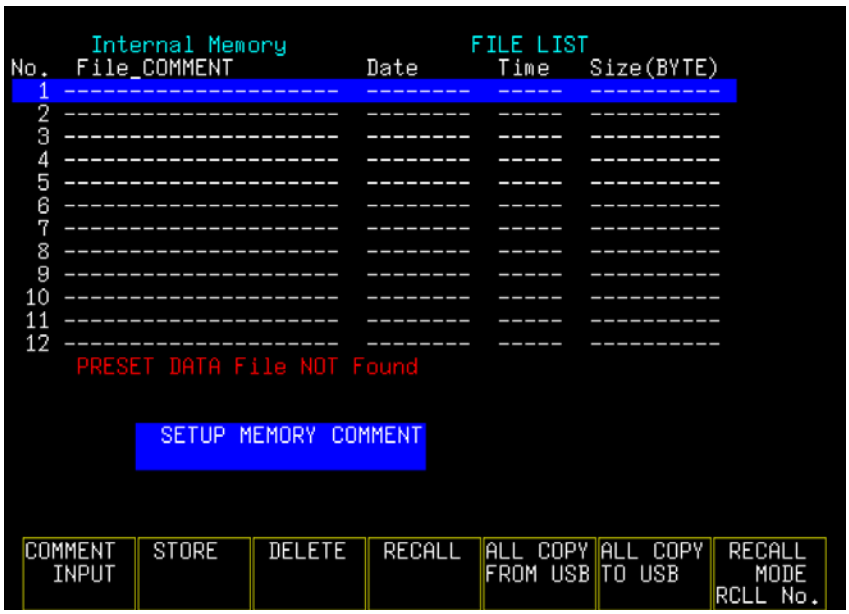


Figure 7-11 Preset registration screen

3. Press F•5 ALL COPY FROM USB.

   The ALL COPY FROM USB menu appears.

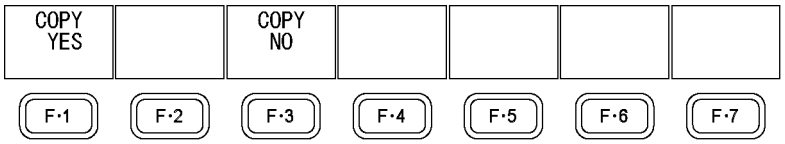


Figure 7-12 ALL COPY FROM USB menu

4. Press F•1 COPY YES.

   To cancel the copy operation, press F•3 COPY NO. If the LV 5333 internal memory already contains presets, they will be overwritten.

8. PICTURE SCREEN

8.1 Picture Screen Description

To display the picture, press PICTURE.

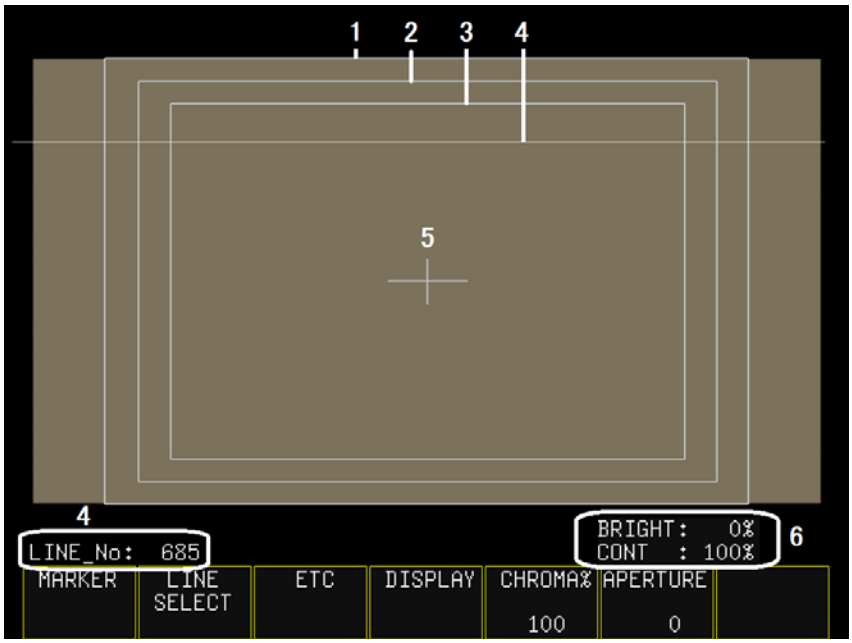


Figure 8-1 Picture screen description

Table 8-1 Picture screen description

No.	Item	Description
1	Aspect marker	You can display a selected aspect ratio marker in the frame. Reference 8.3.1, “Shading the Area Outside of an Aspect Marker”
2	Safe action marker display	You can display a marker in a size relative to the frame or aspect marker. Reference 8.3.2, “Displaying the Safe Action Marker”
3	Safe title marker display	You can display a marker in a size relative to the frame or aspect marker. Reference 8.3.3, “Displaying the Safe Title Marker”
4	Selected line	You can display a marker on the selected line. Reference 8.4, “Configuring the Line Selection Settings”
5	Center marker	You can display a marker in the center of the picture that is 10 % the frame size. Reference 8.3.4“Turning the Center Marker On and Off”
6	Brightness and contrast	The picture brightness and contrast are displayed. You can adjust these at any of the picture display levels. Reference 8.2, “Setting the Brightness and Contrast”

8.2 Setting the Brightness and Contrast

Use the BRIGHT and CONT knobs to adjust the picture brightness and contrast. You can adjust these at any of the picture display levels. The values are displayed in the lower right of the screen.
The values specified here do not apply to CINELITE, CINEZONE, or multi-screen displays.

8.2.1 Adjusting the Brightness

Turn the BRIGHT knob to adjust the picture brightness.
Press the BRIGHT knob to reset the setting to its default value (0%).

Procedure

BRIGHT: −50% - 0% - 50%

8.2.2 Adjusting the Contrast

Turn the CONT knob to adjust the picture contrast.
Press the CONT knob to reset the setting to its default value (100%).

If you set SHORTCUT KEY SET on the SYSTEM menu to CONTRAST, you will be able to press SHORT CUT to switch the contrast in this order: 50%, 100%, and 200%.

Reference SHORTCUT KEY SET → 5.6, “Setting the Short Cut Key.”

Procedure

CONT: 50% - 100% - 200%

8.3 Configuring the Marker Settings

To configure the marker settings, press F•1 MARKER on the PICTURE menu.
This menu item appears when SIZE is set to FIT and CC is set to OFF. The markers that you set here do not appear on the multi-screen display.

Reference SIZE → 8.6.1, “Selecting the Display Size”
CC → 8.5.1, “Displaying Closed Captions”

PICTURE → F•1 MARKER →

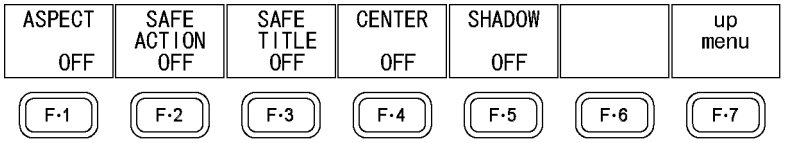


Figure 8-2 MARKER menu

8.3.1 Displaying the Aspect Marker

To display the aspect marker, follow the procedure below.
An aspect marker is displayed as white lines. You can also shade the area outside of the aspect marker.

Reference 8.3.5, “Turning the Aspect Shadow On and Off”

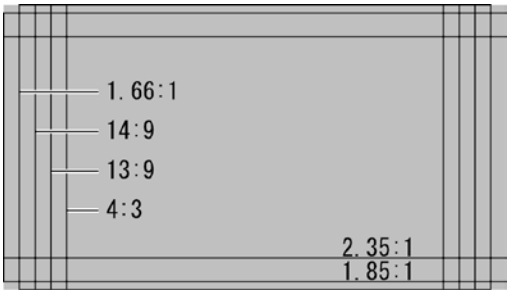
Procedure

PICTURE → F•1 MARKER → F•1 ASPECT: 2.35:1 / 1.85:1 / 1.66:1 / 16:9 / 14:9 / 13:9 / 4:3 / OFF

Settings

2.35:1:	The 2.35:1 aspect marker is displayed.
1.85:1:	The 1.85:1 aspect marker is displayed.
1.66:1:	The 1.66:1 aspect marker is displayed.
14:9:	The 14:9 aspect marker is displayed.
13:9:	The 13:9 aspect marker is displayed.
4:3:	The 4:3 aspect marker is displayed. This setting cannot be selected when the input signal is SD and SQUEEZE is set to OFF.
16:9:	The 16:9 aspect marker is displayed. This setting cannot be selected when the input signal is HD or 3G and SQUEEZE is set to ON.
OFF:	The aspect marker is not displayed.

HD or 3G



SD

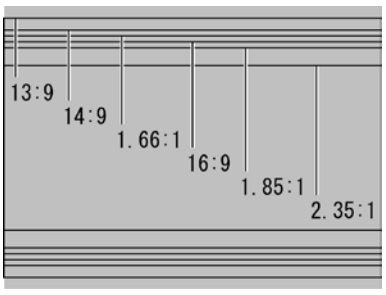


Figure 8-3 Aspect marker

8.3.2 Displaying the Safe Action Marker

To display the safe action marker, follow the procedure below.

Procedure

PICTURE → F•1 MARKER → F•2 SAFE ACTION: 95% / 93% / 90% / OFF

Settings

95%:	A safe action marker is displayed at the 95% position relative to the frame (or the aspect marker when it is displayed).
93%:	A safe action marker is displayed at the 93% position relative to the frame (or the aspect marker when it is displayed).
90%:	A safe action marker is displayed at the 90% position relative to the frame (or the aspect marker when it is displayed).
OFF:	A safe action marker is not displayed.

8.3.3 Displaying the Safe Title Marker

To display the safe title marker, follow the procedure below.

Procedure

PICTURE → F•1 MARKER → F•3 SAFE TITLE: 88% / 80% / OFF

Settings

88%:	A safe title marker is displayed at the 88% position relative to the frame (or the aspect marker when it is displayed).
80%:	A safe title marker is displayed at the 80% position relative to the frame (or the aspect marker when it is displayed).
OFF:	A safe title marker is not displayed.

8.3.4 Turning the Center Marker On and Off

To turn the center marker on and off, follow the procedure below.
The center marker is displayed in the center of the picture at 10% the frame size.

Procedure

PICTURE → F•1 MARKER → F•4 CENTER: ON / OFF

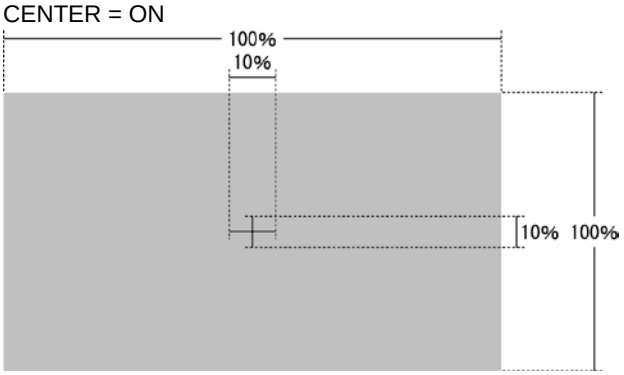


Figure 8-4 Turning the center marker on and off

8.3.5 Turning the Aspect Shadow On and Off

To shade the area outside of an aspect marker, follow the procedure below.

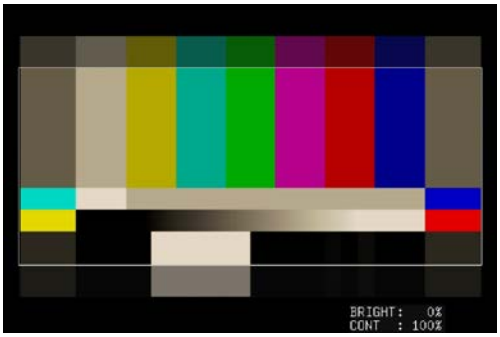
Procedure

PICTURE → F•1 MARKER → F•5 SHADOW: ON / OFF

Settings

ON:	The LV 5333 shades the area outside of the aspect marker. This setting is not valid when F•1 ASPECT is set to OFF.
OFF:	Only the aspect marker is displayed.

SHADOW = ON



SHADOW = OFF

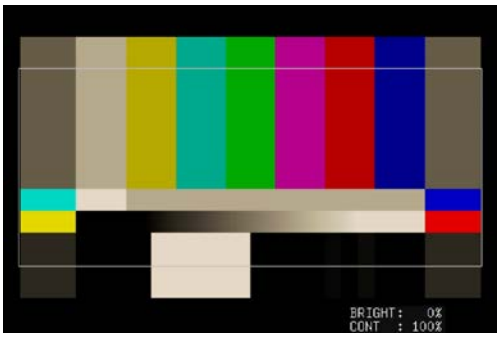


Figure 8-5 Turning the aspect shadow on and off

8.4 Configuring the Line Selection Settings

To configure the line selection settings, press F•2 LINE SELECT on the PICTURE menu. This menu item appears when SIZE is set to FIT. The marker specified here do not appear on the CINELITE display or CINEZONE display.

Reference SIZE → 8.6.1, “Selecting the Display Size”

PICTURE → F•2 LINE SELECT →

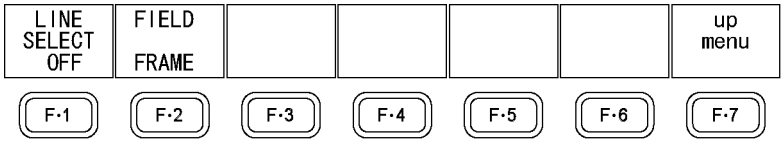


Figure 8-6 LINE SELECT menu

8.4.1 Turning Line Selection On and Off

To display a marker at the selected line, follow the procedure below. You can use the function dial (F•D) to select a line. The number of the selected line appears in the lower left of the screen.

Changing this setting will also change the line selection settings on the video signal waveform display and vectorscope display . In addition, the selected line is linked to the CINELITE display, video signal waveform display, vectorscope display, and status display (data dump display).

Procedure

PICTURE → F•2 LINE SELECT → F•1 LINE SELECT: ON / OFF

LINE SELECT = ON

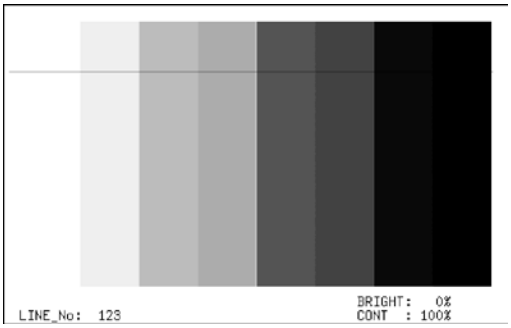


Figure 8-7 Turning line selection on and off

8.4.2 Setting the Line Selection Range

When the input signal is interlace or segmented frame, to set the line select range, follow the procedure below.

Changing this setting will also change the line select range on the video signal waveform display and vectorscope display.

Procedure

PICTURE → F•2 LINE SELECT → F•2 FIELD: FIELD1 / FIELD2 / FRAME

Settings (the examples are for the selectable ranges when the signal is 1080i/59.94)		
FIELD1:	A line from field 1 can be selected.	(Example: 1 to 563)
FIELD2:	A line from field 2 can be selected.	(Example: 564 to 1125)
FRAME:	All lines can be selected.	(Example: 1 to 1125)

8.5 Other Settings

To configure the other settings, press F•3 ETC on the PICTURE menu.

PICTURE → F•3 ETC →

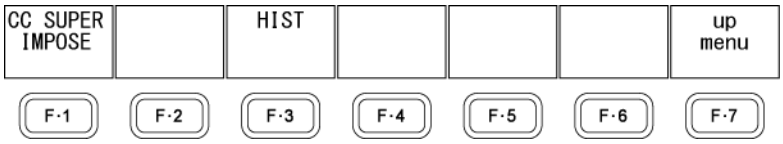


Figure 8-8 ETC menu

8.5.1 Displaying Closed Captions

To configure the closed caption settings, press F•1 CC SUPER IMPOSE on the ETC menu.
This menu appears when the input signal is HD or SD.

PICTURE → F•3 ETC → F•1 CC SUPER IMPOSE →

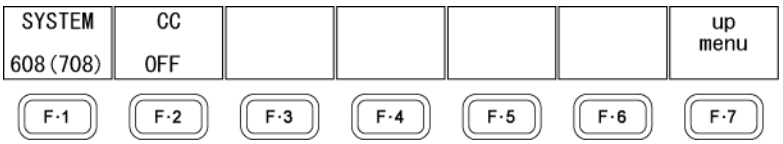


Figure 8-9 CC SUPER IMPOSE menu

To display English SMPTE closed captions, follow the procedure below.
If you select a setting other than OFF, no markers are displayed.

Procedure

PICTURE → F•3 ETC → F•1 CC SUPER IMPOSE → F•2 CC: OFF / CC1 / CC2 / CC3 / CC4 / TEXT1 / TEXT2 / TEXT3 / TEXT4

Settings	
OFF:	Closed captions are not displayed.
CC1:	SMPTE CC1 is displayed.
CC2:	SMPTE CC2 is displayed.
CC3:	SMPTE CC3 is displayed.
CC4:	SMPTE CC4 is displayed.
TEXT1:	SMPTE TEXT1 is displayed.
TEXT2:	SMPTE TEXT2 is displayed.
TEXT3:	SMPTE TEXT3 is displayed.
TEXT4:	SMPTE TEXT4 is displayed.

8.5.2 Selecting the Closed Caption Format

To select the English SMPTE closed caption format, follow the procedure below.

Procedure
PICTURE → F•3 ETC → F•1 CC SUPER IMPOSE → F•1 SYSTEM: 608(708) / 608(608) / VBI

Settings	
608(708):	CEA/EIA-608-B closed caption data that is embedded in EIA-708-B CDP packets is displayed.
608(608):	CEA/EIA-608-B closed caption data is displayed.
VBI:	CEA/EIA-608-B closed caption data that is embedded in vertical blanking intervals is displayed.

8.5.3 Displaying the Histogram

To display the histogram, press F•3 HIST on the ETC menu.
This menu item appears when SIZE is set to FIT.

PICTURE → F•3 ETC → F•3 HIST →

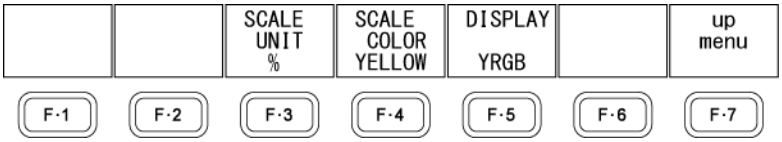


Figure 8-10 HIST menu

A histogram shows the image data distribution for the luminance signal and GBR signals by plotting the luminance level on the horizontal axis and the number of pixels at each luminance level on the vertical axis. Dark points are arranged on the left, and bright points on the right.

On the histogram display, values less than 0% or greater than or equal to 100.1% are displayed as errors. Intensity signal errors are indicated in red, and GBR signal errors in yellow.

On the histogram screen, the menu and displayed information disappear after about 5 seconds from the last operation. To show them again, perform some operation.

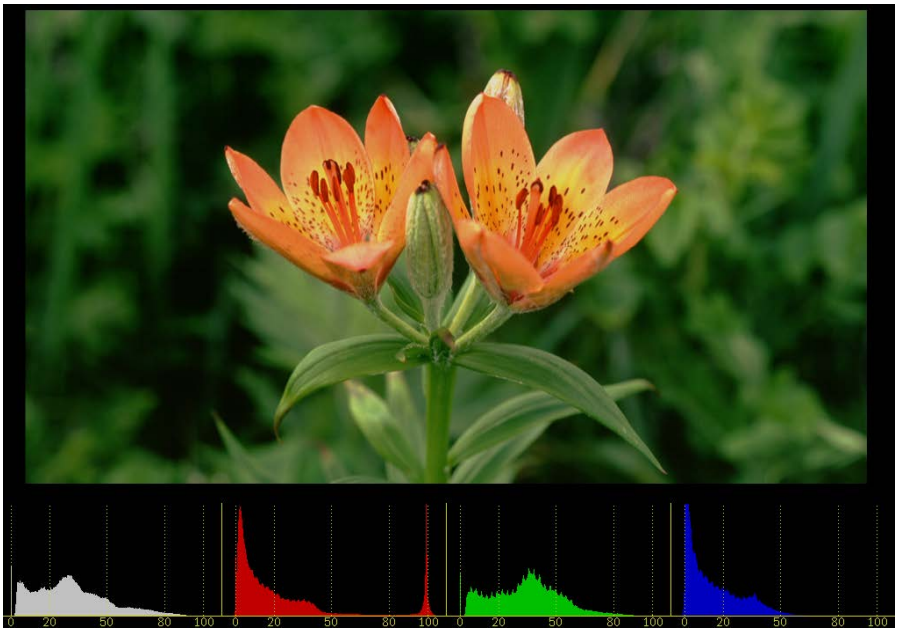


Figure 8-11 Displaying the histogram

8.5.4 Selecting the Scale Unit

To select the scale unit, follow the procedure below.

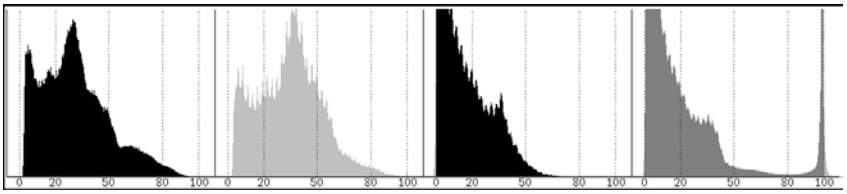
Procedure

PICTURE → F•3 ETC → F•3 HIST → F•3 SCALE UNIT: % / 3FF / 1023

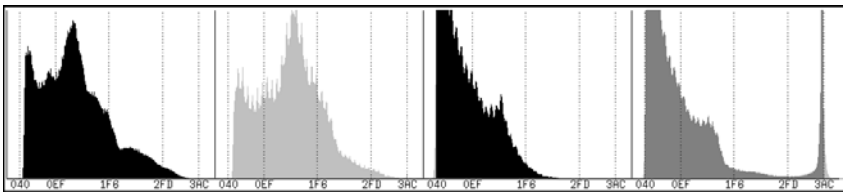
Settings

%:	The scale shows percentages.
3FF:	0 to 100% is displayed as 040 to 3C0.
1023:	0 to 100% is displayed as 64 to 960.

SCALE UNIT = %



SCALE UNIT = 3FF



SCALE UNIT = 1023

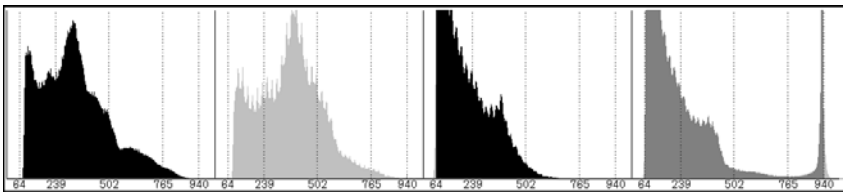


Figure 8-12 Selecting the scale unit

8.5.5 Selecting the Scale Color

To select the scale color, follow the procedure below.

Procedure

PICTURE → F•3 ETC → F•3 HIST → F•4 SCALE COLOR: WHITE / YELLOW / CYAN / GREEN / MAGENTA / RED / BLUE

8.5.6 Selecting the Display Format

To select the display format, follow the procedure below.

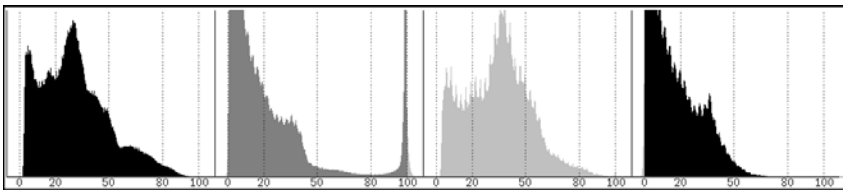
Procedure

PICTURE → F•3 ETC → F•3 HIST → F•5 DISPLAY: YRGB / Y1023

Settings

YRGB:	From the left, the histograms of the luminance signal, R signal, G signal, and B signal are displayed.
Y1023:	A luminance histogram is displayed.

DISPLAY = YRGB



DISPLAY = Y1023

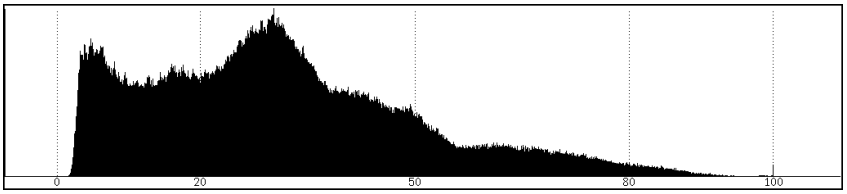


Figure 8-13 Selecting the display format

8.6 Configuring the Display Settings

To configure the display settings, press F•4 DISPLAY on the PICTURE menu.

PICTURE → F•4 DISPLAY →

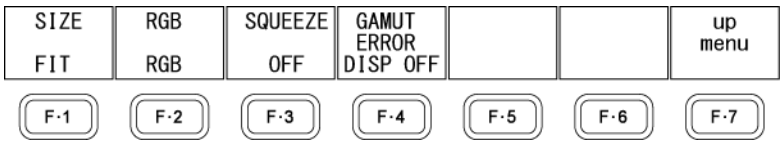


Figure 8-14 DISPLAY menu

8.6.1 Selecting the Display Size

To select the picture display size, follow the procedure shown below.
Regardless of the setting specified here, the picture is displayed using the FIT setting on the CINELITE display, CINEZONE display, and multi-screen displays.

Procedure

PICTURE → F•4 DISPLAY → F•1 SIZE: FIT / x1 / x2 / FULL

Settings

FIT:	The picture size is adjusted to the most suitable size for the screen.
x1:	A single sample of the video signal is displayed with a single pixel on the screen. The marker and line select features cannot be used. If the input signal is HD or 3G, you can use the control stick to adjust the picture position. The menu and displayed information disappear after about 5 seconds from the last operation. To show them again, perform some operation.
x2:	A single sample of the video signal is displayed with four pixels on the screen. The marker and line select features cannot be used. You can use the control stick to adjust the picture position. The menu and displayed information disappear after about 5 seconds from the last operation. To show them again, perform some operation.
FULL:	The picture is displayed so that it takes up the whole screen. The marker and line select features cannot be used. When the input signal is HD or 3G, the sides of the picture are cut off to display it. The menu and displayed information disappear after about 5 seconds from the last operation. To show them again, perform some operation.

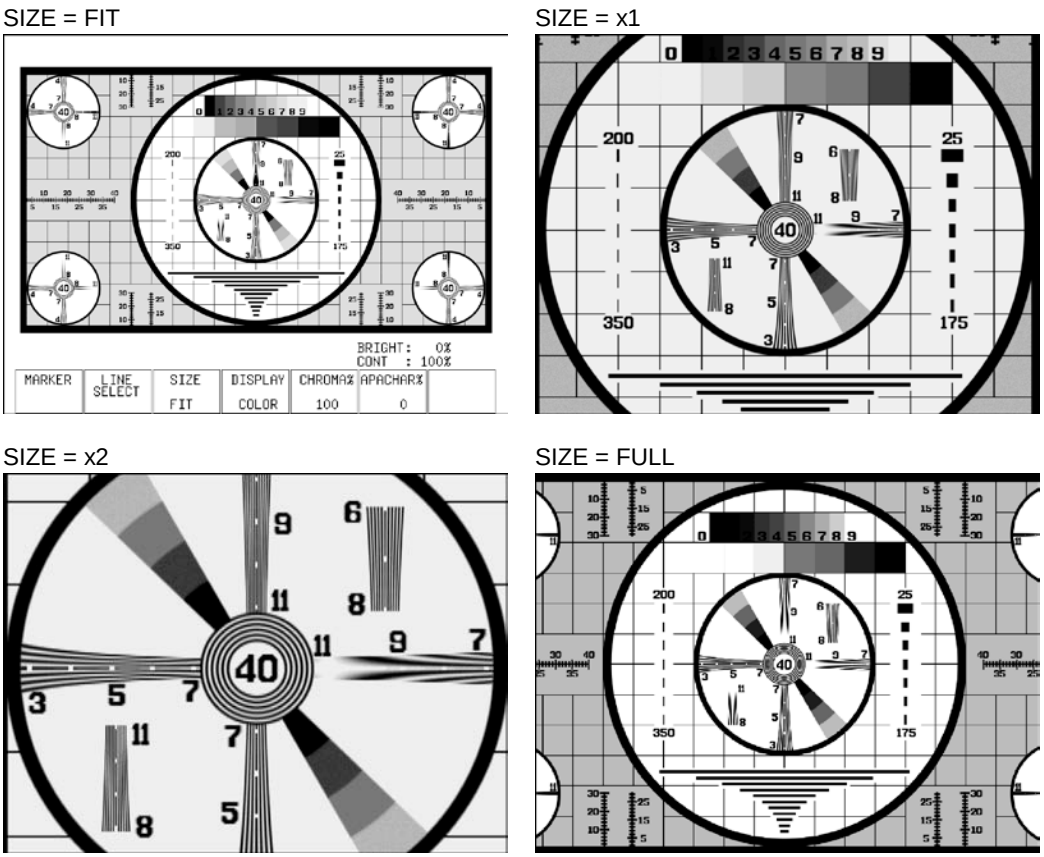


Figure 8-15 Selecting the display size

8.6.2 Turning the RGB Signals On and Off

To turn the individual R, G, and B signals on or off, follow the procedure below. You cannot turn all the signals off.

Procedure

PICTURE → F•4 DISPLAY → F•2 RGB: RGB / MONO / RG- / R-B / -GB / R-- / -G- / --B

Settings

RGB:	All the RGB signals are displayed.
MONO:	The picture is displayed in monochrome.
RG-:	The R and G signals are displayed.
R-B:	The R and B signals are displayed.
-GB:	The G and B signals are displayed.
R--:	The R signal is displayed.
-G-:	The G signal is displayed.
--B:	The B signal is displayed.

8.6.3 Turning the Squeeze Display On and Off

To horizontally expand and display squeezed images, follow the procedure below.
This setting is valid when the input signal is SD and SIZE is set to FIT.
Regardless of the setting specified here, the picture is displayed using the OFF setting on the CINELITE and CINEZONE displays.

Reference SIZE → 8.6.1, “Selecting the Display Size”

Procedure

PICTURE → F•4 DISPLAY → F•3 SQUEEZE: ON / OFF

Settings

ON:	Images with an aspect ratio of 4:3 are expanded horizontally and displayed with an aspect ratio of 16:9.
OFF:	No image expansion is performed.

8.6.4 Displaying Gamut Errors

To display the locations where gamut errors, composite gamut errors, or luminance error are occurring over the picture, follow the procedure below. If the detected value is greater than the upper limit, a red mesh pattern indicates the error location. If the detected value is less than the lower limit, a black mesh pattern indicates the error location.
Gamut errors are displayed if GAMUT ERROR on the STATUS menu is set to ON.
Composite gamut errors are displayed if C.GAMUT ERROR is set to ON. Luminance errors are displayed if LUMA ERROR is set to ON. Additionally, you can use the GAMUT, COMPOSIT GAMUT and LUMA settings on the STATUS menu to set the levels that are used to detect errors.
Gamut errors are not displayed on the CINELITE, CINEZONE, and multi-screen displays.

Reference GAMUT ERROR, C.GAMUT ERROR, LUMA ERROR → 13.6.3, “Configuring Error Detection Settings”
GAMUT → 13.6.5, “Configuring Gamut Error Settings”
COMPOSIT GAMUT → 13.6.6 “Configuring the Composite Gamut Error Settings”
LUMA → 13.6.8 “Configuring the Luminance Level Error Settings”

Procedure

PICTURE → F•4 DISPLAY → F•4 GAMUT ERROR: DISP ON / DISP OFF

GAMUT ERROR = DISP ON

GAMUT ERROR = DISP OFF

Figure 8-16 Displaying gamut errors

8.7 Adjusting the Chroma Gain

To adjust the chroma gain, follow the procedure below. Press the function dial (F•D) to return the setting to its default value (100).
Regardless of the setting specified here, the picture is displayed with the chroma gain set to 100 on the CINELITE and CINEZONE displays.

Procedure

PICTURE → F•5 CHROMA%: 0 - 100 - 150

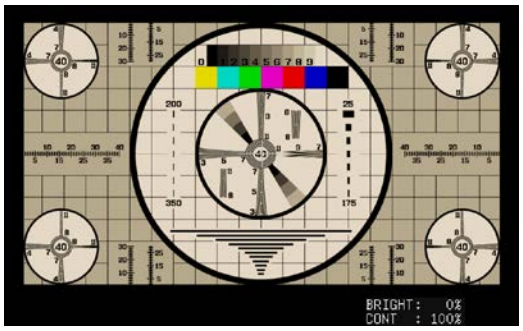
8.8 Adjusting the Aperture

To adjust the aperture, follow the procedure below. A larger number will result in more well-defined outlines. Press the function dial (F•D) to return the setting to its default value (0).

Procedure

PICTURE → F•6 APERTURE: 0 - 200

APERTURE = 0



APERTURE = 100

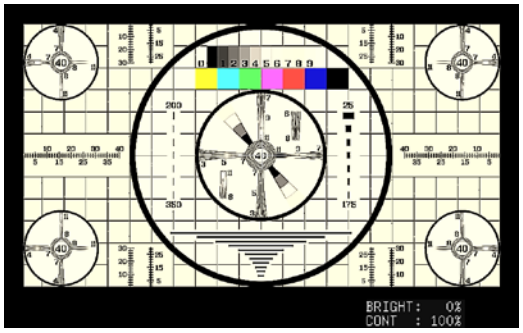


Figure 8-17 Adjusting the aperture

9. CINELITE DISPLAY

To display CINELITE, press CINELITE.
CINELITE is a feature that displays luminance levels of video signals on the picture.

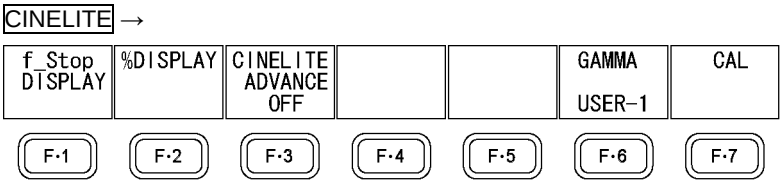


Figure 9-1 CINELITE menu

9.1 f Stop Display Description

To display the f Stop display, follow the procedure below.

Procedure

CINELITE → F•1 f_Stop DISPLAY

On the f Stop display, luminance levels are displayed using f-stop (exposure) values.
f Stop values that correspond to luminance levels equal to or less than 0 % cannot be measured and are displayed as “****.”

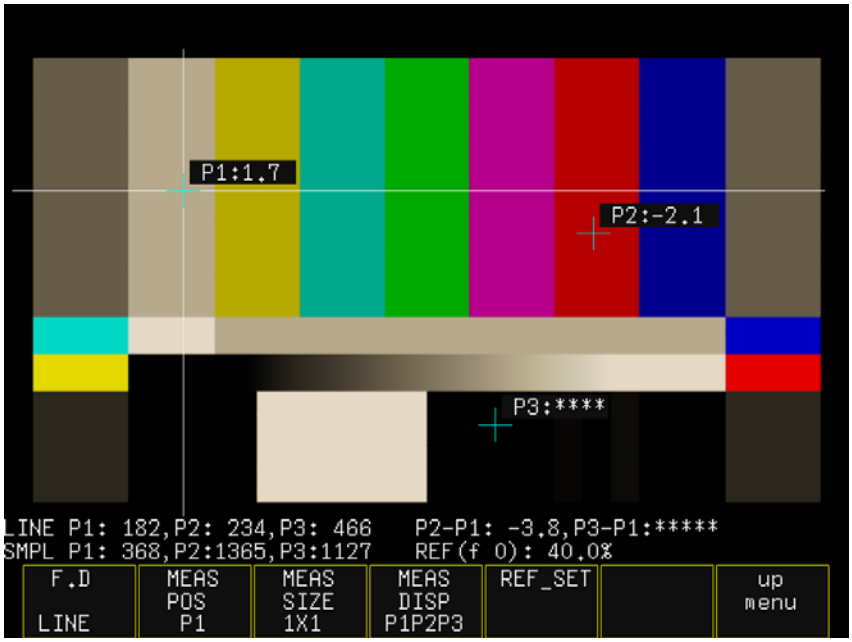


Figure 9-2 f Stop display description

1. REF(f 0)

   Luminance level when F•5 REF_SET is pressed

2. Cursor

   You can set up to three cursors. The f Stop value relative to the reference point is displayed at each point.

3. P2-P1, P3-P1

   f Stop difference

4. Coordinates

   The cursor coordinates are indicated here with both line and sample numbers.

9.2 Procedure for Displaying the f Stop Display

The following example shows how to display luminance levels as f Stop numbers relative to the luminance level of 18 % gray chart. Include an 18 % gray chart with the objects that you are filming.

1. Press CINELITE.
2. Press F•6 GAMMA to select a gamma correction table.

   The default gamma correction value is 0.45, but you can also use a user-defined gamma correction table that matches the gamma characteristics of the camera that you are using. For details, see section 9.8, “Configuring User-Defined Correction Tables.”

3. Press F•1 f_Stop DISPLAY.
4. Place the cursors over the 18 % gray area.

   You can set the cursor to any measurement point from P1 to P3.

   Reference 9.5, “Setting the Cursors”

5. Press F•5 REF_SET.

   The luminance level 18% gray becomes the reference value and is displayed as a percentage in the bottom right of the display next to “REF(f 0).” The f Stop value for this luminance level becomes 0.0.

6. Use the cursors to set the measurement points.

   The f Stop value relative to 18% gray appears next to each cursor.

9.3 %DISPLAY Screen Description

To display the %DISPLAY screen, follow the procedure below.

Procedure

CINELITE → F•2 %DISPLAY

On the %DISPLAY screen, you can display luminance levels using LEVEL%, RGB%, or RGB 255. Press F•5 %/RGB to select the display format.

- LEVEL% display

  Luminance levels are indicated as percentages. This is the default setting.

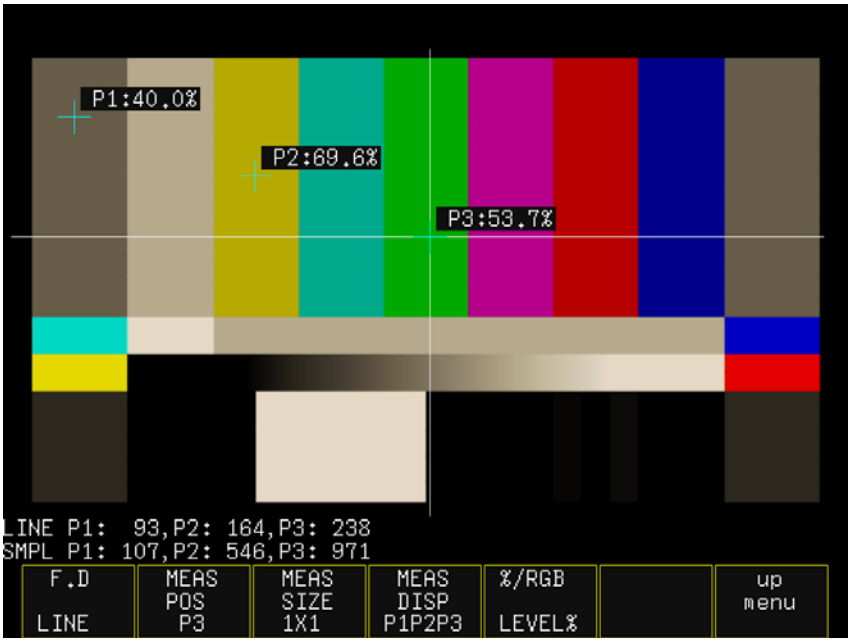


Figure 9-3 LEVEL% display

● RGB% Display

Each of the R, G, and B levels is indicated using a percentage. The levels are also indicated using bars on the left side of the display (the order is R, G, and then B).

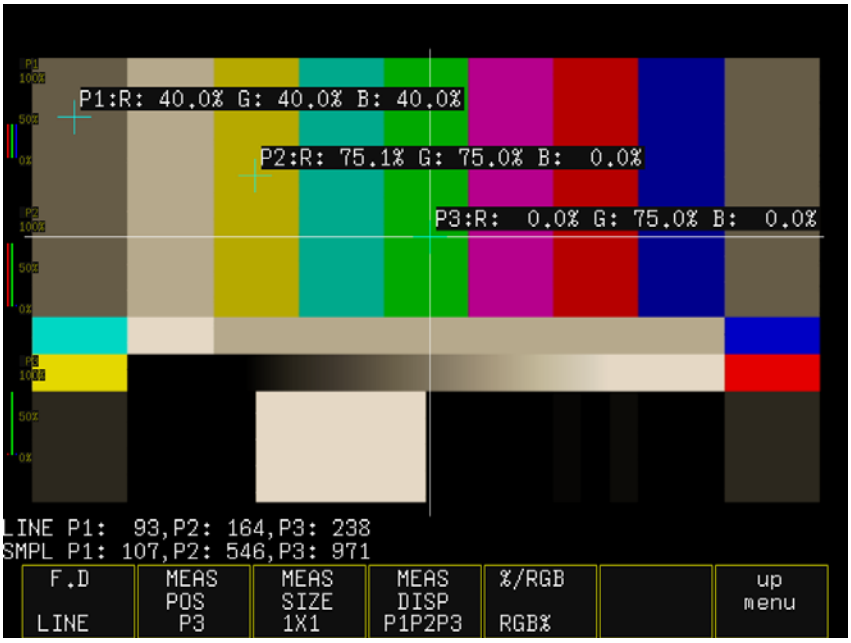


Figure 9-4 RGB% display

● RGB 255 Display

Each of the R, G, and B levels is indicated using 256 steps from 0 to 255. The levels are also indicated using bars on the left side of the display (the order is R, G, and then B). The value of an RGB level that is 100 % or greater is 255. The value of an RGB level that is 0 % or less is 0.

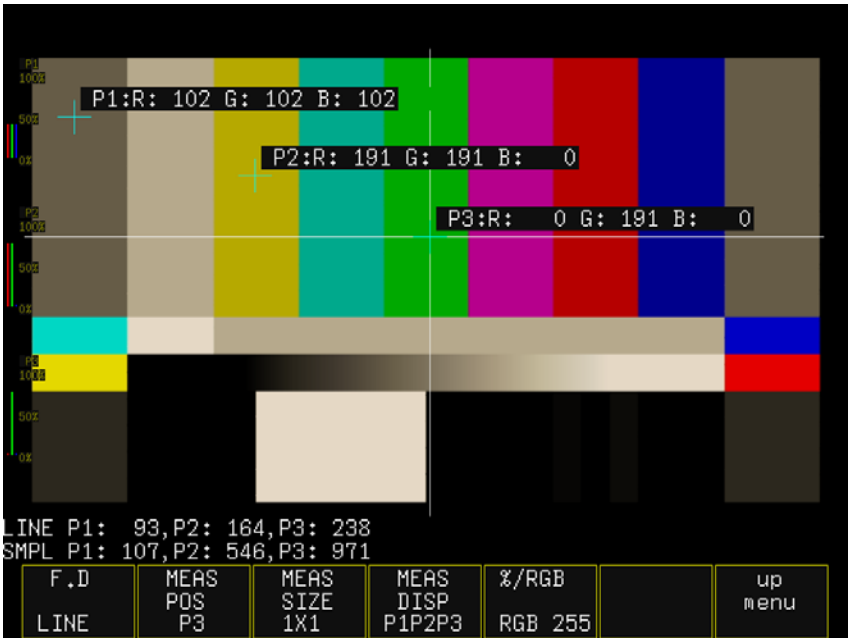


Figure 9-5 RGB 255 display

9.4 Selecting the Measurement Points

You can set up to three measurement points.
To select the measurement point to move with the cursor, follow the procedure below.

Procedure

CINELITE
→ F•1 f_Stop DISPLAY → F•2 MEAS POS: P1 / P2 / P3
→ F•2 %DISPLAY → F•2 MEAS POS: P1 / P2 / P3

9.5 Configuring the Cursor Settings

To set a measurement point, press F•2 MEAS POS to select the measurement point, and then move the X and Y cursors. You can set the line with the Y cursor and the sample with the X cursor. (The X and Y cursors are not displayed if they are within the blanking interval.)

The Y cursor position (LINE) is linked to the selected line on the picture, video-signal-waveform, vector-waveform, and status (data dump) displays.

There are three methods for moving the cursors.

- Using the V POS and H POS Knobs

  Turning the V POS knob clockwise moves the Y cursor (LINE) up. Pressing the V POS knob moves the Y cursor to the center of the picture.
  Turning the H POS knob clockwise moves the X cursor (SMPL) to the right. Pressing the H POS knob moves the X cursor to the center of the picture.

- Using the Control Stick

  Tilting the control stick up moves the Y cursor (LINE) up.
  Tilting the control stick to the right moves the X cursor (SMPL) to the right.
  You can move diagonally using the control stick. If you press the control stick first and then tilt, the movement will be faster.

- Using the Function dial (F•D)

  Select the cursor by following the procedure below, and then turn the function dial (F•D). Press the function dial (F•D) to switch between LINE and SAMPLE.

  Procedure

  CINELITE
  → F•1 f_Stop DISPLAY → F•1 F.D: LINE / SAMPLE
  → F•2 %DISPLAY → F•1 F.D: LINE / SAMPLE

  Settings

LINE:	Turning the function dial (F•D) clockwise moves the Y cursor (LINE) down.
SAMPLE:	Turning the function dial (F•D) clockwise moves the X cursor (SMPL) to the right.

9.6 Setting the Measurement Size

To select the measurement size, follow the procedure below. This setting is applied to P1 to P3 and REF.

Procedure

CINELITE
→ F•1 f_Stop DISPLAY → F•3 MEAS SIZE: 1X1 / 3X3 / 9X9
→ F•2 %DISPLAY → F•3 MEAS SIZE: 1X1 / 3X3 / 9X9

Settings

1X1:	The single pixel at the intersection of the cursors is measured.
3X3:	The 3×3 area of pixels with its center at the intersection of the cursors is averaged and measured.
9X9:	The 9×9 area of pixels with its center at the intersection of the cursors is averaged and measured.

9.7 Selecting the Points to Display

You can set three points to measure: P1 to P3. To select the measured points that you want to display, follow the procedure below.

Procedure

CINELITE
→ F•1 f_Stop DISPLAY → F•4 MEAS DISP: P1P2P3 / P1P2-- / P1--P3 / --P2P3 / P1---- / --P2-- / ----P3
→ F•2 %DISPLAY → F•4 MEAS DISP: P1P2P3 / P1P2-- / P1--P3 / --P2P3 / P1---- / --P2-- / ----P3

Settings

P1P2P3:	P1 to P3 are displayed.
P1P2--:	P1 and P2 are displayed.
P1--P3:	P1 and P3 are displayed.
--P2P3:	P2 and P3 are displayed.
P1----:	P1 is displayed.
--P2--:	P2 is displayed.
----P3:	P3 is displayed.

9.8 Configuring User-Defined Correction Tables

The default gamma correction value when measuring f Stop levels is 0.45, but you can also use a user-defined gamma correction table that matches the gamma characteristics of the camera that you are using.
User-defined correction tables are not deleted even if you initialize the LV 5333.

You can create and store up to three user-defined correction tables.
As an example, the following procedure shows how to create a user-defined correction table that matches a camera's gamma characteristics.
Set the camera's f Stop value to F5.6 beforehand, and put an 18 % gray chart in the area that you will film.

1. Adjust the lighting so that the displayed luminance level of the 18 % gray chart is 45.0 % (for example) on a camera whose f Stop value is set to F5.6.

   See section 9.3, “%DISPLAY Screen Description.”

2. Press F•7 up menu.
3. Press F•6 GAMMA, and select USER-1.

   In this example, explanation will be given for USER-1, but USER2 and USER3 can also be created in the same way.

4. Press F•7 CAL.

   When you press F•7 CAL, a user-defined correction table appears in the lower left of the screen, and the luminance level appears as a 10-bit value (0% is displayed as 64, and 100% is displayed as 940) close to the cursor.

Figure 9-6 User-defined correction table creation screen

5. Press F•2 TABLE CLEAR.

   All the values in the user-defined correction table that is currently being edited are initialized. Be sure to initialize the values first when you create a new user-defined correction table.

6. Press F•1 DELETE YES.

   To cancel the initialization of the user-defined correction table, F•3 DELETE NO.

7. Place the cursors over the 18 % gray chart.
8. Set F•5 CAL_F to 5.6.
9. Press F•4 CAL SET.

   The luminance level when the camera f Stop value is F5.6 is input into Lev in the user-defined correction table. To delete a line of data, press F•3 DATA CLEAR.

10. Change F•5 CAL_F and the camera f Stop value together in the following order: 4.0, 2.8, 2.0, 8.0, 11.0, 16.0, 22.0. F•4 CAL SET each time you change the value to input the luminance level for each value.

    Do not change the lighting or the position of the 18 % gray chart.
    Also, make sure that the Lev value for f Stop values 22.0 to 2.0 increases linearly.

The REF value in the user-defined correction table is entered when you press F•5 REF_SET on the f Stop display.

For example, if you use the following table and press F•5 REF_SET when the luminance level (Y value in the data dump) at the intersection of the X and Y cursors is 416, the f Stop value at that point (3.0) is displayed as the REF value.

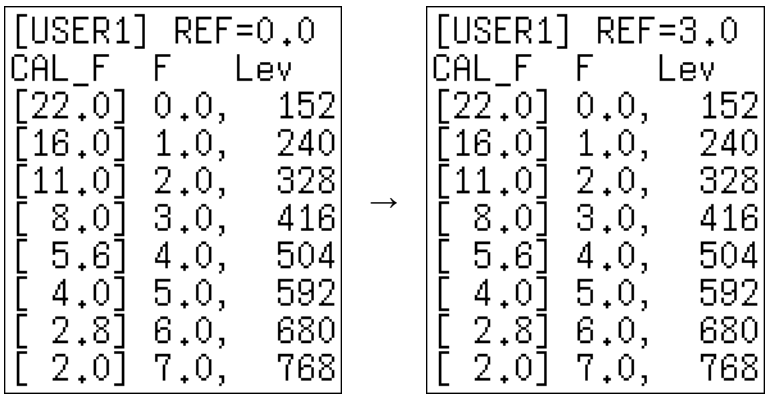


Figure 9-7 User-defined correction tables

When the above user-defined correction tables are used, f Stop values are indicated as shown below. The values between specified values are interpolated linearly.

When Lv = 152 f Stop = 0.0 - 3.0 = −3.0
When Lv = 240 f Stop = 1.0 - 3.0 = −2.0
When Lv = 328 f Stop = 2.0 - 3.0 = −1.0
When Lv = 416 f Stop = 3.0 - 3.0 = 0.0
When Lv = 504 f Stop = 4.0 - 3.0 = 1.0
When Lv = 592 f Stop = 5.0 - 3.0 = 2.0
When Lv = 680 f Stop = 6.0 - 3.0 = 3.0
When Lv = 768 f Stop = 7.0 - 3.0 = 4.0

9.9 Displaying Link Markers

To synchronize the markers on the vector screen and video signal waveform screen to measurement points P1 to P3 and REF that you specify on the CINELITE screen, follow the procedure below.

Markers cannot be displayed on the video signal waveform in the following situations.
• When SWEEP on the WFM menu is set to V
• When COLOR MATRIX on the WFM menu is set to COMPOSIT
Marker display will not work properly when waveforms are being displayed using an external sync signal.

If P+V or P+V+W is selected, the measured values of the selected measurement point are displayed in the lower left of the vector screen. For details on the measured values, see section 12.4.5, “Turning Vector Markers On and Off.”

Procedure

CINELITE → F•3 CINELITE ADVANCE: OFF / P+V / P+W / P+V+W

Settings

OFF:	P1 to P3 and REF are displayed only on the CINELITE screen.
P+V:	P1 to P3 and REF are displayed on the CINELITE and vector screens.
P+W:	P1 to P3 and REF are displayed on the CINELITE and video-signal-waveform screens.
P+V+W:	P1 to P3 and REF are displayed on the CINELITE, vector, and video-signal-waveform screens.

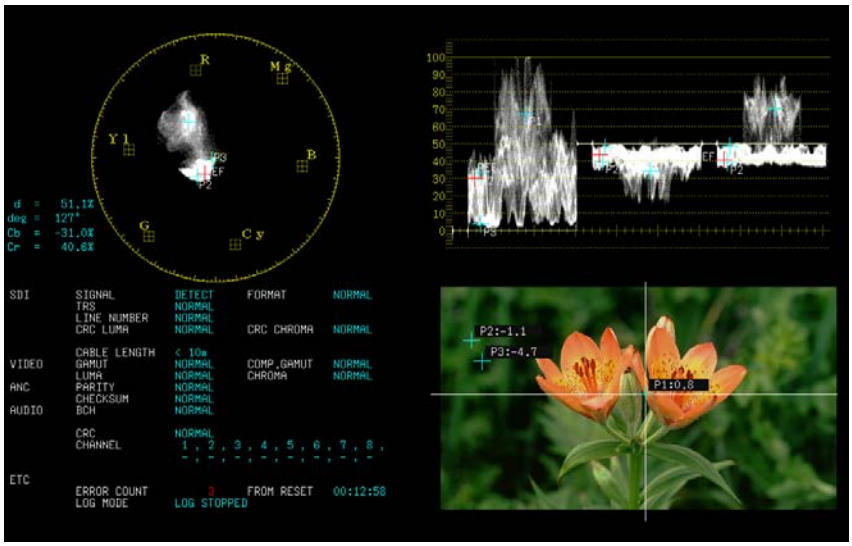


Figure 9-8 Displaying link markers

10. CINEZONE DISPLAY

To display CINEZONE, press CINEZONE.
The CINEZONE display has a CINEZONE display mode—in which the picture luminance levels are converted into colors and displayed—and a level search display mode—in which the specified luminance level is displayed in green.

10.1 Selecting the Display Format

To switch between the CINEZONE display and level search display modes, follow the procedure below.

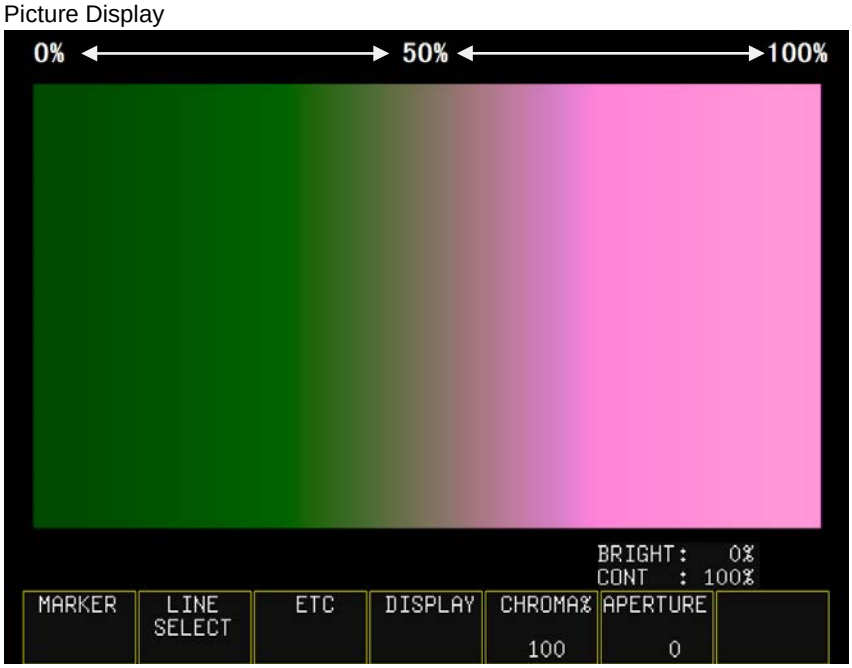
Procedure

CINEZONE → F•1 MODE: ZONE / SEARCH

10.2 CINEZONE Display

In CINEZONE display, the luminance levels of the picture are displayed using RGB colors. Luminance levels above F•5 UPPER% are displayed in white, and levels below F•6 LOWER% are displayed in black. You can see what colors correspond to what luminance levels by looking at the scale on the right of the display.

Picture Display



CINEZONE

CINEZONE Display

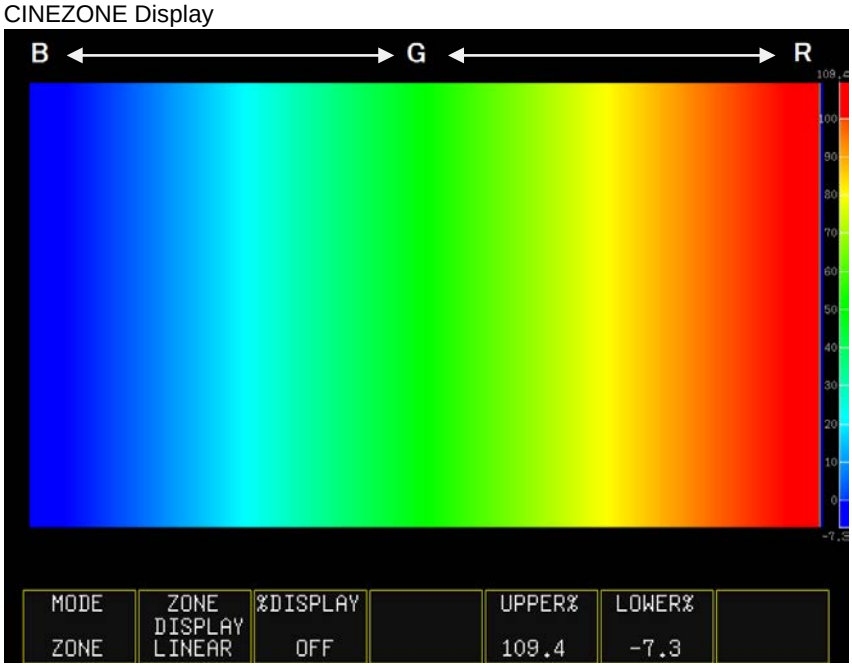


Figure 10-1 CINEZONE display

10.2.1 Selecting the Display Colors

When F•1 MODE is set to ZONE, to set the color levels, follow the procedure below.

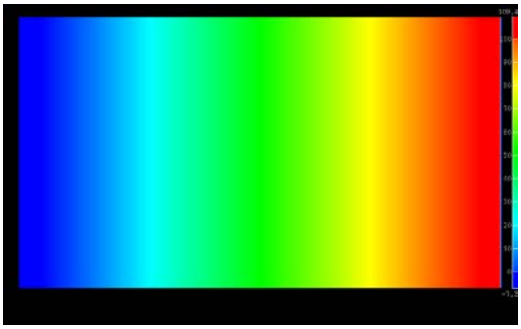
Procedure

CINEZONE → F•2 ZONE DISPLAY: LINEAR / STEP

Settings

LINEAR:	0 to 100% is displayed using 1024 color levels.
STEP:	12 color levels assigned to less than 0%, 0 to 100% (in steps of 10), and greater than 100% are used.

ZONE DISPLAY = LINEAR



ZONE DISPLAY = STEP

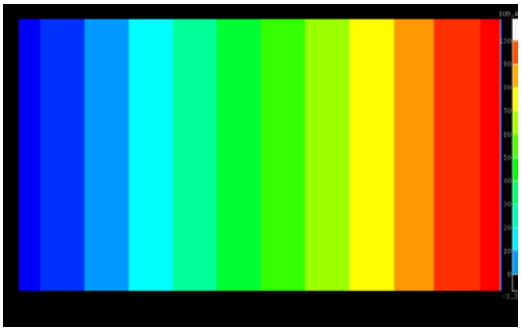


Figure 10-2 Selecting the display colors

10.2.2 Displaying the %DISPLAY

When F•1 MODE is set to ZONE, to overlay %DISPLAY on CINEZONE, follow the procedure below.

Procedure

CINEZONE → F•3 %DISPLAY: OFF / ON

Settings

OFF:	Only CINEZONE is displayed.
ON:	%DISPLAY is overlaid on CINEZONE.

%DISPLAY = OFF

%DISPLAY = ON

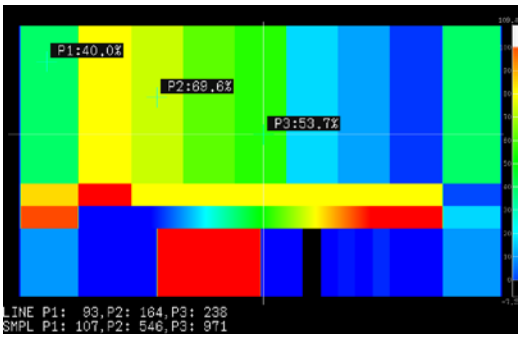


Figure 10-3 Displaying the %DISPLAY

10.2.3 Configuring the %DISPLAY Settings

To configure the settings of %DISPLAY overlaid on CINEZONE, press F•4 DISPLAY on the CINEZONE menu. For instructions, see chapter 9, “CINELITE Display.”
This menu appears when F•3 %DISPLAY is set to ON.

CINEZONE → F•4 DISPLAY →

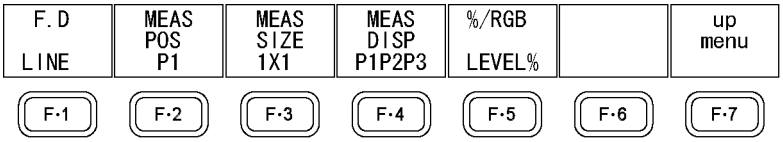


Figure 10-4 DISPLAY menu

10.2.4 Selecting the Display Colors

On the CINEZONE display, luminance levels are displayed using colors, but luminance levels above F•5 UPPER% are displayed in white, and levels below F•6 LOWER% are displayed in black.

If the difference between F•5 UPPER% and F•6 LOWER% is 1%, reducing F•5 UPPER% will also reduce F•6 LOWER% automatically to maintain the 1% difference. Likewise, increasing F•6 LOWER% will also increase F•5 UPPER% automatically to maintain the 1% difference.

To set the display color range, follow the procedure below.

Procedure

CINEZONE
→ F•5 UPPER%: −6.3 - 100.0 - 109.4
→ F•6 LOWER%: −7.3 - 0.0 - 108.4

10.3 Level Search Display

In level search display, the specified luminance level range is displayed with gradations. Also, luminance levels greater than or equal to the specified range are displayed in white, and levels less than equal to the specified range are displayed in black.

Figure 10-5 Level search display

10.3.1 Setting the Search Level

When F•1 MODE is set to SEARCH, to set the level that is displayed with gradation, follow the procedure below.
The range specified by F•3 RANGE% in reference to F•2 LEVEL% is displayed with gradation.

Procedure

CINEZONE
→ F•2 LEVEL%: −7.3 - 50.0 - 109.4
→ F•3 RANGE%: 0.5 - 12.0 - 100.0

11. VIDEO SIGNAL WAVEFORM DISPLAY

11.1 Video Signal Waveform Screen Description

To display the video signal waveform, press WFM.

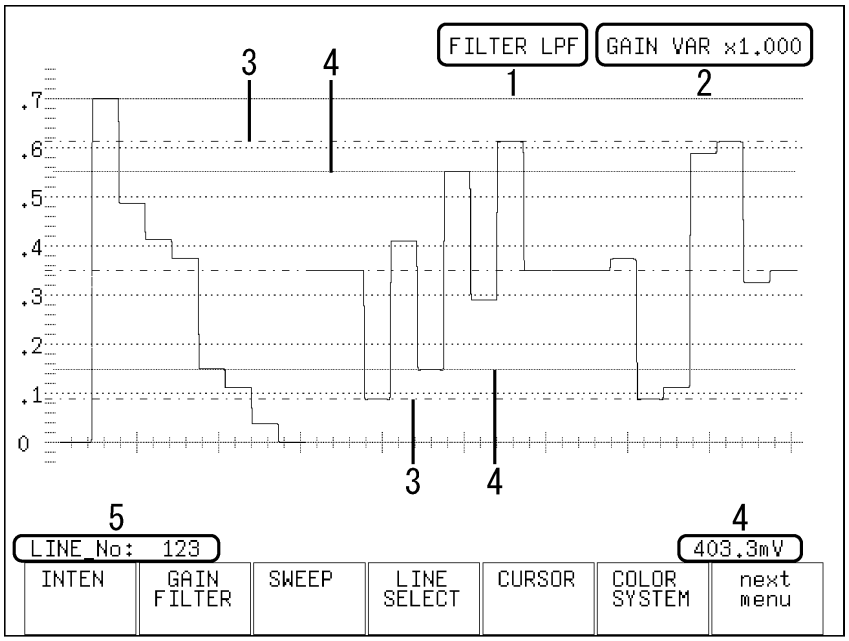


Figure 11-1 Video signal waveform screen description

Table 11-1 Video signal waveform screen description

No.	Item	Description
1	Filter	Appears when the low-pass filter is enabled. Reference 11.5.3, “Selecting the Filter.”
2	Gain	The video signal waveform gain is displayed. You can set the gain to a value between 0.2 and 10 by setting GAIN MAG and GAIN VARIABLE. Reference 11.5.1, “Selecting the Fixed Gain,” 11.5.2, “Setting the Variable Gain”
3	75% color bar scale display	A scale on which a 75% color bar signal input is mapped to the peak level of the chrominance is displayed. Reference 11.10.2, “Turning the 75% Color Bar Scale On and Off”
4	Cursor	You can measure the time or amplitude using cursors. Reference 11.8, “Configuring Cursor Settings”
5	Selected line	The waveform of the selected line is displayed. Reference 11.7, “Configuring the Line Selection Settings”

11.2 Setting the Display Position

Use the V POS and H POS knobs to adjust the display position of the video signal waveform.

● Adjusting the Vertical Position

Use the V POS knob to adjust the vertical position of the video signal waveform.
Pressing the knob returns the display position to its default position.

● Adjusting the Horizontal Position

Use the H POS knob to adjust the horizontal position of the video signal waveform.
Pressing the knob returns the display position to its default position.

11.3 Displaying the VE Mode Menu

When VE MODE is on, pressing WFM displays a dedicated video-engineer station menu.
Press F•7 next menu to display the menu that appears when VE MODE is set to OFF.
The dedicated video-engineer station menu contains commands that are used often. Only a single action is needed to select the menu item.

Reference VE MODE → 5.2, “Setting the VE Mode”

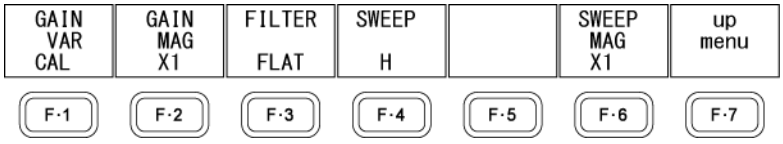


Figure 11-2 The dedicated video-engineer station menu

11.4 Setting the Intensity

To set the intensity, press F•1 INTEN on the WFM menu.

WFM → F•1 INTEN →

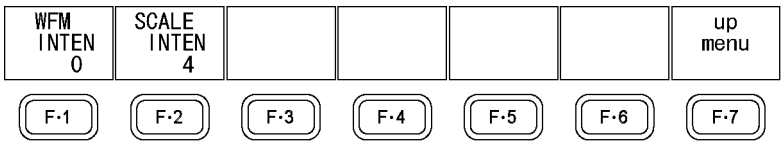


Figure 11-3 INTEN menu

11.4.1 Adjusting the Waveform Intensity

To adjust the video signal waveform intensity, follow the procedure below.
Regardless of this setting, in the multi-screen display, the intensity set with MULTI WFM is used to display the waveform. Note that WFM INTEN set with MULTI WFM is linked to VECTOR INTEN set with MULTI VEC.
Press the function dial (F•D) to return the setting to its default value (0).

Reference MULTI WFM, MULTI VEC → 15.2, “Setting the Measurement Mode”

Procedure

WFM → F•1 INTEN → F•1 WFM INTEN: −128 - 0 - 127

11.4.2 Adjusting the Scale Intensity

To adjust the scale intensity, follow the procedure below.
Regardless of this setting, in the multi-screen display, the intensity set with MULTI WFM is used to display the waveform. Note that SCALE INTEN set with MULTI WFM is linked to SCALE INTEN set with MULTI VEC.
Press the function dial (F•D) to return the setting to its default value (4).

Reference MULTI WFM, MULTI VEC → 15.2, “Setting the Measurement Mode”

Procedure

WFM → F•1 INTEN → F•2 SCALE INTEN: −8 - 4 - 7

11.5 Configuring the Gain and Filter Settings

To configure the gain and filter settings, press F•2 GAIN/FILTER on the WFM menu.

WFM → F•2 GAIN FILTER →

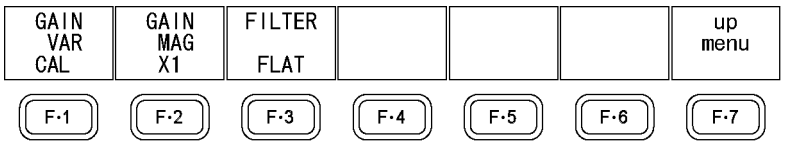


Figure 11-4 GAIN FILTER menu

11.5.1 Selecting the Fixed Gain

To select the fixed video signal waveform gain, follow the procedure below.

Procedure

WFM → F•2 GAIN FILTER → F•2 GAIN MAG: X1 / X5

11.5.2 Setting the Variable Gain

To set the variable video signal waveform gain, follow the procedure below.
You can set the video signal waveform gain to a value between 0.2 and 10 by setting F•2 GAIN MAG and F•1 GAIN VAR.

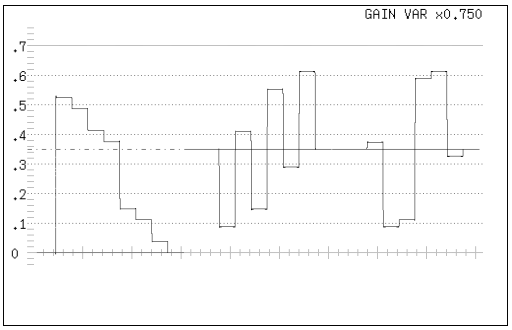
Procedure

WFM → F•2 GAIN FILTER → F•1 GAIN VAR: CAL / VAR

Settings

CAL:	The waveform gain is fixed.
VAR:	You can adjust the waveform gain by turning the function dial (F•D). Press the function dial (F•D) to return the setting to its default value (1.000 or 5.000). The adjusted gain value (the combination of F•1 GAIN VAR and F•2 GAIN MAG) appears in the upper right of the screen. 0.200 - 1.000 - 2.000 (for ×1) 1.000 - 5.000 - 10.000 (for ×5)

GAIN MAG = ×1
GAIN VAR = VAR



GAIN MAG = ×5
GAIN VAR = CAL

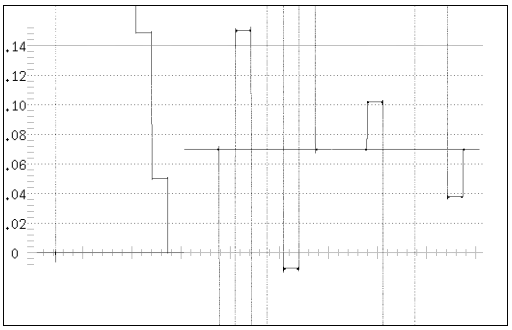


Figure 11-5 Setting the variable gain

11.5.3 Selecting the Filter

To select the filter, follow the procedure below.
The filters that you can select vary depending on the COLOR MATRIX setting.

Reference COLOR MATRIX → section 11.9.1, “Selecting the Color Matrix.”

Procedure

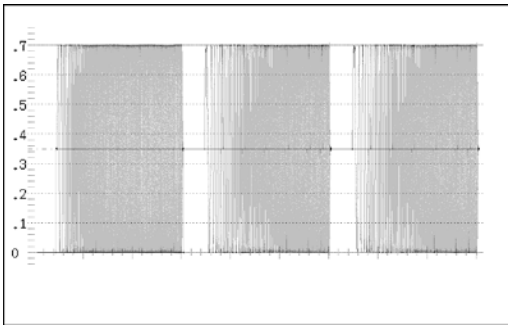
WFM → F•2 GAIN FILTER → F•3 FILTER: FLAT / LOW PASS / FLAT+LUM / LUM+CHRM / LUMA

● When COLOR MATRIX Is Set to YCbCr, GBR, or RGB

Settings

FLAT:	A filter that has a flat frequency response over the entire bandwidth of the input signal is used.
LOW PASS:	A low-pass filter with the following frequency responses is used. Attenuation of 20 dB or more at 40 MHz when the input signal is 1080p/60, 59.94, 50m Attenuation of 20 dB or more at 20 MHz when the input signal is HD Attenuation of 20 dB or more at 3.8 MHz when the input signal is SD

FILTER = FLAT



FILTER = LOW PASS

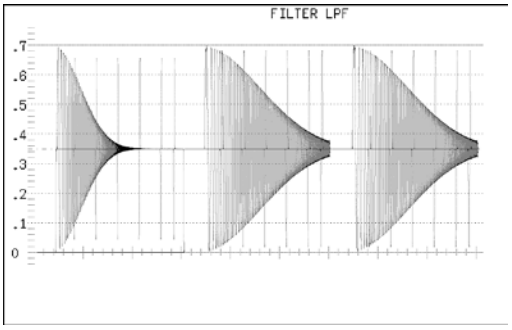


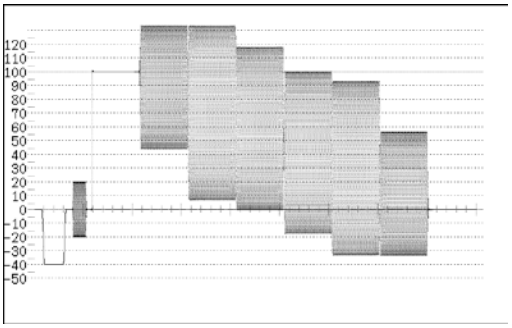
Figure 11-6 Selecting the filter (component)

● When COLOR MATRIX Is Set to COMPOSIT

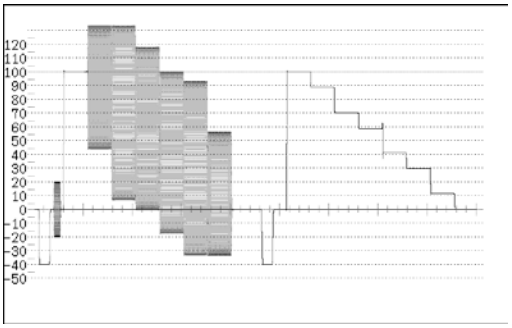
Settings

FLAT:	Only the pseudo-composite signal is displayed.
FLAT+LUM:	The pseudo-composite and luminance signals are displayed side by side.
LUM+CHRM:	The luminance and chrominance signals are displayed side by side.
LUMA:	Only the luminance signal is displayed.

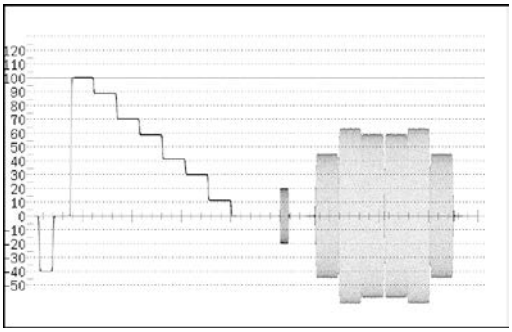
FILTER = FLAT



FILTER = FLAT+LUM



FILTER = LUM+CHRM



FILTER = LUMA

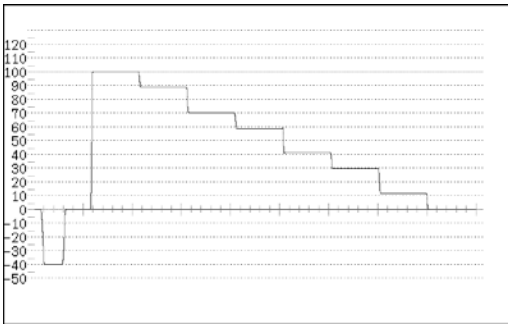


Figure 11-7 Selecting the filter (pseudo-composite)

11.6 Configuring the Sweep Settings

To configure the sweep settings, press F•3 SWEEP on the WFM menu.

WFM → F•3 SWEEP →

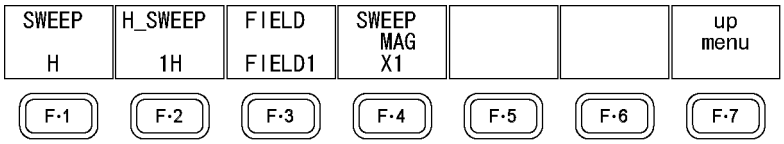


Figure 11-8 SWEEP menu

11.6.1 Selecting the Sweep Method

To select the video signal waveform sweep method, follow the procedure below.

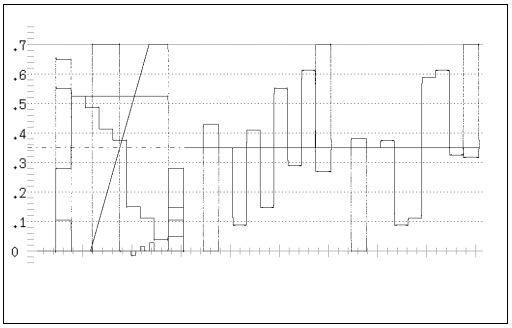
Procedure

WFM → F•3 SWEEP → F•1 SWEEP: H / V

Settings

H:	Lines are displayed.
V:	Fields are displayed. (when the input signal is interlace or segmented frame). Frames are displayed. (when the input signal format is progressive or when F•2 V_SWEEP is set to 2V).

SWEEP = H



SWEEP = V

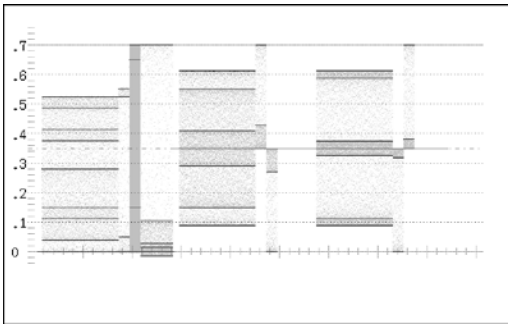


Figure 11-9 Selecting the sweep method

11.6.2 Selecting the Line Display Format

To select the sweep time in line display, follow the procedure below.
This menu item appears when F•1 SWEEP is set to H and COLOR MATRIX is set to COMPOSIT or when F•1 SWEEP is set to H and MODE is set to OVERLAY. When MODE is set to PARADE, the sweep time is fixed to 1H.

Reference COLOR MATRIX → section 11.9.1, “Selecting the Color Matrix.”
MODE → 11.12, “Selecting the Display Mode”

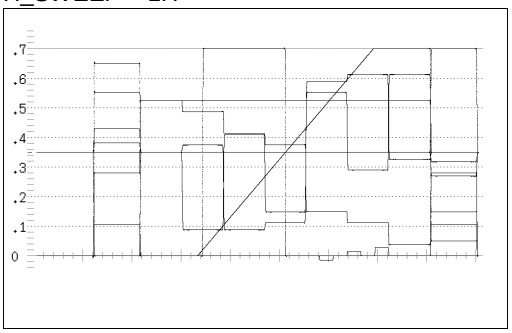
Procedure

WFM → F•3 SWEEP → F•2 H_SWEEP: 1H / 2H

Settings

1H:	The sweep time is set to that of one line.
2H:	The sweep time is set to that of two lines. This option cannot be selected when the parade display is in use or when the input signal is 3G's 1080p/60, 1080p/59.94, or 1080p/50 or 3G-A's 720p/30, 720p/29.97, 720p/25, 720p/24, or 720p/23.98.

H_SWEEP = 1H



H_SWEEP = 2H

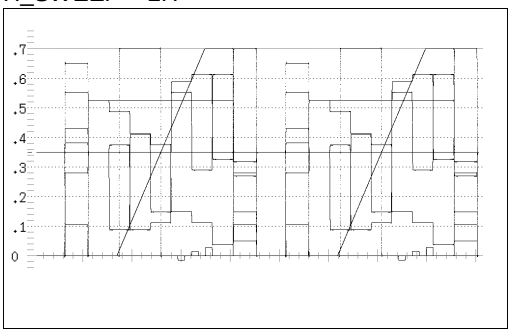


Figure 11-10 Selecting the line display format

11.6.3 Selecting the Field Display Format

To select the sweep time in field/frame display, follow the procedure below.
This menu item appears when F•1 SWEEP is set to V and the input signal is interlace or segmented frame. (However, this excludes when MODE is set to PARADE and COLOR MATRIX is not COMPOSIT.)
When the input signal is progressive, the sweep time is fixed to 1 frame. In addition, when MODE is set to PARADE and COLOR MATRIX is not COMPOSIT, the sweep time is fixed to 1V.

Reference COLOR MATRIX → section 11.9.1, “Selecting the Color Matrix.”
MODE → 11.12, “Selecting the Display Mode”

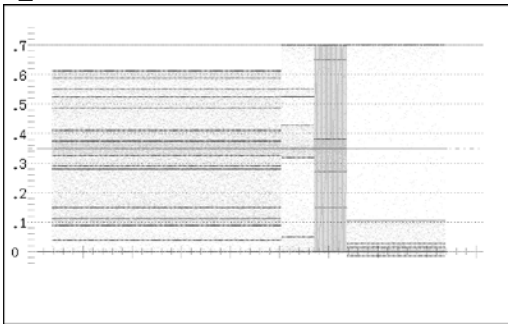
Procedure

WFM → F•3 SWEEP → F•2 V_SWEEP: 1V / 2V

Settings

1V:	The sweep time is set to that of one field.
2V:	The sweep time is set to that of one frame.

V_SWEEP = 1V



V_SWEEP = 2V

Figure 11-11 Selecting the field display format

11.6.4 Selecting the Field to Display

To select the displayed field in field display, follow the procedure below.
This menu item appears when F•1 SWEEP is set to V and the input signal is interlace or segmented frame. However, when F•2 V_SWEEP is 2V, this is invalid.

Procedure

WFM → F•3 SWEEP → F•3 FIELD: FIELD1 / FIELD2

11.6.5 Selecting the Horizontal Magnification

To select the horizontal magnification, follow the procedure below. The magnifications that you can select vary as indicated below depending on the F•1 SWEEP, COLOR MATRIX, MODE, and F•2 H_SWEEP settings. When F•2 H_SWEEP is set to 2H and COLOR MATRIX is set to COMPOSIT, the magnification is fixed at ×1.
(The table cells marked with “Yes” represent settings that can be selected.)

Reference COLOR MATRIX → section 11.9.1, “Selecting the Color Matrix.”
MODE → 11.12, “Selecting the Display Mode”

Table 11-2 Selecting the horizontal magnification

SWEEP	COLOR MATRIX	MODE	H_SWEEP	×1	×10	×20	×40	ACTIVE	BLANK
H	YCbCr	PARADE	-	Yes	Yes	Yes	No	Yes	Yes
	GBR	OVERLAY	1H	Yes	Yes	Yes	No	Yes	Yes
	RGB		2H	Yes	Yes	Yes	No	No	Yes
	COMPOSIT	-	1H	Yes	No	No	No	Yes	No
V	-	-	-	Yes	No	Yes	Yes	No	No

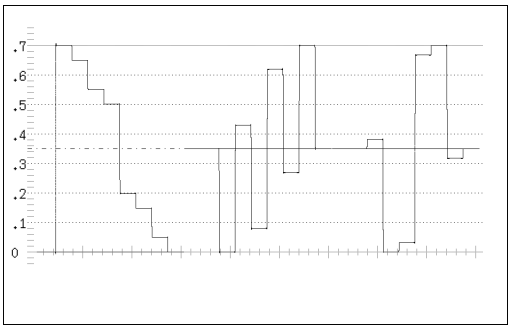
Procedure

WFM → F•3 SWEEP → F•4 SWEEP MAG: X1 / X10 / X20 / X40 / ACTIVE / BLANK

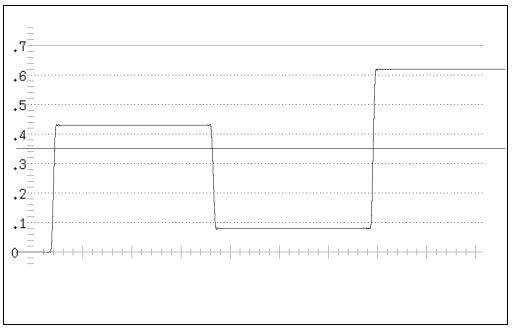
Settings

X1:	The video signal waveforms are displayed so that they fit on the screen.
X10:	The video signal waveforms are magnified from the center of the display to 10 times the size of ×1.
X20:	The video signal waveforms are magnified from the center of the display to 20 times the size of ×1.
X40:	The video signal waveforms are magnified from the center of the display to 40 times the size of ×1.
ACTIVE:	Everything but the video signal waveform blanking interval is magnified.
BLANK:	The video signal waveform blanking interval is magnified.

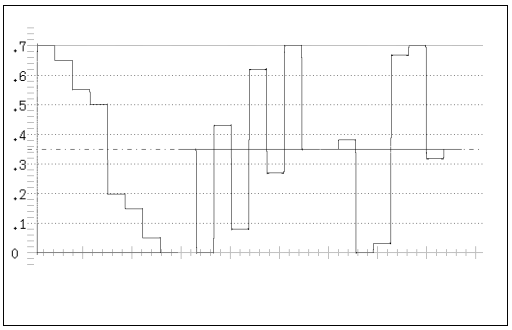
SWEEP MAG = ×1



SWEEP MAG = ×10



SWEEP MAG = ACTIVE



SWEEP MAG = BLANK

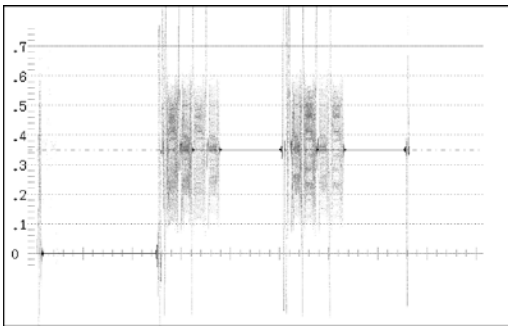


Figure 11-12 Selecting the horizontal magnification

11.7 Configuring the Line Selection Settings

To configure the line selection settings, press F•4 LINE SELECT on the WFM menu.
This menu item appears when SWEEP is set to H.

Reference SWEEP → Section 11.6.1, “Selecting the Sweep Method”

WFM → F•4 LINE SELECT →

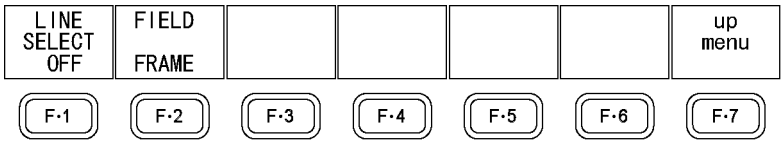


Figure 11-13 LINE SELECT menu

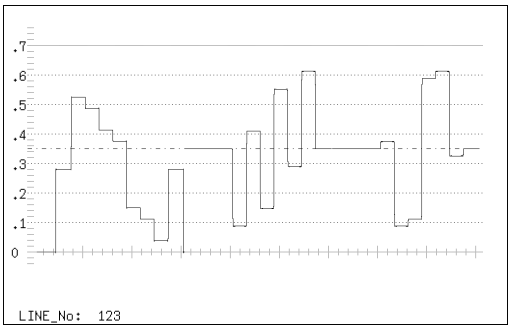
11.7.1 Turning Line Selection On and Off

To display the vector of the selected line, follow the procedure below. You can use the function dial (F•D) to select a line. The number of the selected line appears in the lower left of the screen.
Changing this setting will also change the line selection settings on the picture display and vectorscope display. In addition, the selected line is linked to the picture display, CINELITE display, vectorscope display, and status display (data dump display).

Procedure

WFM → F•4 LINE SELECT → F•1 LINE SELECT: ON / OFF

LINE SELECT = ON



LINE SELECT = OFF

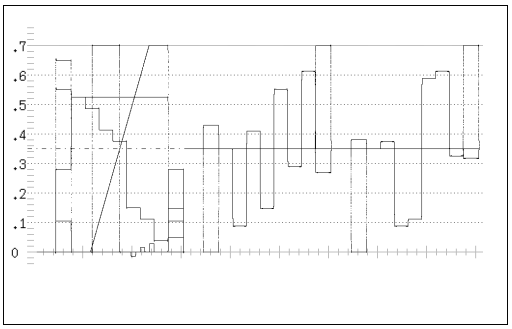


Figure 11-14 Turning line selection on and off

11.7.2 Setting the Line Selection Range

When the input signal is interlace or segmented frame, to set the line select range, follow the procedure below.
Changing this setting will also change the picture display and vectorscope display line selection ranges.

Procedure

WFM → F•4 LINE SELECT → F•2 FIELD: FIELD1 / FIELD2 / FRAME

Settings (the examples are for the selectable ranges when the input signal is 1080i/59.94)

FIELD1:	A line from field 1 can be selected.	(Example: 1 to 563)
FIELD2:	A line from field 2 can be selected.	(Example: 564 to 1125)
FRAME:	All lines can be selected.	(Example: 1 to 1125)

11.8 Configuring the Cursor Settings

To configure the cursor settings, press F•5 CURSOR on the WFM menu.

WFM → F•5 CURSOR →

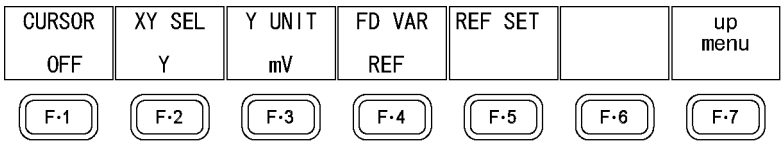


Figure 11-15 CURSOR menu

11.8.1 Turning Cursors On and Off

To display cursors, follow the procedure shown below.
The REF cursor is displayed in blue, and the DELTA cursor is displayed in green. The value of DELTA - REF appears as a measured value in the lower right of the screen.

Procedure

WFM → F•5 CURSOR → F•1 CURSOR: ON / OFF

11.8.2 Selecting the Cursor

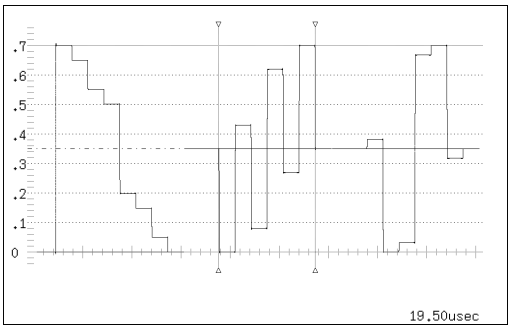
To select the X (time measurement) or Y (amplitude measurement) cursor, follow the procedure below.
This menu item appears when COLOR MATRIX is set to an option other than COMPOSIT.
This setting is fixed to Y when COLOR MATRIX is set to COMPOSIT.

Reference COLOR MATRIX → section 11.9.1, “Selecting the Color Matrix.”

Procedure

WFM → F•5 CURSOR → F•2 XY SEL: X / Y

CURSOR = X



CURSOR = Y

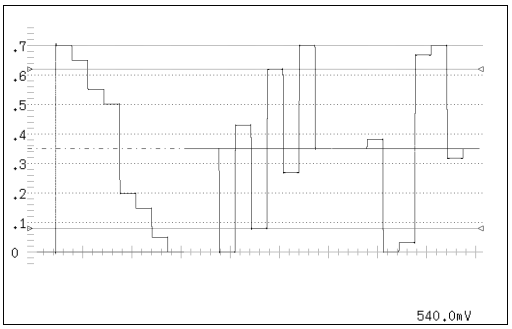


Figure 11-16 Selecting the cursor

11.8.3 Moving the Cursors

To move a cursor, follow the procedure shown below to select a cursor. Then, move the cursor by turning the function dial (F•D). Triangles appear on both ends of the selected cursor.

You can also select a cursor by pressing the function dial (F•D). Each time you press the function dial (F•D), the selected cursor switches from REF, to DELTA, to TRACK, and then back to REF.

Procedure

WFM → F•5 CURSOR → F•4 FD VAR: REF / DELTA / TRACK

Settings

REF:	The REF cursor (blue) is selected.
DELTA:	The DELTA cursor (green) is selected.
TRACK:	The REF cursor and DELTA cursor are selected.

11.8.4 Selecting the Measurement Unit

To select the units used in cursor measurement, follow the procedure below.

● When CURSOR Is Set to Y

Procedure

WFM → F•5 CURSOR → F•3 Y UNIT: mV / % / R% / HEX / DEC

Settings

mV:	Measurements are made in units of voltage. This option cannot be selected when COLOR MATRIX is set to COMPOSIT.
%:	Measurements are made as percentages. When COLOR MATRIX is set to YCbCr, GBR, or RGB700 mV = 100 % When COLOR MATRIX is set to COMPOSIT (NTSC) 714mV = 100 % When COLOR MATRIX is set to COMPOSIT (PAL) 700mV = 100%
R%:	Measurements are made as percentages, with the amplitude when F•5 REF SET was pressed set to 100%. This option cannot be selected when COLOR MATRIX is set to COMPOSIT.
HEX:	Measurements are made in hexadecimal with 0 to 100% expressed as 0 to 36C. This option cannot be selected when COLOR MATRIX is set to COMPOSIT.
DEC:	Measurements are made in decimal with 0 to 100% expressed as 0 to 876. This option cannot be selected when COLOR MATRIX is set to COMPOSIT.

● When CURSOR is set to X

Procedure

WFM → F•5 CURSOR → F•3 X UNIT: sec / Hz

Settings

sec:	Measurements are made in units of seconds.
Hz:	Measurements are made in units of frequency, with the length of one period set to the distance between the two cursors.

11.9 Configuring the Color System Settings

To configure the color system settings, press F•6 COLOR SYSTEM on the WFM menu.

WFM → F•6 COLOR SYSTEM →

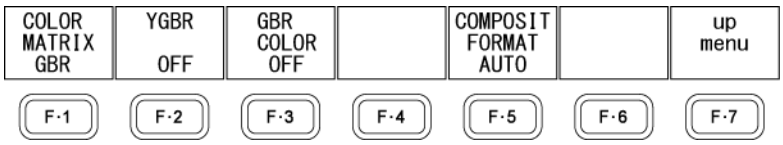


Figure 11-17 COLOR SYSTEM menu

11.9.1 Selecting the Color Matrix

To select the video signal waveform display format, follow the procedure below.
If you select COMPOSIT, choose the composite display format (NTSC or PAL) by setting F•5 COMPOSIT FORMAT.

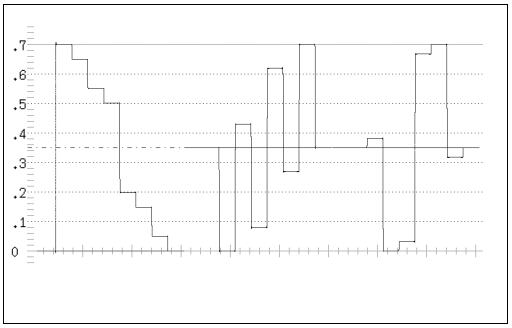
Procedure

WFM → F•6 COLOR SYSTEM → F•1 COLOR MATRIX: YCbCr / GBR / RGB / COMPOSIT

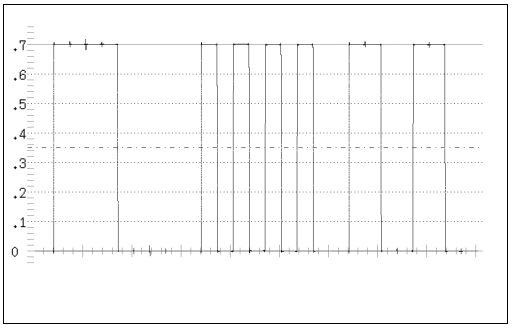
Settings

YCbCr:	Luminance-chrominance signals are displayed.
GBR:	The YC_BC_R signal is converted into a GBR signal and displayed.
RGB:	The YC_BC_R signal is converted into a RGB signal and displayed.
COMPOSIT:	The YC_BC_R signal is converted into a pseudo-composite signal and displayed.

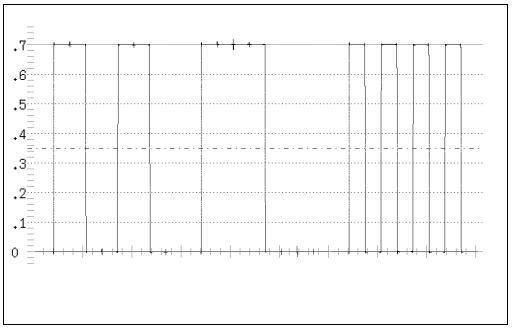
COLOR MATRIX = YCbCr



COLOR MATRIX = GBR



COLOR MATRIX = RGB



COLOR MATRIX = COMPOSIT

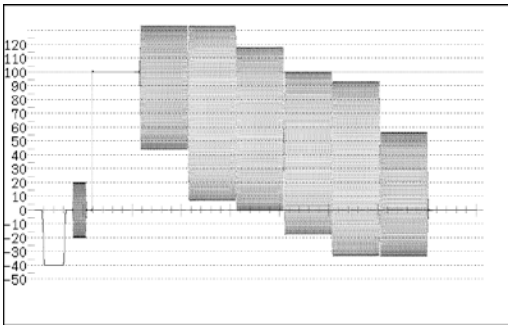


Figure 11-18 Selecting the color matrix

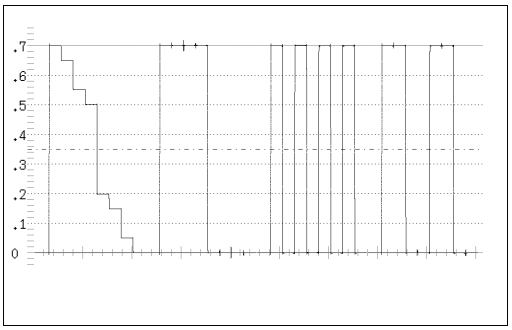
11.9.2 Turning the Luminance Signal On and Off

When F•1 COLOR MATRIX is set to GBR or RGB, to turn the luminance signal on and off, follow the procedure below.

Procedure

WFM → F•6 COLOR SYSTEM
→ F•2 YGBR: ON / OFF
→ F•2 YRGB: ON / OFF

YGBR = ON



YRGB = ON

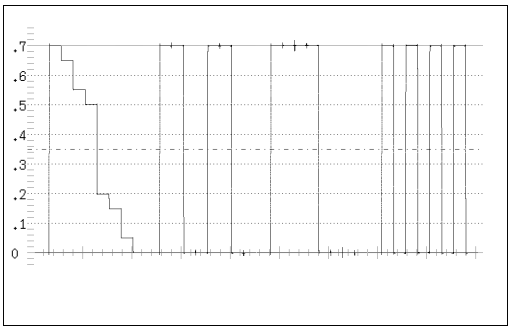


Figure 11-19 Turning the luminance signal on and off

11.9.3 Selecting the Waveform Colors

When F•1 COLOR MATRIX is set to GBR or RGB, to display waveforms according to GBR colors, follow the procedure below.

Procedure

WFM → F•6 COLOR SYSTEM
→ F•3 GBR COLOR: ON / OFF
→ F•3 RGB COLOR: ON / OFF

Settings

ON:	Waveforms are displayed according to GBR colors. They are displayed in white in parade display and V display.
OFF:	Waveforms are displayed in white.

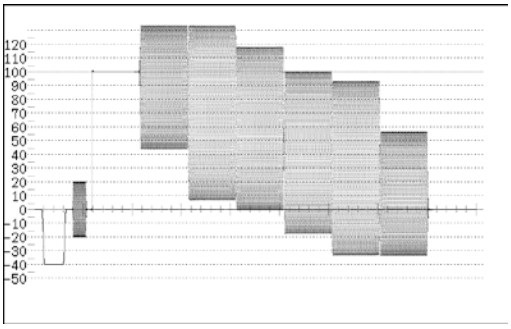
11.9.4 Selecting the Setup Level

When F•1 COLOR MATRIX is set to COMPOSIT and the composite display format is NTSC, to select the setup level, follow the procedure below.

Procedure

WFM → F•6 COLOR SYSTEM → F•4 SETUP: 0% / 7.5%

SETUP = 0%



SETUP = 7.5%

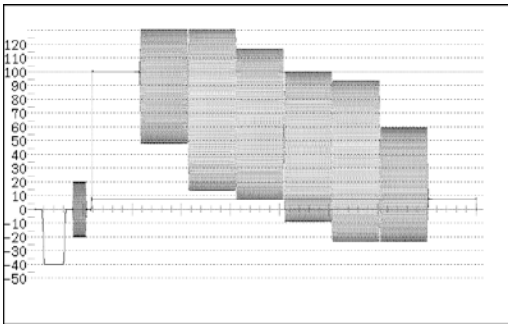


Figure 11-20 Selecting the setup level

11.9.5 Selecting the Composite Display Format

To select the composite display format, follow the procedure below.
This setting is linked to COMPOSIT FORMAT on the VECTOR menu.

Reference COMPOSIT FORMAT → 12.7.4,“Selecting the Composite Display Format”

Procedure

WFM → F•6 COLOR SYSTEM → F•5 COMPOSIT FORMAT: AUTO / NTSC / PAL

Settings

AUTO:	When the input signal frame rate is 25 Hz or 50 Hz, the format is PAL. Otherwise, the format is NTSC.
NTSC:	The format is NTSC.
PAL:	The format is PAL.

11.10 Setting the scale

To set the scale, press F•1 SCALE on the WFM menu.

WFM → F•7 next menu → F•1 SCALE →

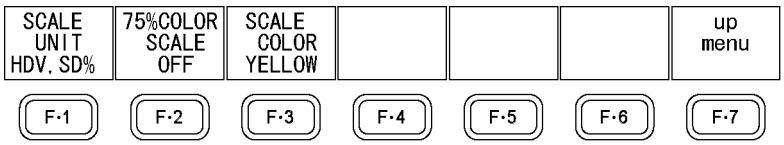


Figure 11-21 SCALE menu

11.10.1 Selecting the Scale Unit

To select the scale unit, follow the procedure below.
This menu item appears when COLOR MATRIX is set to an option other than COMPOSIT. When COLOR MATRIX is set to COMPOSIT, the scale unit is fixed to % when the composite display format is NTSC and V when the format is PAL.

Reference COLOR MATRIX → section 11.9.1, “Selecting the Color Matrix.”
Composite display format → 11.9.5, “Selecting the Composite Display Format”

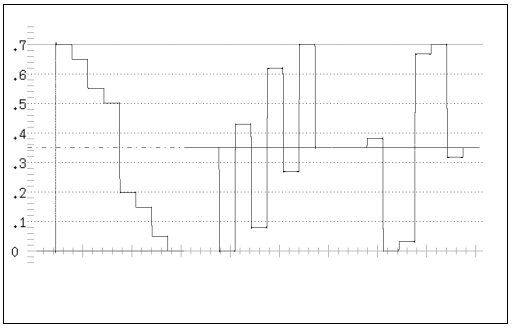
Procedure

WFM → F•7 next menu → F•1 SCALE → F•1 SCALE UNIT: HDV,SD% / HDV,SDV / HD%,SD% / HEX / DEC / FS DEC

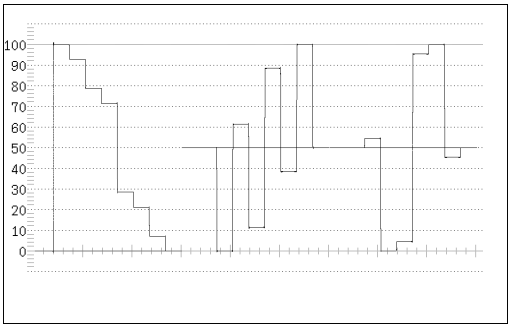
Settings

HDV,SD%:	The scale unit is set to V when the input signal is HD or 3G and % when it is SD.
HDV,SDV:	The scale unit is set to V.
HD%,SD%:	The scale unit is set to %.
HEX:	0 to 100% is displayed as 040 to 3AC (YGBR) or 040 to 3C0 (CbCr).
DEC:	0 to 100% is displayed as 64 to 940 (YGBR) or 64 to 960 (CbCr).
FS DEC:	0 to 100% is displayed as 64 to 940 (YGBR) or 16 to 235 (YGBR).

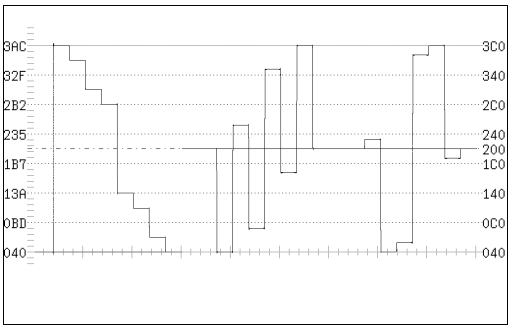
SCALE UNIT = HDV,SDV



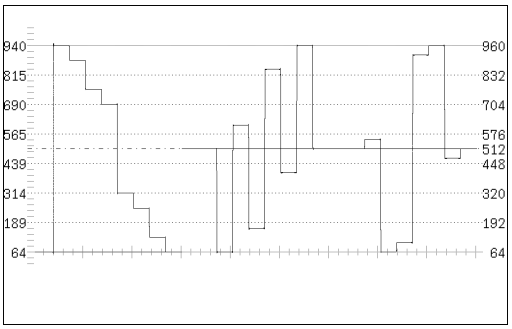
SCALE UNIT = HD%,SD%



SCALE UNIT = HEX



SCALE UNIT = DEC



SCALE UNIT = FS DEC

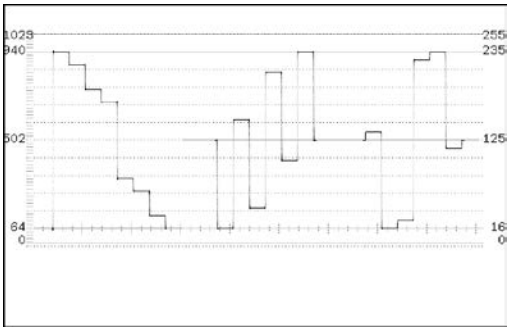


Figure 11-22 Selecting the scale unit

11.10.2 Turning the 75% Color Bar Scale On and Off

When COLOR MATRIX is set to YCbCr, to turn on and off a scale on which a 75% color bar signal input is mapped to the peak level of the chrominance, follow the procedure below.

Reference COLOR MATRIX → section 11.9.1, “Selecting the Color Matrix.”

Procedure

WFM → F•7 next menu → F•1 SCALE → F•2 75%COLOR SCALE: ON / OFF

75%COLOR SCALE = ON

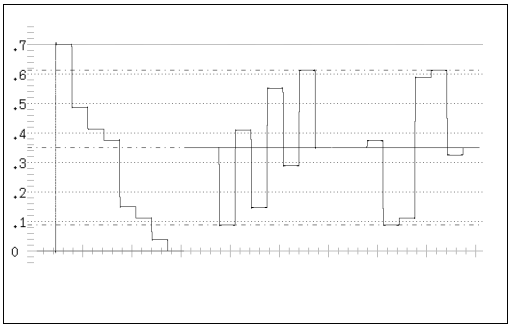


Figure 11-23 Turning the 75% color bar scale on and off

11.10.3 Selecting the Scale Color

To select the scale color, follow the procedure below.

Procedure

WFM → F•7 next menu → F•1 SCALE → F•3 SCALE COLOR: WHITE / YELLOW / CYAN / GREEN / MAGENTA / RED / BLUE

11.11 Displaying the Blanking Interval

To display the blanking interval, follow the procedure below.

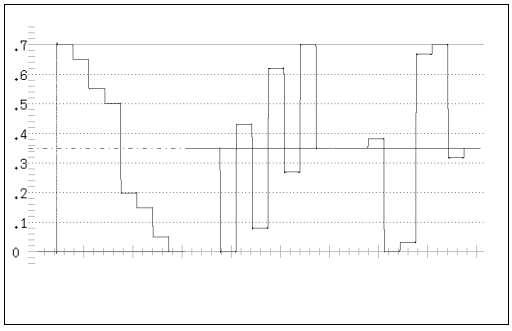
Procedure

WFM → F•7 next menu → F•2 EAV-SAV: REMOVE / PASS

Settings

REMOVE: The blanking interval is masked in black.
PASS: The blanking interval is displayed.

EAV-SAV = REMOVE



EAV-SAV = PASS

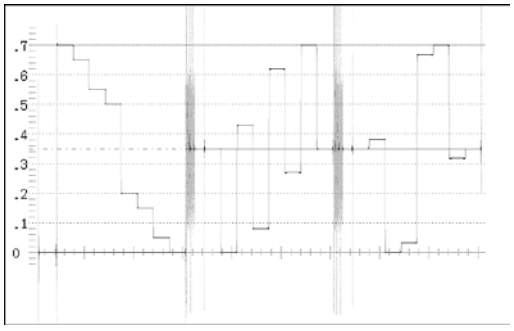


Figure 11-24 Displaying blanking intervals

11.12 Selecting the Display Mode

To select the display mode, follow the procedure below.

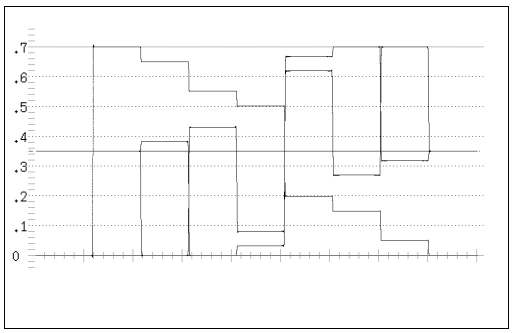
Procedure

WFM → F•7 next menu → F•3 MODE: OVERLAY / PARADE

Settings

OVERLAY: Component signals are overlaid.
PARADE: Component signals are displayed side by side.

MODE = OVERLAY



MODE = PARADE

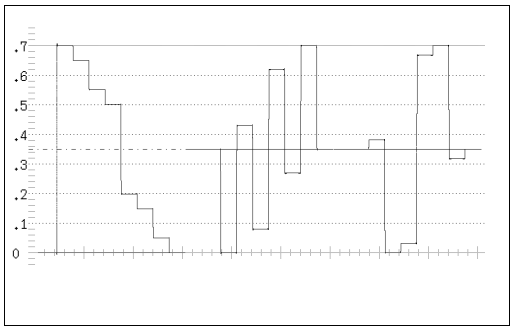


Figure 11-25 Selecting the display mode

11.13 Turning the Channels On and Off

To turn the channels on and off, press F•4 DISPLAY on the WFM menu.
This menu item is not displayed when COLOR MATRIX is set to COMPOSIT or when YGBR or YRGB is set to ON.

Reference COLOR MATRIX → section 11.9.1, “Selecting the Color Matrix.”
YGBR, YRGB → section 11.9.2, “Turning Luminance Signals On and Off.”

WFM → F•7 next menu → F•4 DISPLAY →

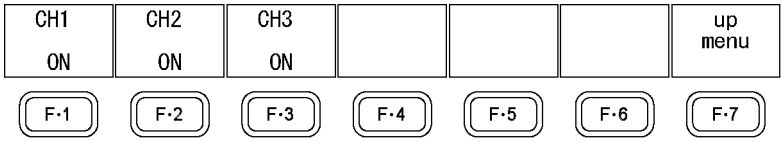


Figure 11-26 DISPLAY menu

To turn individual channels in a YC_BC_R, GBR, or RGB signal on and off, follow the procedure below.
You cannot set all channels to OFF.

Procedure

WFM → F•7 next menu → F•4 DISPLAY
→ F•1 CH1: ON / OFF
→ F•2 CH2: ON / OFF
→ F•3 CH3: ON / OFF

12. VECTORSCOPE DISPLAY

To display vectors, press VECTOR.
You can press F•6 DISPLAY to switch from vectorscope to 5 bar or phase difference display.

12.1 Selecting the Display Format

To switch between vectorscope, 5 bar, and phase difference displays, follow the procedure below.

Procedure

VECTOR → F•6 DISPLAY: VECTOR / 5BAR / EXTPHASE

12.2 Vector Screen Description

To display vectors, set F•6 DISPLAY to VECTOR.

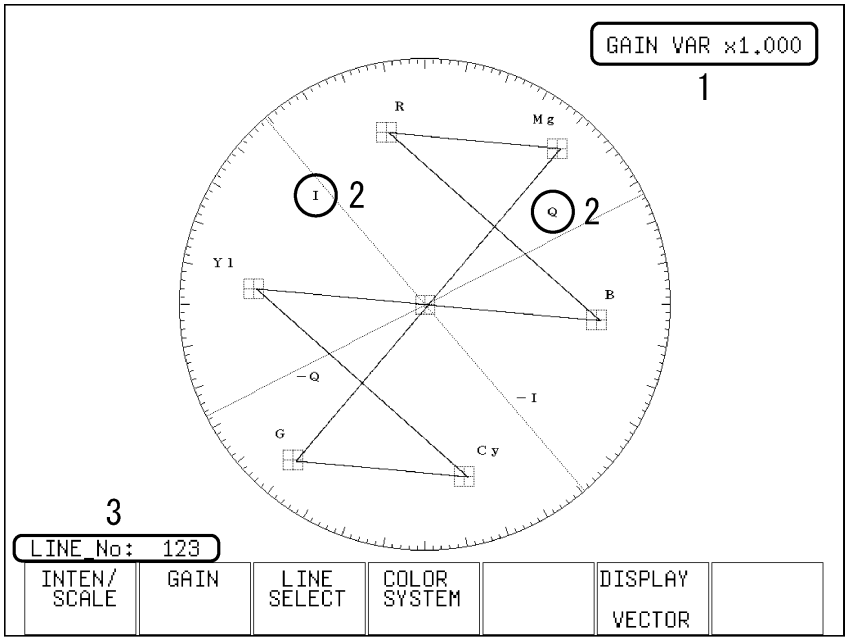


Figure 12-1 Vectors screen description

Table 12-1 Vector screen description

No.	Item	Description
1	Gain	The vector gain is displayed. You can set the gain to a value between 0.2 and 10 by setting GAIN MAG and GAIN VARIABLE. Reference 12.5.1, “Selecting the Fixed Gain,” 12.5.2, “Setting the Variable Gain”
2	I and Q Axes	The I and Q axes can be displayed. Reference 12.4.3, “Turning the Display of the I and Q Axes On and Off”
3	Selected line	The waveform of the selected line is displayed. Reference 12.6, “Configuring the Line Selection Settings”

12.3 Displaying the VE Mode Menu

When VE MODE is on, pressing VECTOR displays a dedicated video-engineer station menu. Press F•7 next menu to display the menu that appears when VE MODE is set to OFF.
The dedicated video-engineer station menu contains commands that are used often. Only a single action is needed to select the menu item.

Reference VE MODE → 5.2, “Setting the VE Mode”

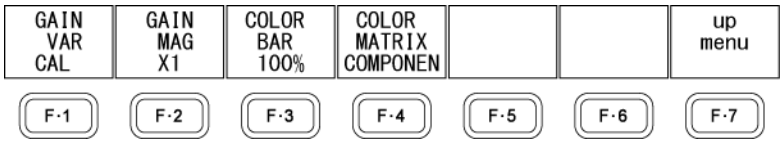


Figure 12-2 The dedicated video-engineer station menu

12.4 Configuring the Intensity and Scale Settings

To configure the intensity and scale settings, press F•1 INTEN/SCALE on the VECTOR menu.

VECTOR → F•1 INTEN/SCALE →

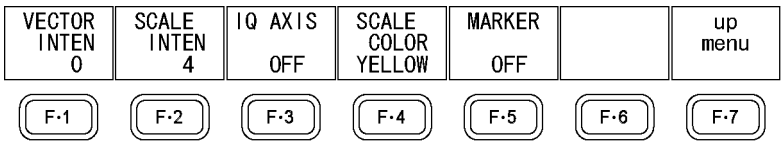


Figure 12-3 INTEN/SCALE menu

12.4.1 Adjusting the Waveform Intensity

When DISPLAY is set to VECTOR, to set the vector intensity, follow the procedure below. Regardless of this setting, in the multi-screen display, the intensity set with MULTI VEC is used to display the waveform. Note that VECTOR INTEN set with MULTI VEC is linked to WFM INTEN set with MULTI WFM.
Press the function dial (F•D) to return the setting to its default value (0).

Reference DISPLAY → 12.1,“Selecting the Display Format”
MULTI VEC, MULTI WFM → 15.2, “Setting the Measurement Mode”

Procedure

VECTOR → F•1 INTEN/SCALE → F•1 VECTOR INTEN: −128 - 0 - 127

12.4.2 Adjusting the Scale Intensity

To adjust the scale intensity, follow the procedure below.
Regardless of this setting, in the multi-screen display, the intensity set with MULTI VEC is used to display the waveform. Note that SCALE INTEN set with MULTI VEC is linked to SCALE INTEN set with MULTI WFM.
Press the function dial (F•D) to return the setting to its default value (4).

Reference MULTI VEC, MULTI WFM → 15.2, “Setting the Measurement Mode”

Procedure

VECTOR → F•1 INTEN/SCALE → F•2 SCALE INTEN: −8 - 4 - 7

12.4.3 Turning the I and Q Axes On and Off

When DISPLAY is set to VECTOR, to turn the I and Q axes on and off, follow the procedure below.
If the input signal is 625i/50, the axes will not be displayed even when this is set to ON.

Reference DISPLAY → 12.1, “Selecting the Display Format”

Procedure

VECTOR → F•1 INTEN/SCALE → F•3 IQ AXIS: ON /, OFF

IQ AXIS = ON

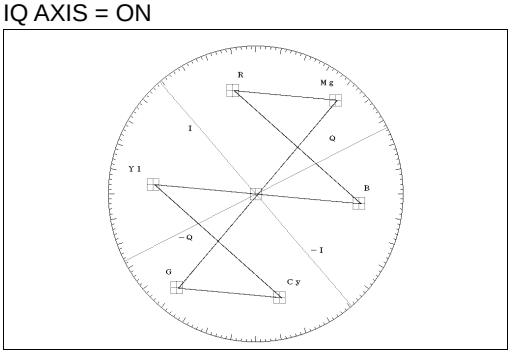


Figure 12-4 Turning the I and Q axes on and off

12.4.4 Selecting the Scale Color

To select the scale color, follow the procedure below.

Procedure

VECTOR → F•1 INTEN/SCALE → F•4 SCALE COLOR: WHITE / YELLOW / CYAN / GREEN / MAGENTA / RED / BLUE

12.4.5 Turning the Aspect Marker On and Off

When DISPLAY is set to VECTOR, to display a marker on the vectors, follow the procedure below.

You can move the marker horizontally using the H POS knob and vertically using the V POS knob. The measured values are displayed in the lower right of the display. Press the H POS knob to move the marker to the Cb = 0.0% position. Press the V POS knob to move the marker to the Cr = 0.0% position.

Measured values are displayed using the following references: Cb at position B = 100.0% and Cr at position R = 100.0%. The distance from the center is expressed as “d,” and hue is expressed as “deg.” Normally, the marker is displayed in green. When if falls outside the display, it blinks in red.

Reference DISPLAY → 12.1, “Selecting the Display Format”

Procedure

VECTOR → F•1 INTEN/SCALE → F•5 MARKER: ON / OFF

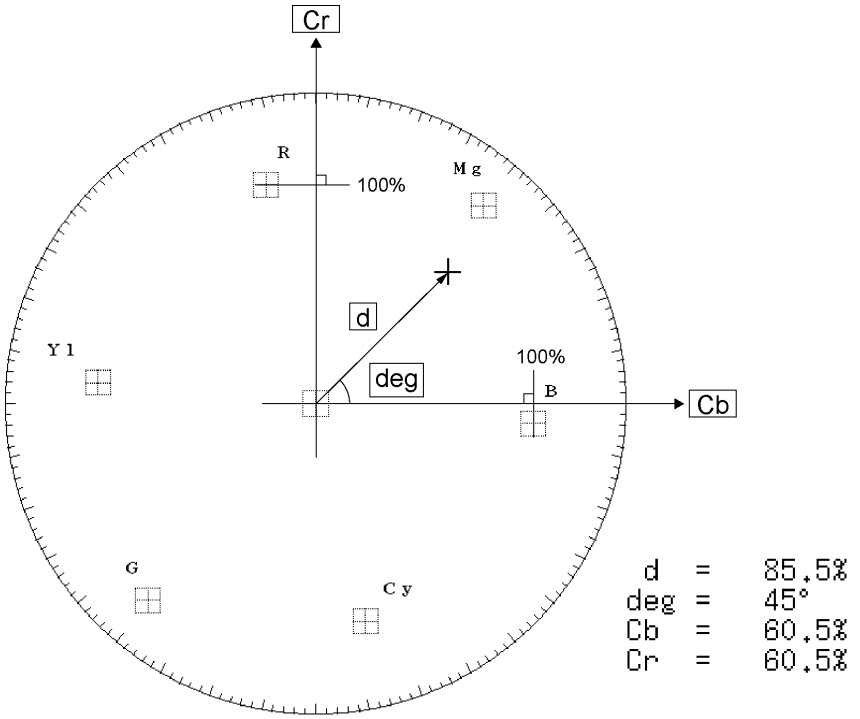


Figure 12-5 Turning the aspect marker on and off

12.5 Setting the Gain

To set the gain, press F•2 GAIN on the VECTOR menu.
This menu is displayed when DISPLAY is set to VECTOR.

Reference DISPLAY → 12.1, “Selecting the Display Format”

VECTOR → F•2 GAIN →

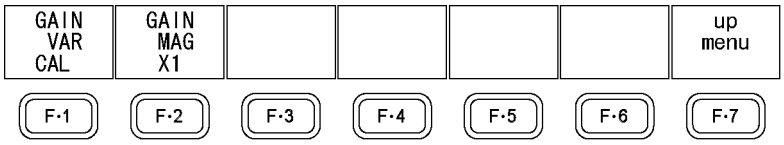


Figure 12-6 GAIN menu

12.5.1 Selecting the Fixed Gain

To select the fixed vector gain, follow the procedure below.

Procedure

VECTOR → F•2 GAIN → F•2 GAIN MAG: X1 / X5 / IQ-MAG

Settings

X1:	Vectors are displayed at ×1 magnification.
X5:	Vectors are displayed at ×5 magnification.
IQ-MAG:	Vectors are displayed at ×3.14 magnification. (a magnification that causes the I signal of the multiformat color bar to lie on the circumference of the scale).

12.5.2 Setting the Variable Gain

To set the variable vector gain, follow the procedure below.
You can set the vector gain to a value between 0.2 and 10 by setting F•2 GAIN MAG and F•1 GAIN VAR.

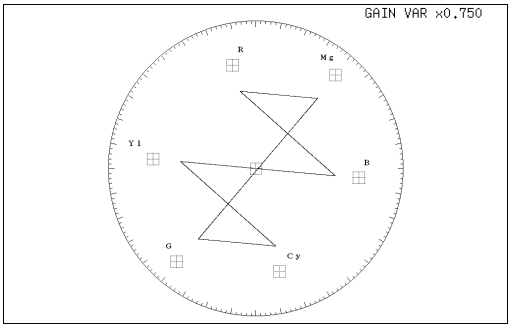
Procedure

VECTOR → F•2 GAIN → F•1 GAIN VAR: CAL / VAR

Settings

CAL:	The waveform gain is fixed.
VAR:	You can adjust the waveform gain by turning the function dial (F•D). Press the function dial (F•D) to return the setting to its default value (1.000, 5.000, or 3.140). The adjusted gain value (the combination of F•1 GAIN VAR and F•2 GAIN MAG) appears in the upper right of the screen. 0.200 - 1.000 - 2.000 (at ×1) 1.000 - 5.000 - 10.000 (at ×5) 0.628 - 3.140 - 6.280 (at IQ-MAG)

GAIN MAG = ×1
GAIN VAR = VAR



GAIN MAG = IQ-MAG
GAIN VAR = CAL

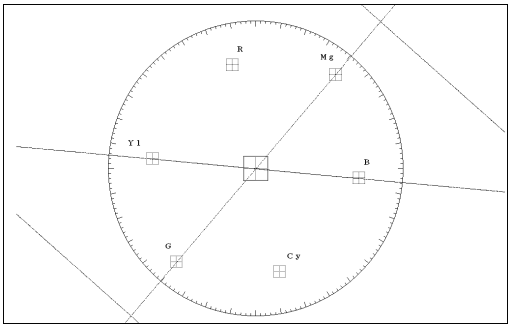


Figure 12-7 Setting the variable gain

12.6 Configuring the Line Selection Settings

To configure the line selection settings, press F•3 LINE SELECT on the VECTOR menu. This menu is displayed when DISPLAY is set to VECTOR or 5BAR.

Reference DISPLAY → 12.1, “Selecting the Display Format”

VECTOR → F•3 LINE SELECT →

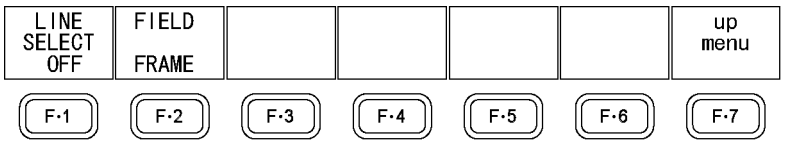


Figure 12-8 LINE SELECT menu

12.6.1 Turning Line Selection On and Off

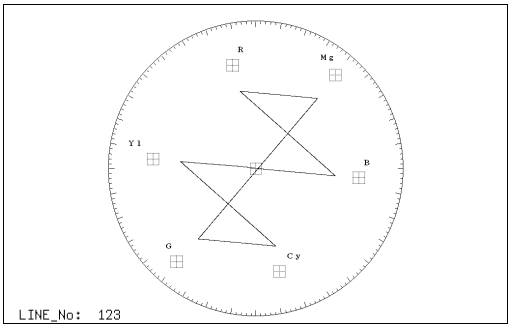
To display the vector of the selected line, follow the procedure below. You can use the function dial (F•D) to select a line. The number of the selected line appears in the lower left of the screen.

Changing this setting will also change the picture display and video signal waveform display line selection settings. In addition, the selected line is linked to the picture display, CINELITE display, video signal waveform display, and status display (data dump display).

Procedure

VECTOR → F•3 LINE SELECT → F•1 LINE SELECT: ON / OFF

LINE SELECT = ON



LINE SELECT = OFF

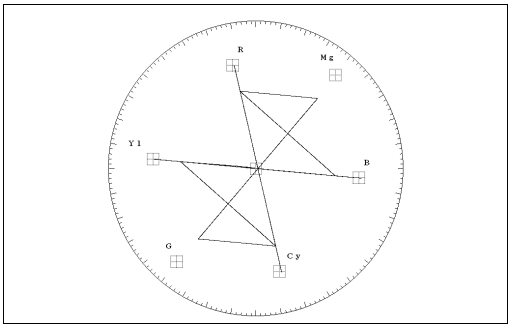


Figure 12-9 Turning line selection on and off

12.6.2 Setting the Line Selection Range

When the input signal is interlace or segmented frame, to set the line select range, follow the procedure below.
Changing this setting will also change the picture display and video signal waveform display line selection ranges.

Procedure

VECTOR → F•3 LINE SELECT → F•2 FIELD: FIELD1 / FIELD2 / FRAME

Settings (the examples are for the selectable ranges when the input signal is 1080i/59.94)

FIELD1:	A line from field 1 can be selected.	(Example: 1 to 563)
FIELD2:	A line from field 2 can be selected.	(Example: 564 to 1125)
FRAME:	All lines can be selected.	(Example: 1 to 1125)

12.7 Configuring the Color System Settings

To configure the color system settings, press F•4 COLOR SYSTEM on the VECTOR menu. This menu is displayed when DISPLAY is set to VECTOR.

Reference DISPLAY → 12.1, “Selecting the Display Format”

VECTOR → F•4 COLOR SYSTEM →

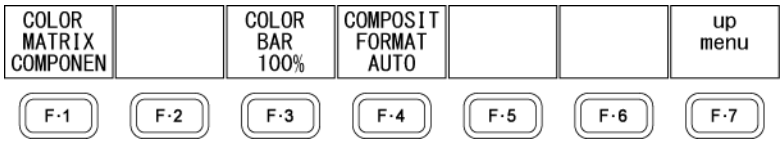


Figure 12-10 COLOR SYSTEM menu

12.7.1 Selecting the Color Matrix

To select the vectorscope display format, follow the procedure below.
If you select COMPOSIT, choose the composite display format (NTSC or PAL) by setting F•4 COMPOSIT FORMAT.

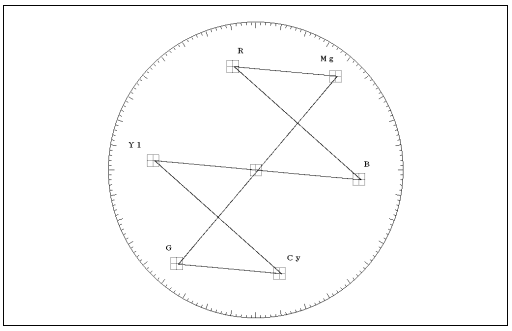
Procedure

VECTOR → F•4 COLOR SYSTEM → F•1 COLOR MATRIX: COMPONEN / COMPOSIT

Settings

COMPONEN:	The component chrominance signal is displayed on the X and Y axes.
COMPOSIT:	The component signal is converted into a composite signal, and the composite signal’s chrominance signal is displayed on the X and Y axes.

COLOR MATRIX = COMPONEN



COLOR MATRIX = COMPOSIT

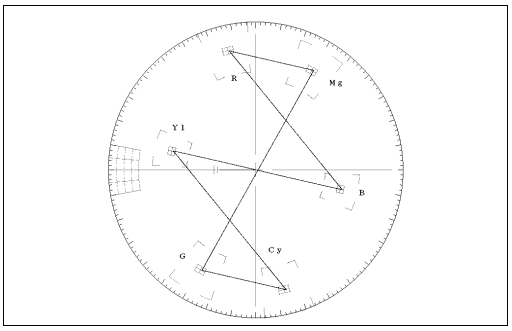


Figure 12-11 Selecting the color matrix

12.7.2 Selecting the Setup Level

When F•1 COLOR MATRIX is set to COMPOSIT and the composite display format is NTSC, to select the setup level, follow the procedure below.

Procedure

VECTOR → F•4 COLOR SYSTEM → F•2 SETUP: 0% / 7.5%

12.7.3 Displaying a Scale for 75% Color Bars

To display a scale for 75 % color bars, follow the procedure below.

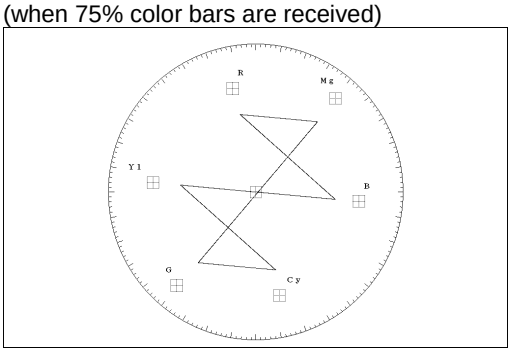
Procedure

VECTOR → F•4 COLOR SYSTEM → F•3 COLOR BAR: 100% / 75%

Settings

100%:	A scale on which a 100% color bar signal input is mapped to the peak level is displayed.
75%:	A scale on which a 75% color bar signal input is mapped to the peak level is displayed.

COLOR BAR = 100%
(when 75% color bars are received)



COLOR BAR = 75%
(when 75% color bars are received)

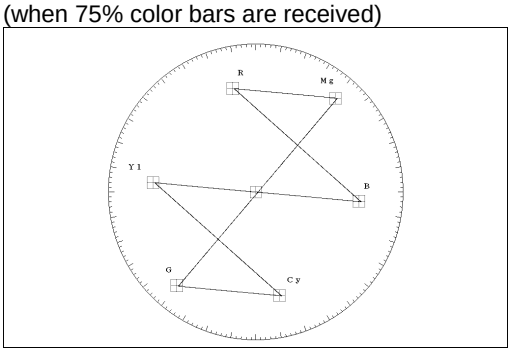


Figure 12-12 Scale types

12.7.4 Selecting the Composite Display Format

To select the composite display format, follow the procedure below.
This setting is linked to COMPOSIT FORMAT on the WFM menu.
Reference COMPOSIT FORMAT → 11.9.5,“Selecting the Composite Display Format”

Procedure

VECTOR → F•4 COLOR SYSTEM → F•4 COMPOSIT FORMAT: AUTO / NTSC / PAL

Settings

AUTO:	When the input signal frame rate is 25 Hz or 50 Hz, the format is PAL. Otherwise, the format is NTSC.
NTSC:	The format is NTSC.
PAL:	The format is PAL.

12.8 5 Bar Display

12.8.1 5 Bar Screen Description

To display the 5 bar screen, set F•6 DISPLAY to 5BAR.
On the 5 bar screen, the positive and negative peak levels are displayed simultaneously. The levels are typically displayed in cyan, but portions that exceed their limits are displayed in red.

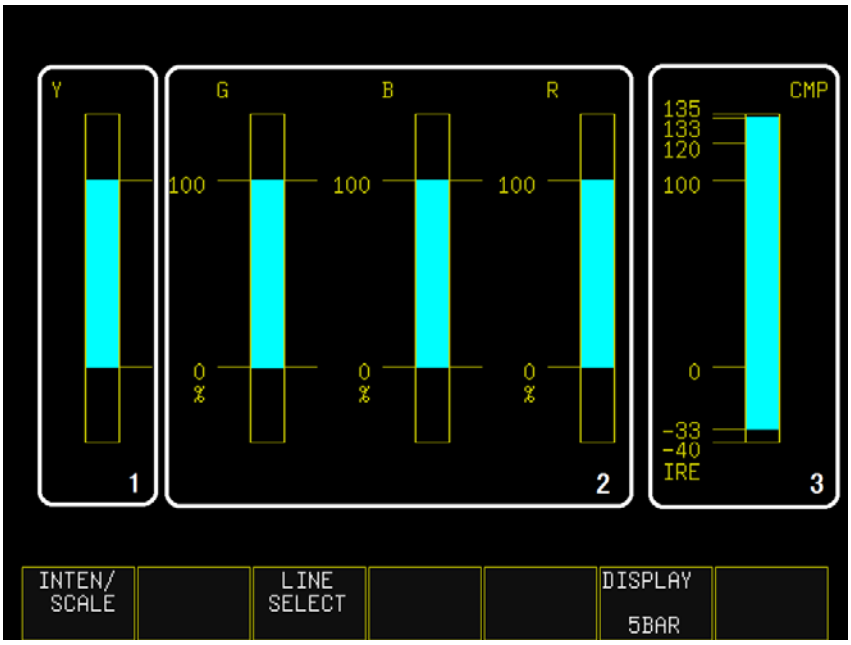


Figure 12-13 5 bar screen description

Table 12-2 5 bar screen description

No.	Item	Description
1	Y	The luminance signal level is displayed. Levels less than 0% or greater than 100% are displayed in red.
2	G, B, R	The levels after converting the YC_BC_R signal into a GBR signal are displayed. The levels that fall outside of the range you set using GAMUT ERROR in the status display are displayed in red. Reference 13.6.5, “Configuring Gamut Error Settings”
3	CMP	The levels after converting the YC_BC_R signal into a pseudo-composite signal are displayed !!!REMOVE BREAK!!! (the levels in the blanking interval are not displayed). The levels that fall outside of the range that you set using COMPOSIT GAMUT on the status screen are displayed in red. Reference 13.6.6, “Configuring Composite Gamut Error Settings”

12.8.2 Selecting the Display Unit

To select the display unit, follow the procedure below.
The display unit is set using UNIT on the STATUS menu.

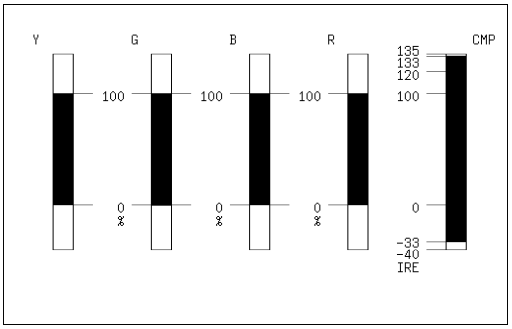
Procedure

STATUS → F•5 ERROR CONFIG → F•4 ERROR LEVEL → F•6 UNIT: % / mV

Settings

%:	The display unit for YGBR is percentage, and the display unit for CMP is IRE.
mV:	The display unit is mV. Depending on the composite display format, the scale differs as follows:
	NTSC: 100% = 700mV (YGBR), 100IRE = 714mV (CMP)
	PAL: 100%(IRE) = 700mV

UNIT = %



UNIT = mV

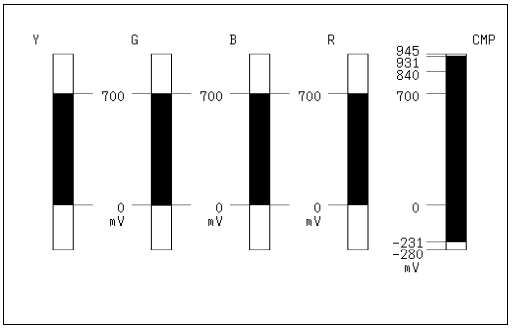


Figure 12-14 Selecting the display unit (PAL)

12.9 Phase Difference Display

12.9.1 Phase Difference Screen Description

To display the phase difference, set F•6 DISPLAY to EXTPHASE.
On the phase difference screen, the phase difference between an SDI signal and an external sync signal is displayed.
To configure the phase difference screen, press F•5 EXTREF PHASE.

VECTOR → F•5 EXTREF PHASE →

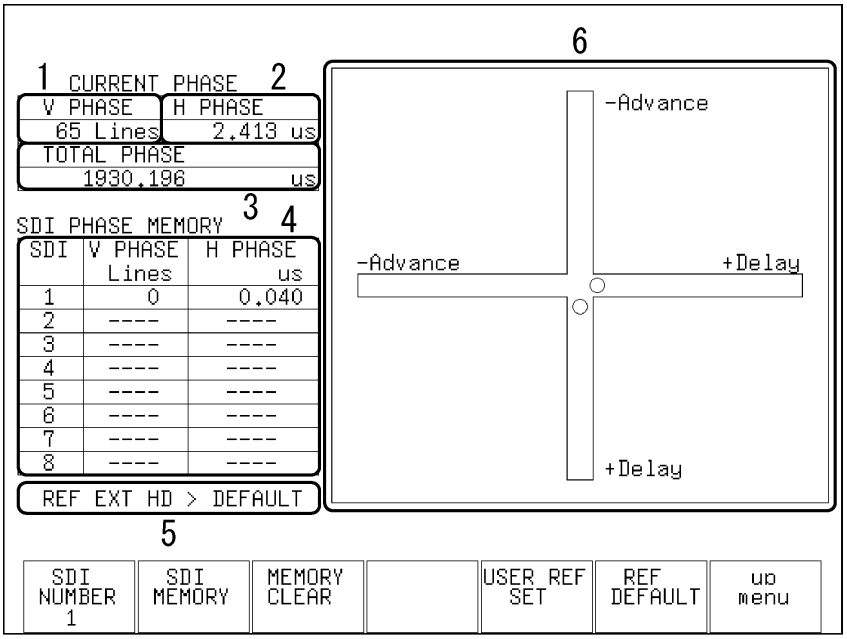


Figure 12-15 Phase difference screen description

To measure the phase difference, press REFE INT/EXT to switch to external sync mode, and then apply an external sync signal. The supported external sync signal formats are listed below.

- 1080i/60, 1080i/59.94, 1080i/50
- 1080p/30, 1080p/29.97, 1080p/25, 1080p/24, 1080p/23.98
- 1080PsF/30, 1080PsF/29.97, 1080PsF/25, 1080PsF/24, 1080PsF/23.98
- 720p/60, 720p/59.94, 720p/50, 720p/30, 720p/29.97, 720p/25, 720p/24, 720p/23.98
- NTSC, NTSC (with a 10-field ID)
- PAL

Table 12-3 Phase difference screen description

No.	Item	Description
1	V PHASE	The phase difference in lines is displayed.
2	H PHASE	The phase difference is displayed in microseconds (us).
3	TOTAL PHASE	The total of the V PHASE and H PHASE differences is displayed in microseconds (us).
4	SDI PHASE MEMORY	The stored phase difference is displayed. Reference 12.9.3, “Saving the Phase Difference”
5	REF	The external sync signal setting is indicated using one of the following messages: “INT” Indicates that the internal sync signal is being used. The phase difference cannot be measured. “EXT HD > DEFAULT” The external sync signal is a tri-level sync signal, and the phase difference between the signals is at its default value. “EXT HD > USER REF” The external sync signal is a tri-level sync signal, and the phase difference between the signals is a user-defined value. “EXT BB > DEFAULT” The external sync signal is a BB signal, and the phase difference between the signals is at its default value. “EXT BB > USER REF” The external sync signal is a BB signal, and the phase difference between the signals is a user-defined value. “NO SIGNAL” Indicates that no external sync signal is being received. Reference 12.9.5,“Setting the User-Defined Phase Difference Reference” 12.9.6, “Setting the Phase Difference to Default”
6	Graphical display	The vertical axis represents the V phase difference in lines. The horizontal axis represents the H phase time difference. When the circles that represent V and H overlap with each other in the center, there is no phase difference. The H circle turns green when it is within ±3 clocks of the center. The V circle turns green when it is in the center±0 lines. Circles do not appear when internal synchronization is in use. For both the V and H axes, differences of up to approximately +1/2 frames from the center are displayed on the Delay axis and differences of up to approximately -1/2 frames from the center are displayed on the Advance axis. See the following table for details. The H axis phase difference display may fluctuate within the range of ±1 clock in cases such as when the signal is switched.

Table 12-4 Delay and Advance axis display ranges

Format	Displayed on the Advance Axis			Displayed on the Delay Axis				
	V PHASE [Lines]	H PHASE [us]		V PHASE [Lines]	H PHASE [us]		V PHASE [Lines]	H PHASE [us]
1080p/59.94	-562	-14.829	to	0	0	to	562	0
1080p/60	-562	-14.814	to	0	0	to	562	0
1080p/50	-532	-17.777	to	0	0	to	562	0
1080i/59.94, 1080p/29.97, 1080PsF/29.97	-562	-29.645	to	0	0	to	562	0
1080i/60, 1080p/30, 1080PsF/30	-562	-29.616	to	0	0	to	562	0
1080i/50, 1080p/25, 1080PsF/25	-562	-35.542	to	0	0	to	562	0
1080p/23.98, 1080PsF/23.98	-562	-37.060	to	0	0	to	562	0
1080p/24, 1080PsF/24	-562	-37.023	to	0	0	to	562	0
720p/59.94	-375	0	to	0	0	to	374	22.230
720p/60	-375	0	to	0	0	to	374	22.208
720p/50	-375	0	to	0	0	to	374	26.653
720p/29.97	-375	0	to	0	0	to	374	44.475
720p/30	-375	0	to	0	0	to	374	44.430
720p/25	-375	0	to	0	0	to	374	53.319
720p/23.98	-375	0	to	0	0	to	374	55.597
720p/24	-375	0	to	0	0	to	374	55.542
525i/59.94	-262	-63.518	to	0	0	to	262	0
625i/50	-312	-63.962	to	0	0	to	312	0

12.9.2 Selecting the Memory Number

You can save up to eight sets of phase differences between the SDI signal and the external sync signal. You can use this when you need to switch systems using a switcher or the like and align the phases.
To select the memory number you want to save to or delete the contents of, follow the procedure below.

Procedure

VECTOR → F•5 EXTREF PHASE → F•1 SDI NUMBER: 1 - 8

12.9.3 Saving the Phase Difference

To save the phase difference between the SDI signal and external sync signal to the memory number selected with F•1 SDI NUMBER, follow the procedure below.

Procedure

VECTOR → F•5 EXTREF PHASE → F•2 SDI MEMORY

12.9.4 Deleting a Phase Difference

To delete the phase difference from the memory number selected with F•1 SDI NUMBER, follow the procedure below.

Procedure

VECTOR → F•5 EXTREF PHASE → F•3 MEMORY CLEAR

12.9.5 Setting the User-Defined Phase Difference Reference

To set the phase difference between the SDI signal and external sync signal to zero, follow the procedure below..
You can change the reference to match the system that you are using.

Procedure

VECTOR → F•5 EXTREF PHASE → F•5 USER REF SET

12.9.6 Setting the Phase Difference to Default

To set the phase difference between the SDI signal and external sync signal to the default value, follow the procedure below..
When set to the default value, the phase difference is assumed to be zero when an external sync signal without a timing offset transmitted from a LEADER signal generator and an SDI signal are received. (Depending on the output accuracy of the signal generator and measurement accuracy of the LV 5333, there may be an offset of around ±3 clocks in the display.)

Procedure

VECTOR → F•5 EXTREF PHASE → F•6 REF DEFAULT

13. STATUS DISPLAY

13.1 Status Screen Description

To display the status, press STATUS.

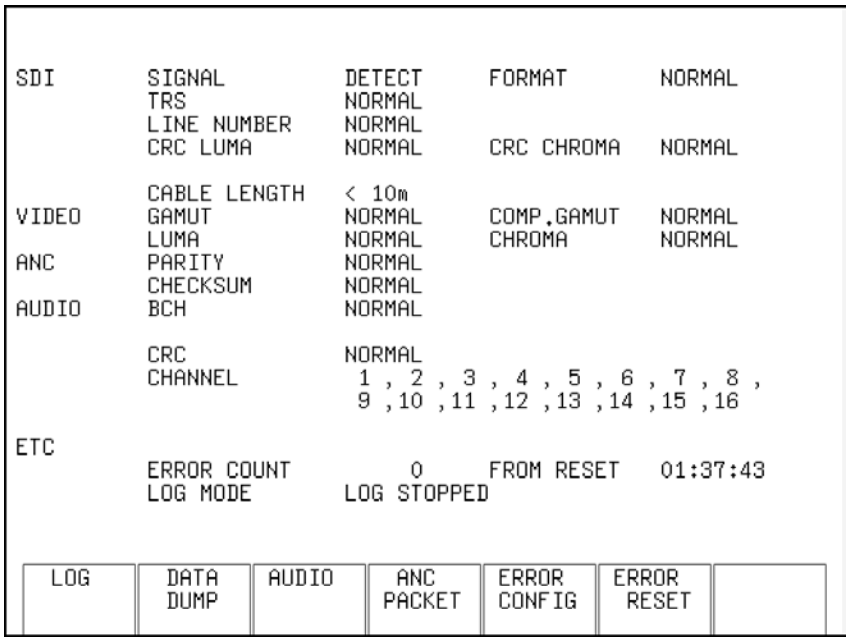


Figure 13-1 Status screen description

Table 13-1 Status screen description

Item	Display	Description
SIGNAL		Whether or not an SDI signal is being received through one of the SDI input connectors is displayed. “NO SIGNAL” may appear even when an SDI signal is being applied if the signal amplitude is small or if there is a lot of jitter. If “NO SIGNAL” appears, the rest of the information listed below will be blank.
	DETECT	When an SDI signal is being received
	NO SIGNAL	When an SDI signal is not being received
FORMAT		The status of video signal format detection is displayed. What the display indicates differs depending on whether the input format on the SYSTEM menu is set to AUTO or MANUAL. If “UNKNOWN” appears, the rest of the information listed below will be blank. Reference 5.1, “Setting the Input Format”
	NORMAL	When a signal in a compatible format is being received (AUTO) When a signal in the specified format is being received (MANUAL)
	UNKNOWN	When a signal in an incompatible format is being received (AUTO) When a signal in a format other than the specified format is being received (MANUAL)
TRS		The TRS error detection result is displayed. An error occurs when the EAV and SAV in the input signal are not in their correct positions.

Item	Display	Description
	NORMAL	Normal
	ERROR	Error
	Blank	When TRS ERROR is set to OFF Reference 13.6.3, “Configuring Error Detection Settings”
LINE NUMBER		The line number error detection result is displayed. An error occurs when the line number embedded in the input signal does not match the line number that has been counted by the LV 5333. This is not displayed when the input signal is SD.
	NORMAL	Normal
	ERROR	Error
	Blank	When LINE ERROR is set to OFF Reference 13.6.3, “Configuring Error Detection Settings”
EDH		The EDH error detection result is displayed. An error occurs when there is an error flag in an EDH packet embedded in the input signal or when the CRC computed from the input signal is different from an EDH packet's CRC data. This is not displayed when the input signal is HD or 3G. Reference 13.5.2, “Displaying EDH Packets.”
	NORMAL	Normal
	ERROR	Error
	NOT FOUND	When an EDH packet cannot be found
	Blank	When EDH ERROR is set to OFF Reference 13.6.3, “Configuring Error Detection Settings”
CRC LUMA CRC CHROMA		The CRC error detection result is displayed separately for the luminance signal and chrominance signal. An error occurs when the CRC embedded in the input signal is different from the CRC that is calculated by the LV 5333. This is not displayed when the input signal is SD.
	NORMAL	Normal
	ERROR	Error
	Blank	When CRC ERROR is set to OFF Reference 13.6.3, “Configuring Error Detection Settings”
CABLE LENGTH		Equivalent cable length measurement. The input signal attenuation is converted into a cable length that you selected with CABLE ERROR in ERROR CONFIG and displayed. If the value exceeds the WARNING value specified for CABLE ERROR, it is displayed in yellow. If it exceeds the ERROR value, it is displayed in red. The cable length display range is shown below. The accuracy is ±20 m. 3G: < 10 m, 10 to 105 m, > 105 m (5 m steps) HD: < 5 m, 5 to 130 m, > 130 m (5 m steps) SD: < 50 m, 50 to 300 m, > 300 m (5 m steps) Reference 13.6.7, “Configuring the Cable Error Settings”
GAMUT		The gamut error detection result is displayed. An error occurs when the detection level set with GAMUT in ERROR

Item	Display	Description
		CONFIG is exceeded. Reference 13.6.5, “Configuring Gamut Error Settings”
	NORMAL	Normal
	ERROR	Error
	Blank	When GAMUT ERROR is set to OFF Reference 13.6.3, “Configuring Error Detection Settings”
COMP.GAMUT		The composite gamut error detection result is displayed. An error occurs when the pseudo-composite signal exceeds the detection level set with COMPOSIT GAMUT in ERROR CONFIG. Reference 13.6.6, “Configuring Composite Gamut Error Settings”
	NORMAL	Normal
	ERROR	Error
	Blank	When C.GAMUT ERROR is set to OFF Reference 13.6.3, “Configuring Error Detection Settings”
LUMA		The luminance level error detection result is displayed. This is not displayed when the input signal is 3G. Reference 13.6.8“Configuring the Luminance Level Error Settings”
CHROMA		The chrominance level error detection result is displayed. This is not displayed when the input signal is 3G. Reference 13.6.9, “Setting the Chrominance Level Error”
PARITY		The parity error detection result is displayed. UDW errors are not detected.
	NORMAL	Normal
	ERROR	Error
	Blank	When PARITY ERROR is set to OFF Reference 13.6.3, “Configuring Error Detection Settings”
CHECKSUM		The checksum error detection result is displayed.
	NORMAL	Normal
	ERROR	Error
	Blank	When CHECKSUM ERROR is set to OFF Reference 13.6.3, “Configuring Error Detection Settings”
BCH		The BCH error detection result is displayed. An error occurs when the input signal's embedded audio BCH code causes an error. This is not displayed when the input signal is SD.
	NORMAL	Normal
	ERROR	Error
	Blank	When BCH ERROR is set to OFF Reference 13.6.3, “Configuring Error Detection Settings”
CRC		The CRC error detection result is displayed. An error is counted when the channel status bit of the input signal's embedded audio has a CRC error.
	NORMAL	Normal
	ERROR	Error
	WARNING	When the channel status FORMAT is Consumer

Item	Display	Description
		Reference 13.4.1, “Audio Status Screen Description”
	Blank	When AUDIO CRC is set to OFF Reference 13.6.3, “Configuring Error Detection Settings”
CHANNEL		The channels in the embedded audio signal of the input signal are detected and displayed. If audio control packets are embedded in the input signal, the channels are detected from the audio control packet ACT bit. Otherwise, the channels are detected from the audio data packet.
	Number	When an audio channel is embedded
	-	When an audio channel is not embedded
ERROR COUNT		The number of detected errors is displayed in the range from 0 to 100000. You can select whether to count an error every second or every field. Reference 13.6.2,“Selecting the Error Count Rate”
FROM RESET		The amount of time that has elapsed since the last error reset is displayed.
LOG MODE		The operating status of the event log feature is displayed. Reference 13.2.2,“Starting the Event Log”
	LOG STOPPED	When the event log feature is stopped.
	NOW LOGGING	When events are being logged

13.2 Configuring Event Log Settings

13.2.1 Event Log Screen Description

To display the event log, press F•1 LOG on the STATUS menu.

The LV 5333 can log various events. Logged events can also be saved in text format to a USB memory device. Events include signal reception, error occurrence, and error recovery. An event log contains both channel A and channel B events regardless of the input channel settings.

Turn the function dial (F•D) to the right to scroll the screen and view older events in the log. Press the function dial (F•D) to display the latest events.

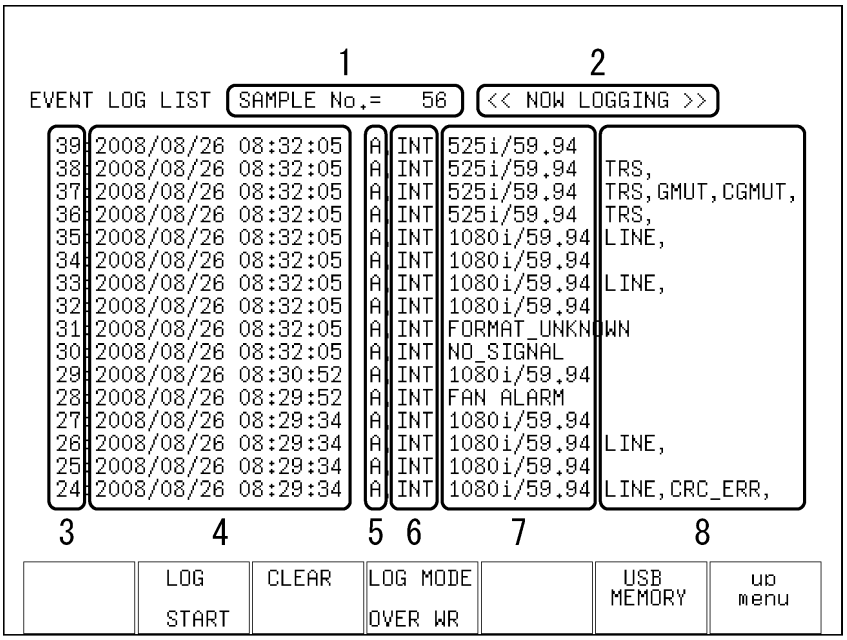


Figure 13-2 Event log screen description

Table 13-2 Event log screen description

No.	Item	Description
1	SAMPLE No.	The total number of events (a number from 0 to 1000) is displayed.
2	Logging Status	“NOW LOGGING” is displayed when events are being logged. “LOGGING STOPPED” appears when logging is stopped. You can start and stop event logging by pressing F•2 LOG. Reference 13.2.2,“Starting the Event Log”
3	Event numbers	Events are assigned numbers in order of their occurrence. The most recent event appears at the top of the list. To view earlier events, turn the function dial (F•D) to the right. You can display a maximum of 1000 events. To set whether or not events after the 1000th event are written over earlier events, press F•4 LOG MODE. Reference 13.2.4, “Selecting the Overwrite Mode”
4	Event dates and times	The dates and times when events occurred are displayed. To set the date and time, use the SYSTEM menu. Follow the procedure in section 5.5, “Setting the Date and Time.”
5	Event channels	The channels that events occurred on (A or B) are displayed.
6	Sync signal	The sync signal status (INT or EXT) when events occurred is displayed.

No.	Item	Description
7	Input format	The input format when events occurred is displayed as follows. “NO_SIGNAL” When a signal is not being received “FORMAT_UNKNOWN” When the input format cannot be detected “FAN ALARM” When the fan is not running properly
8	Event	The event that occurred is displayed. In the event log, when the same kind of event occurs successively or when multiple events occur at the same time, they are treated as a single event. You can view all the events by saving the event log to a USB memory device. This is especially useful when multiple events occur at the same time and you cannot view all of them on the LV 5333 screen. The displayed events are listed below. If the detection of a particular error has been disabled, the event that corresponds to that error will not be logged. “TRS” TRS error “LINE” HD/3G signal line number error “EDH” SD signal transmission error “CRC_L” HD/3G signal transmission error (Y signal) “CRC_C” HD/3G signal transmission error (C_B, C_R signal) “CABLE_ERR” Cable error “GMUT” Gamut error “CGMUT” Composite gamut error “LUMA” Luminance error “CHROMA” Chrominance error “PRTY” Ancillary data parity error “CHK” Ancillary data checksum error “BCH” Embedded audio transmission error “CRC_WAR” Channel status FORMAT is Consumer “CRC_ERR” Embedded audio CRC error Reference 13.2.5, “Saving to a USB Memory Device.” Reference 13.6.3, “Configuring Error Detection Settings”

13.2.2 Starting the Event Log

To start the event log, follow the procedure below.

Procedure

STATUS → F•1 LOG → F•2 LOG: START / STOP

Settings

START:	The event log is started. “NOW LOGGING” appears on the event log screen and the status screen.
STOP:	The event log is stopped. “LOGGING STOPPED” appears on the event log screen and the status screen.

13.2.3 Clearing the Event Log

To clear the event log that is displayed on the screen, follow the procedure below.
The event log is also cleared when you perform the following operations.

- Initialize the LV 5333
- Perform an error reset
- Turn off the power

Procedure

STATUS → F•1 LOG → F•3 CLEAR

13.2.4 Selecting the Overwrite Mode

To select the event log overwrite mode, follow the procedure below. The event log can record up to 1000 events. When the same error occurs successively, it is treated as a single event in the event log.

Procedure

STATUS → F•1 LOG → F•4 LOG MODE: OVER WR / STOP

Settings

OVER WR:	Events after the 1000th event are written over the oldest logged events.
STOP:	Events after the 1000th event are not logged.

13.2.5 Saving to a USB Memory Device

To save the event log in text format to a USB memory device, follow the procedure below. You can view saved event logs on a PC.

The file name is automatically set to “LOG+the date and time set on the SYSTEM menu.” The date is in the display format set on the SYSTEM menu. The time is in the format hour, minute, second.
Example: LOG20080501100859.txt

The file structure used in a USB memory device is shown below.

USB memory device
└ LV5333_USER
  └ LOG
    └ LOG********hhmmss.TXT

F•6 USB MEMORY appears when a USB memory device is connected.

Procedure

STATUS → F•1 LOG → F•6 USB MEMORY → F•2 STORE MEMORY

13.2.6 Save the event log to a USB memory device.

To delete an event log saved in a USB memory device, follow the procedure below. To cancel the operation, press F•3 DELETE NO.
F•4 FILE DELETE appears when there are files in the USB memory device.

Procedure

STATUS → F•1 LOG → F•6 USB MEMORY → F•4 FILE DELETE → F•1 DELETE YES

13.3 Configuring the Data Dump Settings

13.3.1 Data Dump Screen Description

To display a data dump, press F•2 DATA DUMP on the STATUS menu.

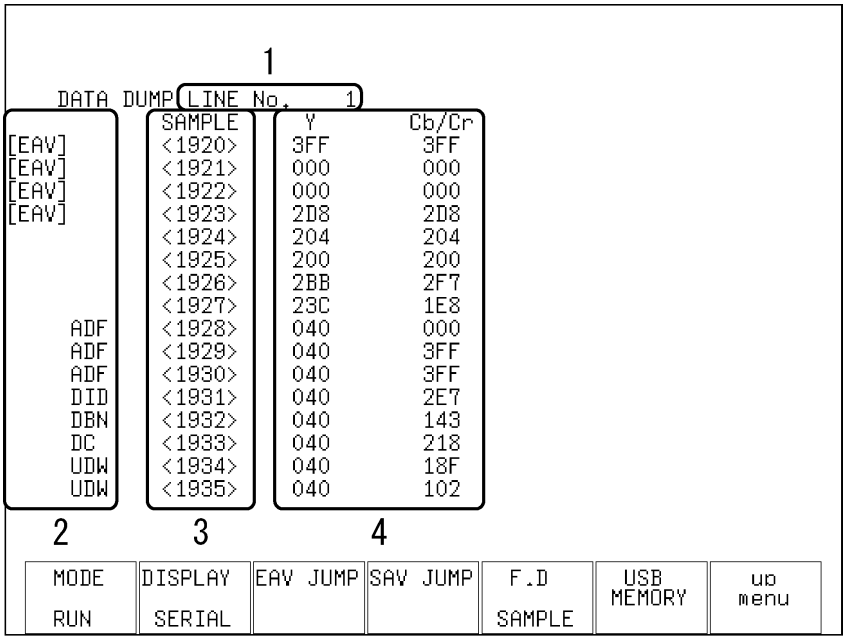


Figure 13-3 Data dump screen description

Table 13-3 Data dump screen description

No.	Item	Description
1	LINE No.	The data dump screen shows the data for a particular line. The selected line is indicated next to LINE No. To select a line, press F•5 F.D to select LINE, and then turn the function dial (F•D). Reference 13.3.5, “Selecting What the Function Dial Controls”
2	Ancillary data	The ancillary data embedded in the SDI signal is indicated as shown in the table below. “ADF” (cyan) Ancillary data header word “DID” (cyan) Ancillary data ID word “SDID” (cyan) Secondary format data in which DID is smaller than 80H “DBN” (cyan) Primary format data in which DID is 80H or larger “DC” (cyan) Ancillary data count word “UDW” (cyan) Ancillary data user data word “CS” (magenta) Ancillary data checksum word “AP” (yellow) The active picture from after the SAV to just before the EAV when the selected line is within the active video area.
3	SAMPLE	The sample numbers of the selected line are displayed. To select a sample, press F•5 F.D to select SAMPLE, and then turn the function dial (F•D). Reference 13.3.5, “Selecting What the Function Dial Controls”
4	Data	The data contained in the selected line and sample is displayed. You

No.	Item	Description
		can select the data display format by pressing F•2 DISPLAY. Reference 13.3.3, “Selecting the Display Format”

13.3.2 Selecting the Display Mode

To set the data dump display mode, follow the procedure below.

Procedure

STATUS → F•2 DATA DUMP → F•1 MODE: RUN / STOP

Settings

RUN:	The input signal data is automatically updated and displayed.
STOP:	The input signal data is retained and displayed.

13.3.3 Selecting the Display Format

To select the data dump display format, follow the procedure below.

Procedure

STATUS → F•2 DATA DUMP → F•2 DISPLAY: SERIAL / COMPO / BINARY / STREAM1 / STREAM2 / STREAM12

Settings

SERIAL:	The data is converted from parallel to serial data and displayed. This option cannot be selected when the input signal is 3G-B-DL.
COMPO:	The data is converted from parallel to serial data, split into Y, Cb, and Cr or G, B, and R, and then displayed. This option cannot be selected when the input signal is 3G-B-DL.
BINARY:	The parallel-converted data is displayed in binary. This option cannot be selected when the input signal is 3G-B-DL.
STREAM1:	Stream 1 is displayed. This option can be selected when the input signal is 3G-B-DL.
STREAM2:	Stream 2 is displayed. This option can be selected when the input signal is 3G-B-DL.
STREAM12:	Streams 1 and 2 are combined and displayed. This option can be selected when the input signal is 3G-B-DL.

Figure 13-4 Selecting the display format

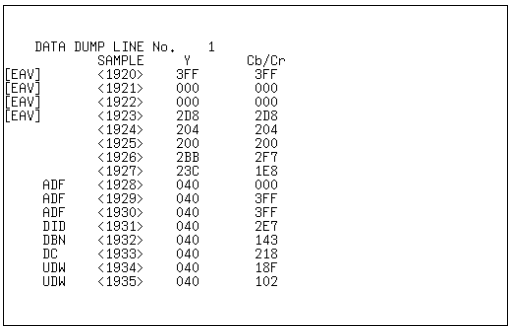
13.3.4 Selecting the Display Start Position

To make EAV the data dump display start position, follow the procedure below to press F•3 EAV JUMP.
To make SAV the display start position, press F•4 SAV JUMP.

Procedure

STATUS → F•2 DATA DUMP
→ F•3 EAV JUMP
→ F•4 SAV JUMP

EAV JUMP



SAV JUMP

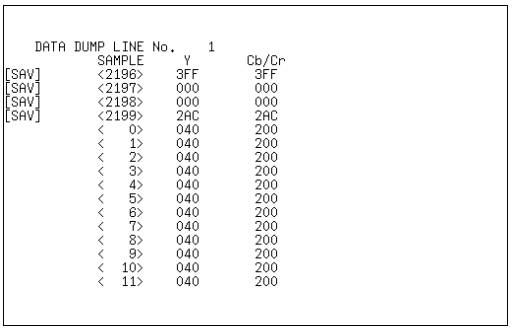


Figure 13-5 Selecting the display start position

13.3.5 Selecting What the Function Dial Controls

To select the line number and sample number for the data dump, you use the function dial (F•D).
To select whether the line number or sample number is controlled with the function dial (F•D), follow the procedure below.
When F•1 MODE is set to STOP, this setting is fixed to SAMPLE. This setting does not appear.

Procedure

STATUS → F•2 DATA DUMP → F•5 F.D: LINE / SAMPLE

Settings

LINE:	Turning the function dial (F•D) changes the line number. Changing this setting will also change the selected line on the picture, CINELITE, video-signal-waveform, and vectorscope displays.
SAMPLE:	Turning the function dial (F•D) changes the sample number.

13.3.6 Saving to a USB Memory Device

To save the data of the selected line in text format to a USB memory device, follow the procedure below. You can view the saved data dump on a PC.

The file name is automatically set to “DAT+the date and time set on the SYSTEM menu.” The date is in the display format set on the SYSTEM menu. The time is in the format hour, minute, second.
Example: DAT20080425150500.TXT

The file structure used in a USB memory device is shown below.

USB memory device
└ LV5333_USER
  └ DAT
    └ DAT********hhmmss.TXT

F•6 USB MEMORY appears when a USB memory device is connected.

Procedure

STATUS → F•2 DATA DUMP → F•6 USB MEMORY → F•2 STORE MEMORY

13.3.7 Deleting a Data Dump from the USB Memory Device

To delete a data dump saved in a USB memory device, follow the procedure below. To cancel the operation, press F•3 DELETE NO.
F•4 FILE DELETE appears when there are files in the USB memory device.

Procedure

STATUS → F•2 DATA DUMP → F•6 USB MEMORY → F•4 FILE DELETE → F•1 DELETE YES

13.4 Configuring the Audio Status Screen

13.4.1 Audio Status Screen Description

To display the audio status, press F•3 AUDIO on the STATUS menu.
You can display the data of the selected channel on this screen.

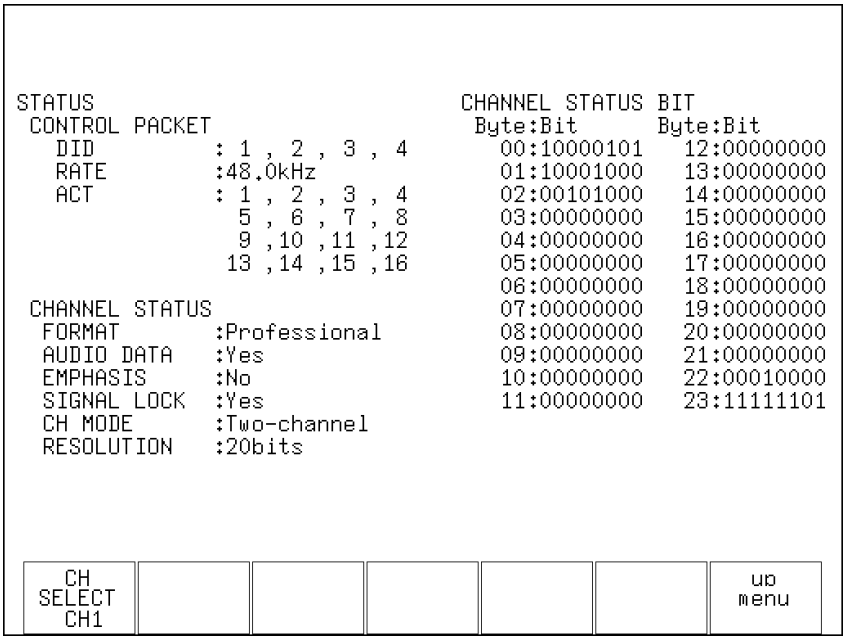


Figure 13-6 Audio status screen description

Table 13-4 Audio status screen description

Item	Display	Description
DID		The embedded audio groups are displayed.
	Number	Audio groups are embedded.
	-	Audio groups are not embedded.
RATE		The sampling frequency of the audio signal is displayed.
ACT		The embedded audio channels are displayed.
	Number	Audio channels are embedded.
	-	Audio channels are not embedded.
FORMAT		The audio signal format is displayed.
	Professional	Broadcasting station signals
	Consumer	Consumer audio signals
AUDIO DATA		Whether the data is an audio signal is displayed.
	Yes	Audio signal
	No	Non-audio signal

Item	Display	Description
EMPHASIS		The audio signal emphasis setting is displayed.
	Not_indicated	No emphasis setting
	No	No emphasis
	50/15us	Emphasis time constant 50/15us
	CCIT_J17	CCITT J.17 (800 Hz insertion loss 6.5 dB)
	Reserved	Undefined data received
SIGNAL LOCK		The lock status of the sampling frequency is displayed.
	Yes	Locked
	No	Not locked
CH MODE		The channel mode setting is displayed.
	Not_indicated	No mode setting
	Two-channel	2-channel mode
	Single-channel	1-channel mode
	Primary/secondary	Primary/secondary mode
	Stereo	Stereo mode
	Reserved	Undefined data received
RESOLUTION		The quantization is displayed.
	24bits	24 bit quantization
	20bits	20 bit quantization
CHANNEL STATUS BIT		The 192 bit channel status is displayed.

13.4.2 Selecting the Displayed Channel

To select the channel to display on the audio status screen, follow the procedure below. You can select from the channels selected with SDI GROUP on the AUDIO menu.

Reference SDI Group → 14.3, “Selecting the Channels to Measure”

Procedure

STATUS → F•3 AUDIO → F•1 CH SELECT: CH1 - CH16

13.5 Displaying the Ancillary Packets

13.5.1 Ancillary Packet Screen Description

To display ancillary packets, press F•4 ANC PACKET on the STATUS menu.
On this screen you can display and analyze ancillary packets embedded in the input signal.
If an ancillary packet is detected, “DETECT” appears. If not, “MISSING” appears.

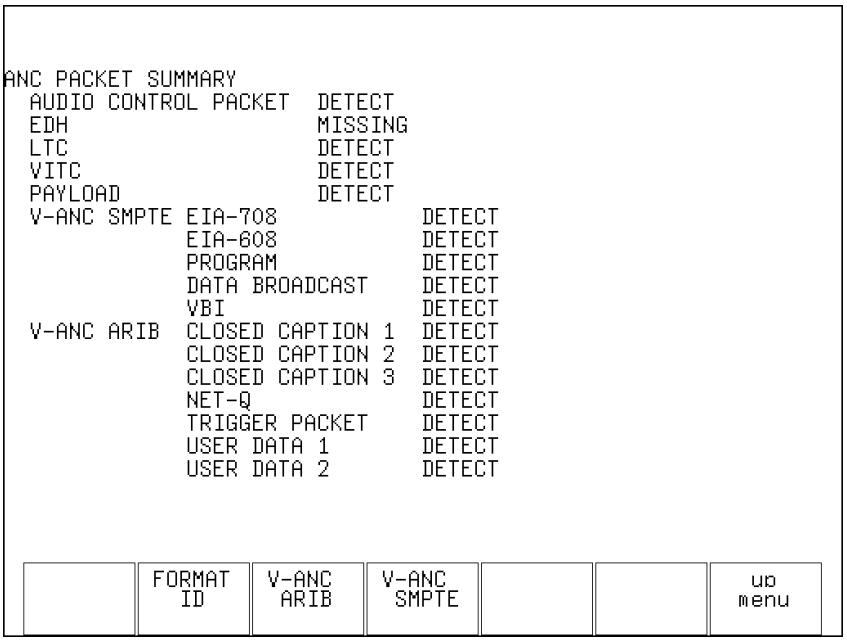


Figure 13-7 Ancillary packet screen description

Table 13-5 Ancillary packet screen description

Item	Description	Compliant Standard	Embedded Line
AUDIO CONTROL PACKET	Control packet for embedded audio. Embedded audio consists of four channels per group, and for each group, a control packet is embedded. Reference 13.4.1, “Audio Status Screen Description”		9, 571 (HD) 12, 275 (SD)
EDH	Packet for detecting SD signal transmission errors. When multiple devices are connected, this packet can be used to determine which device caused an error. Both full-field and active picture errors are detected. This is not detected when the input signal is HD or 3G. Reference 13.5.2, “Displaying EDH Packets.”	SMPTE RP 165	9, 272 (525/59.94) 5, 318 (625/50)
LTC	This is a type of timecode. One packet is embedded per frame.	SMPTE ST 12-2	10 (HD)
VITC	This is a type of timecode. One packet is embedded per field.	SMPTE ST 12-2	9, 571 (HD)
PAYLOAD	Packet for identifying the input format. Reference 13.5.3, “Displaying Payload IDs”	SMPTE ST 352 ARIB STD-B39	
EIA-708	This is one of the closed caption specifications. This is used for digital video closed caption data. It only supports alphanumeric characters. It is embedded in the V-ANC area.		
EIA-608	This is one of the closed caption specifications. This was previously used for analog composite closed caption data. It only supports alphanumeric characters. It is embedded in the V-ANC area.		
PROGRAM	Program information specification. It is embedded in the V-ANC area.	SMPTE ST 334	
DATA BROADCAST	Data broadcast packet. It is embedded in the V-ANC area.	SMPTE ST 334	
VBI	It is embedded in the V-ANC area.	SMPTE ST 334	
CLOSED CAPTION 1 to 3	Closed caption packet. Up to three pieces of closed caption data can be embedded. It is embedded in the V-ANC area. Reference 13.5.4, “Displaying Closed Caption Packets”	ARIB STD-B37	19, 582 (HD) 18, 281 (SD)
NET-Q	This is an inter-stationary control signal.	ARIB STD-B39	20, 583 (HD)

	Reference 13.5.5, “Displaying the Inter-Stationary Control Signal”		19, 282 (SD)
TRIGGER PACKET	Data transmission trigger signal.	ARIB STD-B35	20, 583 (HD) 19, 282 (SD)
USER DATA 1, 2	Data whose broadcast content is not specifically defined.	ARIB TR-B23	20, 583 (HD) 19, 282 (SD)

13.5.2 Displaying EDH Packets

When the input signal is SD, to display EDH packets, follow the procedure below.

The EDH packet screen is divided into a flag display (UES, IDA, IDH, EDA, and EDH) and a CRC display (RECEIVED CRC). The flag display shows the contents of the EDH packets embedded in the input signal. The CRC display shows the results of comparing the CRCs in the EDH packets to the CRCs computed by the LV 5333 from the received data.

Because SDI output is only transmitted through the serial reclock circuit, packets are not rewritten even if an error occurs in RECEIVED CRC.

Procedure

STATUS → F•4 ANC PACKET → F•1 EDH

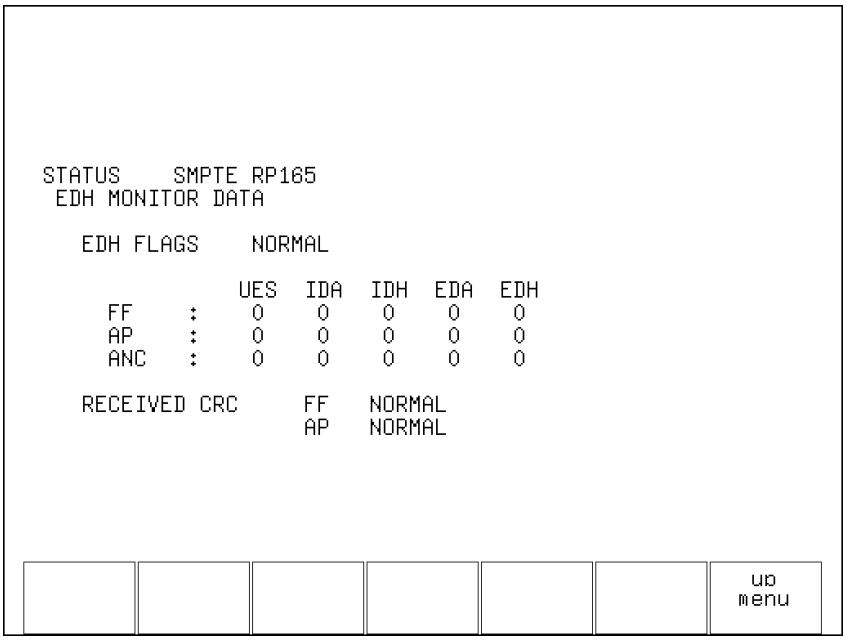


Figure 13-8 Displaying EDH packets

Table 13-6 Displaying EDH packets

Item	Display	Description
EDH FLAGS		Performs an EDH packet error detection.
	NORMAL	All flag indications (UES, IDA, IDH, EDA, and EDH) are 0, and all CRC indications (RECEIVED CRC) are NORMAL.
	ERROR	A flag indication ((UES, IDA, IDH, EDA, or EDH) is 1, or a CRC indication (RECEIVED CRC) is ERROR.
FF		A CRC code is generated from the entire data of a single field, and the result of error detection is displayed.
AP		A CRC code is generated from the data in the active video period, and the result of error detection is displayed.
ANC		A parity bit and checksum are generated from the ancillary data, and the result of error detection is displayed.
UES		Whether the connected device supports EDH packets is displayed.
	0	The connected device supports EDH packets.
	1	The connected device does not support EDH packets.
IDA		Data transmission error in a device before the LV 5333 is detected.
	0	Normal
	1	Error
IDH		Data transmission error in the previous device is detected.
	0	Normal
	1	Error
EDA		Transmission error in a device before the LV 5333 is detected.
	0	Normal
	1	Error
EDH		Transmission error in the previous device is detected.
	0	Normal
	1	Error
RECEIVED CRC FF		Performs a full field CRC error detection.
	NORMAL	The full field CRC in the EDH packet and that calculated from the received data match.
	ERROR	The full field CRC in the EDH packet and that calculated from the received data do not match.
RECEIVED CRC AP		Performs an active picture CRC error detection.
	NORMAL	The active picture CRC in the EDH packet and that calculated from the received data match.
	ERROR	The active picture CRC in the EDH packet and that calculated from the received data do not match.

13.5.3 Displaying Payload IDs

To show the payload IDs, follow the procedure below.
The payload ID is an ancillary packet for identifying the video signal format.

Procedure

STATUS → F•4 ANC PACKET → F•2 PAYLOAD ID

To select the payload ID type, follow the procedure below.

Procedure

STATUS → F•4 ANC PACKET → F•2 PAYLOAD ID → F•1 PACKET SELECT: SMPTE / ARIB

Settings

SMPTE:	The payload ID defined in SMPTE ST 352 is displayed.
ARIB:	The payload ID defined in ARIB STD-B39 is displayed.

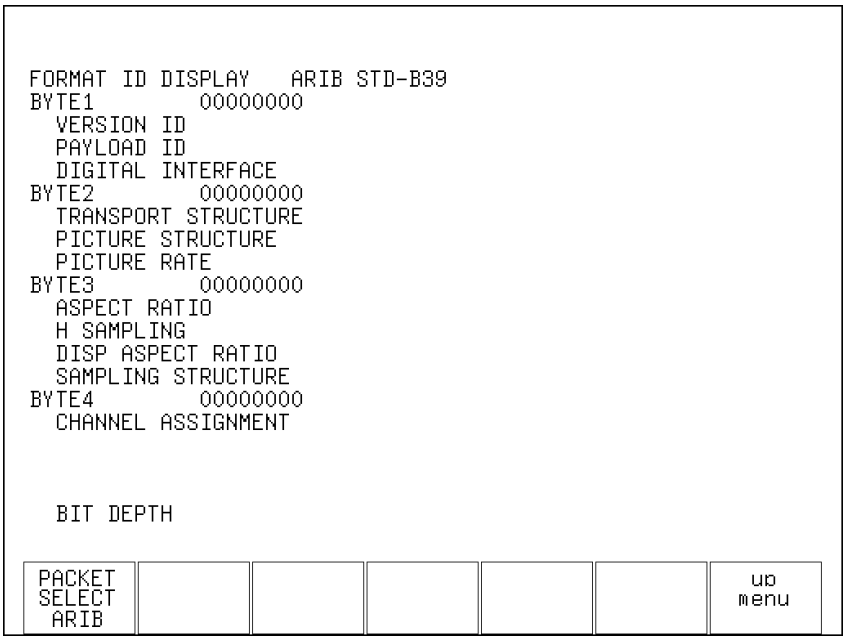


Figure 13-9 Displaying payload IDs (ARIB)

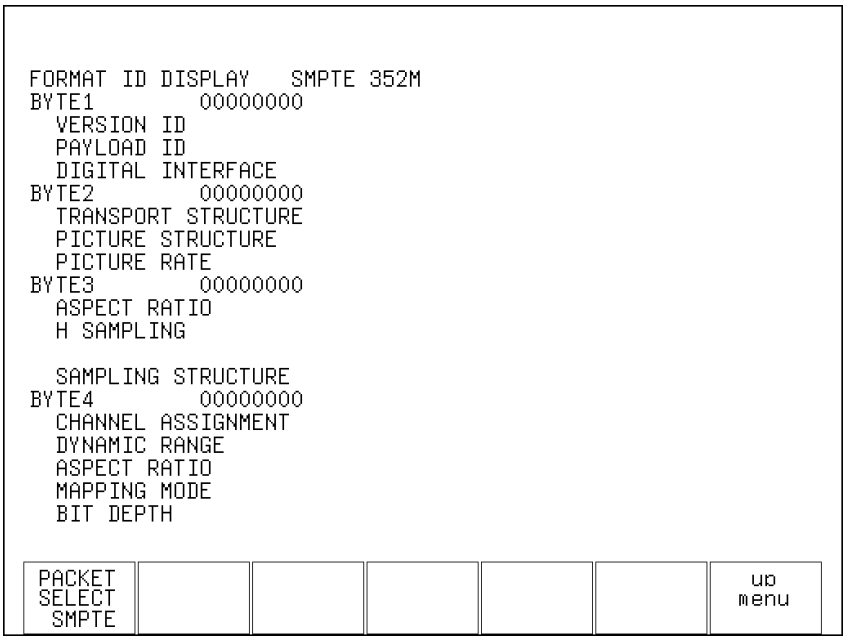


Figure 13-10 Displaying payload IDs (SMPTE)

Figure 13-7 Displaying payload IDs

Item	Description
BYTE1 to 4	Displays the format ID in binary.
VERSION ID	Displays the format ID version.
PAYLOAD ID	Displays the video format.
DIGITAL INTERFACE	Displays the input signal bit rate.
TRANSPORT STRUCTURE	Displays whether the digital interface uses a progressive or interlaced transport structure.
PICTURE STRUCTURE	Displays whether the picture has been scanned as progressive or interlaced.
PICTURE RATE	Displays the frame rate.
ASPECT RATIO	Displays the aspect ratio.
H SAMPLING	Displays the number of horizontal samples.
DISP ASPECT RATIO	Displays the aspect ratio. This is not displayed when F•1 PACKET SELECT is set to SMPTE.
SAMPLING STRUCTURE	Displays the sampling structure.
CHANNEL ASSIGNMENT	Displays the link.
DYNAMIC RANGE	Displays the dynamic range of a pixel. This is not displayed when F•1 PACKET SELECT is set to ARIB.
ASPECT RATIO	Displays the image aspect ratio. This is not displayed when F•1 PACKET SELECT is set to ARIB.
MAPPING MODE	Displays the mapping mode. This is not displayed when F•1 PACKET SELECT is set to ARIB.
BIT DEPTH	Displays the quantization accuracy of a pixel.

13.5.4 Displaying Closed Caption Packets

When the input signal is SD or HD, to display closed caption packets defined in the ARIB standard, follow the procedure below.
In the ARIB standard, up to four types of closed caption packets can be embedded. Here the selected one is displayed. You can set the display format to text or dump format.

Procedure

STATUS → F•4 ANC PACKET → F•3 V-ANC ARIB → F•1 CLOSED CAPTION

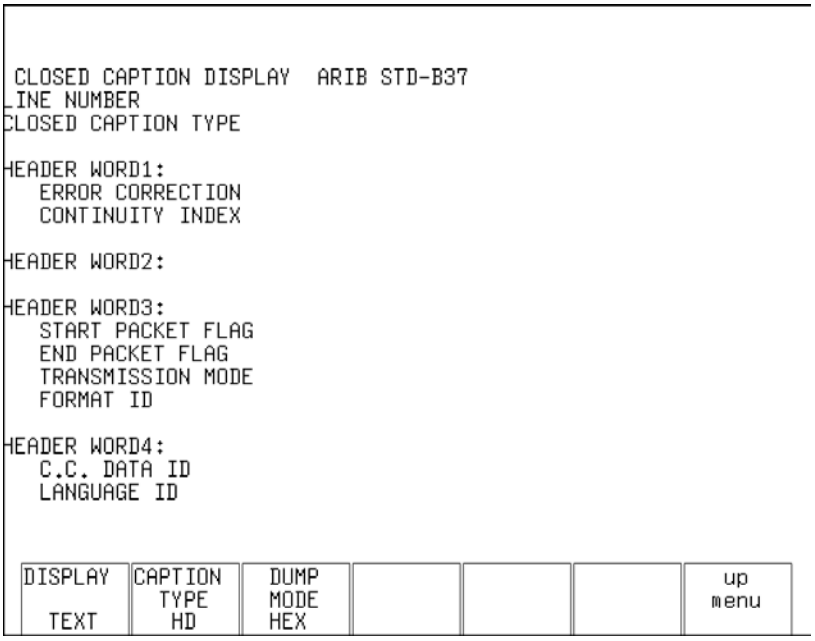


Figure 13-11 Displaying closed caption packets

Table 13-8 Displaying closed caption packets

Item	Description
HEADER WORD1 to 4	Displays the header in binary.
LINE NUMBER	Displays the line number that the closed caption packet is embedded in.
CLOSED CAPTION TYPE	Displays the closed caption packet type.
ERROR CORRECTION	Displays the presence of error correction.
CONTINUITY INDEX	Displays a counter that shows packet continuity.
START PACKET FLAG	Displays the first packet of the ancillary packets composing a closed caption data group.
END PACKET FLAG	Displays whether to include the last packet when packets are divided with MPEG-2 TS.
TRANSMISSION MODE	Displays the transmission mode.
FORMAT ID	Displays the closed caption packet type.
C.C. DATA ID	Displays the closed caption data ID.
LANGUAGE ID	Displays the language ID for sending closed captions in multiple languages.

- Selecting the Closed Caption Type

To select the closed caption packet type, follow the procedure below. The values are arranged in the order that they are embedded: HD, SD, ANALOG, and CELLULAR.

Procedure

STATUS → F•4 ANC PACKET → F•3 V-ANC ARIB → F•1 CLOSED CAPTION → F•2 CAPTION TYPE: HD / SD / ANALOG / CELLULAR

- Selecting the Display Format

To select the closed caption packet display format, follow the procedure below.
On the dump display, you can view the entire content by using the function dial (F•D).

Procedure

STATUS → F•4 ANC PACKET → F•3 V-ANC ARIB → F•1 CLOSED CAPTION → F•1 DISPLAY: TEXT / DUMP

Settings

TEXT:	The header section is analyzed and displayed in text format.
DUMP:	Data dump of one packet is displayed.

- Selecting the Dump Mode

When F•1 DISPLAY is set to DUMP, to select the data dump display format, follow the procedure below.

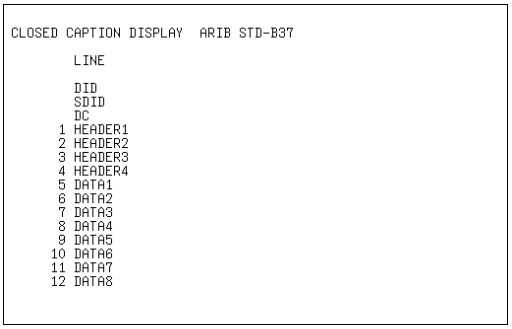
Procedure

STATUS → F•4 ANC PACKET → F•3 V-ANC ARIB → F•1 CLOSED CAPTION → F•3 DUMP MODE: HEX / BINARY

Settings

HEX:	Data is displayed in hexadecimal format.
BINARY:	Data is displayed in binary format.

DUMP MODE = HEX



DUMP MODE = BINARY

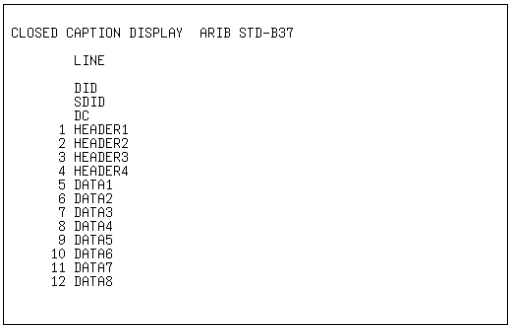


Figure 13-12 Selecting the dump mode

13.5.5 Displaying the Inter-Stationary Control Signal

When the input signal is SD or HD, to display the content of the inter-stationary control signal defined in the ARIB standard, follow the procedure below.
You can set the display format to text or dump format.

Procedure

STATUS → F•4 ANC PACKET → F•3 V-ANC ARIB → F•2 NET-Q

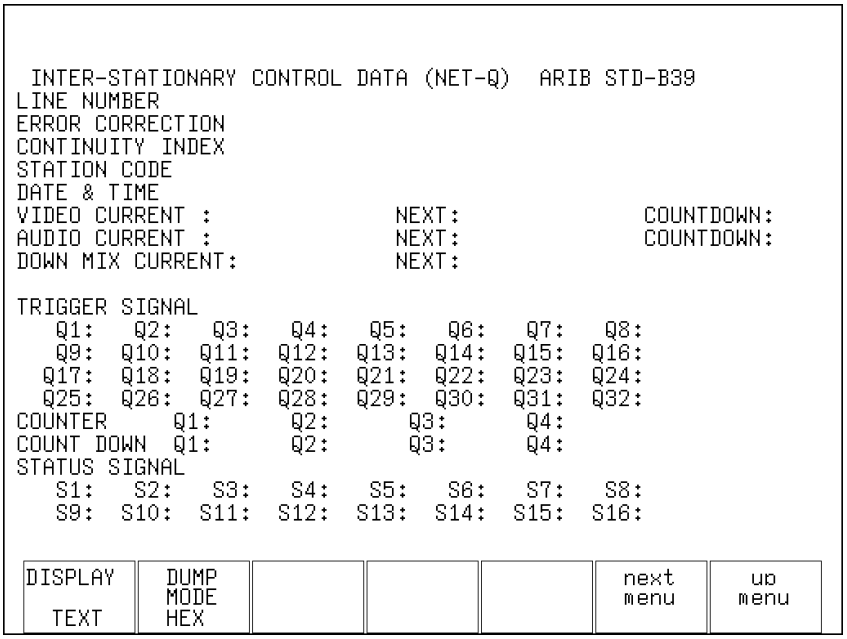


Figure 13-13 Displaying the inter-stationary control signal

Table 13-9 Displaying the inter-stationary control signal

Item	Description
LINE NUMBER	Displays the line number that the inter-stationary control signal is embedded in.
ERROR CORRECTION	Displays the presence of error correction.
CONTINUITY INDEX	Displays a counter that shows packet continuity.
STATION CODE	Displays the station code using the alphabet or katakana.
DATE & TIME	Displays the originating station date and time.
VIDEO CURRENT	Displays the current video mode.
AUDIO CURRENT	Displays the current audio mode.
DOWN MIX CURRENT	Displays the current audio down mix setting.
NEXT	Displays the next video mode, audio mode, audio down mix setting.
COUNTDOWN	Displays a countdown of the video mode and audio mode switching.
TRIGGER SIGNAL	Displays the trigger signal, which indicates the timing.
COUNTER	Displays the counter for TRIGGER SIGNAL Q1 to Q4.
COUNTDOWN	Displays the timing information for TRIGGER SIGNAL Q1 to Q4.
STATUS SIGNAL	Displays the status signal.

- Selecting the Display Format

To select the inter-stationary control signal display format, follow the procedure below.
On the dump display, you can view the entire content by using the function dial (F•D).

Procedure

STATUS → F•4 ANC PACKET → F•3 V-ANC ARIB → F•2 NET-Q → F•1 DISPLAY: TEXT / DUMP

Settings

TEXT:	The packet is analyzed and displayed in text format.
DUMP:	Data dump of one packet is displayed.

- Selecting the Dump Mode

When F•1 DISPLAY is set to DUMP, to select the data dump display format, follow the procedure below.

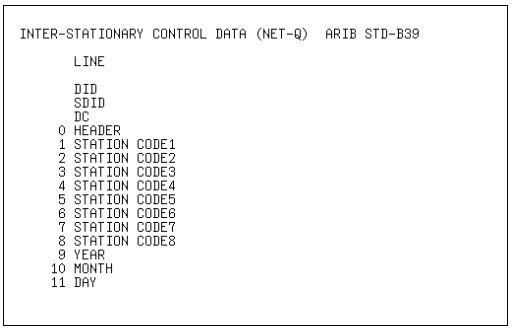
Procedure

STATUS → F•4 ANC PACKET → F•3 V-ANC ARIB → F•2 NET-Q → F•2 DUMP MODE: HEX / BINARY

Settings

HEX:	Data is displayed in hexadecimal format.
BINARY:	Data is displayed in binary format.

DUMP MODE = HEX



DUMP MODE = BINARY

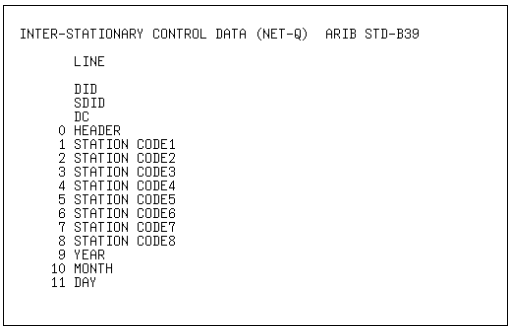


Figure 13-14 Selecting the dump mode

● Turning the Q Signal On and Off

To turn Q1 to Q32 of the trigger signal on and off, follow the procedure below.
This setting is valid when F•1 DISPLAY is set to TEXT.

Procedure

STATUS → F•4 ANC PACKET → F•3 V-ANC ARIB → F•2 NET-Q → F•6 next menu
→ F•1 Q1: ON / OFF
•••
→ F•2 Q32: ON / OFF

13.5.6 Displaying EIA-708 Data

When the input signal is SD or HD, to display data defined in the EIA-708 standard, follow the procedure below.
You can set the display format to text or dump format. If you select the dump format, turn function dial (F•D) to view all the data.

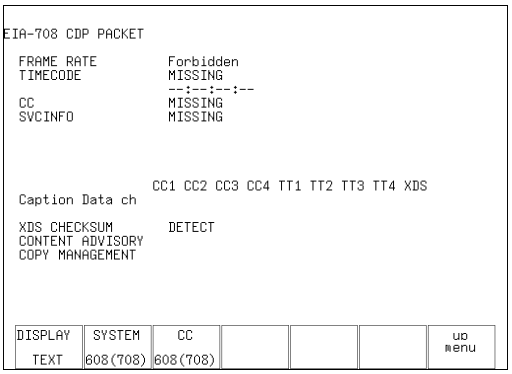
Procedure

STATUS → F•4 ANC PACKET → F•4 V-ANC SMPTE → F•1 EIA-708 → F•1 DISPLAY: TEXT / DUMP

Settings

TEXT: Data is displayed in text format.
DUMP: A data dump is displayed in hexadecimal format.

DISPLAY = TEXT



DISPLAY = DUMP

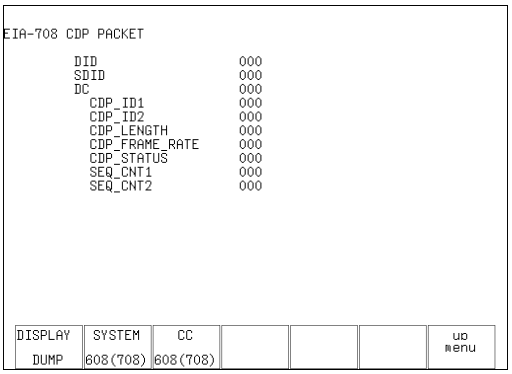


Figure 13-15 Displaying EIA-708 data

Table 13-10 Displaying EIA-708 data

Item	Description
FRAME RATE	Displays the information from the frame_rate field in the header of EIA-708 CDP packets.
TIME CODE	Displays whether the EIA-708 time_code_section is present or not. The LV 5333 checks whether the time_code_section is present or not by examining the time_code_present field in the header of CDP packets. If the time code is present, its value is also displayed.
CC	Displays whether the EIA-708 ccdata_section is present or not. The LV 5333 checks whether the ccdata_section is present or not by examining the ccdata_present field in the header of CDP packets.
SVCINFO	Displays whether the EIA-708 ccsvcinfo_section is present or not. The LV 5333 checks whether the ccsvcinfo_section is present or not by examining the ccsvcinfo_present field in the header of CDP packets.
Caption Data ch	Displays the type of the CC packet that was received.
XDS CHECKSUM	Displays the result of a comparison of a checksum computed on the XDS data that was received and the checksum field in the XDS packet.
CONTENT ADVISORY	Displays the content advisory information of the XDS data that was received.
COPY MANAGEMENT	Displays the copy management information of the XDS data that was received.

13.5.7 Displaying EIA-608 Data

When the input signal is SD or HD, to display data defined in the EIA-608 standard, follow the procedure below.
You can set the display format to text or dump format. If you select the dump format, turn function dial (F•D) to view all the data.

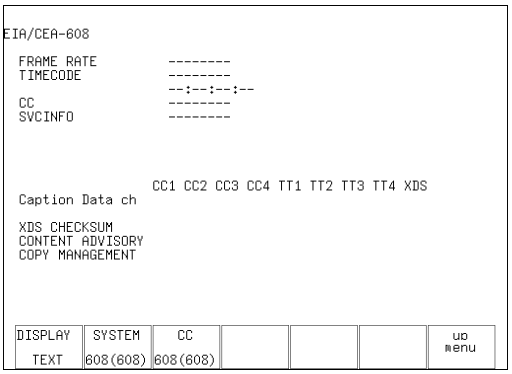
Procedure

STATUS → F•4 ANC PACKET → F•4 V-ANC SMPTE → F•2 EIA-608 → F•1 DISPLAY: TEXT / DUMP

Settings

TEXT:	Data is displayed in text format.
DUMP:	A data dump is displayed in hexadecimal format.

DISPLAY = TEXT



DISPLAY = DUMP

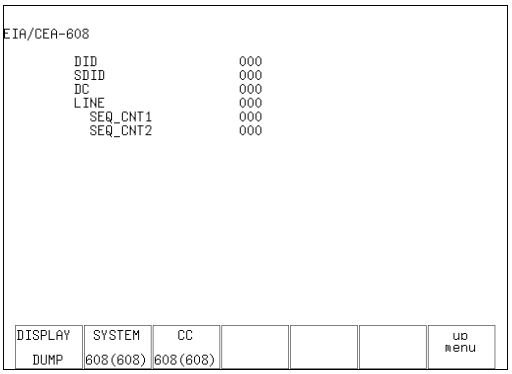


Figure 13-16 Displaying EIA-608 data

13.5.8 Displaying Program Data

When the input signal is SD or HD, to display the presence of the Program Description packet defined in the ATSC A/65 standard, follow the procedure below. For each descriptor, if its ID is present, “DETECT” is displayed; if its ID is not present, “MISSING” is displayed.

Procedure

STATUS → F•4 ANC PACKET → F•4 V-ANC SMPTE → F•3 PROGRAM

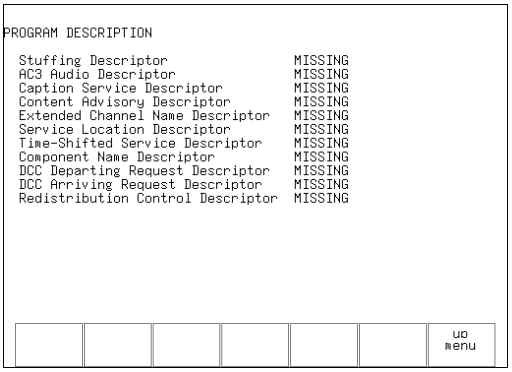


Figure 13-17 Displaying program data

13.5.9 Displaying VBI Data

When the input signal is SD or HD, to display VBI data, follow the procedure below.

Procedure

STATUS → F•4 ANC PACKET → F•4 V-ANC SMPTE → F•5 VBI

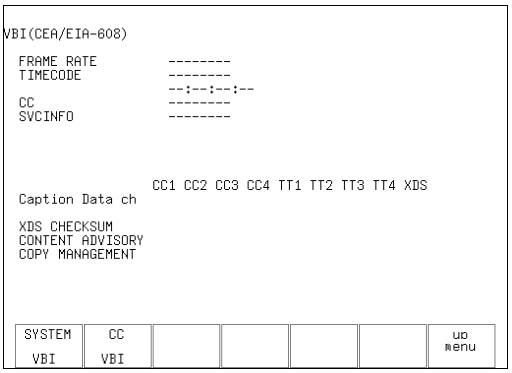


Figure 13-18 Displaying VBI data

13.6 Configuring Error Settings

To configure the error settings, press F•5 ERROR CONFIG on the STATUS menu.

STATUS → F•5 ERROR CONFIG →

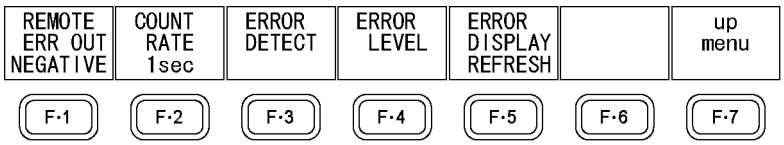


Figure 13-19 ERROR CONFIG menu

13.6.1 Selecting the Alarm Polarity

If an error occurs in an item whose detection has been enabled with F•3 ERROR DETECT, an alarm signal is transmitted from pin 14 of the remote connector.
To select the polarity of the alarm signal, follow the procedure below.

Reference 16.1, “Remote Control Feature”

Procedure

STATUS → F•5 ERROR CONFIG → F•1 REMOTE ERR OUT: OFF / POSITIVE / NEGATIVE

Settings

OFF:	An alarm signal is not transmitted.
POSITIVE:	A high level signal is transmitted when an error occurs.
NEGATIVE:	A low level signal is transmitted when an error occurs.

13.6.2 Selecting the Error Count Rate

If an error occurs in an item whose detection has been enabled with F•3 ERROR DETECT, an error count is displayed next to ERROR COUNT on the status screen.
To select the error count rate displayed next to ERROR COUNT, follow the procedure below.

Procedure

STATUS → F•5 ERROR CONFIG → F•2 COUNT RATE: V RATE / 1sec

Settings

V RATE:	An error is counted for each field (when the input signal is interlace or segmented frame) or each frame (when the input signal is progressive). Even if multiple errors occur within the same field (frame), the error count increases by 1.
1sec:	Errors are counted for each second. Even if multiple errors occur within a second, the error count increases by 1.

13.6.3 Configuring Error Detection Settings

To configure the error detection settings, press F•3 ERROR DETECT on the STATUS menu.

STATUS → F•5 ERROR CONFIG → F•3 ERROR DETECT →

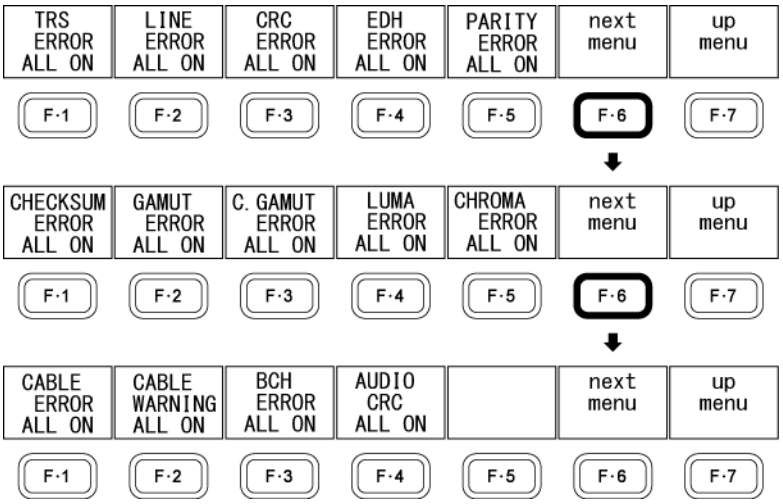


Figure 13-20 ERROR DETECT menu

	INTERNAL	INT&TRAP	INT&RMT	ALL ON	OFF
Error display in the upper right of the screen	Yes	Yes	Yes	Yes	No
Error display on the status display	Yes	Yes	Yes	Yes	No
Error display in the event log	Yes	Yes	Yes	Yes	No
SNMP trap output	No	Yes	No	Yes	No
Alarm output from the remote connector	No	No	Yes	Yes	No

● Detecting TRS Errors

To detect TRS errors, follow the procedure below.

Procedure

STATUS → F•5 ERROR CONFIG → F•3 ERROR DETECT → F•1 TRS ERROR: INTERNAL / INT&TRAP / INT&RMT / ALL ON / OFF

● Detecting Line Number Errors

To detect line number errors, follow the procedure below.
This setting is valid when the input signal is HD or 3G.

Procedure

STATUS → F•5 ERROR CONFIG → F•3 ERROR DETECT → F•2 LINE ERROR: INTERNAL / INT&TRAP / INT&RMT / ALL ON / OFF

● Detecting CRC Errors

To detect CRC errors, follow the procedure below. When set to ON, error information is displayed next to CRC LUMA and CRC CHROMA on the status screen.
This setting is valid when the input signal is HD or 3G.

Procedure

STATUS → F•5 ERROR CONFIG → F•3 ERROR DETECT → F•3 CRC ERROR: INTERNAL / INT&TRAP / INT&RMT / ALL ON / OFF

● Detecting EDH Errors

To detect EDH errors, follow the procedure below. When set to ON, error information is displayed next to EDH on the status screen.
This setting is valid when the input signal is SD.

Procedure

STATUS → F•5 ERROR CONFIG → F•3 ERROR DETECT → F•4 EDH ERROR: INTERNAL / INT&TRAP / INT&RMT / ALL ON / OFF

● Detecting Parity Errors

To detect parity errors in ancillary data, follow the procedure below. When set to ON, error information is displayed next to PARITY on the status screen.

Procedure

STATUS → F•5 ERROR CONFIG → F•3 ERROR DETECT → F•5 PARITY ERROR: INTERNAL / INT&TRAP / INT&RMT / ALL ON / OFF

● Detecting Checksum Errors

To detect checksum error errors in ancillary data, follow the procedure below. When set to ON, error information is displayed next to CHECKSUM on the status screen.

Procedure

STATUS → F•5 ERROR CONFIG → F•3 ERROR DETECT → F•6 next menu → F•1 CHECKSUM ERROR: INTERNAL / INT&TRAP / INT&RMT / ALL ON / OFF

● Detecting Gamut Errors

To detect gamut errors, follow the procedure below. When set to ON, error information is displayed next to GAMUT on the status screen.
To set the threshold for detecting gamut errors, press F•4 ERROR LEVEL.

Procedure

STATUS → F•5 ERROR CONFIG → F•3 ERROR DETECT → F•6 next menu → F•2 GAMUT ERROR: INTERNAL / INT&TRAP / INT&RMT / ALL ON / OFF

● Detecting Composite Gamut Errors

To detect gamut errors in a pseudo-composite signal converted from the component signal, follow the procedure below. When set to ON, error information is displayed next to COMP.GAMUT on the status screen.
To set the threshold for detecting composite gamut errors, press F•4 ERROR LEVEL.

Procedure

STATUS → F•5 ERROR CONFIG → F•3 ERROR DETECT → F•6 next menu → F•3 C.GAMUT ERROR: INTERNAL / INT&TRAP / INT&RMT / ALL ON / OFF

● Detecting Luminance Level Errors

To detect luminance level errors, follow the procedure below. When set to ON, error information is displayed next to LUMA on the status screen.
To set the threshold for detecting luminance level errors, press F•4 ERROR LEVEL.
This setting is valid when the input signal is SD or HD.

Procedure

STATUS → F•5 ERROR CONFIG → F•3 ERROR DETECT → F•6 next menu → F•4 LUMA ERROR: INTERNAL / INT&TRAP / INT&RMT / ALL ON / OFF

● Detecting Chrominance Level Errors

To detect chrominance level errors, follow the procedure below. When set to ON, error information is displayed next to CHROMA on the status screen.
To set the threshold for detecting chrominance level errors, press F•4 ERROR LEVEL.
This setting is valid when the input signal is SD or HD.

Procedure

STATUS → F•5 ERROR CONFIG → F•3 ERROR DETECT → F•6 next menu → F•5 CHROMA ERROR: INTERNAL / INT&TRAP / INT&RMT / ALL ON / OFF

● Detecting Cable Errors

To detect cable errors, follow the procedure below. When set to ON, error information is displayed next to CABLE LENGTH on the status screen. If an error occurs, the measured value is displayed in red.
To set the threshold for detecting cable errors, press F•4 ERROR LEVEL.

Procedure

STATUS → F•5 ERROR CONFIG → F•3 ERROR DETECT → F•6 next menu → F•6 next menu → F•1 CABLE ERROR: INTERNAL / INT&TRAP / INT&RMT / ALL ON / OFF

● Detecting Cable Warnings

To detect cable warnings, follow the procedure below. When set to ON, warning information is displayed next to CABLE LENGTH on the status screen. If a warning occurs, the measured value is displayed in yellow.
To set the threshold for detecting cable warnings, press F•4 ERROR LEVEL.

Procedure

STATUS → F•5 ERROR CONFIG → F•3 ERROR DETECT → F•6 next menu → F•6 next menu → F•2 CABLE WARNING: INTERNAL / INT&TRAP / INT&RMT / ALL ON / OFF

● Detecting BCH Errors

To detect BCH errors in embedded audio, follow the procedure below. When set to ON, error information is displayed next to BCH on the status screen.
This setting is valid when the input signal is HD or 3G.

Procedure

STATUS → F•5 ERROR CONFIG → F•3 ERROR DETECT → F•6 next menu → F•6 next menu → F•3 BCH ERROR: INTERNAL / INT&TRAP / INT&RMT / ALL ON / OFF

● Detecting Audio CRC Errors

To detect CRC errors in embedded audio, follow the procedure below. When set to ON, error information is displayed next to CRC on the status screen.

Procedure

STATUS → F•5 ERROR CONFIG → F•3 ERROR DETECT → F•6 next menu → F•6 next menu → F•4 AUDIO CRC: INTERNAL / INT&TRAP / INT&RMT / ALL ON / OFF

13.6.4 Selecting the Level Unit

To select the unit for setting the error detection levels, follow the procedure below.
The unit that you select here is also applied to the 5 bar screen.

Reference 12.8.2, “Selecting the Display Unit”

Procedure

STATUS → F•5 ERROR CONFIG → F•4 ERROR LEVEL → F•6 UNIT: % / mV

13.6.5 Configuring Gamut Error Settings

To configure the gamut error settings, press F•1 GAMUT on the STATUS menu.
The settings that you specify here also apply to the R, G, and B bars on the 5 bar display.
The unit for setting the level is the same as the unit that was specified with F•6 UNIT.

Reference 12.8.1, “5 Bar Screen Description”

STATUS → F•5 ERROR CONFIG → F•4 ERROR LEVEL → F•1 GAMUT →

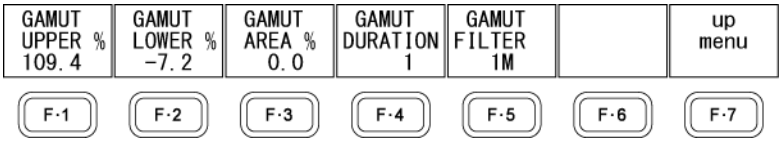


Figure 13-21 GAMUT menu

● Setting the Upper Limit

To set the upper limit of gamut errors, follow the procedure below. An error is detected when the input signal level exceeds the specified value.
Press the function dial (F•D) to return the setting to its default value (109.4 or 765.8).

Procedure

STATUS → F•5 ERROR CONFIG → F•4 ERROR LEVEL → F•1 GAMUT
→ F•1 GAMUT UPPER %: 90.8 - 109.4
→ F•1 GAMUT UPPER mV: 635.6 - 765.8

● Setting the Lower Limit

To set the lower limit of gamut errors, follow the procedure below. An error is detected when the input signal level falls below the specified value.
Press the function dial (F•D) to return the setting to its default value (-7.2 or -50.4).

Procedure

STATUS → F•5 ERROR CONFIG → F•4 ERROR LEVEL → F•1 GAMUT
→ F•2 GAMUT LOWER %: −7.2 - 6.1
→ F•2 GAMUT LOWER mV: −50.4 - 42.7

● Setting the Area

To specify the percentage of the active picture area over which errors must occur to be recognized as an error, follow the procedure below.
Press the function dial (F•D) to return the setting to its default value (0.0).

Procedure

STATUS → F•5 ERROR CONFIG → F•4 ERROR LEVEL → F•1 GAMUT
→ F•3 GAMUT AREA %: 0.0 - 5.0

● Setting the Duration

To set the number of consecutive video frames over which errors must occur to be recognized as an error, follow the procedure below.
Press the function dial (F•D) to return the setting to its default value (1).

Procedure

STATUS → F•5 ERROR CONFIG → F•4 ERROR LEVEL → F•1 GAMUT
→ F•4 GAMUT DURATION: 1 - 50

● Selecting the Gamut Filter

If you are detecting gamut errors or composite gamut errors, you can set a low-pass filter to remove transient errors such as overshoot.
To select the gamut filter, follow the procedure below.

Procedure

STATUS → F•5 ERROR CONFIG → F•4 ERROR LEVEL → F•1 GAMUT → F•5 GAMUT FILTER: 1M / 2.8M / OFF

Settings

1M:	A 1 MHz low-pass filter is applied during error detection.
2.8M:	A 2.8 MHz low-pass filter is applied during error detection. This option cannot be selected when the input signal is SD.
OFF:	A low-pass filter is not applied during error detection.

13.6.6 Configuring the Composite Gamut Error Settings

To configure the composite gamut error settings, press F•2 COMPOSIT GAMUT on the STATUS menu.

The settings that you specify here also apply to the CMP bar in the 5 bar display. The unit for setting the level is the same as the unit that was specified with F•6 UNIT.

Reference 12.8.1, “5 Bar Screen Description”

STATUS → F•5 ERROR CONFIG → F•4 ERROR LEVEL → F•2 COMPOSIT GAMUT →

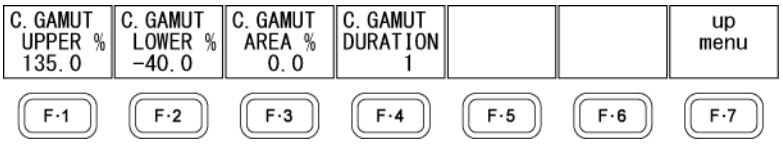


Figure 13-22 COMPOSIT GAMUT menu

● Setting the Upper Limit

To set the upper limit of composite gamut errors, follow the procedure below. An error is detected when the level after converting the input signal to a pseudo-composite signal exceeds the specified value.
Press the function dial (F•D) to return the setting to its default value (135.0, 963.9, or 945.0).

Procedure

STATUS → F•5 ERROR CONFIG → F•4 ERROR LEVEL → F•2 COMPOSIT GAMUT
→ F•1 C.GAMUT UPPER %:90.0 - 135.0
→ F•1 C.GAMUT UPPER mV: 642.6 - 963.9 (for NTSC)
630.0 - 945.0 (for PAL)

● Setting the Lower Limit

To set the lower limit of composite gamut errors, follow the procedure below. An error is

detected when the level after converting the input signal to a pseudo-composite signal falls below the specified value.
Press the function dial (F•D) to return the setting to its default value (-40.0, -285.6, or -280.0).

Procedure

STATUS → F•5 ERROR CONFIG → F•4 ERROR LEVEL → F•2 COMPOSIT GAMUT
→ F•2 C.GAMUT LOWER %: −40.0 - −20.0
→ F•2 C.GAMUT LOWER mV: −285.6 - −142.8 (for NTSC)
−280.0 - −140.0 (for PAL)

● Setting the Area

To specify the percentage of the active picture area over which errors must occur to be recognized as an error, follow the procedure below.
Press the function dial (F•D) to return the setting to its default value (0.0).

Procedure

STATUS → F•5 ERROR CONFIG → F•4 ERROR LEVEL → F•2 COMPOSIT GAMUT
→ F•3 C.GAMUT AREA %: 0.0 - 5.0

● Setting the Duration

To set the number of consecutive video frames over which errors must occur to be recognized as an error, follow the procedure below.
Press the function dial (F•D) to return the setting to its default value (1).

Procedure

STATUS → F•5 ERROR CONFIG → F•4 ERROR LEVEL → F•2 COMPOSIT GAMUT
→ F•4 C.GAMUT DURATION: 1 - 50

13.6.7 Configuring Cable Error Settings

To configure the cable error settings, press F•3 CABLE ERROR on the STATUS menu.

STATUS → F•5 ERROR CONFIG → F•4 ERROR LEVEL → F•3 CABLE ERROR →

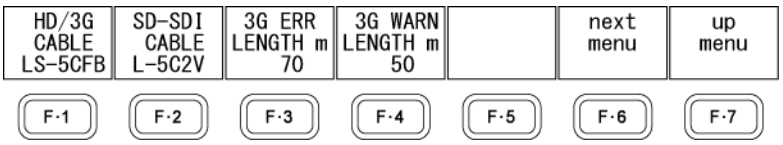


Figure 13-_23 CABLE ERROR menu

● Selecting the HD/3G Cable

To select the cable for measuring cable lengths, follow the procedure below.
This setting is valid when the input signal is HD or 3G.

Procedure

STATUS → F•5 ERROR CONFIG → F•4 ERROR LEVEL → F•3 CABLE ERROR
→ F•1 HD/3G CABLE: LS-5CFB / 1694A

● Selecting the SD-SDI Cable

To select the cable for measuring cable lengths, follow the procedure below.
This setting is valid when the input signal is SD.

Procedure

STATUS → F•5 ERROR CONFIG → F•4 ERROR LEVEL → F•3 CABLE ERROR
→ F•2 SD-SDI CABLE: L-5C2V / 8281

● Setting the 3G Error Upper Limit

To set the upper limit of cable errors, follow the procedure below. If this value is exceeded, an error will occur, and the measured value on the status screen will be displayed in red.
Press the function dial (F•D) to return the setting to its default value (70).
This setting is valid when the input signal is 3G.

Procedure

STATUS → F•5 ERROR CONFIG → F•4 ERROR LEVEL → F•3 CABLE ERROR
→ F•3 3G ERR LENGTH m: 10 - 70 - 105

● Setting the 3G Warning Upper Limit

To set the upper limit of cable warnings, follow the procedure below. If this value is exceeded, a warning will occur, and the measured value on the status screen will be displayed in yellow.
Press the function dial (F•D) to return the setting to its default value (50).
This setting is valid when the input signal is 3G.

Procedure

STATUS → F•5 ERROR CONFIG → F•4 ERROR LEVEL → F•3 CABLE ERROR
→ F•4 3G WARN LENGTH m: 10 - 50 - 105

● Setting the HD Error Upper Limit

To set the upper limit of cable errors, follow the procedure below. If this value is exceeded, an error will occur, and the measured value on the status screen will be displayed in red.
Press the function dial (F•D) to return the setting to its default value (100).
This setting is valid when the input signal is HD.

Procedure

STATUS → F•5 ERROR CONFIG → F•4 ERROR LEVEL → F•3 CABLE ERROR → F•6 next menu
→ F•1 HD ERR LENGTH m: 5 - 100 - 130

● Setting the HD Warning Upper Limit

To set the upper limit of cable warnings, follow the procedure below. If this value is exceeded, a warning will occur, and the measured value on the status screen will be displayed in yellow.
Press the function dial (F•D) to return the setting to its default value (80).
This setting is valid when the input signal is HD.

Procedure

STATUS → F•5 ERROR CONFIG → F•4 ERROR LEVEL → F•3 CABLE ERROR → F•6 next menu
→ F•2 HD WARN LENGTH m: 5 - 80 - 130

● Setting the SD Error Upper Limit

To set the upper limit of cable errors, follow the procedure below. If this value is exceeded, an error will occur, and the measured value on the status screen will be displayed in red.
Press the function dial (F•D) to return the setting to its default value (250).
This setting is valid when the input signal is SD.

Procedure

STATUS → F•5 ERROR CONFIG → F•4 ERROR LEVEL → F•3 CABLE ERROR → F•6 next menu
→ F•3 SD ERR LENGTH m: 50 - 250 - 300

● Setting the SD Warning Upper Limit

To set the upper limit of cable warnings, follow the procedure below. If this value is exceeded, a warning will occur, and the measured value on the status screen will be displayed in yellow.
Press the function dial (F•D) to return the setting to its default value (230).
This setting is valid when the input signal is SD.

Procedure

STATUS → F•5 ERROR CONFIG → F•4 ERROR LEVEL → F•3 CABLE ERROR → F•6 next menu
→ F•4 SD WARN LENGTH m: 50 - 230 - 300

13.6.8 Configuring the Luminance Level Error Settings

To configure the luminance level error settings, press F•4 LUMA on the STATUS menu.
The settings that you specify here also apply to the CMP bar in the 5 bar display. The unit for setting the level is the same as the unit that was specified with F•6 UNIT.
Reference 12.8.1, “5 Bar Screen Description”

STATUS → F•5 ERROR CONFIG → F•4 ERROR LEVEL → F•4 LUMA →

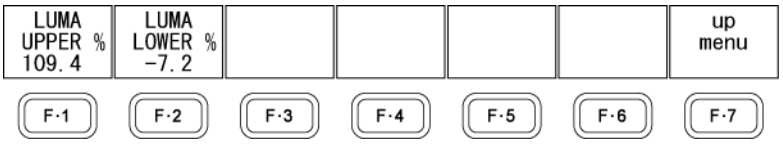


Figure 13-_24 LUMA menu

● Setting the Upper Limit

To set the upper limit of luminance level errors, follow the procedure below. An error is detected when the input signal luminance level exceeds the specified value.
Press the function dial (F•D) to return the setting to its default value (109.4 or 765.8).

Procedure

STATUS → F•5 ERROR CONFIG → F•4 ERROR LEVEL → F•4 LUMA
→ F•1 LUMA UPPER %: -7.2 - 109.4
→ F•1 LUMA UPPER mV: -50.4 - 765.8

● Setting the Lower Limit

To set the lower limit of luminance level errors, follow the procedure below. An error is detected when the input signal luminance level falls below the specified value.
Press the function dial (F•D) to return the setting to its default value (-7.2 or -50.4).

Procedure

STATUS → F•5 ERROR CONFIG → F•4 ERROR LEVEL → F•4 LUMA
→ F•2 LUMA LOWER %: -7.2 - 109.4
→ F•2 LUMA LOWER mV: -50.4 - 765.8

13.6.9 Configuring the Chrominance Level Error Settings

To configure the chrominance level error settings, press F•5 CHROMA on the STATUS menu.

STATUS → F•5 ERROR CONFIG → F•4 ERROR LEVEL → F•5 CHROMA →

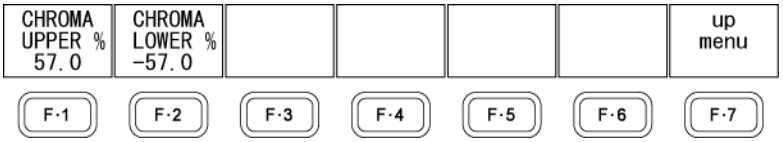


Figure 13-_25 CHROMA menu

● Setting the Upper Limit

To set the upper limit of chrominance level errors, follow the procedure below. An error is detected when the input signal chrominance level exceeds the specified value.
Press the function dial (F•D) to return the setting to its default value (57.0 or 399.0).

Procedure

STATUS → F•5 ERROR CONFIG → F•4 ERROR LEVEL → F•5 CHROMA
→ F•1 CHROMA UPPER %: -57.0 - 57.0
→ F•1 CHROMA UPPER mV: -399.0 - 399.0

● Setting the Lower Limit

To set the lower limit of chrominance level errors, follow the procedure below. An error is detected when the input signal chrominance level falls below the specified value.
Press the function dial (F•D) to return the setting to its default value (-57.0 or -399.0).

Procedure

STATUS → F•5 ERROR CONFIG → F•4 ERROR LEVEL → F•5 CHROMA
→ F•2 CHROMA LOWER %:-57.0 - 57.0
→ F•2 CHROMA LOWER mV: -399.0 - 399.0

13.6.10 Selecting the Error Display Format

To select the error information display format for when the signal returns normal after an error, follow the procedure below. The error information is displayed on the status screen and in the upper right of the screen.

Procedure

STATUS → F•5 ERROR CONFIG → F•5 ERROR DISPLAY: REFRESH / HOLD

Settings

REFRESH:	When the signal returns normal, the error display clears after 1 second.
HOLD:	The error display remains until the error is reset even when the signal returns normal. The error counter continues to count normally.

13.7 Resetting Errors

To reset errors, follow the procedure below. When you reset errors, the status screen changes as follows.

- ERROR COUNT is reset to 0.
- FROM RESET is reset to 00:00:00.
- The event log is cleared.

Procedure

STATUS → F•6 ERROR RESET

14. AUDIO DISPLAY

14.1 Audio Screen Description

To display the audio screen, press AUDIO.
In the audio display, the levels of the eight selected channels are displayed numerically and with meters. The meters are normally displayed in green, but levels that exceed the reference level are displayed in red.

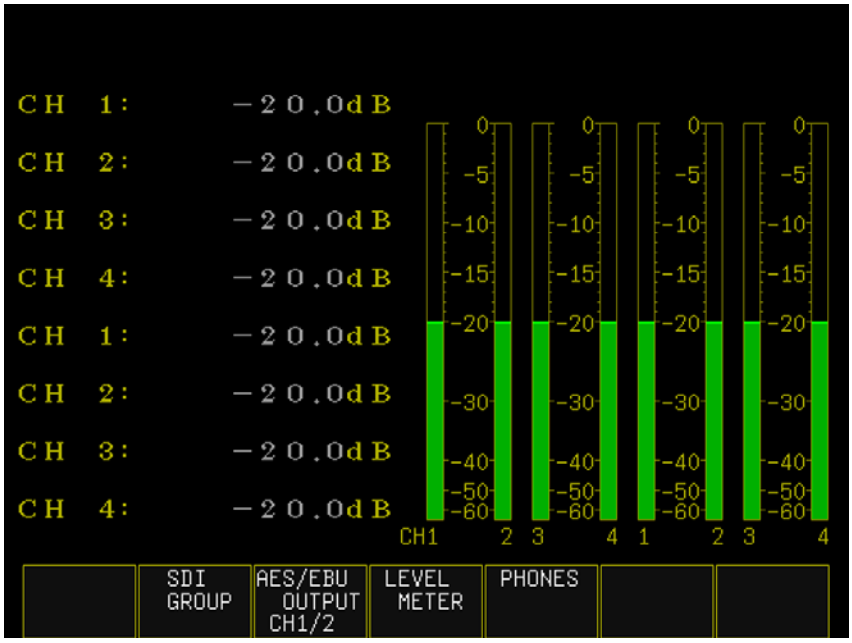


Figure 14-_1 Audio screen description

14.2 Selecting the Display Mode

In 1-screen display, audio levels are displayed numerically and with meters, but in multi-screen display, only one of them is displayed.
To select the audio display mode in multi-screen display, follow the procedure below.

Reference MODE → 15.1, “Selecting the Display Format”

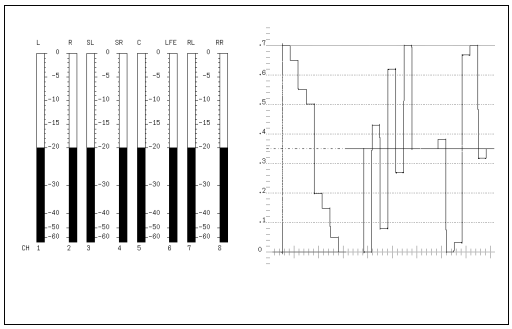
Procedure

MULTI → F•4 MULTI AUDIO → F•1 MODE: LEVEL / VALUE

Settings

LEVEL:	Audio levels are displayed with meters.
VALUE:	Audio levels are displayed numerically.

MODE = LEVEL



MODE = VALUE

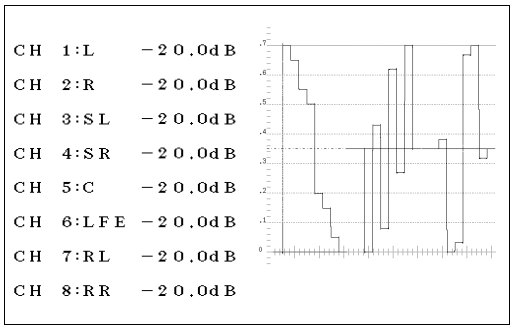


Figure 14-2 Selecting the display mode

14.3 Selecting the Channels to Measure

In audio display, audio levels for eight channels can be measured and displayed. To select the channels to measure, press F•2 SDI GROUP on the AUDIO menu.

AUDIO → F•2 SDI GROUP →

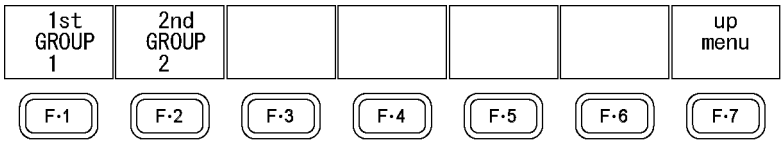


Figure 14-_3 SDI GROUP menu

To select a group of eight channels to show on the audio display, follow the procedure below. The channel assignments of the 1st GROUP and 2nd GROUP are shown below.

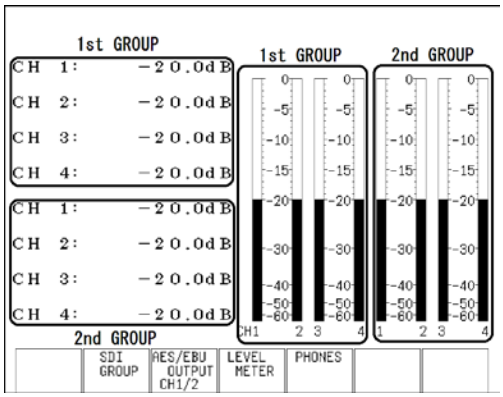


Figure 14-4 Selecting the channels to measure

Note that two of the channels selected here can be assigned to the output channels of the headphone socket (audio output and status).

Procedure

AUDIO → F•2 SDI GROUP
→ F•1 1st GROUP: 1 / 2 / 3 / 4
→ F•2 2nd GROUP: 1 / 2 / 3 / 4

Settings

1:	Channels 1 to 4 are displayed.
2:	Channels 5 to 8 are displayed.
3:	Channels 9 to 12 are displayed.
4:	Channels 13 to 16 are displayed.

14.4 Selecting the Audio Output Channels

To select the audio output channels, follow the procedure below.
You can select the audio output channels from those selected with SDI GROUP.

Reference SDI Group → 14.3, “Selecting the Channels to Measure”

Procedure

AUDIO → F•3 AES/EBU OUTPUT: CH1/2 / CH3/4 / CH5/6 / CH7/8 / CH9/10 / CH11/12 / CH13/14 / CH15/16

14.5 Configuring the Meter Settings

To configure meter settings, press F•4 LEVEL METER on the AUDIO menu.

AUDIO → F•4 LEVEL METER →

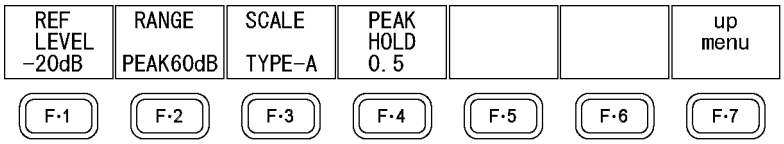


Figure 14-_5 LEVEL METER menu

14.5.1 Selecting the Reference Level

To select the meter reference level, follow the procedure below.
Levels that exceed the reference level are displayed in red, and levels that are less than the reference level are displayed in green.

Procedure

AUDIO → F•4 LEVEL METER → F•1 REF LEVEL: −20dB / −18dB / −12dB / −9dB

14.5.2 Selecting the Range

To set the meter's range, follow the procedure below.

Procedure

AUDIO → F•4 LEVEL METER → F•2 RANGE: PEAK60dB / PEAK90dB / AVERAGE

Settings

PEAK60dB: A meter with a peak marker and a range from -60 to 0 dB
PEAK90dB: A meter with a peak marker and a range from -90 to 0 dB
AVERAGE: A meter with a peak marker, a reference level at 0 dB, and a range from -20 to 3 dB

The following table shows meter response models.

Table 14-1 Meter response models

RANGE	delay time (*1)	return time (*2)
PEAK60dB	Instantaneous	1.7 sec
PEAK90dB	Instantaneous	1.7 sec
AVERAGE	0.3 sec	0.3 sec

*1 The amount of time it takes for the meter to show -20 dB when a -20 dB/1 kHz sine-wave signal is applied with no input preceding it.

*2 The amount of time it takes for the meter to show -40 dB when the application of a -20 dB/1 kHz sine-wave signal is stopped.

14.5.3 Selecting the Scale

When F•2 RANGE is set to PEAK60dB or PEAK90dB, to select the meter scale, follow the procedure below.

Procedure

AUDIO → F•4 LEVEL METER → F•3 SCALE: TYPE-A / TYPE-B

Settings

TYPE-A:	A scale that covers the range determined by the RANGE setting is displayed.
TYPE-B:	A scale in which the reference level specified by REF LEVEL is set to 0 dB is displayed.

14.5.4 Setting the Peak Hold

To set the meter's peak value hold time (in 0.5-second steps), follow the procedure below. This setting is valid when F•2 RANGE is set to PEAK60dB or PEAK90dB.

Procedure

AUDIO → F•4 LEVEL METER → F•4 PEAK HOLD: 0.5 - 5.0 / HOLD

14.6 Configuring the Headphone Settings

To configure the headphone settings, press F•5 PHONES on the AUDIO menu.

AUDIO → F•5 PHONES →

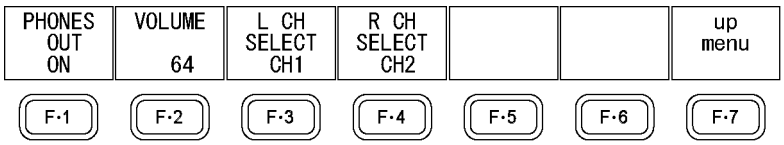


Figure 14-6 PHONES menu

14.6.1 Adjusting the Volume

To adjust the headphone volume, follow the procedure below.
Press the function dial (F•D) to return the setting to its default value (64).

Note that you can adjust the headphone volume simply by pressing the SHORT CUT key if you set SHORTCUT KEY SET on the SYSTEM menu to VOLUME.

Reference SHORTCUT KEY SET → 5.6, “Setting the Short Cut Key.”

Procedure

AUDIO → F•5 PHONES → F•1 PHONES VOLUME: 0 - 64 - 128

14.6.2 Selecting the Channels to Output

To select the left and right headphone jack output channels separately, follow the procedure below.
You can select from the channels selected with F•2 SDI GROUP.

Procedure

AUDIO → F•5 PHONES
→ F•5 PHONES L CH: CH1 - CH16
→ F•6 PHONES R CH: CH1 - CH2 - CH16

15. MULTI-SCREEN DISPLAY

The LV 5333 has five measurement modes: picture display, CINELITE display, CINEZONE display, video signal waveform display, vector display, audio display, and status display. The display that only shows one mode at a time is referred to as the 1-screen display. The display that shows combinations of different modes at the same time is referred to as the multi-screen display.

To switch to multi-screen display, press MULTI and then F•1 MODE to select the display format.

MULTI →

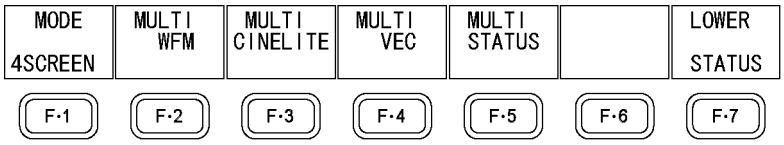


Figure 15-1 MULTI menu

15.1 Selecting the Display Format

To select the display format of the multi-screen display, follow the procedure below.

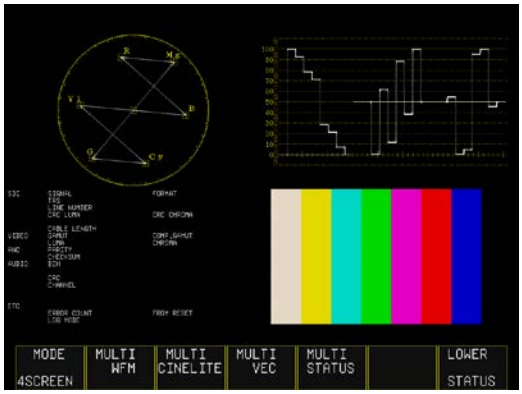
Procedure

MULTI → F•1 MODE: 4SCREEN / PIC_WFM / WFM_VEC / WFM_PIC / WFM_AUD / PIC+WFM / PIC+VECT

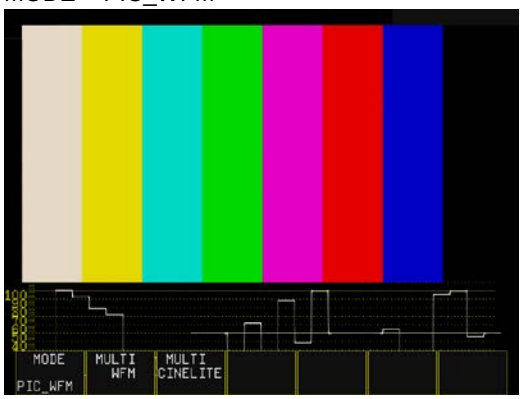
Settings

4SCREEN:	The vector, video-signal-waveform, status, and CINELITE displays appear. The status display can be changed to audio or 5 bar by pressing F•7 LOWER.
PIC_WFM:	The picture (or CINELITE) and video-signal-waveform displays are arranged vertically. The menu and displayed information disappear after about 5 seconds from the last operation.
WFM_VEC:	The video-signal-waveform and vector displays are arranged side by side.
WFM_PIC:	The picture and video-signal-waveform displays are shown.
WFM_AUD:	The audio and video-signal-waveform displays are arranged side by side.
PIC+WFM:	The picture (or CINELITE) and video-signal-waveform displays are superimposed. The picture is displayed at 60% contrast.
PIC+VECT:	The picture (or CINELITE) and vector displays are superimposed. The picture is displayed at 60% contrast.

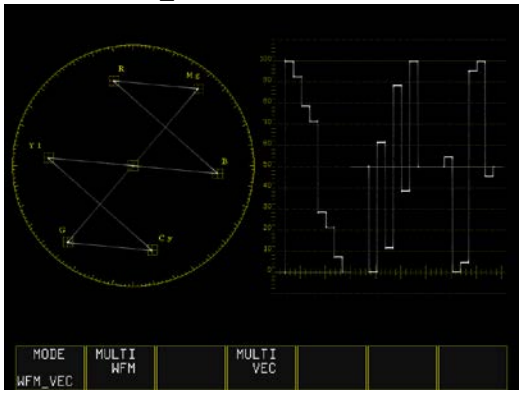
MODE = 4SCREEN



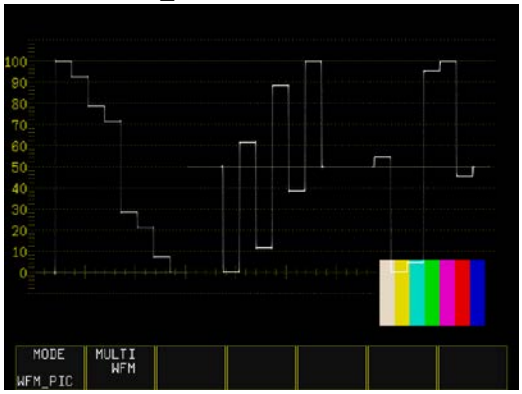
MODE = PIC_WFM



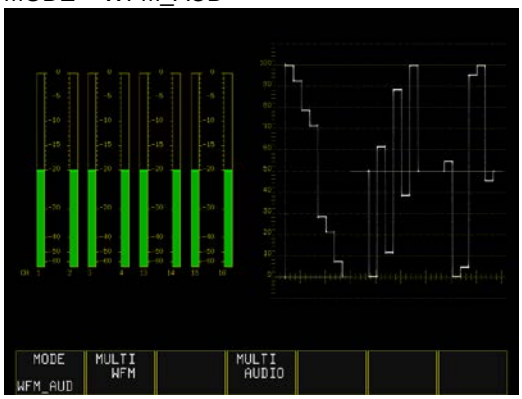
MODE = WFM_VEC



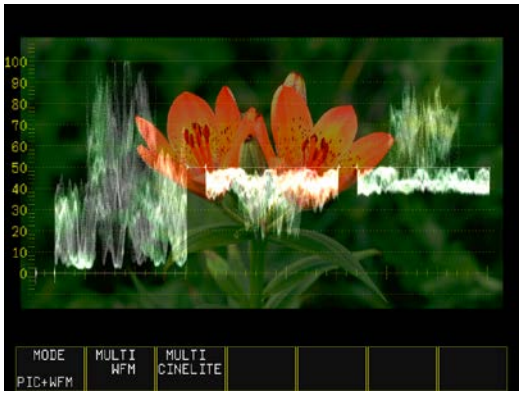
MODE = WFM_PIC



MODE = WFM_AUD



MODE = PIC+WFM



MODE = PIC+VECT

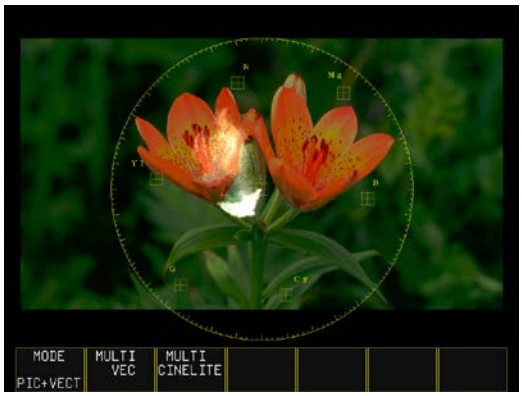


Figure 15-2　Selecting the display format

15.2 Setting the Measurement Mode

The multi-screen display inherits the 1-screen display settings with a few exceptions. For video-signal-waveform, CINELITE, vector, status, and audio displays, the display settings can also be configured from the multi-screen display by following the procedure below. Such settings are linked to the settings in 1-screen display.

The settings for the picture display (except for the line selection function), WFM INTEN, VECTOR INTEN, and SCALE INTEN are not inherited from the 1-screen display. Note that WFM INTEN set with MULTI WFM is linked to VECTOR INTEN set with MULTI VEC and SCALE INTEN set with MULTI WFM is linked to SCALE INTEN set with MULTI VEC.

Procedure

MULTI → F•* MULTI WFM
→ F•* MULTI CINELITE
→ F•* MULTI VEC
→ F•* MULTI STATUS
→ F•* MULTI AUDIO

* F•* represents any of the function keys F•2 to F•5 and varies depending on the displayed contents.

15.3 Selecting the 4-Screen Multi Display Format

When F•1 MODE is set to 4SCREEN, to set the content shown in the lower left of the screen, follow the procedure below.

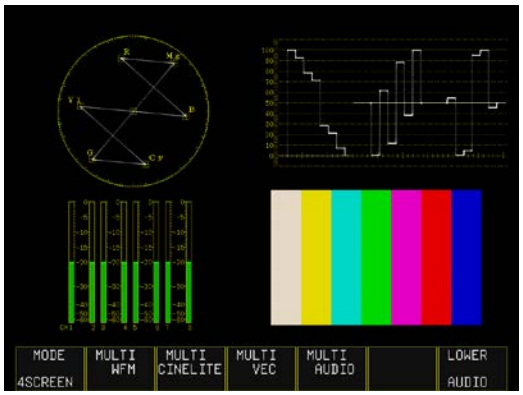
Procedure

MULTI → F•7 LOWER: STATUS / AUDIO / 5BAR

Settings

STATUS:	The status is shown in the lower left of the screen.
AUDIO:	Audio is shown in the lower left of the screen.
5BAR:	5 bar is shown in the lower left of the screen.

LOWER = AUDIO



LOWER = 5BAR

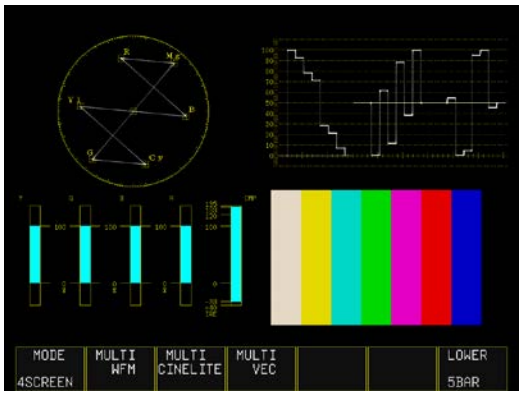


Figure 15-3 Selecting the 4-screen multi display format

16. EXTERNAL INTERFACE

16.1 Remote Control Feature

You can use the remote connector on the rear panel to load presets, transmit alarm signals, and perform other operations. Use the supplied 15-pin D-sub connector to control the LV 5333.

● Pinout

This section contains a diagram of the remote control connector, displayed as it appears on the rear panel, and a table that describes the connector's pinout.

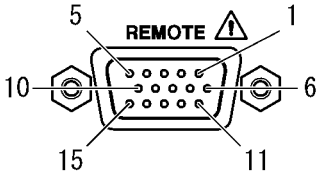


Figure 16-1 Remote control connector (female, inch screws)

Table 16-1 Remote control connector pinout

Pin No.	Name	I/O	Function
1	GND	-	Ground
2	/P1	I	Recall preset 1
3	/P2	I	Recall preset 2
4	/P3	I	Recall preset 3
5	/P4	I	Recall preset 4
6	/P5	I	Recall preset 5
7	/P6	I	Recall preset 6
8	/P7	I	Recall preset 7
9	/P8	I	Recall preset 8
10	/ACH	I	Select channel A
11	/BCH	I	Select channel B
12	RESERVED	I	Reserved
13	TALLY	I	Tally display
14	ALARM	O	Alarm output
15	GND	-	Ground

● Control

The input connectors respond to active-low signals. Do not apply negative voltages or voltages that exceed +5 V. The active-low signal must be stable for at least 350 ms. After that, wait at least 1 second before applying the next signal.

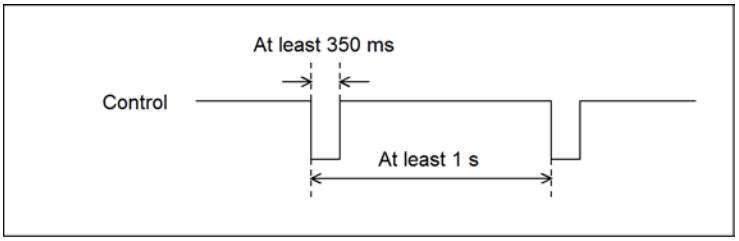


Figure 16-2　Control timing 1

After a setting is made, it may take about 3 seconds for the operation to finish. If you configure subsequent settings before the initial operation finishes, only the last setting will take effect. All settings in between will be discarded. (In the following example, control 2 will be discarded.)

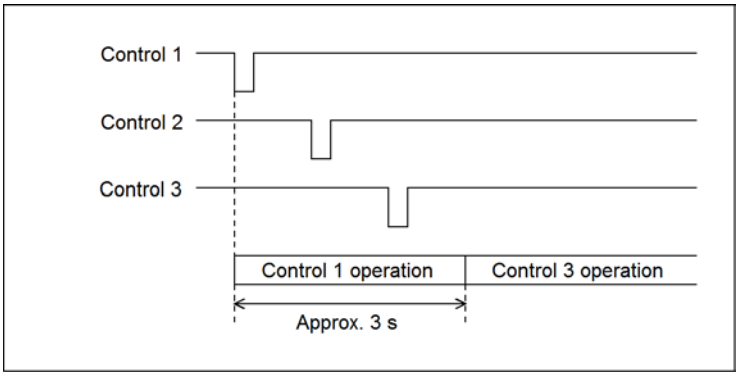


Figure 16-3　Control timing 2

● Recalling a Preset

Use pin 2 (/P1) to pin 9 (/P8) to load a preset.
To select the preset recall mode, press REMOTE on the SYSTEM menu.
Reference　REMOTE → 5.4.1, “Configuring the Remote Connector”

The control table when REMOTE is set to BIT is shown below.

Table 16-2　Loading presets (BIT)

Preset No.	9p /P8	8p /P7	7p /P6	6p /P5	5p /P4	4p /P3	3p /P2	2p /P1
1	H	H	H	H	H	H	H	L
2	H	H	H	H	H	H	L	H
3	H	H	H	H	H	L	H	H
4	H	H	H	H	L	H	H	H
5	H	H	H	L	H	H	H	H
6	H	H	L	H	H	H	H	H
7	H	L	H	H	H	H	H	H
8	L	H	H	H	H	H	H	H

The control table when REMOTE is set to BINARY is shown below.

Table 16-3 Loading presets (BINARY)

Preset No.	6p /P5	5p /P4	4p /P3	3p /P2	2p /P1
1	H	H	H	H	L
2	H	H	H	L	H
3	H	H	H	L	L
4	H	H	L	H	H
5	H	H	L	H	L
6	H	H	L	L	H
7	H	H	L	L	L
8	H	L	H	H	H
9	H	L	H	H	L
10	H	L	H	L	H
11	H	L	H	L	L
12	H	L	L	H	H
13	H	L	L	H	L
14	H	L	L	L	H
15	H	L	L	L	L
16	L	H	H	H	H
17	L	H	H	H	L
18	L	H	H	L	H
19	L	H	H	L	L
20	L	H	L	H	H
21	L	H	L	H	L
22	L	H	L	L	H
23	L	H	L	L	L
24	L	L	H	H	H
25	L	L	H	H	L
26	L	L	H	L	H
27	L	L	H	L	L
28	L	L	L	H	H
29	L	L	L	H	L
30	L	L	L	L	H

● Tally Display

A tally is displayed in green when pin 13 (TALLY) is connected to ground.
A tally can be displayed only when the measurement mode is set to picture, CINELITE, or CINEZONE.

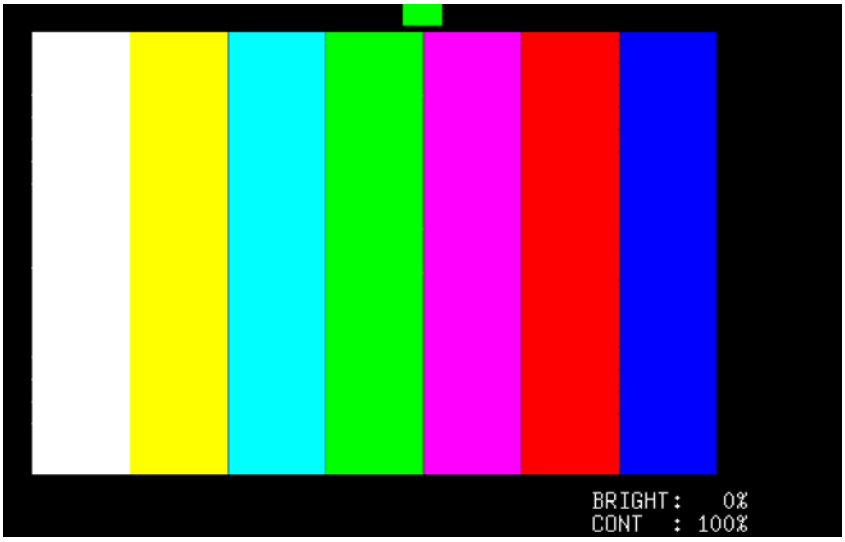


Figure 16-4 Tally display

● Alarm output

The LV 5333 outputs an alarm from pin 14 (ALARM) when any of the conditions below is true.
To select the alarm output polarity, press REMOTE on the STATUS menu.

- When an error occurs in the item that you have set to INT&RMT or ALL ON using ERROR DETECT on the STATUS menu
- When the temperature inside the instrument exceeds 80°C
- When a fan error occurs

Reference REMOTE → 5.4.1, “Configuring the Remote Connector”
ERROR DETECT →13.6.3, “Configuring Error Detection Settings”

16.2 TELNET

From a PC connected to the same network as the LV 5333, you can remotely control most of the operations that can be controlled from the panel.

16.2.1 Procedure

1. Set the IP address, subnet mask, and gateway on the LV 5333.

   You can set these on the SYSTEM menu. Ask your network administrator what values you should use.

   Reference 5.4.2, “Configuring the Ethernet Settings”

2. Restart the LV 5333.

   The IP address, subnet mask, and gateway values that you set become valid.

3. Connect the LV 5333's Ethernet port to the external network device.

4. Start TELNET.

   On Windows 7, on the taskbar, click Start, and then click Run. Type “TELNET ” and the IP address that you set in step 1. Then, click OK.
   (To use TELNET, open Control Panel, click **Turn Windows features on or off** under Program and Features, and select the **Telnet Client** check box.)

   ```
   login:
   ```

5. Enter the login name, and press Enter.

   The login name is fixed to “LV5333.” You cannot change this. Use uppercase for all characters.

   ```
   login: LV5333
   ```

6. Enter the password, and press Enter.

   The password is fixed to “LV5333.” You cannot change this. Use uppercase for all characters.

   ```
   Password: ******
   ```

7. Enter TELNET commands.

   When the login name and password are entered correctly, “LV5333>” appears.
   Enter commands by referring to sections 16.2.2, “How to Enter Commands,” and 16.2.3, “TELNET Commands.”
   To end a TELNET session, type “bye” in lowercase letters.

   ```
   LV5333> bye
   ```

16.2.2 How to Enter Commands

The TELNET command syntax is explained below. (Some commands do not have parameters.)
To query a current setting, use a question mark as the parameter.

```
LV5333> [Command] + [Space] + [Parameter]
```

Examples of how to enter commands are shown below.

● Showing the Status Display

```
LV5333> STATUS
```

● Displaying the Center Marker in the Picture Display

```
LV5333> PICTURE:MARKER:CENTER ON
```

● Querying the Vector Intensity

```
LV5333> VECTOR:INTEN:VECTOR ?
```

16.2.3 TELNET Commands

TELNET commands follow the LV 5333 menu structure. For explanations of each command, see the explanations of their corresponding menu items in this manual.

Table 16-4 TELNET Commands

Command	Parameter
SDI	A / B / ?
REFERENCE	INT / EXT / ?
CAPTURE	-
CAPTURE:HOLD	-
CAPTURE:DISPLAY	REAL / HOLD / BOTH / ?
CAPTURE:TYPE_SELECT	BMP&BSX / BMP / BSX / ?
SYSTEM:FORMAT:MODE	AUTO / MANUAL / ?
SYSTEM:FORMAT:STREAM_SELECT	S1 / S2 / ?
SYSTEM:FORMAT:SDI_FORMAT	HD / SD / 3G-A / 3G-B(DL) / 3G-B_S1 / 3G-B_S2 / ?
SYSTEM:FORMAT:IMAGE_FORMAT	1080I / 1080P / 1080SF / 2K1080P / 2K1080SF / 720P / 525I / 625I / ?
SYSTEM:FORMAT:COLOR	YCBCR422 / YCBCR444 / RGB444 / ?
SYSTEM:FORMAT:PIXEL_DEPTH	10BIT / 12BIT / ?
SYSTEM:FORMAT:RATE	60 / 59.94 / 50 / 30 / 29.97 / 25 / 24 / 23.98 / ?
SYSTEM:DISPLAY:INFO:FORMAT	ON / FREQ / OFF / ?
SYSTEM:DISPLAY:INFO:DATE	Y/M/D / M/D/Y / D/M/Y / OFF / ?
SYSTEM:DISPLAY:INFO:TIME	REAL / TIMECODE / OFF / ?
SYSTEM:DISPLAY:INFO:COLOR	ON / OFF / ?
SYSTEM:DISPLAY:INFO:TIMECODE	VITC / LTC / D-VITC / ?
SYSTEM:DISPLAY:BACKLIGHT	HIGH / LOW / ?
SYSTEM:DISPLAY:AUTO_OFF	OFF / 5 / 30 / 60 / ?
SYSTEM:DISPLAY:COLOR_TEMP	3200 / 6500 / 9300 / THROUGH / ?
SYSTEM:DISPLAY:BATTERY	IDX / ANTON / OTHERS / OFF / ?

Command	Parameter
SYSTEM:DISPLAY:LIGHT	AUTO / ON / ?
SYSTEM:DATE	2000 to 2200, 1 to 12, 1 to 31, 0 to 23, 0 to 59, 0 to 59 / ? (Enter the year, month, day, hour, minute, and second, in that order, separated by commas.)
SYSTEM:INIT	-
SYSTEM:VE_MODE	ON / OFF / ?
MEMORY:RECALL_MODE	RCLL_No. / FUNCTION / ?
RECALL	1 to 30
SHORTCUT	-
PICTURE	-
PICTURE:MARKER:ASPECT_HD	2.35_1 / 1.85_1 / 1.66_1 / 14_9 / 13_9 / 4_3 / OFF / ?
PICTURE:MARKER:ASPECT_SD	2.35_1 / 1.85_1 / 1.66_1 / 16_9 / 14_9 / 13_9 / OFF / ?
PICTURE:MARKER:SAFE_ACTION	95 / 93 / 90 / OFF / ?
PICTURE:MARKER:SAFE_TITLE	88 / 80 / OFF / ?
PICTURE:MARKER:CENTER	ON / OFF / ?
PICTURE:MARKER:SHADOW	ON / OFF / ?
PICTURE:LINE_SEL:LINE_SELECT	ON / OFF / ?
PICTURE:LINE_SEL:LINE_NUMBER	1 to 1125 / ?
PICTURE:LINE_SEL:FIELD	1 / 2 / FRAME / ?
PICTURE:CC	-
PICTURE:CC:SYSTEM	608(708) / 608(608) / VBI / ?
PICTURE:CC:CC	OFF / CC1 / CC2 / CC3 / CC4 / TEXT1 / TEXT2 / TEXT3 / TEXT4 / ?
PICTURE:HIST	-
PICTURE:HIST:SCALE_UNIT	% / 3FF / 1023 / ?
PICTURE:HIST:SCALE_COLOR	WHITE / YELLOW / CYAN / GREEN / MAGENTA / RED / BLUE / ?
PICTURE:HIST:DISPLAY	YRGB / Y1023 / ?
PICTURE:SIZE	FIT / X1 / X2 / FULL / ?
PICTURE:DISPLAY:RGB	RGB / MONO / RG- / R-B / -GB / R-- / -G- / --B / ?
PICTURE:DISPLAY:SQUEEZE	ON / OFF / ?
PICTURE:DISPLAY:GAMUT_ERROR	DISP_ON / DISP_OFF / ?
PICTURE:CHROMA	0 to 150 / ?
PICTURE:APERTURE	0 to 200 / ?
PICTURE:BRIGHT	-50 to 50 / ?
PICTURE:CONTRAST	50 to 200 / ?
CINELITE	-
CINELITE:FSTOP	-
CINELITE:DISPLAY	-
CINELITE:DISPLAY:LINE_NUMBER	1 to 1125 / ?
CINELITE:DISPLAY:SAMPLE	0 to 4124 / ?
CINELITE:DISPLAY:MEAS_POS	P1 / P2 / P3 / ?
CINELITE:DISPLAY:MEAS_SIZE	1X1 / 3X3 / 9X9 / ?
CINELITE:DISPLAY:MEAS_DISP	P1P2P3 / P1P2-- / P1--P3 / --P2P3 / P1---- / --P2-- / ----P3 / ?

Command	Parameter
CINELITE:FSTOP:REF_SET	-
CINELITE:DISPLAY:%/RGB	LEVEL% / RGB% / RGB255 / ?
CINELITE:ADVANCE	OFF / P+V / P+W / P+V+W / ?
CINELITE:GAMMA	0.45 / USER-1 / USER-2 / USER-3 / ?
CINELITE:CAL:TABLE_CLEAR	-
CINELITE:CAL:DATA_CLEAR	-
CINELITE:CAL:SET	-
CINELITE:CAL:CAL_F	22.0 / 16.0 / 11.0 / 8.0 / 5.6 / 4.0 / 2.8 / 2.0 / ?
CINELITE:P1	?
CINELITE:P2	?
CINELITE:P3	?
CINEZONE	-
CINEZONE:MODE	ZONE / SEARCH / ?
CINEZONE:ZONE_DISPLAY	LINEAR / STEP / ?
CINEZONE:%DISPLAY	OFF / ON / ?
CINEZONE:UPPER	-6.3 to 109.4 / ?
CINEZONE:LOWER	-7.3 to 108.4 / ?
CINEZONE:SEARCH:LEVEL	-7.3 to 109.4 / ?
CINEZONE:SEARCH:RANGE	0.5 to 100.0 / ?
WFM	-
WFM:INTEN:WFM	-128 to 127 / ?
WFM:INTEN:SCALE	-8 to 7 / ?
WFM:GAIN:VAR	CAL / VAR / ?
WFM:GAIN:MAG	1 / 5 / ?
WFM:GAIN:FILTER	FLAT / LOW_PASS / ?
WFM:GAIN:C.FILTER	FLAT / FLAT+LUM / LUM+CHRM / LUMA / ?
WFM:SWEEP:SWEEP	H / V / ?
WFM:SWEEP:H_SWEEP	1H / 2H / ?
WFM:SWEEP:V_SWEEP	1V / 2V / ?
WFM:SWEEP:FIELD	1 / 2 / ?
WFM:SWEEP:H_MAG	1 / 10 / 20 / ACTIVE / BLANK / ?
WFM:SWEEP:V_MAG	1 / 20 / 40 / ?
WFM:LINE_SEL:LINE_SELECT	ON / OFF / ?
WFM:LINE_SEL:LINE_NUMBER	1 to 1125 / ?
WFM:LINE_SEL:FIELD	1 / 2 / FRAME / ?
WFM:COLOR:MATRIX	YCBCR / GBR / RGB / COMPOSIT / ?
WFM:COLOR:YGBR	ON / OFF / ?
WFM:COLOR:YRGB	ON / OFF / ?
WFM:COLOR:GBR_COLOR	ON / OFF / ?
WFM:COLOR:RGB_COLOR	ON / OFF / ?
WFM:COLOR:SETUP	0 / 7.5 / ?
WFM:COLOR:COMPOSIT_FORMAT	AUTO / NTSC / PAL / ?
WFM:SCALE:UNIT	V% / V / % / HEX / DEC / FS_DEC / ?
WFM:SCALE:COLOR75P	ON / OFF / ?
WFM:EAV_SAV	REMOVE / PASS / ?

Command	Parameter
WFM:MODE	OVERLAY / PARADE / ?
WFM:DISPLAY:CH1	ON / OFF / ?
WFM:DISPLAY:CH2	ON / OFF / ?
WFM:DISPLAY:CH3	ON / OFF / ?
VECTOR	-
VECTOR:INTEN:VECTOR	-128 to 127 / ?
VECTOR:INTEN:SCALE	-8 to 7 / ?
VECTOR:INTEN:IQ	ON / OFF / ?
VECTOR:INTEN:MARKER	ON / OFF / ?
VECTOR:GAIN:VAR	CAL / VAR / ?
VECTOR:GAIN:MAG	1 / 5 / IQ-MAG / ?
VECTOR:LINE_SEL:LINE_SELECT	ON / OFF / ?
VECTOR:LINE_SEL:LINE_NUMBER	1 to 1125 / ?
VECTOR:LINE_SEL:FIELD	1 / 2 / FRAME / ?
VECTOR:COLOR:MATRIX	COMPONET / COMPOSIT / ?
VECTOR:COLOR:SETUP	0 / 7.5 / ?
VECTOR:COLOR:COLOR_BAR	100% / 75% / ?
VECTOR:COLOR:C.COLOR_BAR	100% / 75% / ?
VECTOR:COLOR:COMPOSIT_FORMAT	AUTO / NTSC / PAL / ?
VECTOR:DISPLAY	VECTOR / 5BAR / EXTPHASE / ?
VECTOR:EXTREF_PHASE:SDI_NUMBER	1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / ?
VECTOR:EXTREF_PHASE:SDI_MEMORY	-
VECTOR:EXTREF_PHASE:MEMORY_CLEAR	-
VECTOR:EXTREF_PHASE:USER_REF_SET	-
VECTOR:EXTREF_PHASE:REF_DEFAULT	-
MULTI	-
MULTI:MODE	4SCREEN / PIC_WFM / WFM_VEC / WFM_PIC / WFM_AUD / PIC+WFM / PIC+VECT / ?
MULTI:LOWER	STATUS / AUDIO / 5BAR / ?
STATUS	-
MAKE	STATUS (See section 16.3, “FTP”)
STATUS:LOG	-
STAUTS:LOG:LOG	START / STOP / ?
STAUTS:LOG:CLEAR	-
STAUTS:LOG:MODE	OVER_WR / STOP / ?
MAKE	LOG (See section 16.3, “FTP”)
STATUS:DUMP	-
STATUS:DUMP:MODE	RUN / STOP / ?
STATUS:DUMP:DISPLAY	SERIAL / COMPO / BINARY / ?
STATUS:DUMP:DISPLAY_3GB_DL	STREAM1 / STREAM2 / STREAM12 / ?
STATUS:DUMP:EAV	-
STATUS:DUMP:SAV	-
STATUS:DUMP:LINE_NUMBER	1 to 1125 / ?
STATUS:DUMP:SAMPLE	0 to 4124 / ?

Command	Parameter
MAKE	DUMP (See section 16.3, “FTP”)
STATUS:AUDIO	-
STATUS:AUDIO:CH	1ST-1 / 1ST-2 / 1ST-3 / 1ST-4 / 2ND-1 / 2ND-2 / 2ND-3 / 2ND-4 / ?
STATUS:EDH	-
STATUS:ANC:PAYLOADID	-
STATUS:ANC:PAYLOADID:PACKET	SMPTE / ARIB / ?
STATUS:ANC:VANC:CCAP	-
STATUS:ANC:VANC:CCAP:DISPLAY	TEXT / DUMP / ?
STATUS:ANC:VANC:CCAP:CAP_NUMBER	HD / SD / ANALOG / CELLULAR / ?
STATUS:ANC:VANC:CCAP:DUMP_MODE	HEX / BINARY / ?
STATUS:ANC:VANC:NETQ	-
STATUS:ANC:VANC:NETQ1:DISPLAY	TEXT / DUMP / ?
STATUS:ANC:VANC:NETQ1:DUMP_MODE	HEX / BINARY / ?
STATUS:ANC:VANC:NETQ2:Q1	ON / OFF / ?
STATUS:ANC:VANC:NETQ2:Q2	ON / OFF / ?
STATUS:ANC:VANC:NETQ2:Q3	ON / OFF / ?
STATUS:ANC:VANC:NETQ2:Q4	ON / OFF / ?
STATUS:ANC:VANC:NETQ2:Q5	ON / OFF / ?
STATUS:ANC:VANC:NETQ3:Q6	ON / OFF / ?
STATUS:ANC:VANC:NETQ3:Q7	ON / OFF / ?
STATUS:ANC:VANC:NETQ3:Q8	ON / OFF / ?
STATUS:ANC:VANC:NETQ3:Q9	ON / OFF / ?
STATUS:ANC:VANC:NETQ3:Q10	ON / OFF / ?
STATUS:ANC:VANC:NETQ4:Q11	ON / OFF / ?
STATUS:ANC:VANC:NETQ4:Q12	ON / OFF / ?
STATUS:ANC:VANC:NETQ4:Q13	ON / OFF / ?
STATUS:ANC:VANC:NETQ4:Q14	ON / OFF / ?
STATUS:ANC:VANC:NETQ4:Q15	ON / OFF / ?
STATUS:ANC:VANC:NETQ5:Q16	ON / OFF / ?
STATUS:ANC:VANC:NETQ5:Q17	ON / OFF / ?
STATUS:ANC:VANC:NETQ5:Q18	ON / OFF / ?
STATUS:ANC:VANC:NETQ5:Q19	ON / OFF / ?
STATUS:ANC:VANC:NETQ5:Q20	ON / OFF / ?
STATUS:ANC:VANC:NETQ6:Q21	ON / OFF / ?
STATUS:ANC:VANC:NETQ6:Q22	ON / OFF / ?
STATUS:ANC:VANC:NETQ6:Q23	ON / OFF / ?
STATUS:ANC:VANC:NETQ6:Q24	ON / OFF / ?
STATUS:ANC:VANC:NETQ6:Q25	ON / OFF / ?
STATUS:ANC:VANC:NETQ7:Q26	ON / OFF / ?
STATUS:ANC:VANC:NETQ7:Q27	ON / OFF / ?
STATUS:ANC:VANC:NETQ7:Q28	ON / OFF / ?
STATUS:ANC:VANC:NETQ7:Q29	ON / OFF / ?
STATUS:ANC:VANC:NETQ7:Q30	ON / OFF / ?
STATUS:ANC:VANC:NETQ8:Q31	ON / OFF / ?

Command	Parameter
STATUS:ANC:VANC:NETQ8:Q32	ON / OFF / ?
STATUS:ANC:VANC:EIA708	-
STATUS:ANC:VANC:EIA708:DISPLAY	TEXT / DUMP / ?
STATUS:ANC:VANC:EIA608	-
STATUS:ANC:VANC:EIA608:DISPLAY	TEXT / DUMP / ?
STATUS:ANC:VANC:PROGRAM	-
STATUS:ANC:VANC:VBI	-
STATUS:ERROR:REMOTE_ERR	OFF / POSITIVE / NEGATIVE / ?
STATUS:ERROR:RATE	V_RATE / 1SEC / ?
STATUS:ERROR:DETECT:TRS	INTERNAL / INT&TRAP / INT&RMT / ALL_ON / OFF / ?
STATUS:ERROR:DETECT:LINE	INTERNAL / INT&TRAP / INT&RMT / ALL_ON / OFF / ?
STATUS:ERROR:DETECT:CRC	INTERNAL / INT&TRAP / INT&RMT / ALL_ON / OFF / ?
STATUS:ERROR:DETECT:EDH	INTERNAL / INT&TRAP / INT&RMT / ALL_ON / OFF / ?
STATUS:ERROR:DETECT:PARITY	INTERNAL / INT&TRAP / INT&RMT / ALL_ON / OFF / ?
STATUS:ERROR:DETECT:CHECKSUM	INTERNAL / INT&TRAP / INT&RMT / ALL_ON / OFF / ?
STATUS:ERROR:DETECT:GAMUT	INTERNAL / INT&TRAP / INT&RMT / ALL_ON / OFF / ?
STATUS:ERROR:DETECT:C.GAMUT	INTERNAL / INT&TRAP / INT&RMT / ALL_ON / OFF / ?
STATUS:ERROR:DETECT:LUMA	INTERNAL / INT&TRAP / INT&RMT / ALL_ON / OFF / ?
STATUS:ERROR:DETECT:CHROMA	INTERNAL / INT&TRAP / INT&RMT / ALL_ON / OFF / ?
STATUS:ERROR:DETECT:CABLE_ERR	INTERNAL / INT&TRAP / INT&RMT / ALL_ON / OFF / ?
STATUS:ERROR:DETECT:CABLE_WARN	INTERNAL / INT&TRAP / INT&RMT / ALL_ON / OFF / ?
STATUS:ERROR:DETECT:BCH	INTERNAL / INT&TRAP / INT&RMT / ALL_ON / OFF / ?
STATUS:ERROR:DETECT:AUDIO_CRC	INTERNAL / INT&TRAP / INT&RMT / ALL_ON / OFF / ?
STATUS:ERROR:LEVEL:GAMUT:UPPER	90.8 to 109.4 / ? (when UNIT is %) 635.6 to 765.8, ? (when UNIT is mV)
STATUS:ERROR:LEVEL:GAMUT:LOWER	-7.2 to 6.1 / ? (when UNIT is %) -50.4 to 42.7 / ? (when UNIT is mV)
STATUS:ERROR:LEVEL:GAMUT:AREA	0.0 to 5.0 / ?
STATUS:ERROR:LEVEL:GAMUT:DURATION	1 to 50 / ?
STATUS:ERROR:LEVEL:GAMUT:FILTER_HD	1M / 2.8M / OFF / ?
STATUS:ERROR:LEVEL:GAMUT:FILTER_SD	1M / OFF / ?
STATUS:ERROR:LEVEL:C.GAMUT:UPPER	90.0 to 135.0 / ? (when UNIT is %) 630.0 to 963.9 / ? (when UNIT is mV)
STATUS:ERROR:LEVEL:C.GAMUT:LOWER	-40.0 to -20.0 / ? (when UNIT is %) -285.6 to -140.0 / ? (when UNIT is mV)
STATUS:ERROR:LEVEL:C.GAMUT:AREA	0.0 to 5.0 / ?
STATUS:ERROR:LEVEL:C.GAMUT:DURATION	1 to 50 / ?
STATUS:ERROR:LEVEL:C_ERR:HD_3G_CABLE	LS-5CFB / 1694A / ?
STATUS:ERROR:LEVEL:C_ERR:SD_CABLE	L-5C2V / 8281 / ?
STATUS:ERROR:LEVEL:C_ERR:3G_ERR_LENGTH_M	10 to 105 / ?
STATUS:ERROR:LEVEL:C_ERR:3G_WARN_LENGTH_M	10 to 105 / ?
STATUS:ERROR:LEVEL:C_ERR:HD_ERR_LENGTH_M	5 to 130 / ?
STATUS:ERROR:LEVEL:C_ERR:HD_WARN_LENGTH_M	5 to 130 / ?
STATUS:ERROR:LEVEL:C_ERR:SD_ERR_LENGTH_M	50 to 300 / ?
STATUS:ERROR:LEVEL:C_ERR:SD_WARN_LENGTH_M	50 to 300 / ?

Command	Parameter
STATUS:ERROR:LEVEL:LUMA:UPPER	-7.2 to 109.4 / ? (when UNIT is %) -50.4 to 765.8 / ? (when UNIT is mV)
STATUS:ERROR:LEVEL:LUMA:LOWER	-7.2 to 109.4 / ? (when UNIT is %) -50.4 to 765.8 / ? (when UNIT is mV)
STATUS:ERROR:LEVEL:CHROMA:UPPER	-57.0 to 57.0 / ? (when UNIT is %) -399.0 to 399.0 / ? (when UNIT is mV)
STATUS:ERROR:LEVEL:CHROMA:LOWER	-57.0 to 57.0 / ? (when UNIT is %) -399.0 to 399.0 / ? (when UNIT is mV)
STATUS:ERROR:LEVEL:UNIT	% / mV / ?
STATUS:ERROR:DISPLAY	REFRESH / HOLD / ?
STATUS:RESET	-
AUDIO:MODE	LEVEL / VALUE / ?
AUDIO:GROUP:1ST	1 / 2 / 3 / 4 / ?
AUDIO:GROUP:2ND	1 / 2 / 3 / 4 / ?
AUDIO:OUTPUT	1ST-1/2 / 1ST-3/4 / 2ND-1/2 / 2ND-3/4 / ?
AUDIO:METER:REF	-20 / -18 / -12 / -9 / ?
AUDIO:METER:RANGE	60 / 90 / AVERAGE / ?
AUDIO:METER:SCALE	TYPE-A / TYPE-B / ?
AUDIO:METER:PEAKHOLD	0.5 / 1.0 / 1.5 / 2.0 / 2.5 / 3.0 / 3.5 / 4.0 / 4.5 / 5.0 / HOLD / ?
AUDIO:PHONES:VOLUME	0 to 128 / ?
AUDIO:PHONES:L_CH	1ST-1 / 1ST-2 / 1ST-3 / 1ST-4 / 2ND-1 / 2ND-2 / 2ND-3 / 2ND-4 / ?
AUDIO:PHONES:R_CH	1ST-1 / 1ST-2 / 1ST-3 / 1ST-4 / 2ND-1 / 2ND-2 / 2ND-3 / 2ND-4 / ?

16.3 FTP

The files that are generated by the LV 5333 can be transferred to a PC connected to the same network.

16.3.1 Procedure

1. Configure the LV 5333 Ethernet settings, and connect an Ethernet cable.

   For more detailed instructions, see steps 1 through 3 in section 16.2.1, “Procedure.”

2. Start FTP.

   On Windows 7, on the taskbar, click Start, and then click Run. Type “FTP ” and the IP address that you set in step 1. Then, click OK.

   ```
   User:
   ```

3. Enter the user name, and press Enter.

   The user name is fixed to “LV5333.” You cannot change this. Use uppercase for all characters.

   ```
   User: LV5333
   ```

4. Enter the password, and press Enter.

   The password is fixed to “LV5333.” You cannot change this. Use uppercase for all characters.

   ```
   Password: ******
   ```

5. Enter FTP commands.

   When the login name and password are entered correctly, “ftp>” appears.
   Enter commands by referring to sections 16.3.2, “How to Enter Commands,” and 16.3.3, “FTP Commands.”
   To end an FTP session, type “bye” in lowercase letters.

   ```
   ftp> bye
   ```

16.3.2 How to Enter Commands

The FTP command syntax is explained below.
To execute an FTP command, you must run a MAKE or CAPTURE command through TELNET.

```
ftp> [Command] + [Space] + [Parameter 1] + [Space] + [Parameter 2]
```

Examples of how to enter commands are shown below.

● Transferring a Data Dump

1. Use the following TELNET command to save a data dump in the LV 5333 internal memory.

```
LV5333> MAKE DUMP
```

2. Use the following FTP command to transfer the data dump to “DUMP.TXT” on the PC's D drive.

```
ftp> GET DUMP.TXT D:\DUMP.TXT
```

16.3.3 FTP Commands

The TELNET MAKE/CAPTURE commands and the FTP commands are listed in the tables below.

Table 16-5 TELNET Commands

Command	Parameter	Description
MAKE	STATUS	Saves the top level of the status display in the internal memory.
	LOG	Saves the event log in the internal memory.
	DUMP	Saves a data dump in the internal memory.
CAPTURE	-	Saves screen capture data in the internal memory.

Table 16-6 FTP commands

Command	Parameter 1	Parameter 2	Description
GET	STATUS.TXT	Directory name\file name.txt	The top level of the status display is transferred as a text file.
	LOG.TXT	Directory name\file name.txt	The event log is transferred as a text file.
	DUMP.TXT	Directory name\file name.txt	A data dump is transferred as a text file.
	CAPTURE.BMP	Directory name\file name.bmp	Screen capture data is transferred as a bitmap file.

16.4 SNMP

By using SNMP (Simple Network Management Protocol), you can control an LV 5333 from SNMP managers. Additionally, you can notify the SNMP managers of errors that the LV 5333 generates.
The LV 5333 supports SNMPv1.

16.4.1 SMI Definitions

```
IMPORTS
MODULE-IDENTITY, OBJECT-TYPE, NOTIFICATION-TYPE, enterprises
FROM SNMPv2-SMI
DisplayString
FROM SNMPv2-TC
OBJECT-GROUP, MODULE-COMPLIANCE
FROM SNMPv2-CONF;
```

16.4.2 Procedure

1. Configure the LV 5333 Ethernet settings, and connect an Ethernet cable.

   For more detailed instructions, see steps 1 through 3 in section 16.2.1, “Procedure” and section 5.4.3, “Setting the SNMP Access Mode.”

2. Start an SNMP manager.

   You must provide the SNMP manager yourself.
   For the community names, see section 5.4.4, “Setting the SNMP Community Names.”
   The factory default community names are shown below.

Read community:	LDRUser
Write community:	LDRAdm
TRAP community:	LDRUser

3. Check that the SNMP managers can perform GET and SET operations.
4. From the SNMP manager, set the following MIB items to the SNMP managers' IP addresses.

   1.3.6.1.4.1.leader(20111).lv5333(34).lv5333ST1(1).l34trapTBL(15).l34trapManagerIp(2).0

5. Restart the LV 5333.
6. When the LV 5333 starts, it transmits the standard TRAP “coldStart(0).” Check that this is received by the SNMP managers.

16.4.3 Standard MIB

The LV 5333 uses the following standard MIB:
•RFC1213 (MIB-II)
•RFC1354 (IP Forwarding Table MIB)

In the tables, “ACCESS” and “SUPPORT” indicate the following:

	Display	Description
ACCESS	R/O	Information that can be read from the SNMP managers.
	R/W	Information that can be read and written from the SNMP managers
SUPPORT	Y	Supports the MIB object as defined by the standard.
	R	Reading and writing are possible according to the standard, but the LV 5333 only supports reading.
	N	Not supported.

● system group

MIB	OID	SYNTAX	ACCESS	SUPPORT
sysDescr	system.1	DisplayString	R/O	Y
sysObjectID	system.2	ObjectID	R/O	Y
sysUpTime	system.3	TimeTicks	R/O	Y
sysContact (*1)	system.4	DisplayString	R/W	Y
sysName (*1)	system.5	DisplayString	R/W	Y
sysLocation (*1)	system.6	DisplayString	R/W	Y
sysServices	system.7	INTEGER	R/O	Y

*1 Set using up to 40 bytes.

● interface group

MIB	OID	SYNTAX	ACCESS	SUPPORT
ifNumber	interfaces.1	INTEGER	R/O	Y
ifTable	interfaces.2	Aggregate	-	Y
ifEntry	ifTable.1	Aggregate	-	Y
ifIndex	ifEntry.1	INTEGER	R/O	Y
ifDescr	ifEntry.2	DisplayString	R/O	Y
ifType	ifEntry.3	INTEGER	R/O	Y
ifMtu	ifEntry.4	INTEGER	R/O	Y
ifSpeed	ifEntry.5	Gauge	R/O	Y
ifPhysAddress	ifEntry.6	OctetString	R/O	Y
ifAdminStatus	ifEntry.7	INTEGER	R/O	R
ifOperStatus	ifEntry.8	INTEGER	R/O	R
ifLastChange	ifEntry.9	TimeTicks	R/O	Y
ifInOctets	ifEntry.10	Counter	R/O	Y
ifInUcastPkts	ifEntry.11	Counter	R/O	Y
ifInNUcastPkts	ifEntry.12	Counter	R/O	Y
ifInDiscards	ifEntry.13	Counter	R/O	Y
ifInErrors	ifEntry.14	Counter	R/O	Y

MIB	OID	SYNTAX	ACCESS	SUPPORT
ifInUnknownProtos	ifEntry.15	Counter	R/O	Y
ifOutOctets	ifEntry.16	Counter	R/O	Y
ifOutUcastPkts	ifEntry.17	Counter	R/O	Y
ifOutNUcastPkts	ifEntry.18	Counter	R/O	Y
ifOutDiscards	ifEntry.19	Counter	R/O	Y
ifOutErrors	ifEntry.20	Counter	R/O	Y
ifOutQLen	ifEntry.21	Gauge	R/O	Y
ifSpecific	ifEntry.22	ObjectID	R/O	Y

- ip group

MIB	OID	SYNTAX	ACCESS	SUPPORT
ipForwarding	ip.1	INTEGER	R/O	Y
ipDefaultTTL	ip.2	INTEGER	R/O	Y
ipInReceives	ip.3	Counter	R/O	Y
ipInHdrErrors	ip.4	Counter	R/O	Y
ipInAddrErrors	ip.5	Counter	R/O	Y
ipForwDatagrams	ip.6	Counter	R/O	Y
ipInUnknownProtos	ip.7	Counter	R/O	Y
ipInDiscards	ip.8	Counter	R/O	Y
ipInDelivers	ip.9	Counter	R/O	Y
ipOutRequests	ip.10	Counter	R/O	Y
ipOutDiscards	ip.11	Counter	R/O	Y
ipOutNoRoutes	ip.12	Counter	R/O	Y
ipReasmTimeout	ip.13	INTEGER	R/O	Y
ipReasmReqds	ip.14	Counter	R/O	Y
ipReasmOKs	ip.15	Counter	R/O	Y
ipReasmFails	ip.16	Counter	R/O	Y
ipFragOKs	ip.17	Counter	R/O	Y
ipFragFails	ip.18	Counter	R/O	Y
ipFragCreates	ip.19	Counter	R/O	Y
ipAddrTable	ip.20	Aggregate	-	Y
ipAddrEntry	ipAddrTable.1	Aggregate	-	Y
ipAdEntAddr	ipAddrEntry.1	IpAddress	R/O	Y
ipAdEntIfIndex	ipAddrEntry.2	INTEGER	R/O	Y
ipAdEntNetMask	ipAddrEntry.3	IpAddress	R/O	Y
ipAdEntBcastAddr	ipAddrEntry.4	INTEGER	R/O	Y
ipAdEntReasmMaxSize	ipAddrEntry.5	INTEGER	R/O	Y
ipNetToMediaTable	ip.22	Aggregate	-	Y
ipNetToMediaEntry	ipNetToMediaTable.1	Aggregate	-	Y
ipNetToMediaIfIndex	ipNetToMediaEntry.1	INTEGER	R/O	R
ipNetToMediaPhysAddress	ipNetToMediaEntry.2	OctetString	R/O	R
ipNetToMediaNetAddress	ipNetToMediaEntry.3	IpAddress	R/O	R
ipNetToMediaType	ipNetToMediaEntry.4	INTEGER	R/O	R
ipRoutingDiscards	ip.23	Counter	R/O	Y
ipForward	ip.24	Aggregate	-	Y

MIB	OID	SYNTAX	ACCESS	SUPPORT
ipForwardNumber	ipForward .1	Gauge	R/O	Y
ipForwardTable	ipForward .2	Aggregate	-	Y
ipForwardDest	ipForwardTable.1	IpAddress	R/O	Y
ipForwardMask	ipForwardTable.1	IpAddress	R/O	Y
ipForwardPolicy	ipForwardTable.1	INTEGER	R/O	N
ipForwardNextHop	ipForwardTable.1	IpAddress	R/O	Y
ipForwardIfIndex	ipForwardTable.1	INTEGER	R/O	Y
ipForwardType	ipForwardTable.1	INTEGER	R/O	N
ipForwardProto	ipForwardTable.1	INTEGER	R/O	N
ipForwardAge	ipForwardTable.1	INTEGER	R/O	N
ipForwardInfo	ipForwardTable.1	ObjectID	R/O	N
ipForwardNextHopAS	ipForwardTable.1	INTEGER	R/O	N
ipForwardMetric1	ipForwardTable.1	INTEGER	R/O	N
ipForwardMetric2	ipForwardTable.1	INTEGER	R/O	N
ipForwardMetric3	ipForwardTable.1	INTEGER	R/O	N
ipForwardMetric4	ipForwardTable.1	INTEGER	R/O	N
ipForwardMetric5	ipForwardTable.1	INTEGER	R/O	N

● icmp group

MIB	OID	SYNTAX	ACCESS	SUPPORT
icmpInMsgs	icmp.1	Counter	R/O	Y
icmpInErrors	icmp.2	Counter	R/O	Y
icmpInDestUnreachs	icmp.3	Counter	R/O	Y
icmpInTimeExcds	icmp.4	Counter	R/O	Y
icmpInParmProbs	icmp.5	Counter	R/O	Y
icmpInSrcQuenchs	icmp.6	Counter	R/O	Y
icmpInRedirects	icmp.7	Counter	R/O	Y
icmpInEchos	icmp.8	Counter	R/O	Y
icmpInEchoReps	icmp.9	Counter	R/O	Y
icmpInTimestamps	icmp.10	Counter	R/O	Y
icmpInTimestampReps	icmp.11	Counter	R/O	Y
icmpInAddrMasks	icmp.12	Counter	R/O	Y
icmpInAddrMaskReps	icmp.13	Counter	R/O	Y
icmpOutMsgs	icmp.14	Counter	R/O	Y
icmpOutErrors	icmp.15	Counter	R/O	Y
icmpOutDestUnreachs	icmp.16	Counter	R/O	Y
icmpOutTimeExcds	icmp.17	Counter	R/O	Y
icmpOutParmProbs	icmp.18	Counter	R/O	Y
icmpOutSrcQuenchs	icmp.19	Counter	R/O	Y
icmpOutRedirects	icmp.20	Counter	R/O	Y
icmpOutEchos	icmp.21	Counter	R/O	Y
icmpOutEchoReps	icmp.22	Counter	R/O	Y
icmpOutTimestamps	icmp.23	Counter	R/O	Y
icmpOutTimestampReps	icmp.24	Counter	R/O	Y
icmpOutAddrMasks	icmp.25	Counter	R/O	Y
icmpOutAddrMaskReps	icmp.26	Counter	R/O	Y

● tcp group

MIB	OID	SYNTAX	ACCESS	SUPPORT
tcpRtoAlgorithm	tcp.1	INTEGER	R/O	Y
tcpRtoMin	tcp.2	INTEGER	R/O	Y
tcpRtoMax	tcp.3	INTEGER	R/O	Y
tcpMaxConn	tcp.4	INTEGER	R/O	Y
tcpActiveOpens	tcp.5	Counter	R/O	Y
tcpPassiveOpens	tcp.6	Counter	R/O	Y
tcpAttemptFails	tcp.7	Counter	R/O	Y
tcpEstabResets	tcp.8	Counter	R/O	Y
tcpCurrEstab	tcp.9	Gauge	R/O	Y
tcpInSegs	tcp.10	Counter	R/O	Y
tcpOutSegs	tcp.11	Counter	R/O	Y
tcpRetransSegs	tcp.12	Counter	R/O	Y
tcpConnTable	tcp.13	Aggregate	-	Y
tcpConnEntry	tcpConnTable.1	Aggregate	-	Y
tcpConnState	tcpConnEntry.1	INTEGER	R/O	R
tcpConnLocalAddress	tcpConnEntry.2	IpAddress	R/O	Y
tcpConnLocalPort	tcpConnEntry.3	INTEGER	R/O	Y
tcpConnRemAddress	tcpConnEntry.4	IpAddress	R/O	Y
tcpConnRemPort	tcpConnEntry.5	INTEGER	R/O	Y
tcpInErrs	tcp.14	Counter	R/O	Y
tcpOutRsts	tcp.15	Counter	R/O	Y

● udp group

MIB	OID	SYNTAX	ACCESS	SUPPORT
udpInDatagrams	udp.1	Counter	R/O	Y
udpNoPorts	udp.2	Counter	R/O	Y
udpInErrors	udp.3	Counter	R/O	Y
udpOutDatagrams	udp.4	Counter	R/O	Y
udpTable	udp.5	Aggregate	-	Y
udpEntry	udpTable.1	Aggregate	-	Y
udpLocalAddress	udpEntry.1	IpAddress	R/O	Y
udpLocalPort	udpEntry.2	INTEGER	R/O	Y

● snmp group

MIB	OID	SYNTAX	ACCESS	SUPPORT
snmpInPkts	snmp.1	Counter	R/O	Y
snmpOutPkts	snmp.2	Counter	R/O	Y
snmpInBadVersions	snmp.3	Counter	R/O	Y
snmpInBadCommunityNames	snmp.4	Counter	R/O	Y
snmpInBadCommunityUses	snmp.5	Counter	R/O	Y
snmpInASNParseErrs	snmp.6	Counter	R/O	Y
snmpInTooBigs	snmp.8	Counter	R/O	Y
snmpInNoSuchNames	snmp.9	Counter	R/O	Y
snmpInBadValues	snmp.10	Counter	R/O	Y
snmpInReadOnlys	snmp.11	Counter	R/O	Y
snmpInGenErrs	snmp.12	Counter	R/O	Y
snmpInTotalReqVars	snmp.13	Counter	R/O	Y
snmpInTotalSetVars	snmp.14	Counter	R/O	Y
snmpInGetRequests	snmp.15	Counter	R/O	Y
snmpInGetNexts	snmp.16	Counter	R/O	Y
snmpInSetRequests	snmp.17	Counter	R/O	Y
snmpInGetResponses	snmp.18	Counter	R/O	Y
snmpInTraps	snmp.19	Counter	R/O	Y
snmpOutTooBigs	snmp.20	Counter	R/O	Y
snmpOutNoSuchNames	snmp.21	Counter	R/O	Y
snmpOutBadValues	snmp.22	Counter	R/O	Y
snmpOutGenErrs	snmp.24	Counter	R/O	Y
snmpOutGetRequests	snmp.25	Counter	R/O	Y
snmpOutGetNexts	snmp.26	Counter	R/O	Y
snmpOutSetRequests	snmp.27	Counter	R/O	Y
snmpOutGetResponses	snmp.28	Counter	R/O	Y
snmpOutTraps	snmp.29	Counter	R/O	Y
snmpEnableAuthenTraps	snmp.30	IpAddress	R/W	Y

16.4.4 Enterprise MIB

● Enterprise Number

The Enterprise Number of LEADER ELECTRONICS CORP. is 20111.
iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).leader(20111)

● Enterprise MIB File

Retrieve the enterprise MIB file from the LV 5333 using FTP.
The file name is "lv5333.my." (Example: GET LV5333.MY D:\LV5333.MY)

● Enterprise MIB Structure

```
lv5333          OBJECT IDENTIFIER ::= { leader 34 }
lv5333ST1       OBJECT IDENTIFIER ::= { lv5333 1 }
l34panelTBL     OBJECT IDENTIFIER ::= { lv5333ST1 1 }
l34wfmTBL       OBJECT IDENTIFIER ::= { lv5333ST1 2 }
l34vectorTBL    OBJECT IDENTIFIER ::= { lv5333ST1 3 }
l34pictureTBL   OBJECT IDENTIFIER ::= { lv5333ST1 4 }
l34cineliteTBL  OBJECT IDENTIFIER ::= { lv5333ST1 5 }
l34cinezoneTBL  OBJECT IDENTIFIER ::= { lv5333ST1 6 }
l34audioTBL     OBJECT IDENTIFIER ::= { lv5333ST1 8 }
l34multiTBL     OBJECT IDENTIFIER ::= { lv5333ST1 9 }
l34statusTBL    OBJECT IDENTIFIER ::= { lv5333ST1 10 }
l34captureTBL   OBJECT IDENTIFIER ::= { lv5333ST1 11 }
l34filesTBL     OBJECT IDENTIFIER ::= { lv5333ST1 12 }
l34systemTBL    OBJECT IDENTIFIER ::= { lv5333ST1 13 }
l34MemoryTBL    OBJECT IDENTIFIER ::= { lv5333ST1 14 }
l34trapTBL      OBJECT IDENTIFIER ::= { lv5333ST1 15 }
```

●ACCESS

In the tables, “ACCESS” indicates the following:

	Display	Description
ACCESS	R/O	Information that can be read from the SNMP managers.
	R/W	Information that can be read and written from the SNMP managers

●l34panelTBL(1) group

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
l34plSDI	l34panelTBL.2	INTEGER	R/W	0=a 1=b
l34plReference	l34panelTBL.3	INTEGER	R/W	0=int 1=ext
l34plDisplay	l34panelTBL.6	INTEGER	R/W	0=wfm 1=vector 2=audio 3=picture 4=multi 5=status 6=capture 7=system 8=memory 10=recall 13=cinelite 14=cinezone

●l34wfmTBL(2) group

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
l34wfmIntenTBL	l34wfmTBL.1	Aggregate	-	-
l34wfmIntenWfm	l34wfmIntenTBL.1	INTEGER	R/W	-128 to 127
l34wfmIntenSCALE	l34wfmIntenTBL.2	INTEGER	R/W	-8 to 7
l34wfmGainTBL	l34wfmTBL.2	Aggregate	-	-
l34wfmGainVAR	l34wfmGainTBL.1	INTEGER	R/W	0=cal 1=var
l34wfmGainMAG	l34wfmGainTBL.2	INTEGER	R/W	0=x1 1=x5
l34wfmGainFILTER	l34wfmGainTBL.3	INTEGER	R/W	0=flat 1=lowPass
l34wfmGainCFILTER	l34wfmGainTBL.4	INTEGER	R/W	0=flat 1=flatLum 2=lumChrm 3=luma
l34wfmSweepTBL	l34wfmTBL.3	Aggregate	-	-
l34wfmSweepSweep	l34wfmSweepTBL.1	INTEGER	R/W	0=h 1=v
l34wfmSweepHSweep	l34wfmSweepTBL.2	INTEGER	R/W	0=sp1H 1=sp2H
l34wfmSweepVSweep	l34wfmSweepTBL.3	INTEGER	R/W	0=sp1V 1=sp2V
l34wfmSweepField	l34wfmSweepTBL.4	INTEGER	R/W	0=field1 1=field2
l34wfmSweepHMAG	l34wfmSweepTBL.5	INTEGER	R/W	0=x1 1=x10

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
				2=x20 3=active 4=blank
l34wfmSweepVMAG	l34wfmSweepTBL.6	INTEGER	R/W	0=x1 1=x20 2=x40
l34wfmLineSelectTBL	l34wfmTBL.4	Aggregate	-	-
l34wfmLineSelect	l34wfmLineSelectTBL.1	INTEGER	R/W	0=off 1=on
l34wfmLineSelectNumber	l34wfmLineSelectTBL.2	INTEGER	R/W	1 to 1125
l34wfmLineSelectField	l34wfmLineSelectTBL.3	INTEGER	R/W	0=field1 1=field2 2=frame
l34wfmColorTBL	l34wfmTBL.5	Aggregate	-	-
l34wfmColorMatrix	l34wfmColorTBL.1	INTEGER	R/W	0=ycbcr 1=gbr 2=rgb 3=composite
l34wfmColorYGBR	l34wfmColorTBL.2	INTEGER	R/W	0=off 1=on
l34wfmColorYRGB	l34wfmColorTBL.3	INTEGER	R/W	0=off 1=on
l34wfmColorColorGBR	l34wfmColorTBL.4	INTEGER	R/W	0=off 1=on
l34wfmColorColorRGB	l34wfmColorTBL.5	INTEGER	R/W	0=off 1=on
l34wfmColorSetup	l34wfmColorTBL.6	INTEGER	R/W	0=p0Per 1=p7p5Per
l34wfmColorCompositeFormat	l34wfmColorTBL.7	INTEGER	R/W	0=auto 1=ntsc 2=pal
l34wfmScaleTBL	l34wfmTBL.6	Aggregate	-	-
l34wfmScaleUnit	l34wfmScaleTBL.1	INTEGER	R/W	0=hdvsdp 1=hdvsdv 2=hdpsdp 3=hex 4=dec 5=fsdec
l34wfmScaleColor	l34wfmScaleTBL.3	INTEGER	R/W	0=white 1=yellow 2=cyan 3=green 4=magenta 5=red 6=blue
l34wfmScaleColor75P	l34wfmScaleTBL.4	INTEGER	R/W	0=off

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
				1=on
l34wfmEavSav	l34wfmTBL.7	INTEGER	R/W	0=remove 1=pass
l34wfmMode	l34wfmTBL.8	INTEGER	R/W	0=overlay 1=parade
l34wfmDisplayTBL	l34wfmTBL.9	Aggregate	-	-
l34wfmDisplayCH1	l34wfmDisplayTBL.1	INTEGER	R/W	0=off 1=on
l34wfmDisplayCH2	l34wfmDisplayTBL.2	INTEGER	R/W	0=off 1=on
l34wfmDisplayCH3	l34wfmDisplayTBL.3	INTEGER	R/W	0=off 1=on

●l34vectorTBL(3) group

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
l34vecIntenTBL	l34vectorTBL.1	Aggregate	-	-
l34vecIntenVector	l34vecIntenTBL.1	INTEGER	R/W	-128 to 127
l34vecIntenScale	l34vecIntenTBL.2	INTEGER	R/W	-8 to 7
l34vecGainTBL	l34vectorTBL.2	INTEGER	R/W	-
l34vecGainVar	l34vecGainTBL.1	INTEGER	R/W	0=cal 1=val
l34vecGainMag	l34vecGainTBL.2	INTEGER	R/W	0=x1 1=x5 2=iqmag
l34vecLineSelectTBL	l34vectorTBL.3	Aggregate	-	-
l34vecLineSelect	l34vecLineSelectTBL.1	INTEGER	R/W	0=off 1=on
l34vecLineSelectNumber	l34vecLineSelectTBL.2	INTEGER	R/W	1 to 1125
l34vecLineSelectField	l34vecLineSelectTBL.3	INTEGER	R/W	0=field1 1=field2 2=frame
l34vecColorSystemTBL	l34vectorTBL.4	Aggregate	-	-
l34vecColorSystemBarComposit	l34vecColorSystemTBL.1	INTEGER	R/W	0=p100Per 1=p75Per
l34vecColorSystemMatrix	l34vecColorSystemTBL.2	INTEGER	R/W	0=componen 1=composite
l34vecColorSystemSetup	l34vecColorSystemTBL.3	INTEGER	R/W	0=p0Per 1=p7p5Per
l34vecColorSystemBarComponent	l34vecColorSystemTBL.4	INTEGER	R/W	0=p100Per 1=p75Per
l34vecColorSystemCompositeFormat	l34vecColorSystemTBL.5	INTEGER	R/W	0=auto 1=ntsc 2=pal
l34vecScaleTBL	l34vectorTBL.5	Aggregate	-	-
l34vecScaleColor	l34vecScaleTBL.1	INTEGER	R/W	0=white

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
				1=yellow 2=cyan 3=green 4=magenta 5=red 6=blue
l34vecScaleIQAXIS	l34vecScaleTBL.2	INTEGER	R/W	0=off 1=on
l34vecScaleMarker	l34vecScaleTBL.3	INTEGER	R/W	0=off 1=on
l34vecSelect	l34vectorTBL.6	INTEGER	R/W	0=vector 1=bar 2=extphase
l34vecExtPhaseTBL	l34vectorTBL.7	Aggregate	-	-
l34vecExtPhaseSdiNumber	l34vecExtPhaseTBL.1	INTEGER	R/W	0=n1 1=n2 2=n3 3=n4 4=n5 5=n6 6=n7 7=n8
l34vecExtPhaseSdiMemory	l34vecExtPhaseTBL.2	INTEGER	R/W	0=ExtPhase SdiMemory
l34vecExtPhaseMemoryClear	l34vecExtPhaseTBL.3	INTEGER	R/W	0=ExtPhase MemoryClear
l34vecExtPhaseUserRefSet	l34vecExtPhaseTBL.4	INTEGER	R/W	0=ExtPhase UserRefSet
l34vecExtPhaseRefDefault	l34vecExtPhaseTBL.5	INTEGER	R/W	0=ExtPhase RefDefault

●l34pictureTBL(4) group

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
l34picMarkerTBL	l34pictureTBL.1	Aggregate	-	-
l34picMarker43	l34picMarkerTBL.1	INTEGER	R/W	0=hd235-1 1=hd185-1 2=hd166-1 3=hd14-9 4=hd13-9 5=hd4-3 6=off
l34picMarker169	l34picMarkerTBL.2	INTEGER	R/W	0=sd235-1 1=sd185-1 2=sd166-1 3=sd16-9

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
				4=sd14-9 5=sd13-9 6=off
l34picMarkerSafeAction	l34picMarkerTBL.3	INTEGER	R/W	0=sa95 1=sa93 2=sa90 3=off
l34picMarkerSafeTitle	l34picMarkerTBL.4	INTEGER	R/W	0=st88 1=st80 2=off
l34picMarkerCenter	l34picMarkerTBL.5	INTEGER	R/W	0=off 1=on
l34picMarkerShadow	l34picMarkerTBL.6	INTEGER	R/W	0=off 1=on
l34picLineSelectTBLl	5pictureTBL.2	Aggregate	-	-
l34picLineSelect	l34picLineSelectTBL.1	INTEGER	R/W	0=off 1=on
l34picLineSelectNumber	l34picLineSelectTBL.2	INTEGER	R/W	1 to 1125
l34picLineSelectField	l34picLineSelectTBL.3	INTEGER	R/W	0=field1 1=field2 2=frame
l34picEtcTBL	l34pictureTBL.3	Aggregate	-	-
l34picCcTBL	l34picEtcTBL.1	Aggregate	-	-
l34picCcSystem	l34picCcTBL.1	INTEGER	R/W	0=eia608-708 1=eia608-608 2=vbi
l34picCcCc	l34picCcTBL.2	INTEGER	R/W	0=off 1=cc1 2=cc2 3=cc3 4=cc4 5=text1 6=text2 7=text3 8=text4
l34picHist	l34picEtcTBL.2	INTEGER	R/W	0=Hist
l34picHistTBL	l34picEtcTBL.3	Aggregate	-	-
l34picHistScaleUnit	l34picHistTBL.1	INTEGER	R/W	0=uPer 1=u3ff 2=u1023
l34picHistScaleColor	l34picHistTBL.2	INTEGER	R/W	0=white 1=yellow 2=cyan 3=green 4=magenta 5=red

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
				6=blue
l34picHistDisplay	l34picHistTBL.3	INTEGER	R/W	0=yrgb 1=y1023
l34picDisplayTBL	l34pictureTBL.4	Aggregate	-	-
l34picSize	l34picDisplayTBL.1	INTEGER	R/W	0=fit 1=x1 2=x2 3=full
l34picRgb	l34picDisplayTBL.2	INTEGER	R/W	0=rgb 1=mono 2=rg 3=rb 4=gb 5=r 6=g 7=b
l34picSqueeze	l34picDisplayTBL.3	INTEGER	R/W	0=off 1=on
l34picGamutErr	l34picDisplayTBL.4	INTEGER	R/W	0=dispon 1=dispoff
l34picChroma	l34pictureTBL.5	INTEGER	R/W	0 to 150
l34picAperture	l34pictureTBL.6	INTEGER	R/W	0 to 200
l34picBright	l34pictureTBL.7	INTEGER	R/W	-50 to 50
l34picContrust	l34pictureTBL.8	INTEGER	R/W	50 to 200

●l34cineliteTBL(5) group

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
l34cineliteFstop	l34cineliteTBL.1	INTEGER	R/W	0=Fstop
l34cineliteDisplay	l34cineliteTBL.2	INTEGER	R/W	0=Display
l34cineliteDisplayTBL	l34cineliteTBL.3	Aggregate	-	-
l34cineliteDisplayLineNumber	l34cineliteDisplayTBL.1	INTEGER	R/W	1 to 1125
l34cineliteDisplaySampleNumber	l34cineliteDisplayTBL.2	INTEGER	R/W	0 to 4124
l34cineliteDisplayFD	l34cineliteDisplayTBL.3	INTEGER	R/W	0=line 1=sample
l34cineliteDisplayMeasPos	l34cineliteDisplayTBL.4	INTEGER	R/W	0=p1 1=p2 0=p3
l34cineliteDisplayMeasSize	l34cineliteDisplayTBL.5	INTEGER	R/W	0=s1x1 1=s3x3 2=s9x9
l34cineliteDisplayMeasDisp	l34cineliteDisplayTBL.6	INTEGER	R/W	0=p1p2p3 1=p1p2 2=p1p3 3=p2p3 4=p1

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
				5=p2 6=p3
l34cineliteDisplayRGB	l34cineliteDisplayTBL.7	INTEGER	R/W	0=level 1=rgb 2=rgb255
l34cineliteFstopRefSet	l34cineliteDisplayTBL.8	INTEGER	R/W	0=FstopRefSet
l34cineliteGamma	l34cineliteTBL.4	INTEGER	R/W	0=gO45 1=user-1 2=user-2 3=user-3
l34cineliteCalTBL	l34cineliteTBL.5	Aggregate	-	-
l34cineliteCalTableClear	l34cineliteCalTBL.1	INTEGER	R/W	0=CalTableClear
l34cineliteCalDataClear	l34cineliteCalTBL.2	INTEGER	R/W	0=CalDataClear
l34cineliteCalSet	l34cineliteCalTBL.3	INTEGER	R/W	0=CalSet
l34cineliteCalCalF	l34cineliteCalTBL.4	INTEGER	R/W	0=f22-0 1=f16-0 2=f11-0 3=f8-0 4=f5-6 5=f4-0 6=f2-8 7=f2-0
l34cineliteAdvance	l34cineliteTBL.7	INTEGER	R/W	0=off 1=P-V 2=P-W 3=P-V-W

●l34cinezoneTBL(6) group

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
l34cinezoneMode	l34cinezoneTBL.1	INTEGER	R/W	0=zone 1=search
l34cinezoneZoneDisplay	l34cinezoneTBL.2	INTEGER	R/W	0=linear 1=step
l34cinezonePerDisplay	l34cinezoneTBL.3	INTEGER	R/W	0=off 1=on
l34cinezoneDisplay	l34cinezoneTBL.4	INTEGER	R/W	0=Display
l34cinezoneUpper	l34cinezoneTBL.5	Display String	R/W	-6.3 to 109.4
l34cinezoneLower	l34cinezoneTBL.6	Display String	R/W	-7.3 to 108.4
l34cinezoneSearchLevel	l34cinezoneTBL.7	Display String	R/W	-7.3 to 109.4
l34cinezoneSearchRange	l34cinezoneTBL.8	Display String	R/W	0.5 to 100.0

●l34audioTBL(8) group

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
l34audMode	l34audioTBL.1	INTEGER	R/W	0=level 1=value
l34audSdiTBL	l34audioTBL.2	Aggregate	-	-
l34audSdi1St	l34audSdiTBL.1	INTEGER	R/W	0=group1 1=group2 2=group3 3=group4
l34audSdi2nd	l34audSdiTBL.2	INTEGER	R/W	0=group1 1=group2 2=group3 3=group4
l34audMeterTBL	l34audioTBL.3	Aggregate	-	-
l34audMeterRef	l34audMeterTBL.1	INTEGER	R/W	0=minus20dB 1=minus18dB 2=minus12dB 3=minus9dB
l34audMeterRange	l34audMeterTBL.2	INTEGER	R/W	0=peak60dB 1=peak90dB 2=avarage
l34audMeterScale	l34audMeterTBL.3	INTEGER	R/W	0=typeA 1=typeB
l34audMeterPeakHold	l34audMeterTBL.4	INTEGER	R/W	0=ph0p5 1=ph1 2=ph1p5 3=ph2 4=ph2p5 5=ph3 6=ph3p5 7=ph4 8=ph4p5 9=ph5 10=hold
l34audPhonesTBL	l34audioTBL.4	Aggregate	-	-
l34audPhonesVolume	l34audPhonesTBL.1	INTEGER	R/W	0 to 128
l34audPhonesL	l34audPhonesTBL.2	INTEGER	R/W	0=ch1st1 1=ch1st2 2=ch1st3 3=ch1st4 4=ch2nd1 5=ch2nd2 6=ch2nd3 7=ch2nd4
l34audPhonesR	l34audPhonesTBL.3	INTEGER	R/W	0=ch1st1 1=ch1st2 2=ch1st3

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
				3=ch1st4 4=ch2nd1 5=ch2nd2 6=ch2nd3 7=ch2nd4
l34audAesEbuOut	l34audioTBL.5	INTEGER	R/W	0=ch1st1and2 1=ch1st3and4 2=ch2nd1and2 3=ch2nd3and4-

●l34multiTBL(9) group

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
l34mulMode	l34multiTBL.1	INTEGER	R/W	0=m4SCREEN 1=picWFM 2=wfmVEC 3=wfmPIC 4=wfmAUD 5=picpluswfm 6=picplusvect
l34mulLower	l34multiTBL.2	INTEGER	R/W	0=statusDisp 1=audLVLDisp 2=fiveBarDisp

●l34statusTBL(10) group

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
l34staDisplayTBL	l34statusTBL.1	Aggregate	-	-
l34staDisplayLog	l34staDisplayTBL.1	INTEGER	R/W	0=DisplayLog
l34staDisplayDump	l34staDisplayTBL.2	INTEGER	R/W	0=DisplayDump
l34staDisplayAudio	l34staDisplayTBL.3	INTEGER	R/W	0=DisplayAudio
l34staDisplayEdh	l34staDisplayTBL.4	INTEGER	R/W	0=DisplayEdh
l34staLogTBL	l34statusTBL.2	Aggregate	-	-
l34staLogLog	l34staLogTBL.1	INTEGER	R/W	0=start 1=stop
l34staLogClear	l34staLogTBL.2	INTEGER	R/W	0=LogClear
l34staLogMode	l34staLogTBL.3	INTEGER	R/W	0=overWR 1=stop
l34staDumpTBL	l34statusTBL.3	Aggregate	-	-
l34staDumpMode	l34staDumpTBL.1	INTEGER	R/W	0=run 1=stop
l34staDumpDisplayTBL	l34staDumpTBL.2	Aggregate	-	-
l34staDumpDisplay	l34staDumpDisplayTBL.1	INTEGER	R/W	0=serial 1=compo 2=binary
l34staDumpDisplay3GB-DL	l34staDumpDisplayTBL.2	INTEGER	R/W	0=stream1 1=stream2

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
				2=stream12
l34staDumpLineNumber	l34staDumpTBL.3	INTEGER	R/W	1 to 1125
l34staDumpSample	l34staDumpTBL.4	INTEGER	R/W	0 to 4124
l34staDumpEav	l34staDumpTBL.5	INTEGER	R/W	0=DumpEav
l34staDumpSav	l34staDumpTBL.6	INTEGER	R/W	0=DumpSav
l34staDumpFD	l34staDumpTBL.7	INTEGER	R/W	0=line 1=sample
l34staAudioTBL	l34statusTBL.4	Aggregate	-	-
l34staAudioChSEL	l34staAudioTBL.1	INTEGER	R/W	0=ch1st1 1=ch1st2 2=ch1st3 3=ch1st4 4=ch2nd1 5=ch2nd2 6=ch2nd3 7=ch2nd4
l34staAncPacketTBL	l34statusTBL.5	Aggregate	-	-
l34staAncpacPayloadTBL	l34staAncPacketTBL.1	Aggregate	-	-
l34staAncpacPayloadIDsel	l34staAncpacPayloadTBL.1	INTEGER	R/W	0=smpte 1=arib
l34staAncpacVancaribTBL	l34staAncPacketTBL.2	Aggregate	-	-
l34staAncVanClocapTBL	l34staAncpacVancaribTBL.1	Aggregate	-	-
l34staAncVanClocapDisplay	l34staAncVanClocapTBL.1	INTEGER	R/W	0=text 1=dump
l34staAncVanClocapType	l34staAncVanClocapTBL.2	INTEGER	R/W	0=hd 1=sd 2=analog 3=cellular
l34staAncVanClocapDumpmode	l34staAncVanClocapTBL.3	INTEGER	R/W	0=hex 1=binary
l34staAncVanNetqTBL	l34staAncpacVancaribTBL.2	Aggregate	-	-
l34staAncVanNetqDisplay	l34staAncVanNetqTBL.1	INTEGER	R/W	0=text 1=dump
l34staAncVanNetqDumpmode	l34staAncVanNetqTBL.2	INTEGER	R/W	0=hex 1=binary
l34staAncVanNetqQ1	l34staAncVanNetqTBL.3	INTEGER	R/W	0=off 1=on
l34staAncVanNetqQ2	l34staAncVanNetqTBL.4	INTEGER	R/W	0=off 1=on
l34staAncVanNetqQ3	l34staAncVanNetqTBL.5	INTEGER	R/W	0=off 1=on
l34staAncVanNetqQ4	l34staAncVanNetqTBL.6	INTEGER	R/W	0=off 1=on

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
l34staAncVanNetqQ5	l34staAncVanNetqTBL.7	INTEGER	R/W	0=off 1=on
l34staAncVanNetqQ6	l34staAncVanNetqTBL.8	INTEGER	R/W	0=off 1=on
l34staAncVanNetqQ7	l34staAncVanNetqTBL.9	INTEGER	R/W	0=off 1=on
l34staAncVanNetqQ8	l34staAncVanNetqTBL.10	INTEGER	R/W	0=off 1=on
l34staAncVanNetqQ9	l34staAncVanNetqTBL.11	INTEGER	R/W	0=off 1=on
l34staAncVanNetqQ10	l34staAncVanNetqTBL.12	INTEGER	R/W	0=off 1=on
l34staAncVanNetqQ11	l34staAncVanNetqTBL.13	INTEGER	R/W	0=off 1=on
l34staAncVanNetqQ12	l34staAncVanNetqTBL.14	INTEGER	R/W	0=off 1=on
l34staAncVanNetqQ13	l34staAncVanNetqTBL.15	INTEGER	R/W	0=off 1=on
l34staAncVanNetqQ14	l34staAncVanNetqTBL.16	INTEGER	R/W	0=off 1=on
l34staAncVanNetqQ15	l34staAncVanNetqTBL.17	INTEGER	R/W	0=off 1=on
l34staAncVanNetqQ16	l34staAncVanNetqTBL.18	INTEGER	R/W	0=off 1=on
l34staAncVanNetqQ17	l34staAncVanNetqTBL.19	INTEGER	R/W	0=off 1=on
l34staAncVanNetqQ18	l34staAncVanNetqTBL.20	INTEGER	R/W	0=off 1=on
l34staAncVanNetqQ19	l34staAncVanNetqTBL.21	INTEGER	R/W	0=off 1=on
l34staAncVanNetqQ20	l34staAncVanNetqTBL.22	INTEGER	R/W	0=off 1=on
l34staAncVanNetqQ21	l34staAncVanNetqTBL.23	INTEGER	R/W	0=off 1=on
l34staAncVanNetqQ22	l34staAncVanNetqTBL.24	INTEGER	R/W	0=off 1=on
l34staAncVanNetqQ23	l34staAncVanNetqTBL.25	INTEGER	R/W	0=off 1=on
l34staAncVanNetqQ24	l34staAncVanNetqTBL.26	INTEGER	R/W	0=off 1=on
l34staAncVanNetqQ25	l34staAncVanNetqTBL.27	INTEGER	R/W	0=off 1=on
l34staAncVanNetqQ26	l34staAncVanNetqTBL.28	INTEGER	R/W	0=off 1=on
l34staAncVanNetqQ27	l34staAncVanNetqTBL.29	INTEGER	R/W	0=off

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
				1=on
l34staAncVanNetqQ28	l34staAncVanNetqTBL.30	INTEGER	R/W	0=off 1=on
l34staAncVanNetqQ29	l34staAncVanNetqTBL.31	INTEGER	R/W	0=off 1=on
l34staAncVanNetqQ30	l34staAncVanNetqTBL.32	INTEGER	R/W	0=off 1=on
l34staAncVanNetqQ31	l34staAncVanNetqTBL.33	INTEGER	R/W	0=off 1=on
l34staAncVanNetqQ32	l34staAncVanNetqTBL.34	INTEGER	R/W	0=off 1=on
l34staAncpacVancsmpteTBL	l34staAncPacketTBL.3	Aggregate	-	-
l34staEia708TBL	l34staAncpacVancsnpteTBL.1	Aggregate	-	-
l34staEia708	l34staEia708TBL.1	INTEGER	R/W	0
l34staEia708Display	l34staEia708TBL.2	INTEGER	R/W	0=text 1=dump
l34staEia608TBL	l34staAncpacVancsnpteTBL.2	Aggregate	-	-
l34staEia608	l34staEia608TBL.1	INTEGER	R/W	0
l34staEia608Display	l34staEia608TBL.2	INTEGER	R/W	0=text 1=dump
l34staProgramTBL	l34staAncpacVancsnpteTBL.3	Aggregate	-	-
l34staProgram	l34staProgramTBL.1	INTEGER	R/W	0
l34staVbiTBL	l34staAncpacVancsnpteTBL.4	Aggregate	-	-
l34staVbi	l34staVbiTBL.1	INTEGER	R/W	0
l34staErrTBL	l34statusTBL.6	Aggregate	-	-
l34staRemoteErr	l34staErrTBL.1	INTEGER	R/W	0=positive 1=negative 2=off
l34staErrCountRate	l34staErrTBL.2	INTEGER	R/W	0=vRATE 1=sec1
l34staErrDetectTBL	l34staErrTBL.3	Aggregate	-	-
l34staErrDetectTrs	l34staErrDetectTBL.1	INTEGER	R/W	0=internal 1=intTrap 2=intRmt 3=allOn 4=0ff
l34staErrDetectLine	l34staErrDetectTBL.2	INTEGER	R/W	0=internal 1=intTrap 2=intRmt 3=allOn 4=0ff

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
l34staErrDetectCRC	l34staErrDetectTBL.3	INTEGER	R/W	0=internal 1=intTrap 2=intRmt 3=allOn 4=0ff
l34staErrDetectEDH	l34staErrDetectTBL.4	INTEGER	R/W	0=internal 1=intTrap 2=intRmt 3=allOn 4=0ff
l34staErrDetectParity	l34staErrDetectTBL.6	INTEGER	R/W	0=internal 1=intTrap 2=intRmt 3=allOn 4=0ff
l34staErrDetectCheckSum	l34staErrDetectTBL.7	INTEGER	R/W	0=internal 1=intTrap 2=intRmt 3=allOn 4=0ff
l34staErrDetectGamut	l34staErrDetectTBL.9	INTEGER	R/W	0=internal 1=intTrap 2=intRmt 3=allOn 4=0ff
l34staErrDetectCGamut	l34staErrDetectTBL.10	INTEGER	R/W	0=internal 1=intTrap 2=intRmt 3=allOn 4=0ff
l34staErrDetectLuma	l34staErrDetectTBL.11	INTEGER	R/W	0=internal 1=intTrap 2=intRmt 3=allOn 4=0ff
l34staErrDetectChroma	l34staErrDetectTBL.12	INTEGER	R/W	0=internal 1=intTrap 2=intRmt 3=allOn 4=0ff
l34staErrDetectCableErr	l34staErrDetectTBL.13	INTEGER	R/W	0=internal 1=intTrap 2=intRmt 3=allOn 4=0ff
l34staErrDetectCableWarn	l34staErrDetectTBL.14	INTEGER	R/W	0=internal

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
				1=intTrap 2=intRmt 3=allOn 4=0ff
l34staErrDetectBCH	l34staErrDetectTBL.15	INTEGER	R/W	0=internal 1=intTrap 2=intRmt 3=allOn 4=0ff
l34staErrDetectAudCrc	l34staErrDetectTBL.16	INTEGER	R/W	0=internal 1=intTrap 2=intRmt 3=allOn 4=0ff
l34staErrLevTBL	l34staErrTBL.4	Aggregate	-	-
l34staErrLevGamutTBL	l34staErrLevTBL.1	Aggregate	-	-
l34staErrLevGamutUpper	l34staErrLevGamutTBL.1	Display String	R/W	90.8 to 109.4(%) 635.6 to 765.8 (mV)
l34staErrLevGamutLower	l34staErrLevGamutTBL.2	Display String	R/W	-7.2 to 6.1(%) -50.4 to 42.7(mV)
l34staErrLevGamutArea	l34staErrLevGamutTBL.3	Display String	R/W	0.0 to 5.0
l34staErrLevGamutDuration	l34staErrLevGamutTBL.4	INTEGER	R/W	1 to 50
l34staErrLevGamutFilterTBL	l34staErrLevGamutTBL.5	Aggregate	-	-
l34staErrLevGamutFilterSD	l34staErrLevGamutFilterTBL.1	INTEGER	R/W	0=1M 1=off
l34staErrLevGamutFilterHD	l34staErrLevGamutFilterTBL.2	INTEGER	R/W	0=1M 1=2p8M 2=off
l34staErrLevCGamutTBL	l34staErrLevTBL.2	Aggregate	-	-
l34staErrLevCGamutUpper	l34staErrLevCGamutTBL.1	Display String	R/W	90.0 to 135.0(%) 630.0 to 963.9 (mV)
l34staErrLevCGamutLower	l34staErrLevCGamutTBL.2	Display String	R/W	-40.0 to -20.0(%) -285.6 to -140.0 (mV)
l34staErrLevCGamutArea	l34staErrLevCGamutTBL.3	Display String	R/W	0.0 to 5.0
l34staErrLevCGamutDuration	l34staErrLevCGamutTBL.4	INTEGER	R/W	1 to 50
l34staErrLevCableErrTBL	l34staErrLevTBL.3	Aggregate	-	-
l34staErrLevCableErrHD3GCable	l34staErrLevCableErrTBL.1	INTEGER	R/W	0=cls5cfb 1=c1694a
l34staErrLevCableErrSDCable	l34staErrLevCableErrTBL.	INTEGER	R/W	0=cl5c2v

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
	2			1=c8281
l34staErrLevCableErr3GErrLen	l34staErrLevCableErrTBL.3	INTEGER	R/W	10 to 105
l34staErrLevCableErr3GWarnLen	l34staErrLevCableErrTBL.4	INTEGER	R/W	10 to 105
l34staErrLevCableErrHDErrLen	l34staErrLevCableErrTBL.5	INTEGER	R/W	5 to 130
l34staErrLevCableErrHDWarnLen	l34staErrLevCableErrTBL.6	INTEGER	R/W	5 to 130
l34staErrLevCableErrSDErrLen	l34staErrLevCableErrTBL.7	INTEGER	R/W	50 to 300
l34staErrLevCableErrSDWarnLen	l34staErrLevCableErrTBL.8	INTEGER	R/W	50 to 300
l34staErrLevLumaTBL	l34staErrLevTBL.4	Aggregate	-	-
l34staErrLevLumaUpper	l34staErrLevLumaTBL.1	Display String	R/W	-7.2 to 109.4(%) -50.4 to 765.8 (mV)
l34staErrLevLumaLower	l34staErrLevLumaTBL.2	Display String	R/W	-7.2 to 109.4(%) -50.4 to 765.8 (mV)
l34staErrLevChromaTBL	l34staErrLevTBL.5	Aggregate	-	-
l34staErrLevChromaUpper	l34staErrLevChromaTBL.1	Display String	R/W	-57.0 to 57.0(%) -399.0 to 399.0 (mV)
l34staErrLevChromaLower	l34staErrLevChromaTBL.2	Display String	R/W	-57.0 to 57.0(%) -399.0 to 399.0 (mV)
l34staErrLevUnit	l34staErrLevTBL.6	INTEGER	R/W	0=per 1=mV
l34staErrDisplay	l34staErrTBL.5	INTEGER	R/W	0=refresh 1=hold
l34staReset	l34statusTBL.7	INTEGER	R/W	0=Reset

●l34captureTBL(11) group

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
l34capDisplay	l34captureTBL.1	INTEGER	R/W	0=real 1=hold 2=both
l34capFileSelect	l34captureTBL.2	INTEGER	R/W	0=bmpbsx 1=bmp 2=bsx

●l34filesTBL(12) group

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
l34filMakeTBL	l34filesTBL.1	Aggregate	-	-

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
l34filMakeStatus	l34filMakeTBL.1	INTEGER	R/W	0=MakeStatus
l34filMakeLog	l34filMakeTBL.2	INTEGER	R/W	0=MakeLog
l34filMakeDump	l34filMakeTBL.3	INTEGER	R/W	0=MakeDump
l34filMakeCapture	l34filMakeTBL.4	INTEGER	R/W	0=MakeCapture
l34filRecall	l34filesTBL.2	INTEGER	R/W	1 to 30

●l34systemTBL(13) group

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
l34sysFormatTBL	l34systemTBL.1	Aggregate	-	-
l34sysFormatMode	l34sysFormatTBL.1	INTEGER	R/W	0=auto 1=manual
l34sysFormatIPSF	l34sysFormatTBL.2	INTEGER	R/W	0=interlac 1=segFram
l34sysFormatSDI	l34sysFormatTBL.3	INTEGER	R/W	0=HD 1=SD 2=3G-A 3=3G-B_DL 4=3G-B_S1 5=3G-B_S2
l34sysFormatImage	l34sysFormatTBL.4	INTEGER	R/W	0=1080i 1=1080p 2=1080sF 3=720p 4=525i 5=625i 6=2K1080p 7=2K1080sF
l34sysFormatColor	l34sysFormatTBL.5	INTEGER	R/W	0=YCbCr422 1=YCbCr444 2=RGB444
l34sysFormatPixelDepth	l34sysFormatTBL.6	INTEGER	R/W	0=10bit 1=12bit
l34sysFormatRate	l34sysFormatTBL.7	INTEGER	R/W	0=r23p98 1=r24 2=r25 3=r29p97 4=r30 5=r50 6=r59p94 7=r60
l34sysFormatStreamSel	l34sysFormatTBL.8	INTEGER	R/W	0=S1 1=S2
l34sysDispTBL	l34systemTBL.3	Aggregate	-	-
l34sysDispInfoTBL	l34sysDispTBL.1	Aggregate	-	-
l34sysDispInfoFormat	l34sysDispInfoTBL.1	INTEGER	R/W	0=on

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
				1=freq 2=off
l34sysDispInfoTime	l34sysDispInfoTBL.2	INTEGER	R/W	0=real 1=timecode 2=off
l34sysDispInfoDate	l34sysDispInfoTBL.3	INTEGER	R/W	0=ymd 1=mdy 2=dmy 3=off
l34sysDispInfoColor	l34sysDispInfoTBL.4	INTEGER	R/W	0=off 1=on
l34sysDispInfoTimeCode	l34sysDispInfoTBL.5	INTEGER	R/W	0=ltc 1=vitc 2=dvitc
l34sysDispDisplayBackLight	l34sysDispTBL.2	INTEGER	R/W	0=high 1=low
l34sysDispDisplayAutoOff	l34sysDispTBL.3	INTEGER	R/W	0=off 1=min5 2=min30 3=min60
l34sysDispColorTemp	l34sysDispTBL.4	INTEGER	R/W	0=color3200 1=color6500 2=color9300 3=through
l34sysDispDisplayBattery	l34sysDispTBL.5	INTEGER	R/W	0=idx 1=anton 2=others 3=off
l34sysDispDisplayLight	l34sysDispTBL.6	INTEGER	R/W	0=auto 1=on
l34sysDate	l34systemTBL.4	Display String	R/W	yyyy/mm/dd hh:mm:ss
l34sysShortCutKey	l34systemTBL.5	INTEGER	R/W	0=light 1=capUSB 2=directK 3=volume 4=contrast
l34sysInit	l34systemTBL.6	INTEGER	R/W	90=initialize
l34sysVersionTBL	l34systemTBL.7	Aggregate	-	-
l34sysSoftwareVersion	l34sysVersionTBL.1	Display String	R/O	version

●l34MemoryTBL(14) group

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
l34recallMode	l34MemoryTBL.1	INTEGER	R/W	0=rclNo

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
				1=function

●l34trapTBL(15) group

MIB	OID	SYNTAX	ACCESS	VALUE/RANGE
l34trapStrTBL	l34trapTBL.1	Aggregate	-	-
l34trapManagerIp	l34trapTBL.2	IpAddress	R/W	-
l34trapID	l34trapTBL.3	IpAddress	R/W	-

16.4.5 Specific Trap

Specific Trap Type	Description
1	Fan stop detection
2	Fan restart detection
3	No input signal detection
4	Format error detection
5	TRS error detection
6	Line number error detection
7	CRC LUMA error detection
8	CRC CHROMA error detection
9	Checksum error detection
10	BCH error detection
11	EDH error detection
13	Parity error detection
19	Cable error detection
21	Audio CRC error detection
23	Gamut error detection
24	Composite gamut error detection
27	Luminance level error detection
28	Chrominance level error detection
37	No error (at error recovery, at startup)

16.4.6 Variable Binding List

●index 1

OID : leader(20111).lv5333(34).lv5333ST1(1).l34trapTBL(15).l34trapStrTBL(1).1.0
Syntax : Counter
Range: 1 to 4294967295 (overflow occurs if this range is exceeded)
Description: The total number of enterprise traps sent after starting up

●index 2

OID : leader(20111).lv5333(34).lv5333ST1(1).l34trapTBL(15).l34trapStrTBL(1).2.0
Syntax : Octet String
Range: Up to 40 characters
Description: Date and time of error occurrence and line information
YYYY/MM/DD hh:mm:ss sdi,ref (Example: 2004/07/15 11:30:11 A,INT)
YYYY = year, MM = month, DD = day, hh = hour, mm = minute, ss = second,
sdi = SDI INPUT (A or B)
ref = reference (INT or EXT)

●index 3

OID : leader(20111).lv5333(34).lv5333ST1(1).l34trapTBL(15).l34trapStrTBL(1).3.0
Syntax : Octet String
Range: Up to 40 characters
Description: Format information

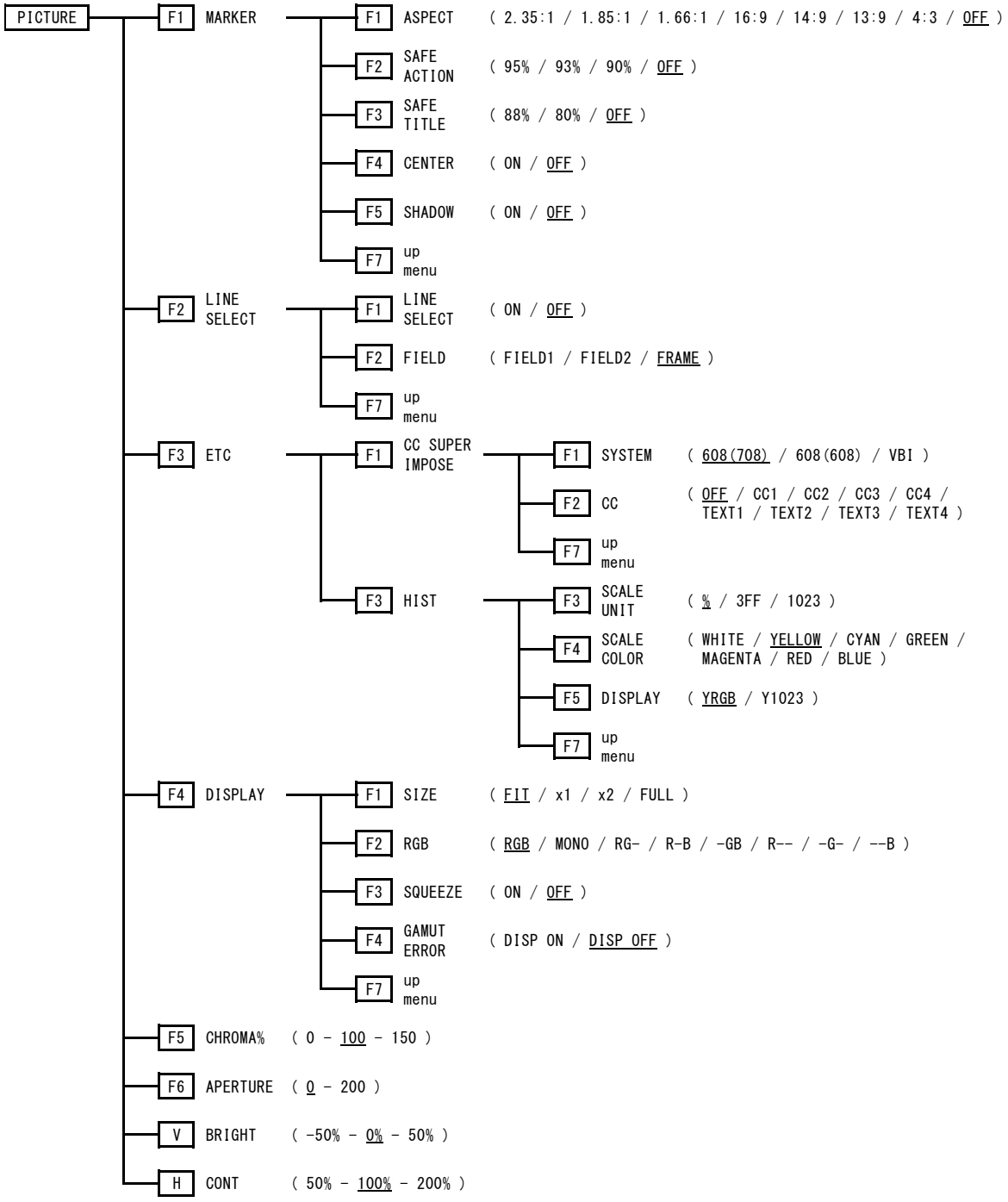
●index 4

OID : leader(20111).lv5333(34).lv5333ST1(1).l34trapTBL(15).l34trapStrTBL(1).4.0
Syntax : Octet String
Range: Up to 40 characters
Description: Error information

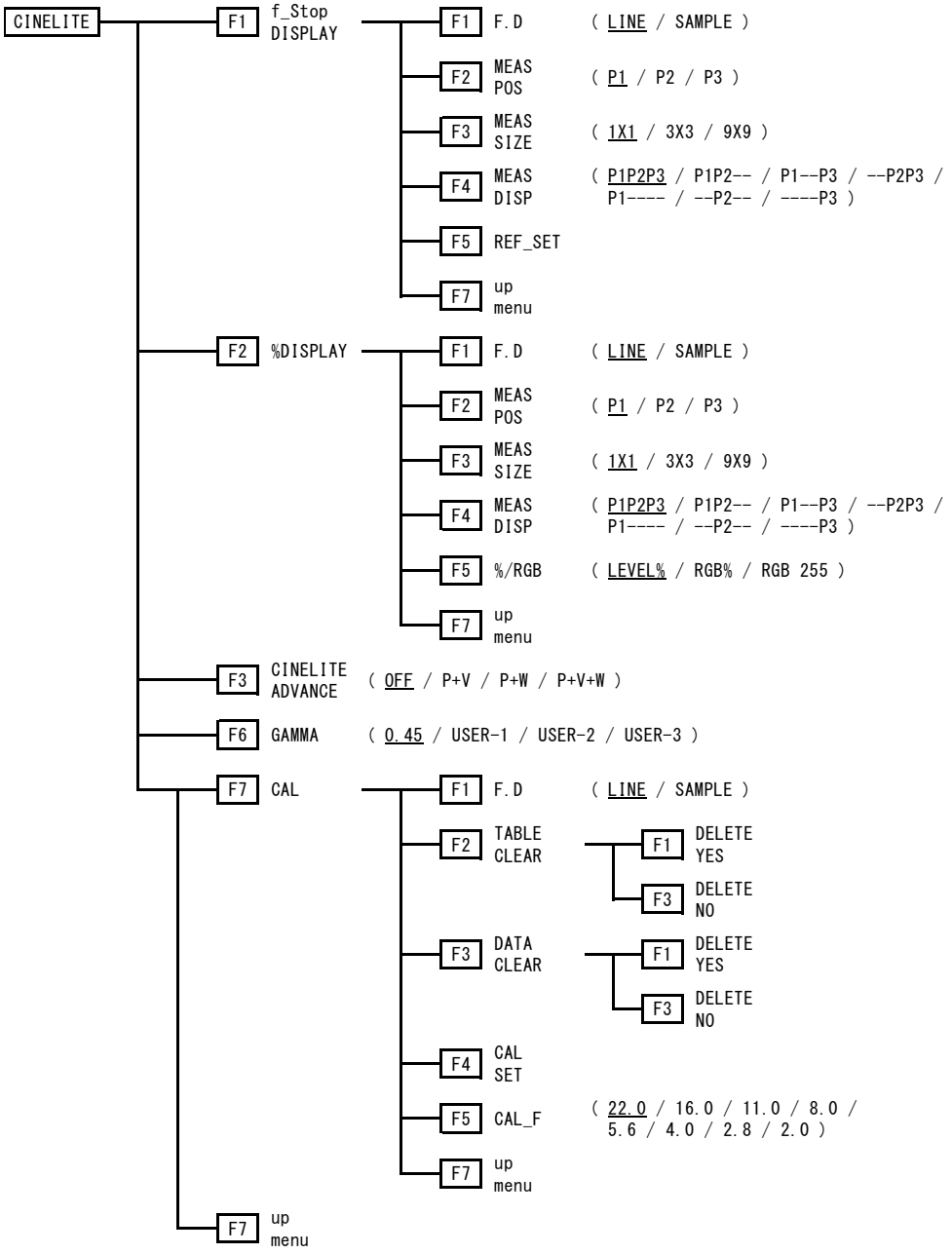
17. MENU TREE

This chapter shows the menu trees that correspond to each key.
The default settings are underlined.
The menus that are displayed vary depending on the LV 5333 settings and whether a USB memory device is connected to the LV 5333.

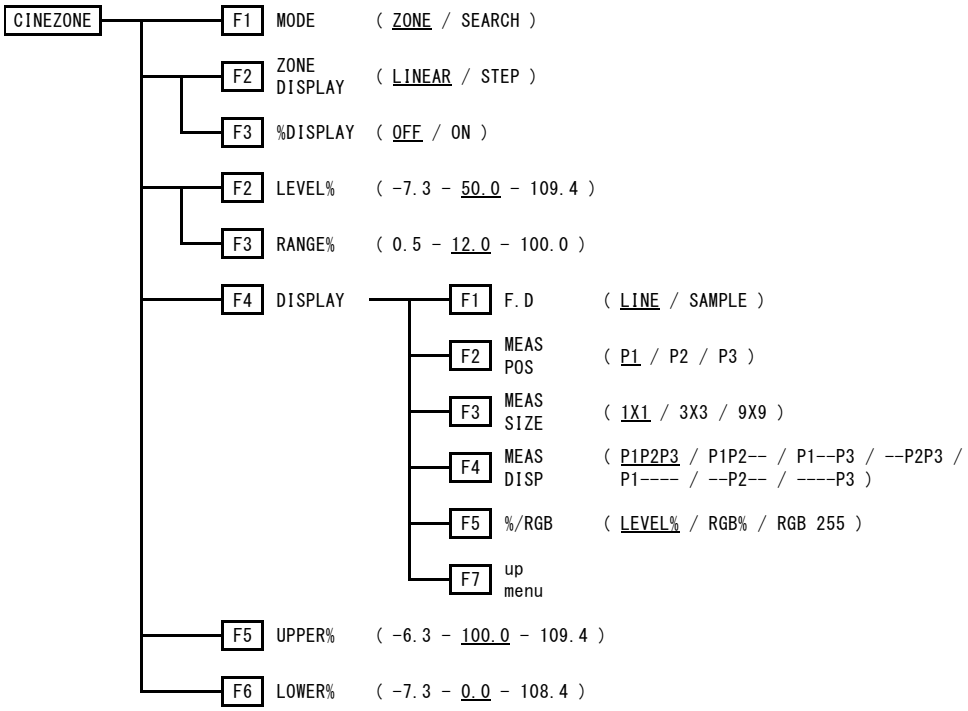
17.1 Picture Menu



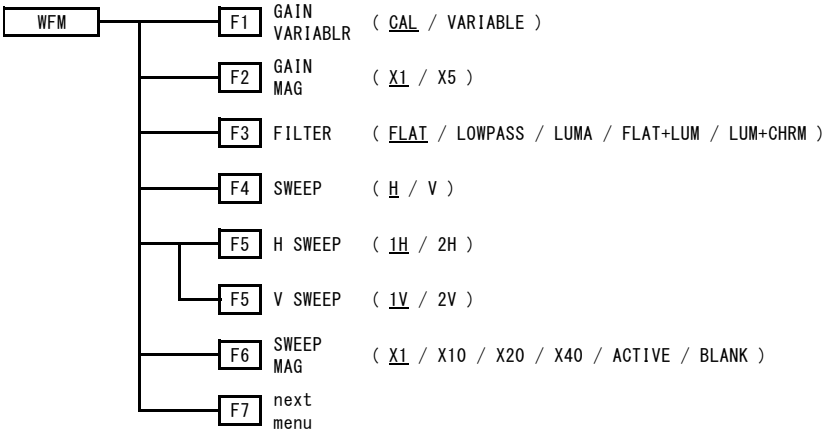
17.2 CINELITE Menu

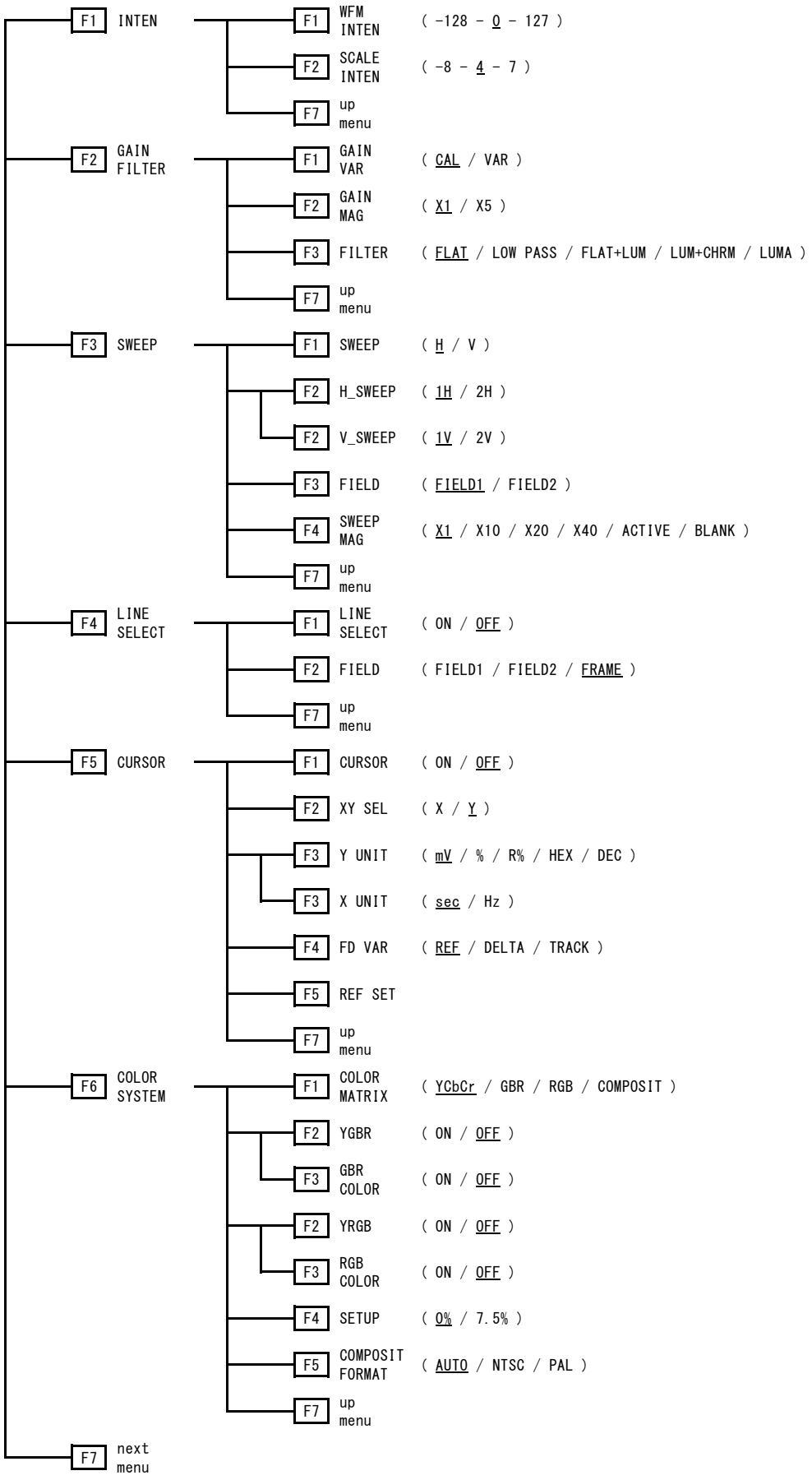


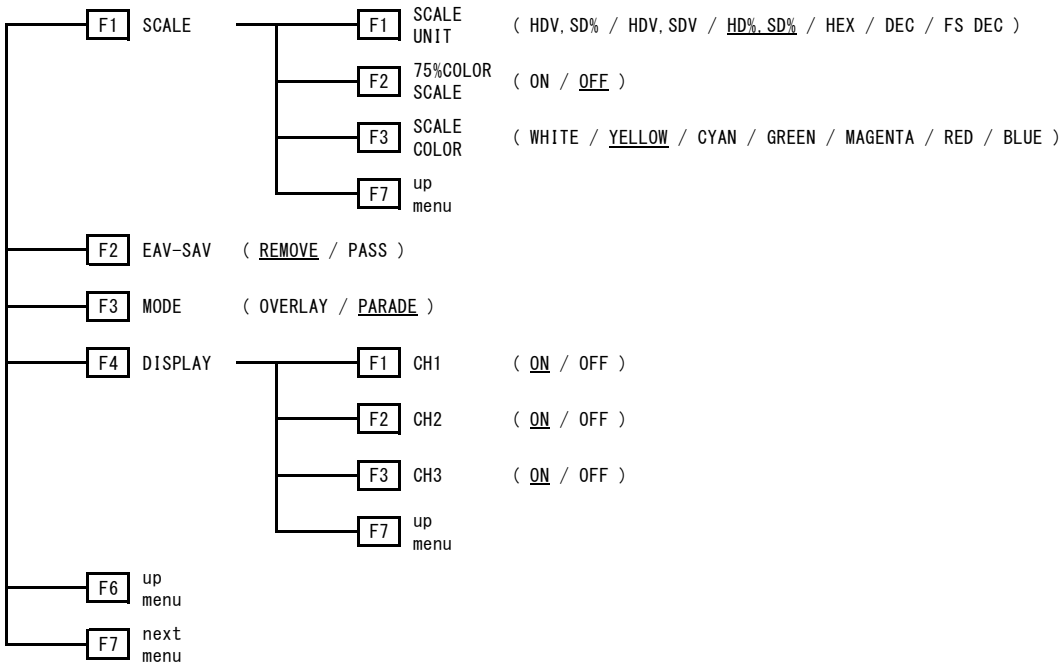
17.3 CINEZONE Menu



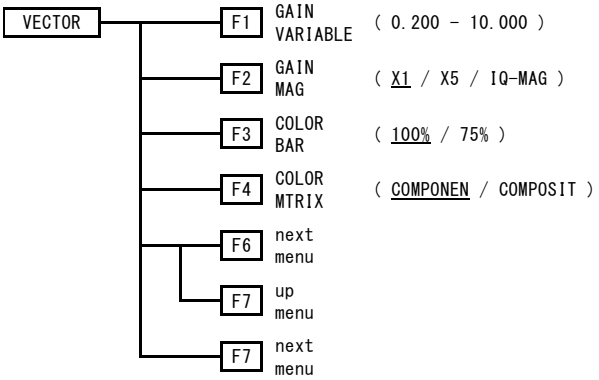
17.4 WFM Menu

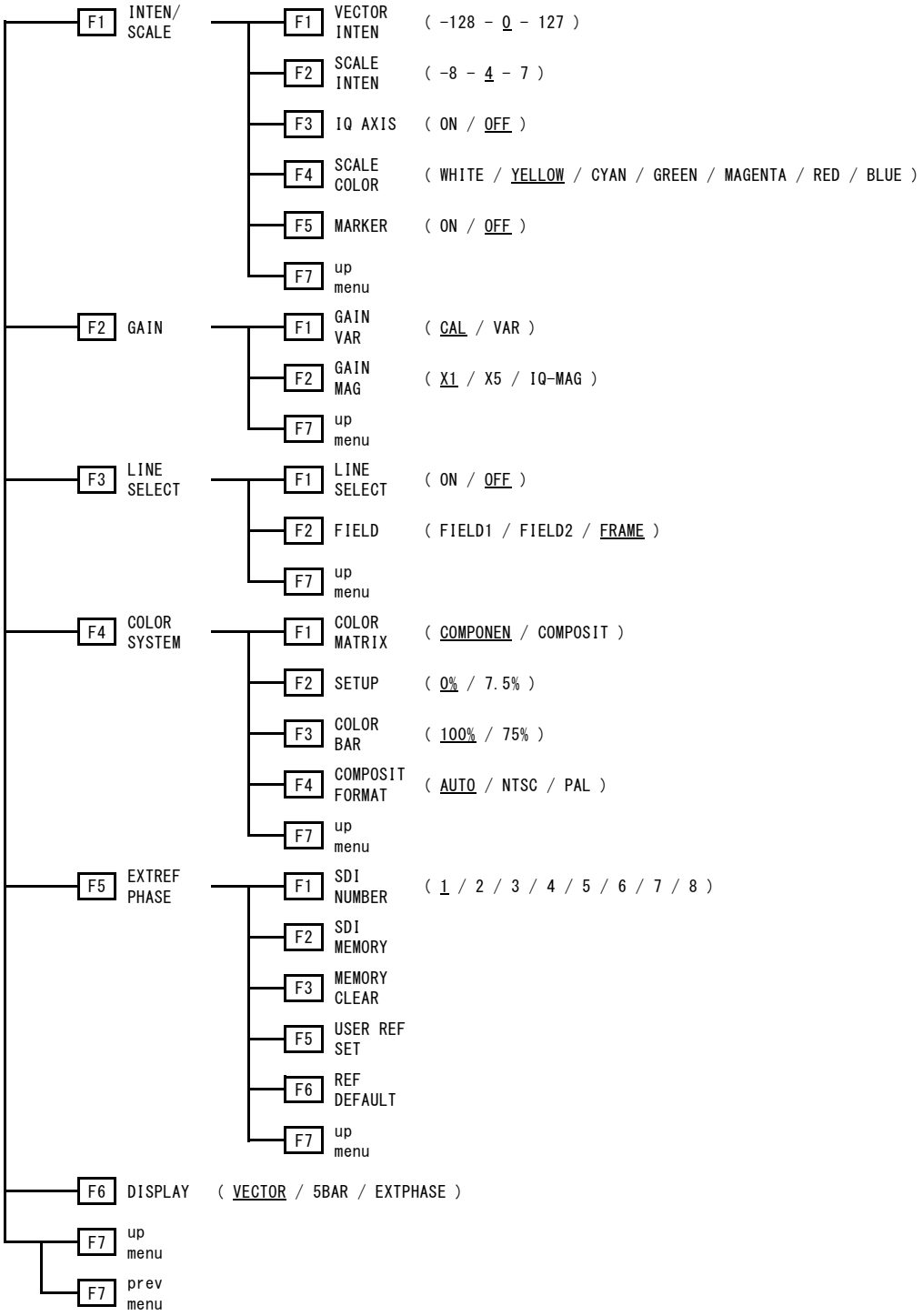



F1 INTEN
F1 WFM INTEN (-128 - 0 - 127)
F2 SCALE INTEN (-8 - 4 - 7)
F7 up menu
F2 GAIN FILTER
F1 GAIN VAR (CAL / VAR)
F2 GAIN MAG (X1 / X5)
F3 FILTER (FLAT / LOW PASS / FLAT+LUM / LUM+CHRM / LUMA)
F7 up menu
F3 SWEEP
F1 SWEEP (H / V)
F2 H_SWEEP (1H / 2H)
F2 V_SWEEP (1V / 2V)
F3 FIELD (FIELD1 / FIELD2)
F4 SWEEP MAG (X1 / X10 / X20 / X40 / ACTIVE / BLANK)
F7 up menu
F4 LINE SELECT
F1 LINE SELECT (ON / OFF)
F2 FIELD (FIELD1 / FIELD2 / FRAME)
F7 up menu
F5 CURSOR
F1 CURSOR (ON / OFF)
F2 XY SEL (X / Y)
F3 Y UNIT (mV / % / R% / HEX / DEC)
F3 X UNIT (sec / Hz)
F4 FD VAR (REF / DELTA / TRACK)
F5 REF SET
F7 up menu
F6 COLOR SYSTEM
F1 COLOR MATRIX (YCbCr / GBR / RGB / COMPOSIT)
F2 YGBR (ON / OFF)
F3 GBR COLOR (ON / OFF)
F2 YRGB (ON / OFF)
F3 RGB COLOR (ON / OFF)
F4 SETUP (0% / 7.5%)
F5 COMPOSIT FORMAT (AUTO / NTSC / PAL)
F7 up menu
F7 next menu

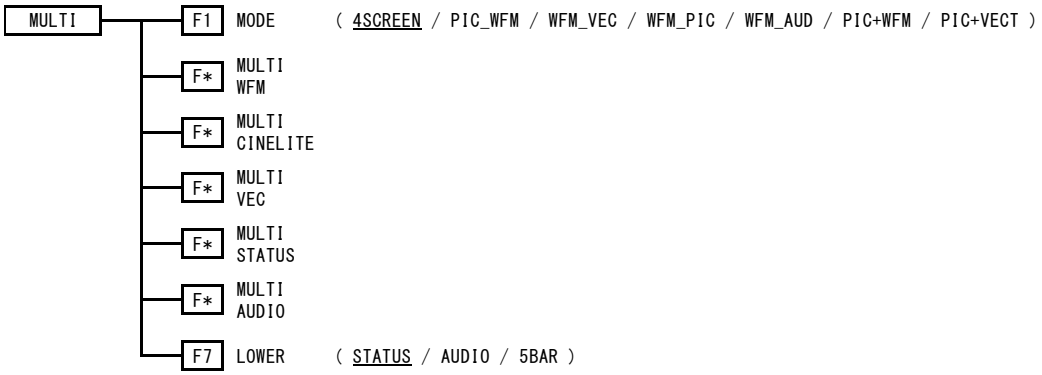


17.5 VECTOR Menu

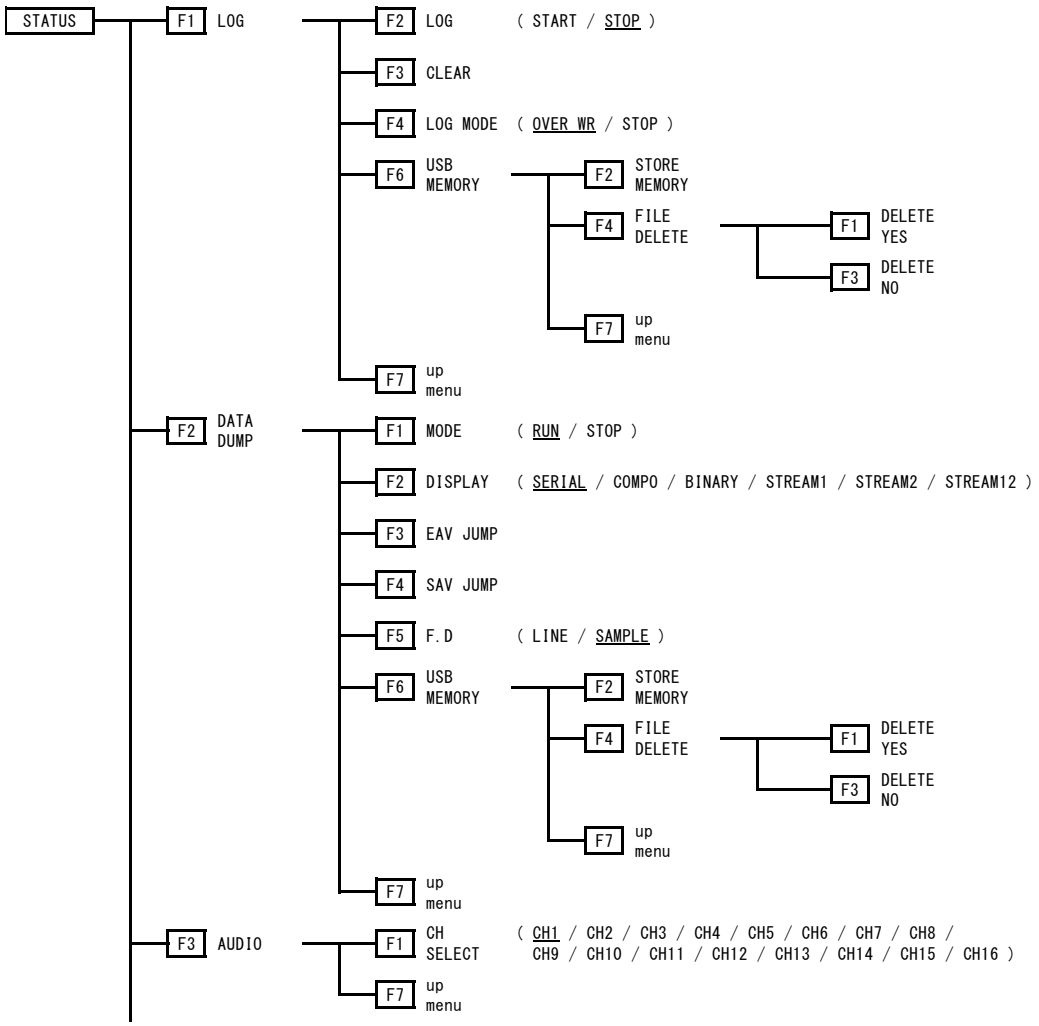


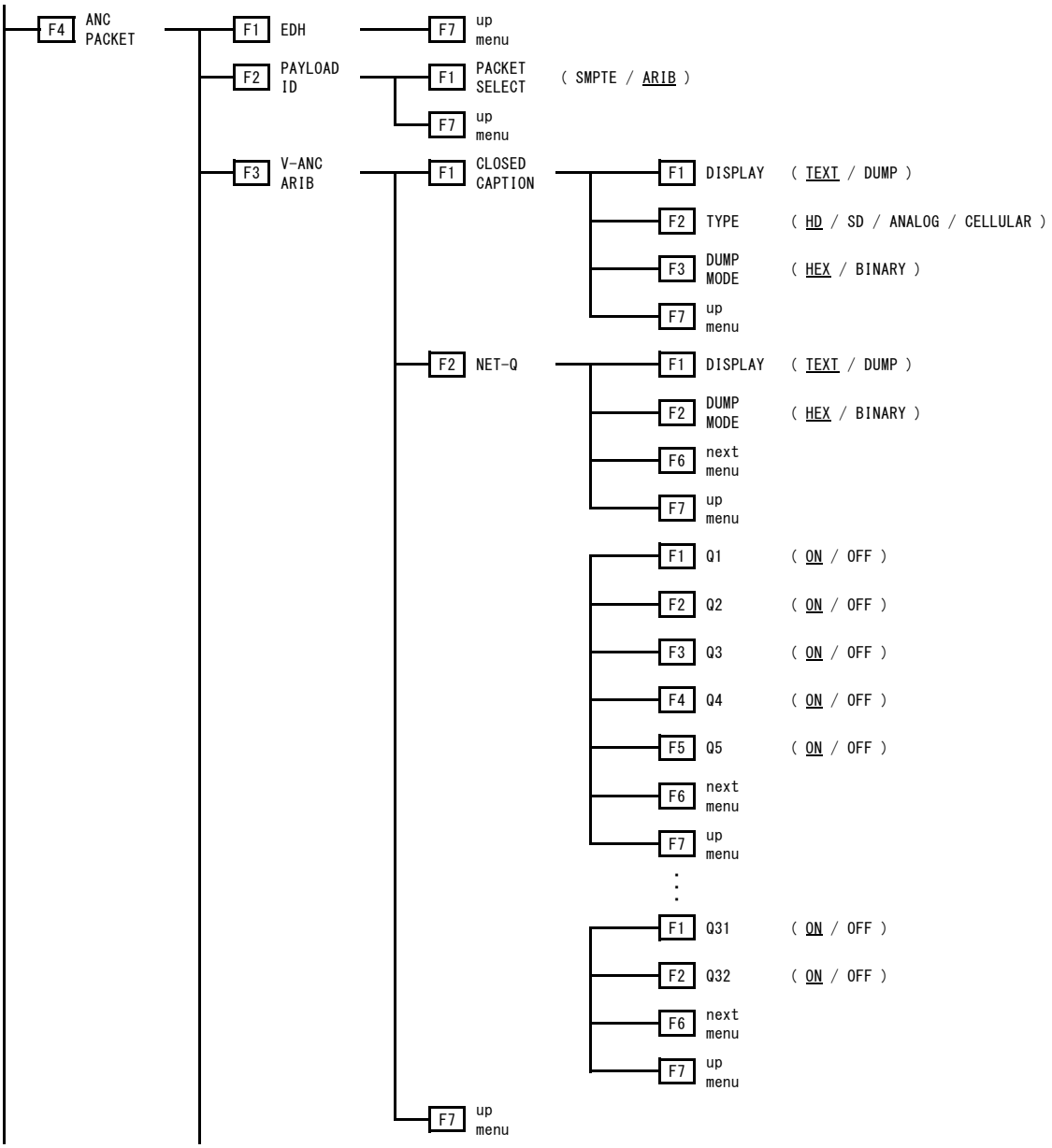

F1 INTEN/ SCALE
F1 VECTOR INTEN (-128 - 0 - 127)
F2 SCALE INTEN (-8 - 4 - 7)
F3 IQ AXIS (ON / OFF)
F4 SCALE COLOR (WHITE / YELLOW / CYAN / GREEN / MAGENTA / RED / BLUE)
F5 MARKER (ON / OFF)
F7 up menu
F2 GAIN
F1 GAIN VAR (CAL / VAR)
F2 GAIN MAG (X1 / X5 / IQ-MAG)
F7 up menu
F3 LINE SELECT
F1 LINE SELECT (ON / OFF)
F2 FIELD (FIELD1 / FIELD2 / FRAME)
F7 up menu
F4 COLOR SYSTEM
F1 COLOR MATRIX (COMPONEN / COMPOSIT)
F2 SETUP (0% / 7.5%)
F3 COLOR BAR (100% / 75%)
F4 COMPOSIT FORMAT (AUTO / NTSC / PAL)
F7 up menu
F5 EXTREF PHASE
F1 SDI NUMBER (1 / 2 / 3 / 4 / 5 / 6 / 7 / 8)
F2 SDI MEMORY
F3 MEMORY CLEAR
F5 USER REF SET
F6 REF DEFAULT
F7 up menu
F6 DISPLAY (VECTOR / 5BAR / EXTPHASE)
F7 up menu
F7 prev menu

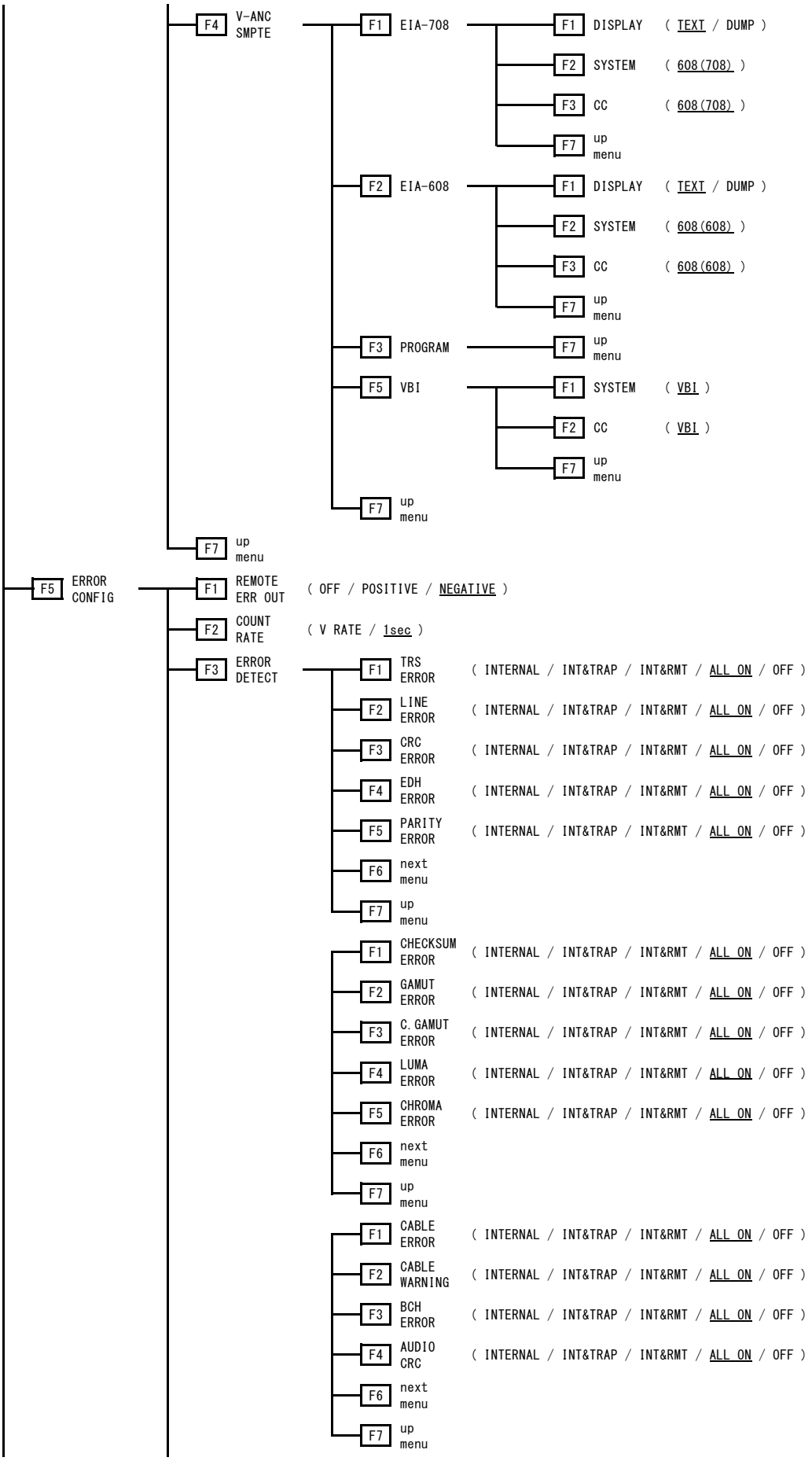
17.6 MULTI Menu

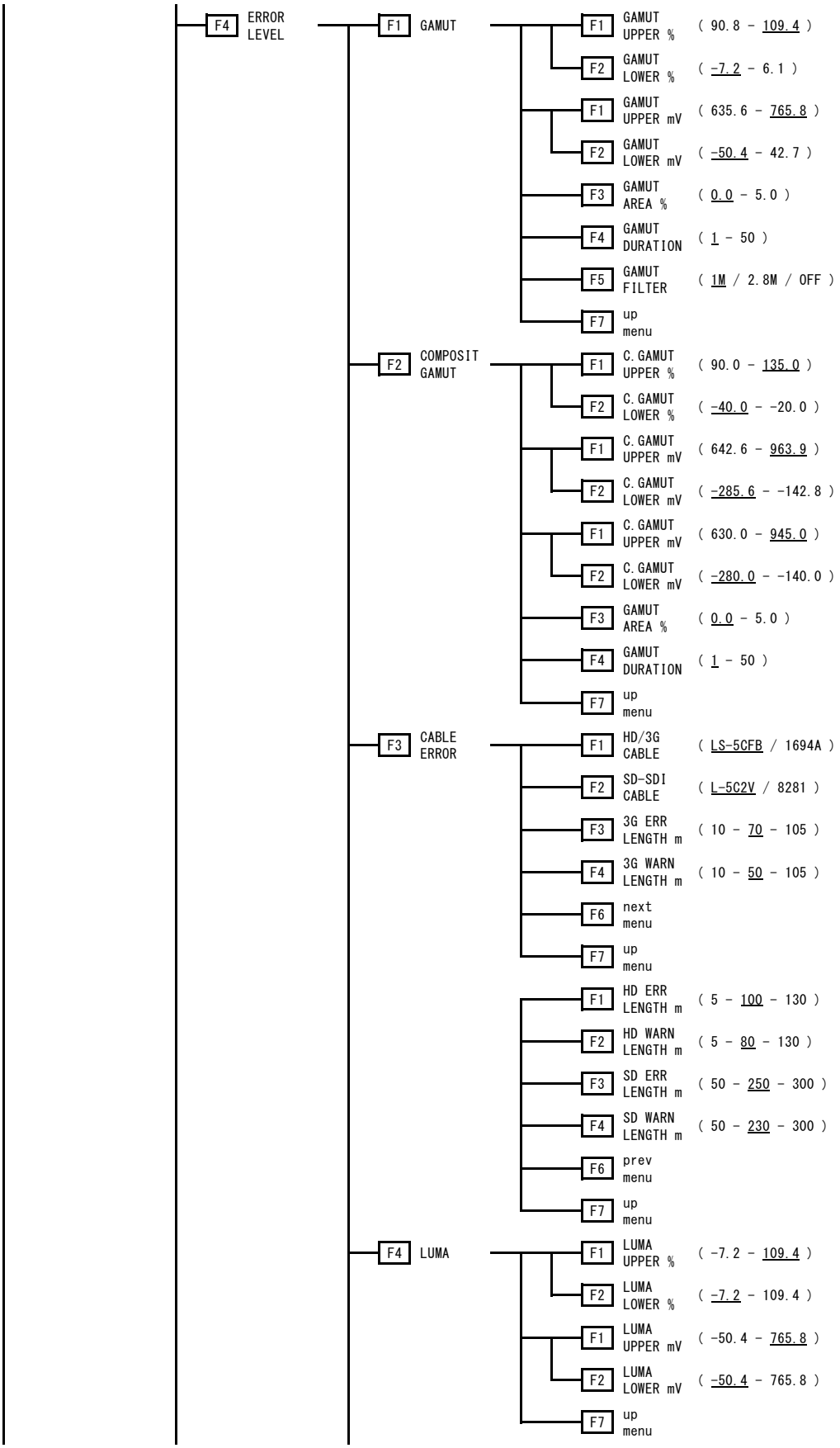


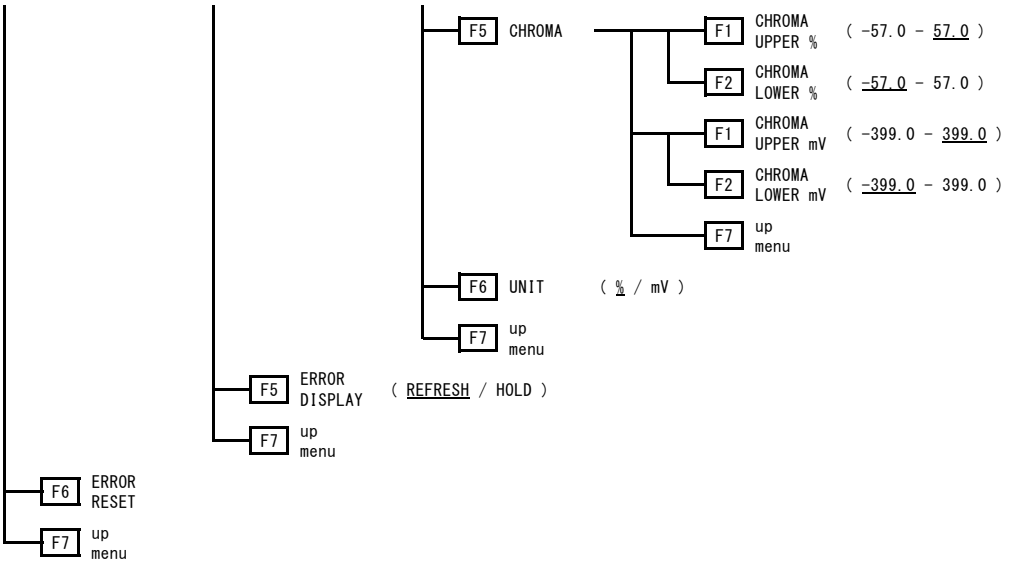
17.7 STATUS Menu



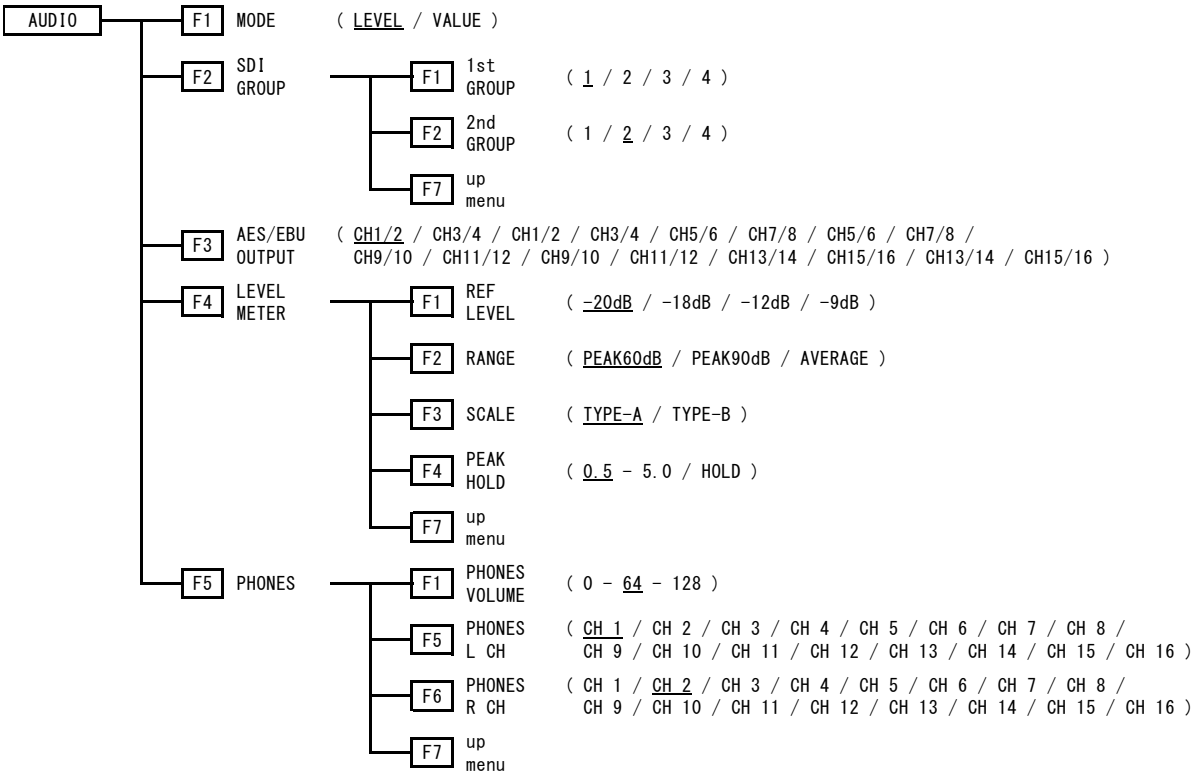

F4 ANC PACKET
F1 EDH
F7 up menu
F2 PAYLOAD ID
F1 PACKET SELECT (SMPTE / ARIB)
F7 up menu
F3 V-ANC ARIB
F1 CLOSED CAPTION
F1 DISPLAY (TEXT / DUMP)
F2 TYPE (HD / SD / ANALOG / CELLULAR)
F3 DUMP MODE (HEX / BINARY)
F7 up menu
F2 NET-Q
F1 DISPLAY (TEXT / DUMP)
F2 DUMP MODE (HEX / BINARY)
F6 next menu
F7 up menu
F1 Q1 (ON / OFF)
F2 Q2 (ON / OFF)
F3 Q3 (ON / OFF)
F4 Q4 (ON / OFF)
F5 Q5 (ON / OFF)
F6 next menu
F7 up menu
F1 Q31 (ON / OFF)
F2 Q32 (ON / OFF)
F6 next menu
F7 up menu
F7 up menu


F4 V-ANC SMPTE
F1 EIA-708
F1 DISPLAY (TEXT / DUMP)
F2 SYSTEM (608(708))
F3 CC (608(708))
F7 up menu
F2 EIA-608
F1 DISPLAY (TEXT / DUMP)
F2 SYSTEM (608(608))
F3 CC (608(608))
F7 up menu
F3 PROGRAM
F7 up menu
F5 VBI
F1 SYSTEM (VBI)
F2 CC (VBI)
F7 up menu
F7 up menu
F7 up menu
F5 ERROR CONFIG
F1 REMOTE ERR OUT (OFF / POSITIVE / NEGATIVE)
F2 COUNT RATE (V RATE / 1sec)
F3 ERROR DETECT
F1 TRS ERROR (INTERNAL / INT&TRAP / INT&RMT / ALL ON / OFF)
F2 LINE ERROR (INTERNAL / INT&TRAP / INT&RMT / ALL ON / OFF)
F3 CRC ERROR (INTERNAL / INT&TRAP / INT&RMT / ALL ON / OFF)
F4 EDH ERROR (INTERNAL / INT&TRAP / INT&RMT / ALL ON / OFF)
F5 PARITY ERROR (INTERNAL / INT&TRAP / INT&RMT / ALL ON / OFF)
F6 next menu
F7 up menu
F1 CHECKSUM ERROR (INTERNAL / INT&TRAP / INT&RMT / ALL ON / OFF)
F2 GAMUT ERROR (INTERNAL / INT&TRAP / INT&RMT / ALL ON / OFF)
F3 C.GAMUT ERROR (INTERNAL / INT&TRAP / INT&RMT / ALL ON / OFF)
F4 LUMA ERROR (INTERNAL / INT&TRAP / INT&RMT / ALL ON / OFF)
F5 CHROMA ERROR (INTERNAL / INT&TRAP / INT&RMT / ALL ON / OFF)
F6 next menu
F7 up menu
F1 CABLE ERROR (INTERNAL / INT&TRAP / INT&RMT / ALL ON / OFF)
F2 CABLE WARNING (INTERNAL / INT&TRAP / INT&RMT / ALL ON / OFF)
F3 BCH ERROR (INTERNAL / INT&TRAP / INT&RMT / ALL ON / OFF)
F4 AUDIO CRC (INTERNAL / INT&TRAP / INT&RMT / ALL ON / OFF)
F6 next menu
F7 up menu

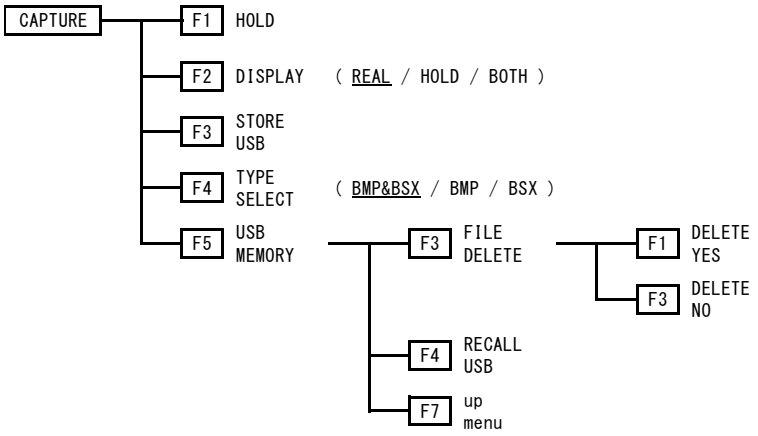

F4 ERROR LEVEL
F1 GAMUT
F1 GAMUT UPPER % (90.8 - 109.4)
F2 GAMUT LOWER % (-7.2 - 6.1)
F1 GAMUT UPPER mV (635.6 - 765.8)
F2 GAMUT LOWER mV (-50.4 - 42.7)
F3 GAMUT AREA % (0.0 - 5.0)
F4 GAMUT DURATION (1 - 50)
F5 GAMUT FILTER (1M / 2.8M / OFF)
F7 up menu
F2 COMPOSIT GAMUT
F1 C.GAMUT UPPER % (90.0 - 135.0)
F2 C.GAMUT LOWER % (-40.0 - -20.0)
F1 C.GAMUT UPPER mV (642.6 - 963.9)
F2 C.GAMUT LOWER mV (-285.6 - -142.8)
F1 C.GAMUT UPPER mV (630.0 - 945.0)
F2 C.GAMUT LOWER mV (-280.0 - -140.0)
F3 GAMUT AREA % (0.0 - 5.0)
F4 GAMUT DURATION (1 - 50)
F7 up menu
F3 CABLE ERROR
F1 HD/3G CABLE (LS-5CFB / 1694A)
F2 SD-SDI CABLE (L-5C2V / 8281)
F3 3G ERR LENGTH m (10 - 70 - 105)
F4 3G WARN LENGTH m (10 - 50 - 105)
F6 next menu
F7 up menu
F1 HD ERR LENGTH m (5 - 100 - 130)
F2 HD WARN LENGTH m (5 - 80 - 130)
F3 SD ERR LENGTH m (50 - 250 - 300)
F4 SD WARN LENGTH m (50 - 230 - 300)
F6 prev menu
F7 up menu
F4 LUMA
F1 LUMA UPPER % (-7.2 - 109.4)
F2 LUMA LOWER % (-7.2 - 109.4)
F1 LUMA UPPER mV (-50.4 - 765.8)
F2 LUMA LOWER mV (-50.4 - 765.8)
F7 up menu



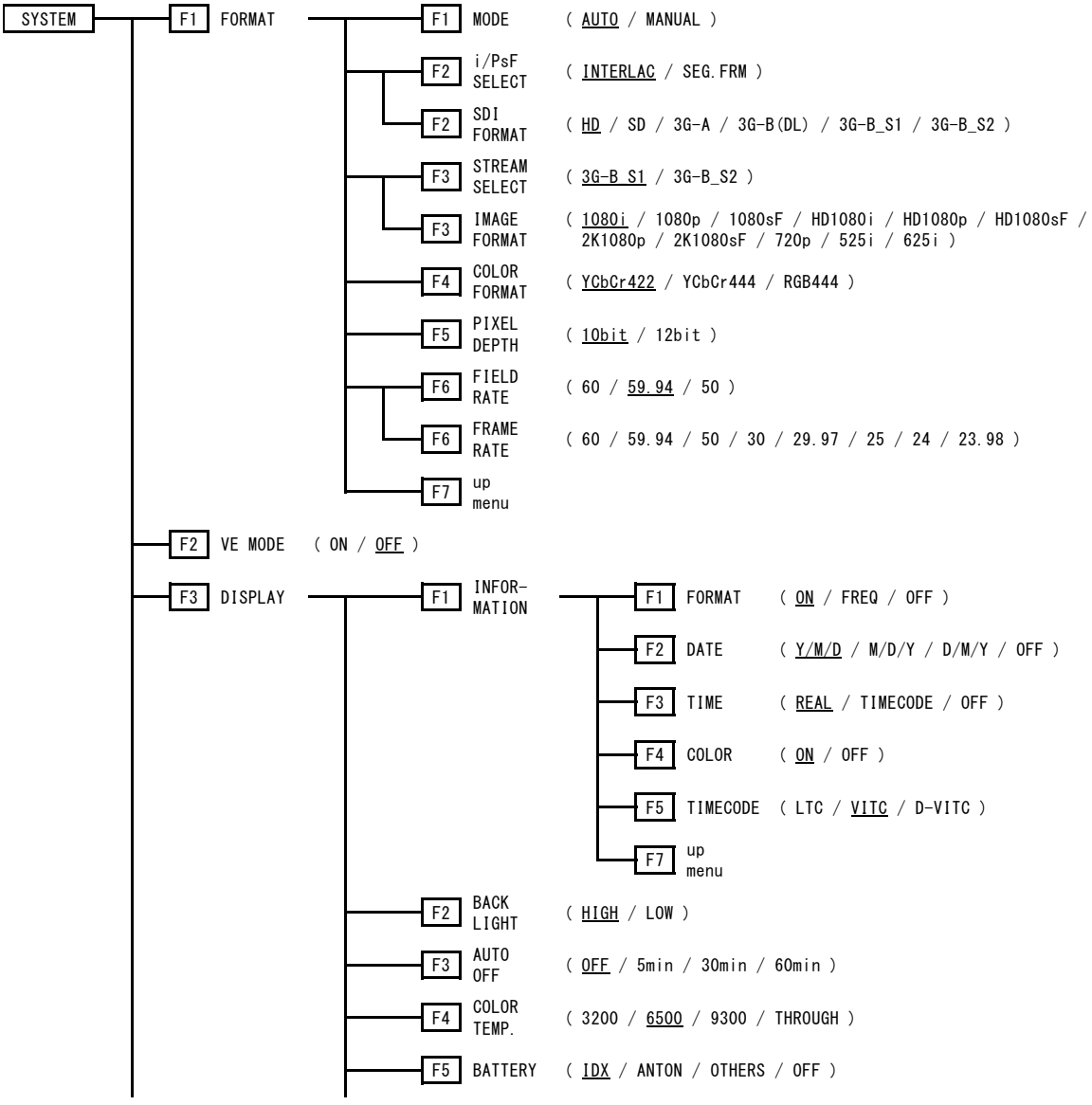
17.8 AUDIO Menu

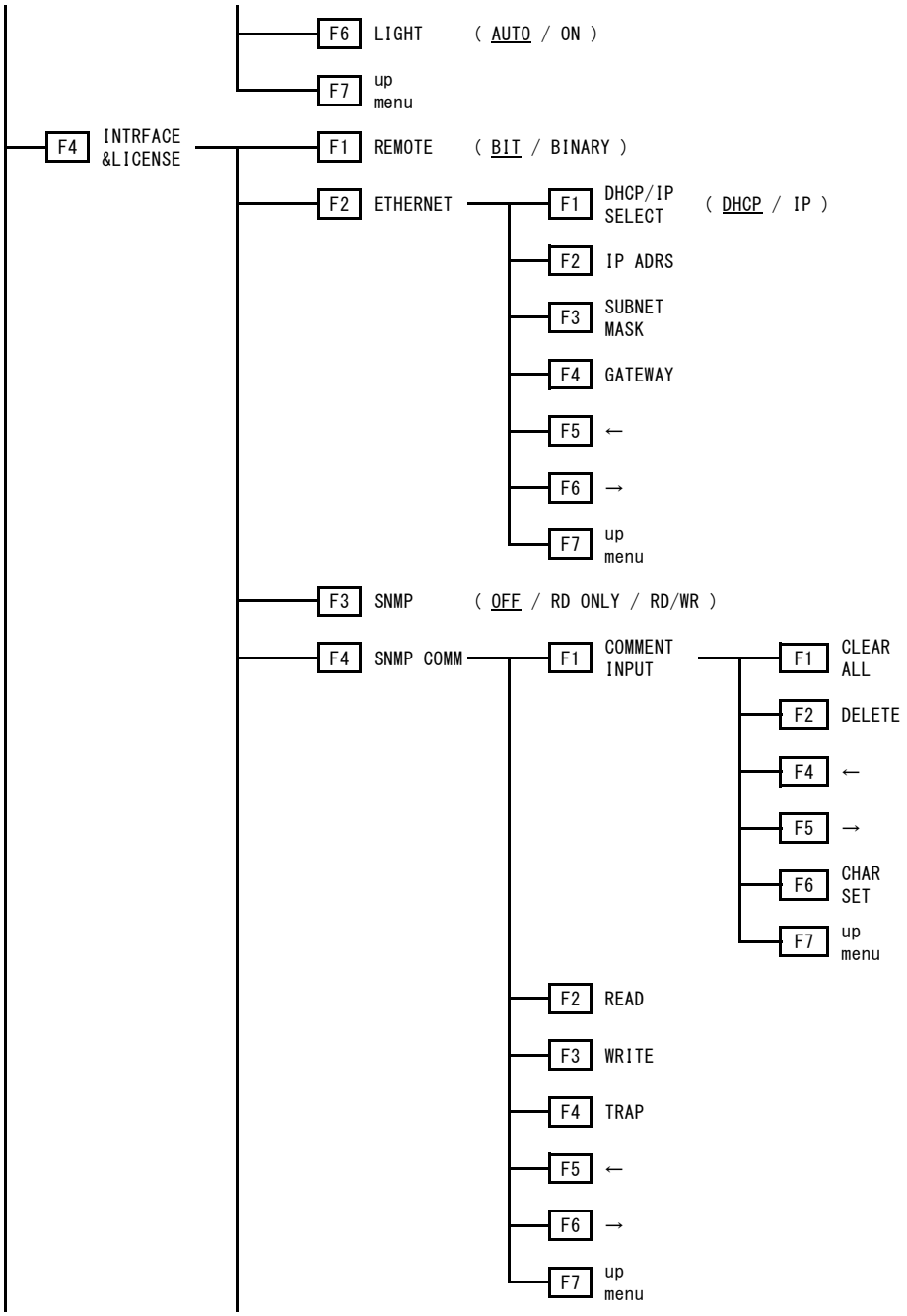


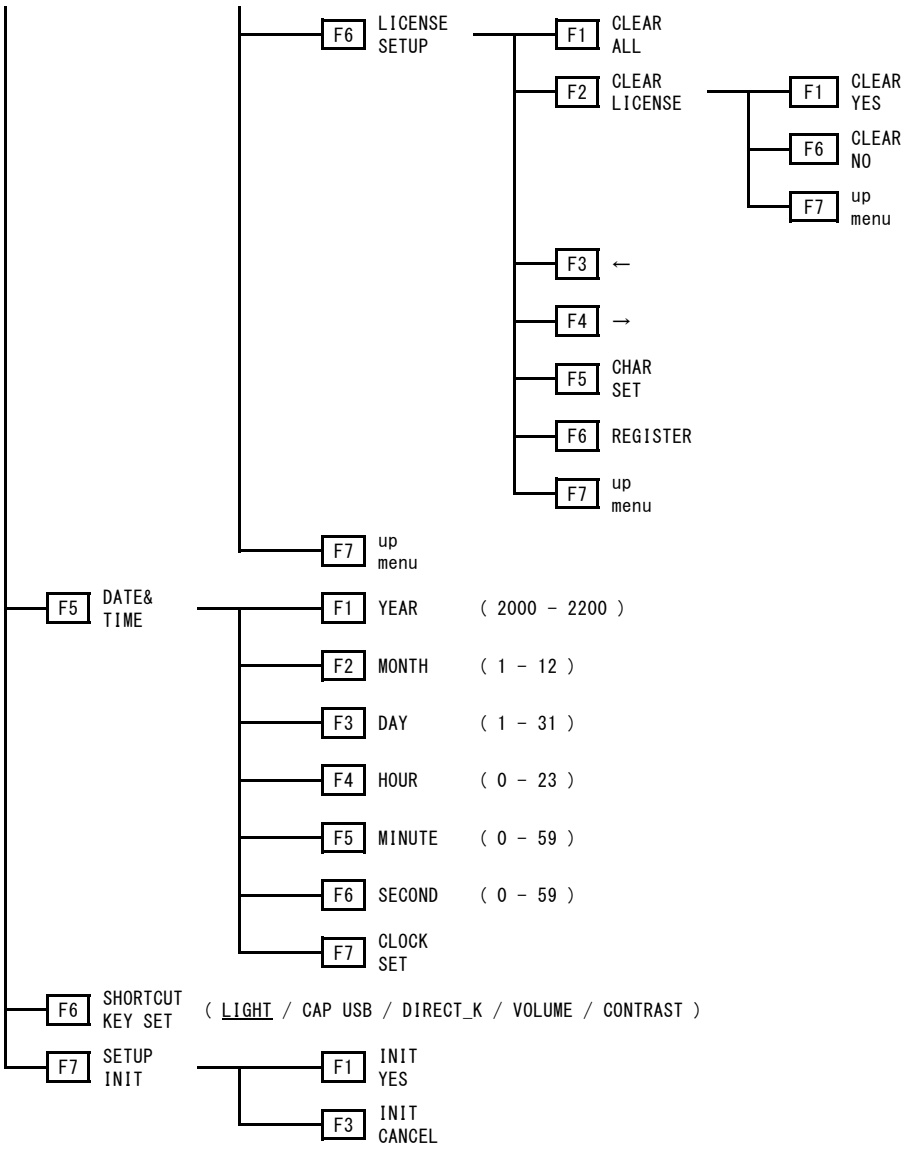
17.9 CAPTURE Menu



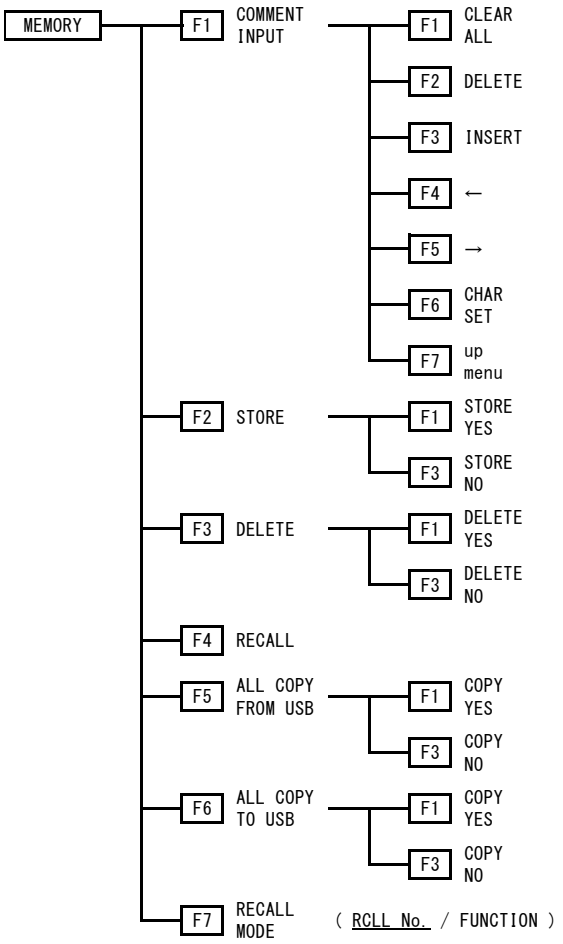
17.10 SYSTEM Menu



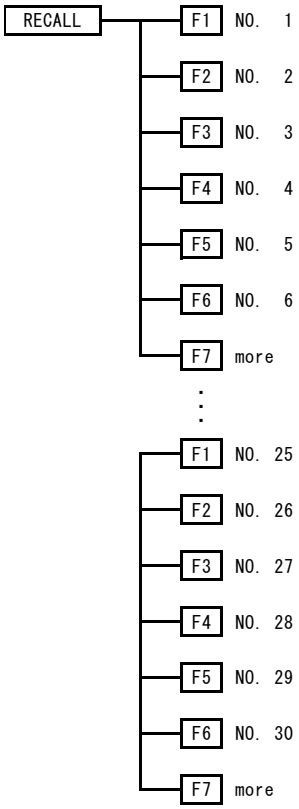

F6 LIGHT (AUTO / ON)
F7 up menu
F4 INTRFACE &LICENSE
F1 REMOTE (BIT / BINARY)
F2 ETHERNET
F1 DHCP/IP SELECT (DHCP / IP)
F2 IP ADRS
F3 SUBNET MASK
F4 GATEWAY
F5 ←
F6 →
F7 up menu
F3 SNMP (OFF / RD ONLY / RD/WR)
F4 SNMP COMM
F1 COMMENT INPUT
F1 CLEAR ALL
F2 DELETE
F4 ←
F5 →
F6 CHAR SET
F7 up menu
F2 READ
F3 WRITE
F4 TRAP
F5 ←
F6 →
F7 up menu


F6 LICENSE SETUP
F1 CLEAR ALL
F2 CLEAR LICENSE
F1 CLEAR YES
F6 CLEAR NO
F7 up menu
F3 ←
F4 →
F5 CHAR SET
F6 REGISTER
F7 up menu
F7 up menu
F5 DATE& TIME
F1 YEAR (2000 - 2200)
F2 MONTH (1 - 12)
F3 DAY (1 - 31)
F4 HOUR (0 - 23)
F5 MINUTE (0 - 59)
F6 SECOND (0 - 59)
F7 CLOCK SET
F6 SHORTCUT KEY SET (LIGHT / CAP USB / DIRECT_K / VOLUME / CONTRAST)
F7 SETUP INIT
F1 INIT YES
F3 INIT CANCEL

17.11 MEMORY Menu



17.12 RECALL Menu



18. FIRMWARE UPDATE HITORY

This manual is written for firmware version 1.80.
You can view the firmware version by pressing F•4 INTRFACE&LICENSE and then F•6 LICENSE SETUP on the SYSTEM menu.

Ver. 1.8

- An SNMP community name setup function was added.

Index

%

1

2

3

7

A

B

C

D

E

F

G

H

I

L

M

N

P

R

S

T

U

V

W

X

Y

Z

Following information is for Chinese RoHS only

所含有毒有害物质信息

部件号码：LV 5333

此标志适用于在中国销售的电子信息产品，依据2006年2月28日公布的《电子信息产品污染控制管理办法》以及SJ/T11364-2006《电子信息产品污染控制标识要求》，表示该产品在使用完结后可再利用。数字表示的是环境保护使用期限，只要遵守与本产品有关的安全和使用上的注意事项，从制造日算起在数字所表示的年限内，产品不会产生环境污染和对人体、财产的影响。
产品适当使用后报废的方法请遵从电子信息产品的回收、再利用相关法令。
详细请咨询各级政府主管部门。

产品中有毒有害物质或元素的名称及含量

部件名称 Parts	有毒有害物质或元素 Hazardous Substances in each Part					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
实装基板	×	○	○	○	○	○
主体部	×	○	○	○	○	○
液晶显示模组	×	○	○	○	○	○
风扇	×	○	○	○	○	○
线材料一套	○	○	○	○	○	○
外筐	○	○	○	○	○	○
附件	○	○	○	○	○	○
包装材	○	○	○	○	○	○
电池	○	○	○	○	○	○
选件						
OP70	×	○	○	○	○	○
OP71	×	○	○	○	○	○

备注）

○：表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T11363-2006 规定的限量要求以下。

×：表示该有毒有害物质或元素至少在该部件的某一均质材料中的含量超出SJ/T11363-2006 标准规定的限量要求。

Ver.1

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Jul. 12, 2017 Ver. 2 (FW Ver. 1.80)