LEADER

# LT 4400

MULTIFORMAT VIDEO GENERATOR

INSTRUCTION MANUAL

(ETHERNET)

LEADER
ELECTRONIC MEASURING INSTRUMENTS

# TABLE OF CONTENTS

# 1. INTRODUCTION

This manual explains how to control an LT 4400 remotely over an Ethernet.
For other explanations and notes, see the main LT 4400 instruction manual.

## 1.1 Networks

Controlling an LT 4400 remotely through the instrument's Ethernet interface has only been confirmed to work in a local network environment. LEADER does not guarantee that you will be able to control an LT 4400 remotely through the instrument's Ethernet interface in any network environment.

## 1.2 Trademark Acknowledgments

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

## 1.3 Operations in Remote Control

The operations that you can perform remotely on the LT 4400 are shown in the following table.

Table 1-1 List of remote control methods

| | ACCESS MODE (*1) | Check the LT 4400 settings | Change the LT 4400 settings | Retrieve LT 4400 errors |
|---|---|---|---|---|
| HTTP | READ ONLY | ○ | × | × |
| | OFF (initial setting) | × | × | × |
| TELNET | ON | ○ | ○ | × |
| | READ ONLY | ○ | × | × |
| | OFF (initial setting) | × | × | × |
| SNMP | Always ON | ○ | △ (Only some settings) | ○ |

*1 You can set the ACCESS MODE for HTTP and TELNET from the LT 4400 or set it from the SNMP manager by using the SET operation.
The ACCESS MODE item for SNMP is always set to ON, but this setting is only valid if the ETHERNET settings (IP ADDRESS, SUBNET MASK, and GATEWAY) have been configured. (SNMP control does not function if you set IP ADDRESS to '0.0.0.0'.)
Also, if the SNMP Manager IP item is not configured, SNMP traps are not sent.

## 1.4 Operating Environment

- **OS**

・Microsoft Windows 2000
・Microsoft Windows XP professional Version 2002 Service Pack 2
・Microsoft Windows XP professional Version 2002 Service Pack 3

- **Web browser (only HTTP)**

・Microsoft Internet Explorer 6
・Microsoft Internet Explorer 7
・Microsoft Internet Explorer 8
・Mozilla Firefox 3.6.8

- **Cable**

・clossover cable (when the LT 4400 and PC are connected directly)
・straight cable (when the LT 4400 is connected to a hub)

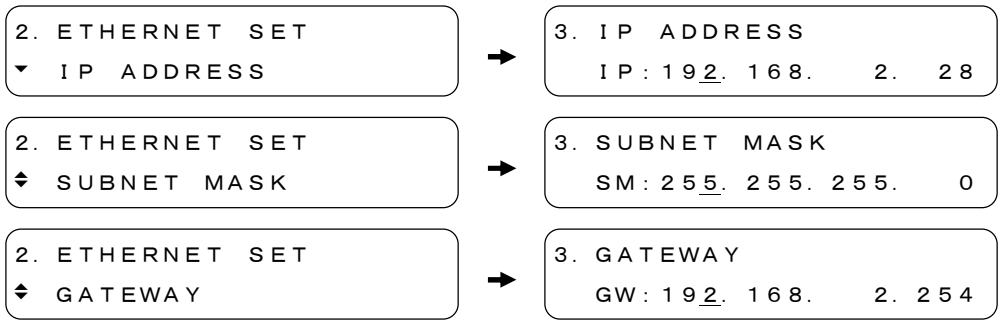
# 2. CONTROL BY HTTP

You can use HTTP to check the LT 4400 settings from a Web browser. Also, you can save the displayed data to the PC in html or txt format. (You cannot send the saved data to the LT 4400.) You should only use HTTP control for a limited period of time.

## 2.1 Procedure

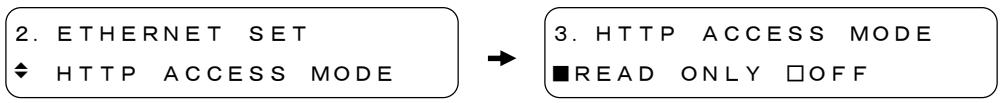
**1. On the LT 4400, configure the IP ADDRESS, SUBNET MASK, and GATEWAY settings.**

You can configure the settings by selecting UTILITY MENU and then ETHERNET SET. If necessary, ask your network administrator what values you should use.
The new settings take effect after the instrument is restarted.




**2. On the LT 4400, set the HTTP access mode to READ ONLY.**

You can configure the settings by selecting UTILITY MENU and then ETHERNET SET. (You can also set the access mode from the SNMP manager by using the SET operation.) When the access mode is changed, a trap is sent to the SNMP manager to notify it of the change. To use SNMP control, set this item to OFF.




**3. Restart the LT 4400.**

The IP address, subnet mask, and gateway values that you set become valid.

**4. Connect a cable to the LT 4400 ETHERNET port.**

After you set the IP address, subnet mask, and gateway, promptly connect a cable to the ETHERNET port.
If you do not connect a cable to the ETHERNET port, it may take time for the LT 4400 to initialize after you turn it on.

**5. Open a Web browser, and type “http://” followed by the IP address into the address bar.**

Enter the IP address that you set in step 1.


Figure 2-1 Entering the IP address

**6. Enter the username and password.**

The username and password are both ‘LT4400’. Be sure to use capital letters. You cannot change the user name or the password.

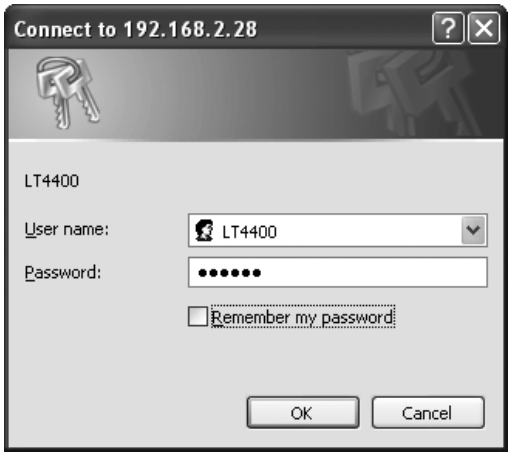



Figure 2-2 Entering the user name and password

**7. The LT 4400 settings appear in the browser.**

See the following pages for an example of the settings that are displayed.
Even if you change the LT 4400 settings, the displayed contents are not automatically refreshed. To refresh the displayed contents, click the Get Status button in the upper right of the window.

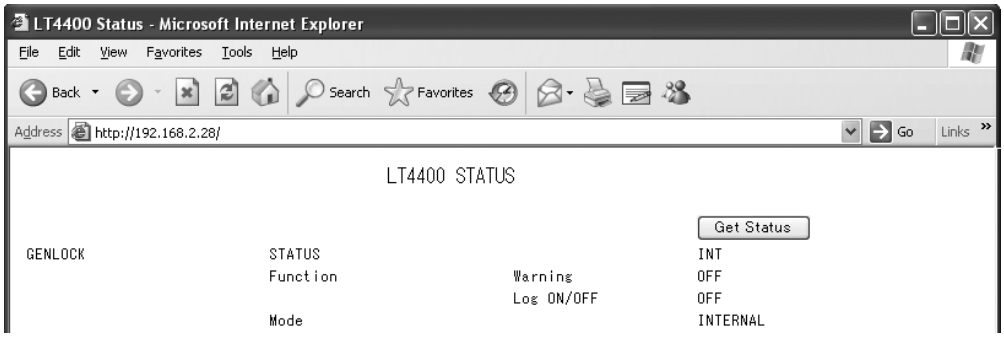
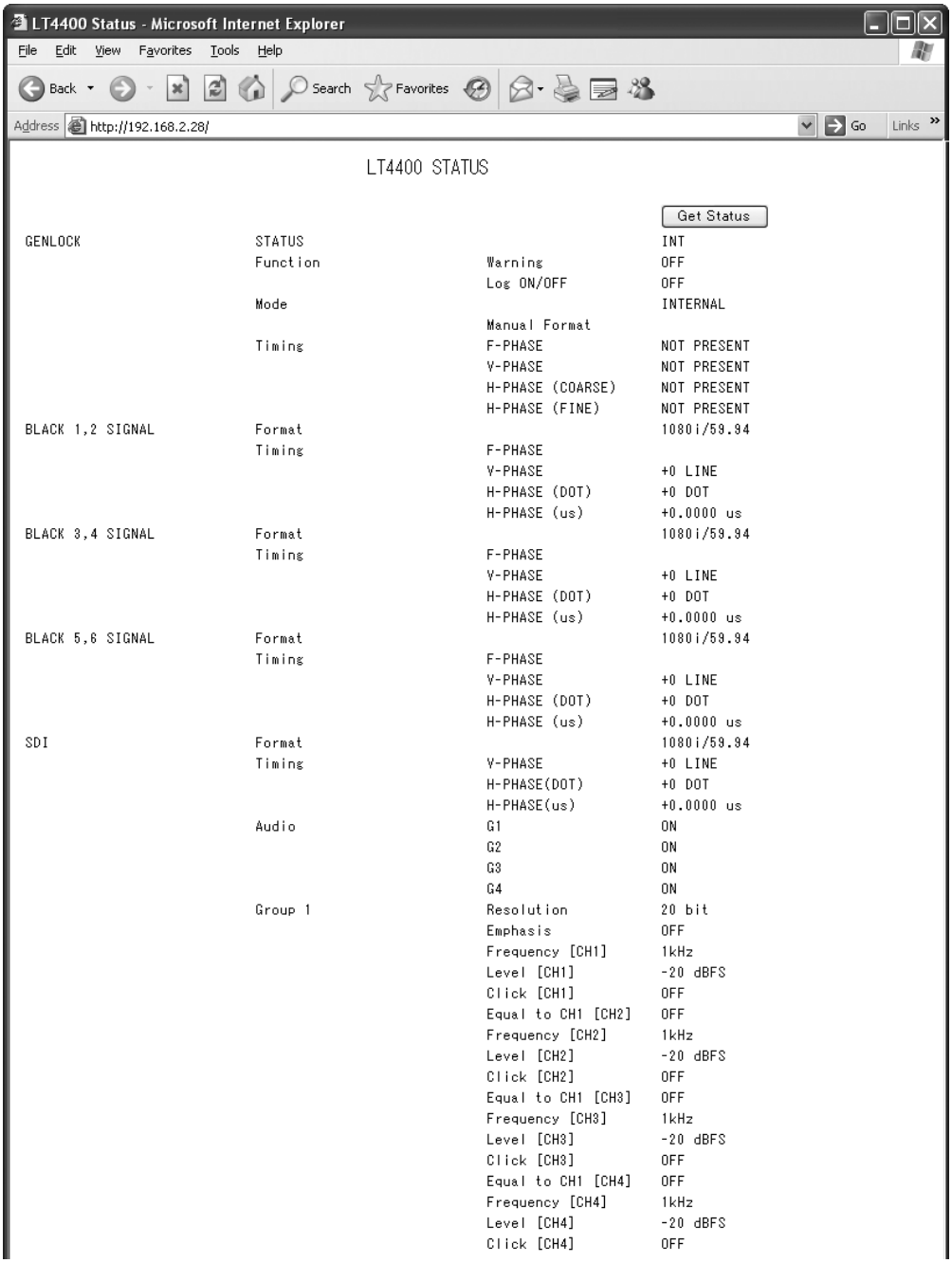



Figure 2-3 Displaying the settings

## 2.2 Browser Display Example

The following is an example of the settings displayed in a browser.




| | | | |
|---|---|---|---|
| GENLOCK | STATUS | | INT |
| | Function | Warning | OFF |
| | | Log ON/OFF | OFF |
| | Mode | | INTERNAL |
| | | Manual Format | |
| | Timing | F-PHASE | NOT PRESENT |
| | | V-PHASE | NOT PRESENT |
| | | H-PHASE (COARSE) | NOT PRESENT |
| | | H-PHASE (FINE) | NOT PRESENT |
| BLACK 1,2 SIGNAL | Format | | 1080i/59.94 |
| | Timing | F-PHASE | |
| | | V-PHASE | +0 LINE |
| | | H-PHASE (DOT) | +0 DOT |
| | | H-PHASE (us) | +0.0000 us |
| BLACK 3,4 SIGNAL | Format | | 1080i/59.94 |
| | Timing | F-PHASE | |
| | | V-PHASE | +0 LINE |
| | | H-PHASE (DOT) | +0 DOT |
| | | H-PHASE (us) | +0.0000 us |
| BLACK 5,6 SIGNAL | Format | | 1080i/59.94 |
| | Timing | F-PHASE | |
| | | V-PHASE | +0 LINE |
| | | H-PHASE (DOT) | +0 DOT |
| | | H-PHASE (us) | +0.0000 us |
| SDI | Format | | 1080i/59.94 |
| | Timing | V-PHASE | +0 LINE |
| | | H-PHASE(DOT) | +0 DOT |
| | | H-PHASE(us) | +0.0000 us |
| | Audio | G1 | ON |
| | | G2 | ON |
| | | G3 | ON |
| | | G4 | ON |
| | Group 1 | Resolution | 20 bit |
| | | Emphasis | OFF |
| | | Frequency [CH1] | 1kHz |
| | | Level [CH1] | -20 dBFS |
| | | Click [CH1] | OFF |
| | | Equal to CH1 [CH2] | OFF |
| | | Frequency [CH2] | 1kHz |
| | | Level [CH2] | -20 dBFS |
| | | Click [CH2] | OFF |
| | | Equal to CH1 [CH3] | OFF |
| | | Frequency [CH3] | 1kHz |
| | | Level [CH3] | -20 dBFS |
| | | Click [CH3] | OFF |
| | | Equal to CH1 [CH4] | OFF |
| | | Frequency [CH4] | 1kHz |
| | | Level [CH4] | -20 dBFS |
| | | Click [CH4] | OFF |

| | | |
|---|---|---|
| Group 2 | Equal G1 | OFF |
| | Resolution | 20 bit |
| | Emphasis | OFF |
| | Frequency [CH5] | 1kHz |
| | Level [CH5] | -20 dBFS |
| | Click [CH5] | OFF |
| | Equal to CH5 [CH6] | OFF |
| | Frequency [CH6] | 1kHz |
| | Level [CH6] | -20 dBFS |
| | Click [CH6] | OFF |
| | Equal to CH5 [CH7] | OFF |
| | Frequency [CH7] | 1kHz |
| | Level [CH7] | -20 dBFS |
| | Click [CH7] | OFF |
| | Equal to CH5 [CH8] | OFF |
| | Frequency [CH8] | 1kHz |
| | Level [CH8] | -20 dBFS |
| | Click [CH8] | OFF |
| Group 3 | Resolution | 20 bit |
| | Emphasis | OFF |
| | Frequency [CH9] | 1kHz |
| | Level [CH9] | -20 dBFS |
| | Click [CH9] | OFF |
| | Equal to CH9 [CH10] | OFF |
| | Frequency [CH10] | 1kHz |
| | Level [CH10] | -20 dBFS |
| | Click [CH10] | OFF |
| | Equal to CH9 [CH11] | OFF |
| | Frequency [CH11] | 1kHz |
| | Level [CH11] | -20 dBFS |
| | Click [CH111] | OFF |
| | Equal to CH9 [CH12] | OFF |
| | Frequency [CH12] | 1kHz |
| | Level [CH12] | -20 dBFS |
| | Click [CH12] | OFF |
| Group 4 | Equal G3 | OFF |
| | Resolution | 20 bit |
| | Emphasis | OFF |
| | Frequency [CH13] | 1kHz |
| | Level [CH13] | -20 dBFS |
| | Click [CH13] | OFF |
| | Equal to CH13 [CH14] | OFF |
| | Frequency [CH14] | 1kHz |
| | Level [CH14] | -20 dBFS |
| | Click [CH14] | OFF |
| | Equal to CH13 [CH15] | OFF |
| | Frequency [CH15] | 1kHz |
| | Level [CH15] | -20 dBFS |
| | Click [CH15] | OFF |
| | Equal to CH13 [CH16] | OFF |
| | Frequency [CH16] | 1kHz |
| | Level [CH16] | -20 dBFS |
| | Click [CH16] | OFF |
| Y,Cb,Cr | Y | ON |
| | Cb | ON |
| | Cr | ON |
| Safety Area | 90% | OFF |
| | 80% | OFF |
| | 4:3 | OFF |
| ID Character | | LT4400<- |
| | Position H | 0 DOT |
| | Position V | 0 DOT |
| | Size | x1 |
| | ID Level | 100% |
| | ID Blink | OFF |
| | On Time | 1 s |
| | Off Time | 1 s |
| | ON/OFF | OFF |

| | | | |
|---|---|---|---|
| | Logo | Position H | 0 DOT |
| | | Position V | 0 DOT |
| | | Level 3 | 3ACH (100%) |
| | | Level 2 | 288H (66%) |
| | | Level 1 | 164H (33%) |
| | | Level 0 | 040H (0%) |
| | | Background | OFF |
| | | ON/OFF | OFF |
| | | Internal Memory | NO DATA |
| | Pattern Scroll | Direction | UP and RIGHT |
| | | Speed H | 0 DOT |
| | | Speed V | 0 DOT |
| | | ON/OFF | OFF |
| | Pattern Change | Speed | 1 s |
| | | ON/OFF | OFF |
| WCLK | Level | | 5V CMOS |
| | Timing | | 0 |
| UTILITY | LCD | Brightness | HIGH |
| | | Lighting Time | ALL |
| | Keylock | | OFF |
| | PRESET/RECALL | Media | INT MEMORY |
| | PRESET INT MEMORY | Preset 0 | NO DATA |
| | | Preset 1 | NO DATA |
| | | Preset 2 | NO DATA |
| | | Preset 3 | NO DATA |
| | | Preset 4 | NO DATA |
| | | Preset 5 | NO DATA |
| | | Preset 6 | NO DATA |
| | | Preset 7 | NO DATA |
| | | Preset 8 | NO DATA |
| | | Preset 9 | NO DATA |
| | PRESET EXT CARD | Preset 0 | CARD NOT READY |
| | | Preset 1 | CARD NOT READY |
| | | Preset 2 | CARD NOT READY |
| | | Preset 3 | CARD NOT READY |
| | | Preset 4 | CARD NOT READY |
| | | Preset 5 | CARD NOT READY |
| | | Preset 6 | CARD NOT READY |
| | | Preset 7 | CARD NOT READY |
| | | Preset 8 | CARD NOT READY |
| | | Preset 9 | CARD NOT READY |
| | Power On Recall | ON/OFF | OFF |
| | | Recall No | INT MEMORY 0 |
| | Ethernet | IP Address | 192.168.2.28 |
| | | Subnet mask | 255.255.255.0 |
| | | Gateway | 192.168.2.254 |
| | | Http Access | READ ONLY |
| | | Telnet Access | OFF |
| | Date & Time After On | | 00000 days 00:00:35 |
| | Date & Time | | NOT ADJUST |
| | Version | | LT4400 Ver 3.58 |

Figure 2-4 Browser display example

* About the ID Character String

In the browser display, ◄ is shown as <-, → is shown as `, and ← is shown as a. Also, multiple consecutive blank spaces are represented with a single space. When a string starts with a space, the space is removed. If you want to use remote control to see an exact character string, use TELNET commands.

# 3. CONTROL BY TELNET

You can use TELNET to configure the LT 4400 and check its settings.
You should only use TELNET control for a limited period of time.

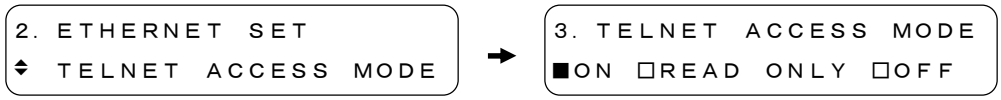
## 3.1 Procedure

**1. Set the IP address, subnet mask, and gateway on the LT 4400.**

You can configure the settings by selecting UTILITY MENU and then ETHERNET SET.
If necessary, ask your network administrator what values you should use.
The new settings become valid after the instrument restarts.

**2. On the LT 4400, set the TELNET access mode to ON.**

You can configure the settings by selecting UTILITY MENU and then ETHERNET SET.
(You can also set the access mode from the SNMP manager by using the SET operation.)
When the access mode is changed, a trap is sent to the SNMP manager to notify it of the change. To use SNMP control or to prevent TELNET controls from being received while you are performing panel operations, set this item to OFF.




**3. Restart the LT 4400.**

The IP address, subnet mask, and gateway values that you set become valid.

**4. Connect a cable to the LT 4400 ETHER connector.**

After you set the IP address, subnet mask, and gateway promptly connect a cable to the ETHERNET port. If you do not connect a cable to the ETHERNET port, it may take time for the LT 4400 to initialize after you turn it on.

**5. Start TELNET.**

After you start TELNET, the following display appears.
For information on how to start TELNET, see your PC user's manual.

```
login:
```

**6. Enter the login name, and press Enter.**

The login name is LT4400. Be sure to use capital letters.
You cannot change the login name.

```
login: LT4400
```

**7. Enter the password, and press Enter.**

The password is LT4400. Be sure to use capital letters.
You cannot change the password.

If you enter the password incorrectly, you can press CTRL+C (this key combination may be invalid in some environments) to reenter the login name and password.

```
Password: ******
```

**8. Enter commands.**

After you enter the password, the following command prompt appears.
Refer to section 3.2, “How to Enter Commands,” and section 3.3, “List of Commands,” to enter commands.

If you do not enter any commands for five minutes, the connection times out and is closed. When this happens, you must log in again.

```
LT4400>
```

- **Notes about Communication**

You cannot perform operations on the LT 4400 panel while a connection is established. Also, the LT 4400 LCD and LED displays become indeterminate. If you press one of the LT 4400 keys while a TELNET connection is established, the following message appears.

```
NETWORK CONTROLLED
PLEASE WAIT LOGOFF
```

If you turn off the LT 4400 while a connection is established and then turn it on again, the connection will be closed. To reopen the connection, you must log in again.

- **Control Priority**

When TELNET ACCESS MODE is set to ON or READ ONLY, the relative priorities of ETHERNET remote control and panel control commands are as indicated below.

SNMP ≧ TELNET ＞ panel operations

The LT 4400 accepts SNMP commands even when a connection is established.
For example, if you use an SNMP command to release the key lock, the LT 4400 accepts the command, but because of the command priority, the message shown above is displayed. If you close the connection, because the key lock has already been released, the LT 4400 will accept panel operations.

When the TELNET ACCESS MODE item is set to OFF, the relative priorities of ETHERNET remote control and panel control are as indicated below, and TELNET cannot be used.

SNMP ≧ panel operations

- **Closing the Connection**

  To close the connection, press CTRL+D (this key combination may be invalid in some environments) or enter ‘bye’ or ‘logout’.
  When you press CTRL+D, the connection is closed immediately.
  If you type ‘bye’ or ‘logout’, press ENTER afterward.
  To reopen the connection, you must log in again.

## 3.2 How to Enter Commands

The LT 4400 can use TELNET commands that are similar to those of the LT 443D. Because of this, there may be two different commands for the same setting. (For example, there are two commands for setting BLACK 1, 2: BLACK12: FORMAT and BB12. These commands both function in the same way.)

Here, we will describe how to enter the following four types of commands and explain the formats of the responses to these commands.
Commands that are similar to the LT 443D TELNET commands have a note written next to them in section 3.3, “List of Commands.”

・Normal commands used to configure the LT 4400
・Normal commands used to query the LT 4400
・Commands that are similar to those of the LT 443D and that are used to configure the LT 4400
・Commands that are similar to those of the LT 443D and that are used to query the LT 4400

- **Notes about Entering Commands**

  For command and transmission parameter formats (uppercase and lowercase), see section 3.3, “List of Commands.” On the LT 4400, commands are case sensitive.

  You cannot enter multiple commands on the same line.

  The ranges in section 3.3, “List of Commands,” may vary depending on the input format and pattern. For details, see the other parts of this instruction manual.
  Also, when there is a command or transmission parameter error, the command response contains an error message.

- **Normal Commands Used to Configure the LT 4400**

  Command

  | LT4400> [Command] + [Space] + [Transmission parameter] |
  |---|

  Response

  | OK |
  |---|

  Example: Displaying the 90 % safety marker

  | LT4400>SDI:SAFETY: 90% ON<br>OK |
  |---|

- **Commands That Are Similar to Those of the LT 443D and That Are Used to Configure the LT 4400**

  Command

  | LT4400> [Command] + [Space] + [Transmission parameter] |
  |---|

  Response

  | OK |
  |---|

  Example: Displaying the 90 % safety marker

  | LT4400>SF90 1<br>OK |
  |---|

- **Normal Commands Used to Query the LT 4400**

  Command

  | LT4400> [Command] + [Space] + [?] |
  |---|

  Response

  | [Command] + [Space] + [Response parameters] |
  |---|

  Example: Querying whether the 90% safety marker is displayed

  | LT4400>SDI: SAFETY: 90% ?<br>SDI:SAFETY: 90% ON |
  |---|

- **Commands That Are Similar to Those of the LT 443D and That Are Used to Query the LT 4400**

  Command

  | LT4400>[ Command] + [?] |
  |---|

  Response

  | [Command] + [:] + [Response parameters] |
  |---|

  Example: Querying whether the 90% safety marker is displayed

  | LT4400>SF90?<br>SF90:1 |
  |---|

## 3.3 List of Commands

The response parameters in the table are only representative values. In addition to these parameters, the following parameters may also be displayed.

UNKNOWN COMMAND, ERROR, OUT OF RANGE, PARAMETER ERROR,
FILE TYPE ERROR, FILE NOT FOUND, DEVICE NOT READY, FILE OPEN ERROR,
MEDIA TYPE UNKNOWN, NOT FOUND PRESET DIR, DATE MISSING, TIME MISSING,
ALL 24bit RESOLUTION

Table 3-1 Front panel commands

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| SDIPA<br>(Commands that are similar to those of the LT 443D) | 0 | OK | Sets the output pattern to COLOR BAR 100 % |
| | 1 | OK | Sets the output pattern to COLOR BAR 75% |
| | | ERROR | Sets the output pattern to COLOR BAR 75 % when the format is 625i/50 |
| | 2 | OK | Sets the output pattern to MULTI COLOR BAR 100% |
| | | ERROR | Sets the output pattern to MULTI COLOR BAR 100% when the format is SD |
| | 3 | OK | Sets the output pattern to MULTI COLOR BAR 75% |
| | | ERROR | Sets the output pattern to MULTI COLOR BAR 75% when the format is SD |
| | 4 | OK | Sets the output pattern to MULTI COLOR BAR (+I) |
| | | ERROR | Sets the output pattern to MULTI COLOR BAR (+I) when the format is SD |
| | 5 | OK | Sets the output pattern to SMPTE COLOR BAR |
| | | ERROR | Sets the output pattern to SMPTE COLOR BAR when the format is HD or 625i/50 |
| | 6 | OK | Sets the output pattern to EBU COLOR BAR |
| | | ERROR | Sets the output pattern to EBU COLOR BAR when the format is HD or 525i/59.94 |
| | 7 | OK | Sets the output pattern to BBC COLOR BAR |
| | | ERROR | Sets the output pattern to BBC COLOR BAR when the format is HD or 525i/59.94 |
| | 8 | OK | Sets the output pattern to CHECK FIELD (*1) |
| | | OPERATION IS INVALID | Sets the output pattern to CHECK FIELD when LIPSYNC is set to ON |
| | 1000 | ERROR | Sets the output pattern to COLOR BAR 100 % when LIPSYNC is set to ON |
| | 1001 | ERROR | Sets the output pattern to COLOR BAR 75 % when LIPSYNC is set to ON |
| | 1002 | ERROR | Sets the output pattern to MULTI COLOR BAR 100% when LIPSYNC is set to ON |
| | 1003 | ERROR | Sets the output pattern to MULTI COLOR BAR 75% when LIPSYNC is set to ON |
| | 1004 | ERROR | Sets the output pattern to MULTI COLOR BAR (+I) when LIPSYNC is set to ON |

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| | 1005 | ERROR | Sets the output pattern to SMPTE COLOR BAR when LIPSYNC is set to ON |
| | 1006 | ERROR | Sets the output pattern to EBU COLOR BAR when LIPSYNC is set to ON |
| | 1007 | ERROR | Sets the output pattern to BBC COLOR BAR when LIPSYNC is set to ON |
| | ? | Queries the transmission parameter | Queries the output pattern (No spaces are required between the command and parameter.) |
| BLACK12:FORMAT | 1080i/60 | OK | Sets the BLACK1, 2 output format to 1080i/60 |
| | 1080i/59.94 | OK | Sets the BLACK1, 2 output format to 1080i/59.94 |
| | 1080i/50 | OK | Sets the BLACK1, 2 output format to 1080i/50 |
| | 1080p/30 | OK | Sets the BLACK1, 2 output format to 1080p/30 |
| | 1080p/29.97 | OK | Sets the BLACK1, 2 output format to 1080p/29.97 |
| | 1080p/25 | OK | Sets the BLACK1, 2 output format to 1080p/25 |
| | 1080p/24 | OK | Sets the BLACK1, 2 output format to 1080p/24 |
| | 1080p/23.98 | OK | Sets the BLACK1, 2 output format to 1080p/23.98 |
| | 1080PsF/24 | OK | Sets the BLACK1, 2 output format to 1080PsF/24 |
| | 1080PsF/23.98 | OK | Sets the BLACK1, 2 output format to 1080PsF/23.98 |
| | 720p/60 | OK | Sets the BLACK1, 2 output format to 720p/60 |
| | 720p/59.94 | OK | Sets the BLACK1, 2 output format to 720p/59.94 |
| | 720p/50 | OK | Sets the BLACK1, 2 output format to 720p/50 |
| | 720p/30 | OK | Sets the BLACK1, 2 output format to 720p/30 |
| | 720p/29.97 | OK | Sets the BLACK1, 2 output format to 720p/29.97 |
| | 720p/25 | OK | Sets the BLACK1, 2 output format to 720p/25 |
| | 720p/24 | OK | Sets the BLACK1, 2 output format to 720p/24 |
| | 720p/23.98 | OK | Sets the BLACK1, 2 output format to 720p/23.98 |
| | NTSC_BB | OK | Sets the BLACK1, 2 output format to NTSC BB |
| | NTSC_BB+REF | OK | Sets the BLACK1, 2 output format to NTSC BB+REF |
| | NTSC_BB+ID | OK | Sets the BLACK1, 2 output format to NTSC BB+ID |
| | NTSC_BB+REF+ID | OK | Sets the BLACK1, 2 output format to NTSC BB+REF+ID |
| | NTSC_BB+SETUP | OK | Sets the BLACK1, 2 output format to NTSC BB+SETUP |
| | NTSC_BB+S+REF | OK | Sets the BLACK1, 2 output format to NTSC BB+S+REF |
| | NTSC_BB+S+ID | OK | Sets the BLACK1, 2 output format to NTSC BB+S+ID |
| | NTSC_BB+S+R+ID | OK | Sets the BLACK1, 2 output format to NTSC BB+S+R+ID |
| | 525i/59.94 | OK | Sets the BLACK1, 2 output format to 525i/59.94 |
| | 525p/59.94 | OK | Sets the BLACK1, 2 output format to 525p/59.94 |
| | PAL_BB | OK | Sets the BLACK1, 2 output format to PAL BB |
| | PAL_BB+REF | OK | Sets the BLACK1, 2 output format to PAL BB+REF |
| | 625i/50 | OK | Sets the BLACK1, 2 output format to 625i/50 |

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| | 625p/50 | OK | Sets the BLACK1, 2 output format to 625p/50 |
| | ? | Queries the transmission parameter | Queries the BLACK1,2 output format |
| BB12<br>(Commands that are similar to those of the LT 443D) | 0 | OK | Sets the BLACK1, 2 output format to 1080i/60 |
| | 1 | OK | Sets the BLACK1, 2 output format to 1080i/59.94 |
| | 2 | OK | Sets the BLACK1, 2 output format to 1080i/50 |
| | 3 | OK | Sets the BLACK1, 2 output format to 1080p/30 |
| | 4 | OK | Sets the BLACK1, 2 output format to 1080p/29.97 |
| | 5 | OK | Sets the BLACK1, 2 output format to 1080p/25 |
| | 6 | OK | Sets the BLACK1, 2 output format to 1080p/24 |
| | 7 | OK | Sets the BLACK1, 2 output format to 1080p/23.98 |
| | 8 | OK | Sets the BLACK1, 2 output format to 1080PsF/24 |
| | 9 | OK | Sets the BLACK1, 2 output format to 1080PsF/23.98 |
| | 20 | OK | Sets the BLACK1, 2 output format to 720p/60 |
| | 21 | OK | Sets the BLACK1, 2 output format to 720p/59.94 |
| | 22 | OK | Sets the BLACK1, 2 output format to 720p/50 |
| | 23 | OK | Sets the BLACK1, 2 output format to 720p/30 |
| | 24 | OK | Sets the BLACK1, 2 output format to 720p/29.97 |
| | 25 | OK | Sets the BLACK1, 2 output format to 720p/25 |
| | 26 | OK | Sets the BLACK1, 2 output format to 720p/24 |
| | 27 | OK | Sets the BLACK1, 2 output format to 720p/23.98 |
| | 30 | OK | Sets the BLACK1, 2 output format to NTSC BB |
| | 31 | OK | Sets the BLACK1, 2 output format to NTSC BB+REF |
| | 32 | OK | Sets the BLACK1, 2 output format to NTSC BB+ID |
| | 33 | OK | Sets the BLACK1, 2 output format to NTSC BB+REF+ID |
| | 34 | OK | Sets the BLACK1, 2 output format to NTSC BB+SETUP |
| | 35 | OK | Sets the BLACK1, 2 output format to NTSC BB+S+REF |
| | 36 | OK | Sets the BLACK1, 2 output format to NTSC BB+S+ID |
| | 37 | OK | Sets the BLACK1, 2 output format to NTSC BB+S+R+ID |
| | 38 | OK | Sets the BLACK1, 2 output format to 525i/59.94 |
| | 39 | OK | Sets the BLACK1, 2 output format to 525p/59.94 |
| | 40 | OK | Sets the BLACK1, 2 output format to PAL BB |
| | 41 | OK | Sets the BLACK1, 2 output format to PAL BB+REF |
| | 42 | OK | Sets the BLACK1, 2 output format to 625i/50 |
| | 43 | OK | Sets the BLACK1, 2 output format to 625p/50 |
| | ? | Queries the transmission parameter | Queries the BLACK1,2 output format<br>(No spaces are required between the command and parameter.) |
| BLACK34:FORMAT | 1080i/60 | OK | Sets the BLACK3, 4 output format to 1080i/60 |

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| | 1080i/59.94 | OK | Sets the BLACK3, 4 output format to 1080i/59.94 |
| | 1080i/50 | OK | Sets the BLACK3, 4 output format to 1080i/50 |
| | 1080p/30 | OK | Sets the BLACK3, 4 output format to 1080p/30 |
| | 1080p/29.97 | OK | Sets the BLACK3, 4 output format to 1080p/29.97 |
| | 1080p/25 | OK | Sets the BLACK3, 4 output format to 1080p/25 |
| | 1080p/24 | OK | Sets the BLACK3, 4 output format to 1080p/24 |
| | 1080p/23.98 | OK | Sets the BLACK3, 4 output format to 1080p/23.98 |
| | 1080PsF/24 | OK | Sets the BLACK3, 4 output format to 080PsF/24 |
| | 1080PsF/23.98 | OK | Sets the BLACK3, 4 output format to 1080PsF/23.98 |
| | 720p/60 | OK | Sets the BLACK3, 4 output format to 720p/60 |
| | 720p/59.94 | OK | Sets the BLACK3, 4 output format to 720p/59.94 |
| | 720p/50 | OK | Sets the BLACK3, 4 output format to 720p/50 |
| | 720p/30 | OK | Sets the BLACK3, 4 output format to 720p/30 |
| | 720p/29.97 | OK | Sets the BLACK3, 4 output format to 720p/29.97 |
| | 720p/25 | OK | Sets the BLACK3, 4 output format to 720p/25 |
| | 720p/24 | OK | Sets the BLACK3, 4 output format to 720p/24 |
| | 720p/23.98 | OK | Sets the BLACK3, 4 output format to 720p/23.98 |
| | NTSC_BB | OK | Sets the BLACK3, 4 output format to NTSC BB |
| | NTSC_BB+REF | OK | Sets the BLACK3, 4 output format to NTSC BB+REF |
| | NTSC_BB+ID | OK | Sets the BLACK3, 4 output format to NTSC BB+ID |
| | NTSC_BB+REF+ID | OK | Sets the BLACK3, 4 output format to NTSC BB+REF+ID |
| | NTSC_BB+SETUP | OK | Sets the BLACK3, 4 output format to NTSC BB+SETUP |
| | NTSC_BB+S+REF | OK | Sets the BLACK3, 4 output format to NTSC BB+S+REF |
| | NTSC_BB+S+ID | OK | Sets the BLACK3, 4 output format to NTSC BB+S+ID |
| | NTSC_BB+S+R+ID | OK | Sets the BLACK3, 4 output format to NTSC BB+S+R+ID |
| | 525i/59.94 | OK | Sets the BLACK3, 4 output format to 525i/59.94 |
| | 525p/59.94 | OK | Sets the BLACK3, 4 output format to 525p/59.94 |
| | PAL_BB | OK | Sets the BLACK3, 4 output format to PAL BB |
| | PAL_BB+REF | OK | Sets the BLACK3, 4 output format to PAL BB+REF |
| | 625i/50 | OK | Sets the BLACK3, 4 output format to 625i/50 |
| | 625p/50 | OK | Sets the BLACK3, 4 output format to 625p/50 |
| | ? | Queries the transmission parameter | Queries the BLACK3,4 output format |
| BB34<br>(Commands that are similar to those of the LT 443D) | 0 | OK | Sets the BLACK3, 4 output format to 1080i/60 |
| | 1 | OK | Sets the BLACK3, 4 output format to 1080i/59.94 |
| | 2 | OK | Sets the BLACK3, 4 output format to 1080i/50 |
| | 3 | OK | Sets the BLACK3, 4 output format to 1080p/30 |
| | 4 | OK | Sets the BLACK3, 4 output format to 1080p/29.97 |
| | 5 | OK | Sets the BLACK3, 4 output format to 1080p/25 |

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| | 6 | OK | Sets the BLACK3, 4 output format to 1080p/24 |
| | 7 | OK | Sets the BLACK3, 4 output format to 1080p/23.98 |
| | 8 | OK | Sets the BLACK3, 4 output format to 1080PsF/24 |
| | 9 | OK | Sets the BLACK3, 4 output format to 1080PsF/23.98 |
| | 20 | OK | Sets the BLACK3, 4 output format to 720p/60 |
| | 21 | OK | Sets the BLACK3, 4 output format to 720p/59.94 |
| | 22 | OK | Sets the BLACK3, 4 output format to 720p/50 |
| | 23 | OK | Sets the BLACK3, 4 output format to 720p/30 |
| | 24 | OK | Sets the BLACK3, 4 output format to 720p/29.97 |
| | 25 | OK | Sets the BLACK3, 4 output format to 720p/25 |
| | 26 | OK | Sets the BLACK3, 4 output format to 720p/24 |
| | 27 | OK | Sets the BLACK3, 4 output format to 720p/23.98 |
| | 30 | OK | Sets the BLACK3, 4 output format to NTSC BB |
| | 31 | OK | Sets the BLACK3, 4 output format to NTSC BB+REF |
| | 32 | OK | Sets the BLACK3, 4 output format to NTSC BB+ID |
| | 33 | OK | Sets the BLACK3, 4 output format to NTSC BB+REF+ID |
| | 34 | OK | Sets the BLACK3, 4 output format to NTSC BB+SETUP |
| | 35 | OK | Sets the BLACK3, 4 output format to NTSC BB+S+REF |
| | 36 | OK | Sets the BLACK3, 4 output format to NTSC BB+S+ID |
| | 37 | OK | Sets the BLACK3, 4 output format to NTSC BB+S+R+ID |
| | 38 | OK | Sets the BLACK3, 4 output format to 525i/59.94 |
| | 39 | OK | Sets the BLACK3, 4 output format to 525p/59.94 |
| | 40 | OK | Sets the BLACK3, 4 output format to PAL BB |
| | 41 | OK | Sets the BLACK3, 4 output format to PAL BB+REF |
| | 42 | OK | Sets the BLACK3, 4 output format to 625i/50 |
| | 43 | OK | Sets the BLACK3, 4 output format to 625p/50 |
| | ? | Queries the transmission parameter | Queries the BLACK3,4 output format (No spaces are required between the command and parameter.) |
| BLACK56:FORMAT | 1080i/60 | OK | Sets the BLACK5, 6 output format to 1080i/60 |
| | 1080i/59.94 | OK | Sets the BLACK5, 6 output format to 1080i/59.94 |
| | 1080i/50 | OK | Sets the BLACK5, 6 output format to 1080i/50 |
| | 1080p/30 | OK | Sets the BLACK5, 6 output format to 1080p/30 |
| | 1080p/29.97 | OK | Sets the BLACK5, 6 output format to 1080p/29.97 |
| | 1080p/25 | OK | Sets the BLACK5, 6 output format to 1080p/25 |
| | 1080p/24 | OK | Sets the BLACK5, 6 output format to 1080p/24 |
| | 1080p/23.98 | OK | Sets the BLACK5, 6 output format to 1080p/23.98 |
| | 1080PsF/24 | OK | Sets the BLACK5, 6 output format to 1080PsF/24 |
| | 1080PsF/23.98 | OK | Sets the BLACK5, 6 output format to 1080PsF/23.98 |
| | 720p/60 | OK | Sets the BLACK5, 6 output format to 720p/60 |

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| | 720p/59.94 | OK | Sets the BLACK5, 6 output format to 720p/59.94 |
| | 720p/50 | OK | Sets the BLACK5, 6 output format to 720p/50 |
| | 720p/30 | OK | Sets the BLACK5, 6 output format to 720p/30 |
| | 720p/29.97 | OK | Sets the BLACK5, 6 output format to 720p/29.97 |
| | 720p/25 | OK | Sets the BLACK5, 6 output format to 720p/25 |
| | 720p/24 | OK | Sets the BLACK5, 6 output format to 720p/24 |
| | 720p/23.98 | OK | Sets the BLACK5, 6 output format to 720p/23.98 |
| | NTSC_BB | OK | Sets the BLACK5, 6 output format to NTSC BB |
| | NTSC_BB+REF | OK | Sets the BLACK5, 6 output format to NTSC BB+REF |
| | NTSC_BB+ID | OK | Sets the BLACK5, 6 output format to NTSC BB+ID |
| | NTSC_BB+REF +ID | OK | Sets the BLACK5, 6 output format to NTSC BB+REF+ID |
| | NTSC_BB+SET UP | OK | Sets the BLACK5, 6 output format to NTSC BB+SETUP |
| | NTSC_BB+S+R EF | OK | Sets the BLACK5, 6 output format to NTSC BB+S+REF |
| | NTSC_BB+S+ID | OK | Sets the BLACK5, 6 output format to NTSC BB+S+ID |
| | NTSC_BB+S+R +ID | OK | Sets the BLACK5, 6 output format to NTSC BB+S+R+ID |
| | 525i/59.94 | OK | Sets the BLACK5, 6 output format to 525i/59.94 |
| | 525p/59.94 | OK | Sets the BLACK5, 6 output format to 525p/59.94 |
| | PAL_BB | OK | Sets the BLACK5, 6 output format to PAL BB |
| | PAL_BB+REF | OK | Sets the BLACK5, 6 output format to PAL BB+REF |
| | 625i/50 | OK | Sets the BLACK5, 6 output format to 625i/50 |
| | 625p/50 | OK | Sets the BLACK5, 6 output format to 625p/50 |
| | ? | Queries the transmission parameter | Queries the BLACK5,6 output format |
| BB56<br>(Commands that are similar to those of the LT 443D) | 0 | OK | Sets the BLACK5, 6 output format to 1080i/60 |
| | 1 | OK | Sets the BLACK5, 6 output format to 1080i/59.94 |
| | 2 | OK | Sets the BLACK5, 6 output format to 1080i/50 |
| | 3 | OK | Sets the BLACK5, 6 output format to 1080p/30 |
| | 4 | OK | Sets the BLACK5, 6 output format to 1080p/29.97 |
| | 5 | OK | Sets the BLACK5, 6 output format to 1080p/25 |
| | 6 | OK | Sets the BLACK5, 6 output format to 1080p/24 |
| | 7 | OK | Sets the BLACK5, 6 output format to 1080p/23.98 |
| | 8 | OK | Sets the BLACK5, 6 output format to 1080PsF/24 |
| | 9 | OK | Sets the BLACK5, 6 output format to 1080PsF/23.98 |
| | 20 | OK | Sets the BLACK5, 6 output format to 720p/60 |
| | 21 | OK | Sets the BLACK5, 6 output format to 720p/59.94 |
| | 22 | OK | Sets the BLACK5, 6 output format to 720p/50 |
| | 23 | OK | Sets the BLACK5, 6 output format to 720p/30 |
| | 24 | OK | Sets the BLACK5, 6 output format to 720p/29.97 |
| | 25 | OK | Sets the BLACK5, 6 output format to 720p/25 |

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| | 26 | OK | Sets the BLACK5, 6 output format to 720p/24 |
| | 27 | OK | Sets the BLACK5, 6 output format to 720p/23.98 |
| | 30 | OK | Sets the BLACK5, 6 output format to NTSC BB |
| | 31 | OK | Sets the BLACK5, 6 output format to NTSC BB+REF |
| | 32 | OK | Sets the BLACK5, 6 output format to NTSC BB+ID |
| | 33 | OK | Sets the BLACK5, 6 output format to NTSC BB+REF+ID |
| | 34 | OK | Sets the BLACK5, 6 output format to NTSC BB+SETUP |
| | 35 | OK | Sets the BLACK5, 6 output format to NTSC BB+S+REF |
| | 36 | OK | Sets the BLACK5, 6 output format to NTSC BB+S+ID |
| | 37 | OK | Sets the BLACK5, 6 output format to NTSC BB+S+R+ID |
| | 38 | OK | Sets the BLACK5, 6 output format to 525i/59.94 |
| | 39 | OK | Sets the BLACK5, 6 output format to 525p/59.94 |
| | 40 | OK | Sets the BLACK5, 6 output format to PAL BB |
| | 41 | OK | Sets the BLACK5, 6 output format to PAL BB+REF |
| | 42 | OK | Sets the BLACK5, 6 output format to 625i/50 |
| | 43 | OK | Sets the BLACK5, 6 output format to 625p/50 |
| | ? | Queries the transmission parameter | Queries the BLACK5,6 output format<br>(No spaces are required between the command and parameter.) |
| SDI:FORMAT | 1080i/60 | OK | Sets the SDI output format to 1080i/60 |
| | 1080i/59.94 | OK | Sets the SDI output format to 1080i/59.94 |
| | 1080i/50 | OK | Sets the SDI output format to 1080i/50 |
| | 1080p/30 | OK | Sets the SDI output format to 1080p/30 |
| | 1080p/29.97 | OK | Sets the SDI output format to 1080p/29.97 |
| | 1080p/25 | OK | Sets the SDI output format to 1080p/25 |
| | 1080p/24 | OK | Sets the SDI output format to 1080p/24 |
| | 1080p/23.98 | OK | Sets the SDI output format to 1080p/23.98 |
| | 1080PsF/24 | OK | Sets the SDI output format to 1080PsF/24 |
| | 1080PsF/23.98 | OK | Sets the SDI output format to 1080PsF/23.98 |
| | 720p/60 | OK | Sets the SDI output format to 720p/60 |
| | 720p/59.94 | OK | Sets the SDI output format to 720p/59.94 |
| | 720p/50 | OK | Sets the SDI output format to 720p/50 |
| | 720p/30 | OK | Sets the SDI output format to 720p/30 |
| | 720p/29.97 | OK | Sets the SDI output format to 720p/29.97 |
| | 720p/25 | OK | Sets the SDI output format to 720p/25 |
| | 720p/24 | OK | Sets the SDI output format to 720p/24 |
| | 720p/23.98 | OK | Sets the SDI output format to 720p/23.98 |
| | 525i/59.94 | OK | Sets the SDI output format to 525i/59.94 |
| | | ALL 24bit RESOLUTION | Sets the SDI output format to 525i/59.94 when all the audio groups are transmitting at 24 bits. (*2) |

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| | 625i/50 | OK | Sets the SDI output format to 625i/50 |
| | ? | Queries the transmission parameter | Queries the SDI output format |
| SDIFM<br>(Commands that are similar to those of the LT 443D) | 0 | OK | Sets the SDI output format to 1080i/60 |
| | 1 | OK | Sets the SDI output format to 1080i/59.94 |
| | 2 | OK | Sets the SDI output format to 1080i/50 |
| | 3 | OK | Sets the SDI output format to 1080p/30 |
| | 4 | OK | Sets the SDI output format to 1080p/29.97 |
| | 5 | OK | Sets the SDI output format to 1080p/25 |
| | 6 | OK | Sets the SDI output format to 1080p/24 |
| | 7 | OK | Sets the SDI output format to 1080p/23.98 |
| | 8 | OK | Sets the SDI output format to 1080PsF/24 |
| | 9 | OK | Sets the SDI output format to 1080PsF/23.98 |
| | 20 | OK | Sets the SDI output format to 720p/60 |
| | 21 | OK | Sets the SDI output format to 720p/59.94 |
| | 22 | OK | Sets the SDI output format to 720p/50 |
| | 23 | OK | Sets the SDI output format to 720p/30 |
| | 24 | OK | Sets the SDI output format to 720p/29.97 |
| | 25 | OK | Sets the SDI output format to 720p/25 |
| | 26 | OK | Sets the SDI output format to 720p/24 |
| | 27 | OK | Sets the SDI output format to 720p/23.98 |
| | 30 | OK | Sets the SDI output format to 525i/59.94 |
| | | ALL 24bit RESOLUTION | Sets the SDI output format to 525i/59.94 when all the audio groups are transmitting at 24 bits. (*2) |
| | 40 | OK | Sets the SDI output format to 625i/50 |
| | ? | Queries the transmission parameter | Queries the SDI output format<br>(No spaces are required between the command and parameter.) |

*1 When the output pattern is set to CHECK FIELD, embedded audio, various safety area markers, ID characters, and logos are not embedded. Also, pattern scrolling does not function.

*2 Returned when the output format is 525i/59.94, the LT 4400 cannot produce 24-bit signals on all the audio groups (16 channels). When an error message appears, set the resolution to 20 bits, or turn one or more of the audio signal output groups off.

Table 3-2 UTILITY commands

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| UTILITY:LCD_BRIGHTNESS | HIGH | OK | Sets the LCD backlight brightness to high |
| | MID | OK | Sets the LCD backlight brightness to mid |
| | LOW | OK | Sets the LCD backlight brightness to low |
| | OFF | OK | Turns of the LCD backlight |
| | ? | Queries the transmission parameter | Queries the LCD backlight brightness |
| UTILITY:LCD_LIGHT_TIME | ALL | OK | Sets the LCD backlight so that it is always lit |
| | 1 - 10 | OK | Sets the time for which the LCD backlight is lit in seconds |
| | ? | Queries the transmission parameter | Queries the time for which the LCD backlight is lit |
| UTILITY:KEY_LOCK | ? | OFF | Queries whether the key lock is enabled |
| | | ON | |
| UTILITY:MEDIA | INT | OK | Sets the medium used for presets to the internal memory |
| | EXT | OK | Sets the medium used for presets to an external memory device |
| | ? | Queries the transmission parameter | Queries the type of medium |
| UTILITY:RECALL_NUMBER | 0 - 9 | OK | Loads the specified preset |
| | | FILE NOT FOUND | Returned when there is no data for the specified preset |
| | | DEVICE NOT READY | Returned when a preset is specified but an external memory device is not connected |
| UTILITY:PRESET_NUMBER | 0 - 9 | OK | Saves the specified preset (*1) |
| | | DEVICE NOT READY | Returned when an attempt is made to save a preset but an external memory device is not connected |
| | | OPERATION IS INVALID | Saves the specified preset when LIPSYNC is set to ON |
| UTILITY:POWER_ON_RECALL | OFF | OK | Uses the last-memory feature to configure the settings when the power is turned on |
| | ON | OK | Uses a preset to configure the settings when the power is turned on |
| | ? | Queries the transmission parameter | Queries the settings that are used when the power is turned on |
| UTILITY:POWER_ON_RECALL_NUMBER | INT0 - INT9 | OK | Sets the internal preset number that is used when the power is turned on (*2) |
| | | FILE NOT FOUND | Returned when there is no data for the specified preset number |

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| | ? | (INT) 0 - (INT) 9 | Queries the number of the preset that is used when the power is turned on |
| UTILITY:DATE_TIME_AFTER_ON | ? | ***** days **:**:** | Queries the time since the power was turned on |
| UTILITY:DATE_TIME_ADJUST | ****/**/** **:**:** | OK | Sets the date and time |
| | ? | Queries the transmission parameter | Queries the date and time |
| UTILITY:VER | ? | LT4400 Ver *.** | Queries the model name and firmware version |
| | | LT4400-70 Ver *.** | |
| VR (Commands that are similar to those of the LT 443D) | ? | LT4400 V*.** | Queries the model name and firmware version (No spaces are required between the command and parameter.) |
| | | LT4400-70 V*.** | |
| MO (Commands that are similar to those of the LT 443D) | ? | LT4400 | Queries the model (No spaces are required between the command and parameter.) |
| | | LT4400-70 | |
| FAN (Commands that are similar to those of the LT 443D) | ? | - | Queries the fan status (No spaces are required between the command and parameter.) |
| | | 0 | Normal |
| | | 1 | Abnormal |

*1 If the specified preset already exists, it is overwritten. No message appears to confirm whether to overwrite the preset.

*2 Using TELNET commands, you can only set the preset number to a number from INT0 to INT9.

Table 3-3 GENLOCK commands

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| GL:WARNING | OFF | OK | Lock frequency warnings are not displayed. |
| | ON | OK | Lock frequency warnings are displayed. |
| | ? | Queries the transmission parameter | Queries whether lock frequency warnings are displayed |
| GL:LOG | OFF | OK | A GENLOCK log is not recorded. |
| | ON | OK | A GENLOCK log is recorded. |
| | ? | Queries the transmission parameter | Queries whether a GENLOCK log is recorded |
| GL:LOG_DISP | ? | The log is displayed. | Queries the recorded log |
| GL:LOG_SAVE | 0 - 9 | OK | Saves a log to the external memory (*1) |
| | | DEVICE NOT READY | Returned when an attempt is made to save a log but an external memory device is not connected |
| GL:MODE | INT | OK | Sets the GENLOCK mode to INTERNAL |
| | AUTO_INT | OK | Sets the GENLOCK mode to AUTO (GO INTERNAL) |
| | MANU_INT | OK | Sets the GENLOCK mode to MANUAL (GO INT) (*2) |
| | AUTO_STAY | OK | Sets the GENLOCK mode to AUTO (STAYinSYNC) |
| | MANU_STAY | OK | Sets the GENLOCK mode to MANUAL (STAYinSYNC) (*2) |
| | ? | Queries the transmission parameter | Queries the GENLOCK mode |
| GL:MODE:MANUAL_FORMAT | 1125i/60 | OK | Sets the manual format to 1125i/60 |
| | 1125i/59.94 | OK | Sets the manual format to 1125i/59.94 |
| | 1125i/50 | OK | Sets the manual format to 1125i/50 |
| | 1125p/30 | OK | Sets the manual format to 1125p/30 |
| | 1125p/29.97 | OK | Sets the manual format to 1125p/29.97 |
| | 1125p/25 | OK | Sets the manual format to 1125p/25 |
| | 1125p/24 | OK | Sets the manual format to 1125p/24 |
| | 1125p/23.98 | OK | Sets the manual format to 1125p/23.98 |
| | 1125PsF/24 | OK | Sets the manual format to 1125PsF/24 |
| | 1125PsF/23.98 | OK | Sets the manual format to 1125PsF/23.98 |
| | 750p/60 | OK | Sets the manual format to 750p/60 |
| | 750p/59.94 | OK | Sets the manual format to 750p/59.94 |
| | 750p/50 | OK | Sets the manual format to 750p/50 |
| | 750p/30 | OK | Sets the manual format to 750p/30 |
| | 750p/29.97 | OK | Sets the manual format to 750p/29.97 |
| | 750p/25 | OK | Sets the manual format to 750p/25 |
| | 750p/24 | OK | Sets the manual format to 750p/24 |
| | 750p/23.98 | OK | Sets the manual format to 750p/23.98 |
| | NTSC_BB | OK | Sets the manual format to NTSC BB |

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| | NTSC_BB+REF | OK | Sets the manual format to NTSC BB+REF |
| | NTSC_BB+ID | OK | Sets the manual format to NTSC BB+ID |
| | NTSC_BB+REF +ID | OK | Sets the manual format to NTSC BB+REF+ID |
| | 525i/59.94 | OK | Sets the manual format to 525i/59.94 |
| | 525p/59.94 | OK | Sets the manual format to 525p/59.94 |
| | PAL_BB | OK | Sets the manual format to PAL BB |
| | PAL_BB+REF | OK | Sets the manual format to PAL BB+REF |
| | 625i/50 | OK | Sets the manual format to 625i/50 |
| | 625p/50 | OK | Sets the manual format to 625p/50 |
| | ? | Queries the transmission parameter | Queries the manual format. (*3) |
| GL:TIMING:F | ? | ±5 | Queries the GENLOCK timing in frames |
| | | ERROR | Returned when a query is made and the GENLOCK mode is INTERNAL or when a query is made, the GENLOCK mode is not INTERNAL, and there is no input |
| GL:TIMING:V | ? | ±1125 | Queries the vertical GENLOCK timing in lines |
| | | ERROR | Returned when a query is made and the GENLOCK mode is INTERNAL or when a query is made, the GENLOCK mode is not INTERNAL, and there is no input |
| GL:TIMING:H_COARSE | ? | ±32.0000(max) (0.0741 step) (*4) | Queries the coarse horizontal GENLOCK timing in µs |
| | | ERROR | Returned when a query is made and the GENLOCK mode is INTERNAL or when a query is made, the GENLOCK mode is not INTERNAL, and there is no input |
| GL:TIMING:H_FINE | ? | ±100 | Queries the fine horizontal GENLOCK timing. |
| | | ERROR | Returned when a query is made and the GENLOCK mode is INTERNAL or when a query is made, the GENLOCK mode is not INTERNAL, and there is no input |
| GE (Commands that are similar to those of the LT 443D) | ? | - | Queries whether GENLOCK is enabled (No spaces are required between the command and parameter.) |
| | | 0 | INT or STAY in SYNC |
| | | 1 | EXT |

*1 If the specified log already exists, it is overwritten. No message appears to confirm whether to overwrite the log.

*2 If you set the GENLOCK mode to MANUAL, be sure to use the GL:MODE:MANUAL_FORMAT command to specify the format.

*3 A format is returned when the GENLOCK mode is MANUAL. In other modes, the reply is normally "OK."

*4 ±32.0000 is the maximum value. The value varies depending on the input format. For details, see the other parts of this instruction manual.
0.0741 is a rounded value. The actual value of each step is 1/13.5 (which equals 0.074074074. . .)

Table 3-4 BLACK commands

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| BLACK12:TIMING:F-PHASE | ±5 (*1) | OK | Sets the timing of BLACK1,2 in frames |
| | | ERROR | Returned when an attempt is made to set the timing of BLACK1,2 and the format is HD, 525i/59.94, 525p/59.94, 625i/50, or 625p/50 |
| | ? | Queries the transmission parameter | Queries the timing of BLACK1, 2 |
| | | ERROR | Returned when an attempt is made to set the timing of BLACK1,2 and the format is HD, 525i/59.94, 525p/59.94, 625i/50, or 625p/50 |
| BLACK12:TIMING:V-PHASE | ±1124 (*1) | OK | Sets the vertical timing of BLACK1, 2 in lines |
| | ? | Queries the transmission parameter | Queries the vertical timing of BLACK1, 2 |
| BLACK12:TIMING:H-PHASE:DOT | ±4124 (*1) | OK | Sets the horizontal timing of BLACK1, 2 in dots |
| | ? | Queries the transmission parameter | Queries the horizontal timing of BLACK1, 2 |
| BLACK12:TIMING:H-PHASE:US | ? | ±63.9814(*1) | Queries the horizontal timing of BLACK1, 2 in μs |
| BLACK34:TIMING:F-PHASE | ±5 (*1) | OK | Sets the timing of BLACK3,4 in frames |
| | | ERROR | Returned when an attempt is made to set the timing of BLACK3,4 and the format is HD, 525i/59.94, 525p/59.94, 625i/50, or 625p/50 |
| | ? | Queries the transmission parameter | Queries the timing of BLACK3, 4 |
| | | ERROR | Returned when an attempt is made to set the timing of BLACK3,4 and the format is HD, 525i/59.94, 525p/59.94, 625i/50, or 625p/50 |
| BLACK34:TIMING:V-PHASE | ±1124 (*1) | OK | Sets the vertical timing of BLACK3, 4 in lines |
| | ? | Queries the transmission parameter | Queries the vertical timing of BLACK3, 4 |
| BLACK34:TIMING:H-PHASE:DOT | ±4124 (*1) | OK | Sets the horizontal timing of BLACK3, 4 in dots |
| | ? | Queries the transmission parameter | Queries the horizontal timing of BLACK3, 4 |
| BLACK34:TIMING:H-PHASE:US | ? | ±63.9814(*1) | Queries the horizontal timing of BLACK3, 4 in μs |

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| BLACK56:TIMING:F-PHASE | ±5 (*1) | OK | Sets the timing of BLACK5,6 in frames |
| | | ERROR | Returned when an attempt is made to set the timing of BLACK5,6 and the format is HD, 525i/59.94, 525p/59.94, 625i/50, or 625p/50 |
| | ? | Queries the transmission parameter | Queries the timing of BLACK5, 6 |
| | | ERROR | Returned when an attempt is made to set the timing of BLACK5,6 and the format is HD, 525i/59.94, 525p/59.94, 625i/50, or 625p/50 |
| BLACK56:TIMING:V-PHASE | ±1124 (*1) | OK | Sets the vertical timing of BLACK5, 6 in lines |
| | ? | Queries the transmission parameter | Queries the vertical timing of BLACK5, 6 |
| BLACK56:TIMING:H-PHASE:DOT | ±4124 (*1) | OK | Sets the horizontal timing of BLACK5, 6 in dots |
| | ? | Queries the transmission parameter | Queries the horizontal timing of BLACK5, 6 |
| BLACK56:TIMING:H-PHASE:US | ? | ±63.9814(*1) | Queries the horizontal timing of BLACK5, 6 in μs |

*1 The value varies depending on the input format. For details, see the other parts of this instruction manual.

Table 3-5 SDI commands

Before you configure embedded audio group 2, from the panel, in the EMBEDDED AUDIO settings, set EQUAL TO G1 under GROUP 2 SET to OFF. Before you configure embedded audio group 4, from the panel, in the EMBEDDED AUDIO settings, set EQUAL TO G3 under GROUP 4 SET to OFF.

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| SDI:TIMING:V | ±1124 | OK | Sets the vertical timing in lines |
| | ? | Queries the transmission parameter | Queries the vertical timing |
| SDI:TIMING:H-PHASE:DOT | ±4124 | OK | Sets the horizontal timing in dots |
| | ? | Queries the transmission parameter | Queries the horizontal timing |
| SDI:TIMING:H-PHASE:US | ? | ±63.9629 | Queries the horizontal timing in μs |
| SDI:AUDIO:GROUP1 | OFF | OK | Audio group 1 is not output. |
| | ON | OK | Audio group 1 is output |
| | | ALL 24bit RESOLUTION | Returned when the format is 525i/59.94, all the audio groups are set to 24 bit, and an attempt is made to output all the audio groups (*1) |
| | ? | Queries the transmission parameter | Queries whether audio group 1 is on or off |
| SDI:AUDIO:GROUP2 | OFF | OK | Audio group 2 is not output. |
| | ON | OK | Audio group 2 is output |
| | | ALL 24bit RESOLUTION | Returned when the format is 525i/59.94, all the audio groups are set to 24 bit, and an attempt is made to output all the audio groups (*1) |
| | ? | Queries the transmission parameter | Queries whether audio group 2 is on or off |
| SDI:AUDIO:GROUP3 | OFF | OK | Audio group 3 is not output. |
| | ON | OK | Audio group 3 is output |
| | | ALL 24bit RESOLUTION | Returned when the format is 525i/59.94, all the audio groups are set to 24 bit, and an attempt is made to output all the audio groups (*1) |
| | ? | Queries the transmission parameter | Queries whether audio group 3 is on or off |
| SDI:AUDIO:GROUP4 | OFF | OK | Audio group 4 is not output. |
| | ON | OK | Audio group 4 is output |
| | | ALL 24bit RESOLUTION | Returned when the format is 525i/59.94, all the audio groups are set to 24 bit, and an attempt is made to output all the audio groups (*1) |
| | ? | Queries the | Queries whether audio group 4 is on or off |

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| | | transmission parameter | |
| EB<br>(Commands that are similar to those of the LT 443D) | 0000 | OK | Configures the audio groups as follows: G1 = OFF, G2 = OFF, G3 = OFF, G4 = OFF |
| | 0001 | OK | Configures the audio groups as follows: G1 = OFF, G2 = OFF, G3 = OFF, G4 = ON |
| | 0010 | OK | Configures the audio groups as follows: G1 = OFF, G2 = OFF, G3 = ON, G4 = OFF |
| | 0011 | OK | Configures the audio groups as follows: G1 = OFF, G2 = OFF, G3 = ON, G4 = ON |
| | 0100 | OK | Configures the audio groups as follows: G1 = OFF, G2 = ON, G3 = OFF, G4 = OFF |
| | 0101 | OK | Configures the audio groups as follows: G1 = OFF, G2 = ON, G3 = OFF, G4 = ON |
| | 0110 | OK | Configures the audio groups as follows: G1 = OFF, G2 = ON, G3 = ON, G4 = OFF |
| | 0111 | OK | Configures the audio groups as follows: G1 = OFF, G2 = ON, G3 = ON, G4 = ON |
| | 1000 | OK | Configures the audio groups as follows: G1 = ON, G2 = OFF, G3 = OFF, G4 = OFF |
| | 1001 | OK | Configures the audio groups as follows: G1 = ON, G2 = OFF, G3 = OFF, G4 = ON |
| | 1010 | OK | Configures the audio groups as follows: G1 = ON, G2 = OFF, G3 = ON, G4 = OFF |
| | 1011 | OK | Configures the audio groups as follows: G1 = ON, G2 = OFF, G3 = ON, G4 = ON |
| | 1100 | OK | Configures the audio groups as follows: G1 = ON, G2 = ON, G3 = OFF, G4 = OFF |
| | 1101 | OK | Configures the audio groups as follows: G1 = ON, G2 = ON, G3 = OFF, G4 = ON |
| | 1110 | OK | Configures the audio groups as follows: G1 = ON, G2 = ON, G3 = ON, G4 = OFF |
| | 1111 | OK | Configures the audio groups as follows: G1 = ON, G2 = ON, G3 = ON, G4 = ON |
| | | ALL 24bit RESOLUTION | Returned when the format is 525i/59.94, all the audio groups are set to 24 bit, and an attempt is made to output all the audio groups (*1) |
| | ? | Queries the transmission parameter | Queries whether audio is on or off<br>(No spaces are required between the command and parameter.) |
| SDI:AUDIO:GROUP1:RESOLUTION | 24 | OK | Sets the resolution of audio group 1 to 24 bits |
| | | ALL 24bit RESOLUTION | Returned when the format is 525i/59.94, all the audio groups are being output, and an attempt is made to set all the audio groups to 24 bit (*1) |
| | 20 | OK | Sets the resolution of audio group 1 to 20 bits |

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| | ? | Queries the transmission parameter | Queries the resolution of audio group 1 |
| SDI:AUDIO:GROUP1:EMPHASIS | 50/15 | OK | Sets the pre-emphasis mode of audio group 1 to 50/15 |
| | CCITT | OK | Sets the pre-emphasis mode of audio group 1 to CCITT |
| | OFF | OK | Sets the pre-emphasis mode of audio group 1 to OFF |
| | ? | Queries the transmission parameter | Queries the pre-emphasis mode of audio group 1 |
| SDI:AUDIO:GROUP1:CH1:FREQUENCY | SILENCE | OK | The frequency of audio channel 1 is not set |
| | 400 | OK | Sets the frequency of audio channel 1 to 400 Hz |
| | 800 | OK | Sets the frequency of audio channel 1 to 800 Hz |
| | 1k | OK | Sets the frequency of audio channel 1 to 1kHz |
| | ? | Queries the transmission parameter | Queries the frequency of audio channel 1 |
| SDI:AUDIO:GROUP1:CH1:LEVEL | -60 - 0 | OK | Sets the level of audio channel 1 in decibels |
| | ? | Queries the transmission parameter | Queries the level of audio channel 1 |
| SDI:AUDIO:GROUP1:CH1:CLICK | 1 - 4 | OK | Inserts clicks into audio channel 1 every specified number of seconds |
| | OFF | OK | Clicks are not inserted into audio channel 1. |
| | ? | Queries the transmission parameter | Queries whether clicks are inserted into audio channel 1 |
| SDI:AUDIO:GROUP1:CH2:EQUAL-CH1 | OFF | OK | The settings of audio channel 1 are not applied to audio channel 2. |
| | ON | OK | The settings of audio channel 1 are applied to audio channel 2 |
| | ? | Queries the transmission parameter | Queries whether the settings of audio channel 1 are applied to audio channel 2 |
| SDI:AUDIO:GROUP1:CH2:FREQUENCY | SILENCE | OK | The frequency of audio channel 2 is not set |
| | 400 | OK | Sets the frequency of audio channel 2 to 400 Hz |
| | 800 | OK | Sets the frequency of audio channel 2 to 800 Hz |
| | 1k | OK | Sets the frequency of audio channel 2 to 1kHz |
| | ? | Queries the transmission parameter | Queries the frequency of audio channel 2 |
| SDI:AUDIO:GROUP1:CH2:LEVEL | -60 - 0 | OK | Sets the level of audio channel 2 in decibels |
| | ? | Queries the transmission parameter | Queries the level of audio channel 2 |

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| SDI:AUDIO:GROUP1:CH2:CLICK | 1 - 4 | OK | Inserts clicks into audio channel 2 every specified number of seconds |
| | OFF | OK | Clicks are not inserted into audio channel 2. |
| | ? | Queries the transmission parameter | Queries whether clicks are inserted into audio channel 2 |
| SDI:AUDIO:GROUP1:CH3:EQUAL-CH1 | OFF | OK | The settings of audio channel 1 are not applied to audio channel 3. |
| | ON | OK | The settings of audio channel 1 are applied to audio channel 3 |
| | ? | Queries the transmission parameter | Queries whether the settings of audio channel 1 are applied to audio channel 3 |
| SDI:AUDIO:GROUP1:CH3:FREQUENCY | SILENCE | OK | The frequency of audio channel 3 is not set |
| | 400 | OK | Sets the frequency of audio channel 3 to 400 Hz |
| | 800 | OK | Sets the frequency of audio channel 3 to 800 Hz |
| | 1k | OK | Sets the frequency of audio channel 3 to 1kHz |
| | ? | Queries the transmission parameter | Queries the frequency of audio channel 3 |
| SDI:AUDIO:GROUP1:CH3:LEVEL | -60 - 0 | OK | Sets the level of audio channel 3 in decibels |
| | ? | Queries the transmission parameter | Queries the level of audio channel 3 |
| SDI:AUDIO:GROUP1:CH3:CLICK | 1 - 4 | OK | Inserts clicks into audio channel 3 every specified number of seconds |
| | OFF | OK | Clicks are not inserted into audio channel 3. |
| | ? | Queries the transmission parameter | Queries whether clicks are inserted into audio channel 3 |
| SDI:AUDIO:GROUP1:CH4:EQUAL-CH1 | OFF | OK | The settings of audio channel 1 are not applied to audio channel 4. |
| | ON | OK | The settings of audio channel 1 are applied to audio channel 4 |
| | ? | Queries the transmission parameter | Queries whether the settings of audio channel 1 are applied to audio channel 4 |
| SDI:AUDIO:GROUP1:CH4:FREQUENCY | SILENCE | OK | The frequency of audio channel 4 is not set |
| | 400 | OK | Sets the frequency of audio channel 4 to 400 Hz |
| | 800 | OK | Sets the frequency of audio channel 4 to 800 Hz |
| | 1k | OK | Sets the frequency of audio channel 4 to 1kHz |
| | ? | Queries the transmission parameter | Queries the frequency of audio channel 4 |

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| SDI:AUDIO:GROUP1:CH4:LEVEL | -60 - 0 | OK | Sets the level of audio channel 4 in decibels |
| | ? | Queries the transmission parameter | Queries the level of audio channel 4 |
| SDI:AUDIO:GROUP1:CH4:CLICK | 1 - 4 | OK | Inserts clicks into audio channel 4 every specified number of seconds |
| | OFF | OK | Clicks are not inserted into audio channel 4. |
| | ? | Queries the transmission parameter | Queries whether clicks are inserted into audio channel 4 |
| SDI:AUDIO:GROUP2:RESOLUTION | 24 | OK | Sets the resolution of audio group 2 to 24 bits |
| | | ALL 24bit RESOLUTION | Returned when the format is 525i/59.94, all the audio groups are being output, and an attempt is made to set all the audio groups to 24 bit (*1) |
| | 20 | OK | Sets the resolution of audio group 2 to 20 bits |
| | ? | Queries the transmission parameter | Queries the resolution of audio group 2 |
| SDI:AUDIO:GROUP2:EMPHASIS | 50/15 | OK | Sets the pre-emphasis mode of audio group 2 to 50/15 |
| | CCITT | OK | Sets the pre-emphasis mode of audio group 2 to CCITT |
| | OFF | OK | Sets the pre-emphasis mode of audio group 2 to OFF |
| | ? | Queries the transmission parameter | Queries the pre-emphasis mode of audio group 2 |
| SDI:AUDIO:GROUP2:CH5:FREQUENCY | SILENCE | OK | The frequency of audio channel 5 is not set |
| | 400 | OK | Sets the frequency of audio channel 5 to 400 Hz |
| | 800 | OK | Sets the frequency of audio channel 5 to 800 Hz |
| | 1k | OK | Sets the frequency of audio channel 5 to 1kHz |
| | ? | Queries the transmission parameter | Queries the frequency of audio channel 5 |
| SDI:AUDIO:GROUP2:CH5:LEVEL | -60 - 0 | OK | Sets the level of audio channel 5 in decibels |
| | ? | Queries the transmission parameter | Queries the level of audio channel 5 |
| SDI:AUDIO:GROUP2:CH5:CLICK | 1 - 4 | OK | Inserts clicks into audio channel 5 every specified number of seconds |
| | OFF | OK | Clicks are not inserted into audio channel 5. |
| | ? | Queries the transmission parameter | Queries whether clicks are inserted into audio channel 5 |
| SDI:AUDIO:GROUP2:CH6:EQUAL-CH5 | OFF | OK | The settings of audio channel 5 are not applied to audio channel 6. |
| | ON | OK | The settings of audio channel 5 are applied to audio |

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| | | | channel 6 |
| | ? | Queries the transmission parameter | Queries whether the settings of audio channel 5 are applied to audio channel 6 |
| SDI:AUDIO:GROUP2:CH6:FREQUENCY | SILENCE | OK | The frequency of audio channel 6 is not set |
| | 400 | OK | Sets the frequency of audio channel 6 to 400 Hz |
| | 800 | OK | Sets the frequency of audio channel 6 to 800 Hz |
| | 1k | OK | Sets the frequency of audio channel 6 to 1kHz |
| | ? | Queries the transmission parameter | Queries the frequency of audio channel 6 |
| SDI:AUDIO:GROUP2:CH6:LEVEL | -60 - 0 | OK | Sets the level of audio channel 6 in decibels |
| | ? | Queries the transmission parameter | Queries the level of audio channel 6 |
| SDI:AUDIO:GROUP2:CH6:CLICK | 1 - 4 | OK | Inserts clicks into audio channel 6 every specified number of seconds |
| | OFF | OK | Clicks are not inserted into audio channel 6. |
| | ? | Queries the transmission parameter | Queries whether clicks are inserted into audio channel 6 |
| SDI:AUDIO:GROUP2:CH7:EQUAL-CH5 | OFF | OK | The settings of audio channel 5 are not applied to audio channel 7. |
| | ON | OK | The settings of audio channel 5 are applied to audio channel 7 |
| | ? | Queries the transmission parameter | Queries whether the settings of audio channel 5 are applied to audio channel 7 |
| SDI:AUDIO:GROUP2:CH7:FREQUENCY | SILENCE | OK | The frequency of audio channel 7 is not set |
| | 400 | OK | Sets the frequency of audio channel 7 to 400 Hz |
| | 800 | OK | Sets the frequency of audio channel 7 to 800 Hz |
| | 1k | OK | Sets the frequency of audio channel 7 to 1kHz |
| | ? | Queries the transmission parameter | Queries the frequency of audio channel 7 |
| SDI:AUDIO:GROUP2:CH7:LEVEL | -60 - 0 | OK | Sets the level of audio channel 7 in decibels |
| | ? | Queries the transmission parameter | Queries the level of audio channel 7 |
| SDI:AUDIO:GROUP2:CH7:CLICK | 1 - 4 | OK | Inserts clicks into audio channel 7 every specified number of seconds |
| | OFF | OK | Clicks are not inserted into audio channel 7. |
| | ? | Queries the transmission | Queries whether clicks are inserted into audio channel 7 |

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| | | parameter | |
| SDI:AUDIO:GROUP2:CH8:EQUAL-CH5 | OFF | OK | The settings of audio channel 5 are not applied to audio channel 8. |
| | ON | OK | The settings of audio channel 5 are applied to audio channel 8 |
| | ? | Queries the transmission parameter | Queries whether the settings of audio channel 5 are applied to audio channel 8 |
| SDI:AUDIO:GROUP2:CH8:FREQUENCY | SILENCE | OK | The frequency of audio channel 8 is not set |
| | 400 | OK | Sets the frequency of audio channel 8 to 400 Hz |
| | 800 | OK | Sets the frequency of audio channel 8 to 800 Hz |
| | 1k | OK | Sets the frequency of audio channel 8 to 1kHz |
| | ? | Queries the transmission parameter | Queries the frequency of audio channel 8 |
| SDI:AUDIO:GROUP2:CH8:LEVEL | -60 - 0 | OK | Sets the level of audio channel 8 in decibels |
| | ? | Queries the transmission parameter | Queries the level of audio channel 8 |
| SDI:AUDIO:GROUP2:CH8:CLICK | 1 - 4 | OK | Inserts clicks into audio channel 8 every specified number of seconds |
| | OFF | OK | Clicks are not inserted into audio channel 8. |
| | ? | Queries the transmission parameter | Queries whether clicks are inserted into audio channel 8 |
| SDI:AUDIO:GROUP3:RESOLUTION | 24 | OK | Sets the resolution of audio group 3 to 24 bits |
| | | ALL 24bit RESOLUTION | Returned when the format is 525i/59.94, all the audio groups are being output, and an attempt is made to set all the audio groups to 24 bit (*1) |
| | 20 | OK | Sets the resolution of audio group 3 to 20 bits |
| | ? | Queries the transmission parameter | Queries the resolution of audio group 3 |
| SDI:AUDIO:GROUP3:EMPHASIS | 50/15 | OK | Sets the pre-emphasis mode of audio group 3 to 50/15 |
| | CCITT | OK | Sets the pre-emphasis mode of audio group 3 to CCITT |
| | OFF | OK | Sets the pre-emphasis mode of audio group 3 to OFF |
| | ? | Queries the transmission parameter | Queries the pre-emphasis mode of audio group 3 |
| SDI:AUDIO:GROUP3:CH9:FREQUENCY | SILENCE | OK | The frequency of audio channel 9 is not set |
| | 400 | OK | Sets the frequency of audio channel 9 to 400 Hz |
| | 800 | OK | Sets the frequency of audio channel 9 to 800 Hz |
| | 1k | OK | Sets the frequency of audio channel 9 to 1kHz |
| | ? | Queries the | Queries the frequency of audio channel 9 |

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| | | transmission parameter | |
| SDI:AUDIO:GROUP3:CH9:LEVEL | -60 - 0 | OK | Sets the level of audio channel 9 in decibels |
| | ? | Queries the transmission parameter | Queries the level of audio channel 9 |
| SDI:AUDIO:GROUP3:CH9:CLICK | 1 - 4 | OK | Inserts clicks into audio channel 9 every specified number of seconds |
| | OFF | OK | Clicks are not inserted into audio channel 9. |
| | ? | Queries the transmission parameter | Queries whether clicks are inserted into audio channel 9 |
| SDI:AUDIO:GROUP3:CH10:EQUAL-CH9 | OFF | OK | The settings of audio channel 9 are not applied to audio channel 10. |
| | ON | OK | The settings of audio channel 9 are applied to audio channel 10 |
| | ? | Queries the transmission parameter | Queries whether the settings of audio channel 9 are applied to audio channel 10 |
| SDI:AUDIO:GROUP3:CH10:FREQUENCY | SILENCE | OK | The frequency of audio channel 10 is not set |
| | 400 | OK | Sets the frequency of audio channel 10 to 400 Hz |
| | 800 | OK | Sets the frequency of audio channel 10 to 800 Hz |
| | 1k | OK | Sets the frequency of audio channel 10 to 1kHz |
| | ? | Queries the transmission parameter | Queries the frequency of audio channel 10 |
| SDI:AUDIO:GROUP3:CH10:LEVEL | -60 - 0 | OK | Sets the level of audio channel 10 in decibels |
| | ? | Queries the transmission parameter | Queries the level of audio channel 10 |
| SDI:AUDIO:GROUP3:CH10:CLICK | 1 - 4 | OK | Inserts clicks into audio channel 10 every specified number of seconds |
| | OFF | OK | Clicks are not inserted into audio channel 10. |
| | ? | Queries the transmission parameter | Queries whether clicks are inserted into audio channel 10 |
| SDI:AUDIO:GROUP3:CH11:EQUAL-CH9 | OFF | OK | The settings of audio channel 9 are not applied to audio channel 11 |
| | ON | OK | The settings of audio channel 9 are applied to audio channel 11 |
| | ? | Queries the transmission parameter | Queries whether the settings of audio channel 9 are applied to audio channel 11 |
| SDI:AUDIO:GROUP3:CH11:FREQ | SILENCE | OK | The frequency of audio channel 11 is not set |

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| UENCY | 400 | OK | Sets the frequency of audio channel 11 to 400 Hz |
| | 800 | OK | Sets the frequency of audio channel 11 to 800 Hz |
| | 1k | OK | Sets the frequency of audio channel 11 to 1kHz |
| | ? | Queries the transmission parameter | Queries the frequency of audio channel 11 |
| SDI:AUDIO:GROUP3:CH11:LEVEL | -60 - 0 | OK | Sets the level of audio channel 11 in decibels |
| | ? | Queries the transmission parameter | Queries the level of audio channel 11 |
| SDI:AUDIO:GROUP3:CH11:CLICK | 1 - 4 | OK | Inserts clicks into audio channel 11 every specified number of seconds |
| | OFF | OK | Clicks are not inserted into audio channel 11 |
| | ? | Queries the transmission parameter | Queries whether clicks are inserted into audio channel 11 |
| SDI:AUDIO:GROUP3:CH12:EQUAL-CH9 | OFF | OK | The settings of audio channel 9 are not applied to audio channel 12. |
| | ON | OK | The settings of audio channel 9 are applied to audio channel 12 |
| | ? | Queries the transmission parameter | Queries whether the settings of audio channel 9 are applied to audio channel 12 |
| SDI:AUDIO:GROUP3:CH12:FREQUENCY | SILENCE | OK | The frequency of audio channel 12 is not set |
| | 400 | OK | Sets the frequency of audio channel 12 to 400 Hz |
| | 800 | OK | Sets the frequency of audio channel 12 to 800 Hz |
| | 1k | OK | Sets the frequency of audio channel 12 to 1kHz |
| | ? | Queries the transmission parameter | Queries the frequency of audio channel 12 |
| SDI:AUDIO:GROUP3:CH12:LEVEL | -60 - 0 | OK | Sets the level of audio channel 12 in decibels |
| | ? | Queries the transmission parameter | Queries the level of audio channel 12 |
| SDI:AUDIO:GROUP3:CH12:CLICK | 1 - 4 | OK | Inserts clicks into audio channel 12 every specified number of seconds |
| | OFF | OK | Clicks are not inserted into audio channel 12. |
| | ? | Queries the transmission parameter | Queries whether clicks are inserted into audio channel 12 |
| SDI:AUDIO:GROUP4:RESOLUTION | 24 | OK | Sets the resolution of audio group 4 to 24 bits |
| | | ALL 24bit RESOLUTION | Returned when the format is 525i/59.94, all the audio groups are being output, and an attempt is made to set all the audio groups to 24 bit (*1) |

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| | 20 | OK | Sets the resolution of audio group 4 to 20 bits |
| | ? | Queries the transmission parameter | Queries the resolution of audio group 4 |
| SDI:AUDIO:GROUP4:EMPHASIS | 50/15 | OK | Sets the pre-emphasis mode of audio group 4 to 50/15 |
| | CCITT | OK | Sets the pre-emphasis mode of audio group 4 to CCITT |
| | OFF | OK | Sets the pre-emphasis mode of audio group 4 to OFF |
| | ? | Queries the transmission parameter | Queries the pre-emphasis mode of audio group 4 |
| SDI:AUDIO:GROUP4:CH13:FREQUENCY | SILENCE | OK | The frequency of audio channel 13 is not set |
| | 400 | OK | Sets the frequency of audio channel 13 to 400 Hz |
| | 800 | OK | Sets the frequency of audio channel 13 to 800 Hz |
| | 1k | OK | Sets the frequency of audio channel 13 to 1kHz |
| | ? | Queries the transmission parameter | Queries the frequency of audio channel 13 |
| SDI:AUDIO:GROUP4:CH13:LEVEL | -60 - 0 | OK | Sets the level of audio channel 13 in decibels |
| | ? | Queries the transmission parameter | Queries the level of audio channel 13 |
| SDI:AUDIO:GROUP4:CH13:CLICK | 1 - 4 | OK | Inserts clicks into audio channel 13 every specified number of seconds |
| | OFF | OK | Clicks are not inserted into audio channel 13. |
| | ? | Queries the transmission parameter | Queries whether clicks are inserted into audio channel 13 |
| SDI:AUDIO:GROUP4:CH14:EQUAL-CH13 | OFF | OK | The settings of audio channel 13 are not applied to audio channel 14. |
| | ON | OK | The settings of audio channel 13 are applied to audio channel 14 |
| | ? | Queries the transmission parameter | Queries whether the settings of audio channel 13 are applied to audio channel 14 |
| SDI:AUDIO:GROUP4:CH14:FREQUENCY | SILENCE | OK | The frequency of audio channel 14 is not set |
| | 400 | OK | Sets the frequency of audio channel 14 to 400 Hz |
| | 800 | OK | Sets the frequency of audio channel 14 to 800 Hz |
| | 1k | OK | Sets the frequency of audio channel 14 to 1kHz |
| | ? | Queries the transmission parameter | Queries the frequency of audio channel 14 |
| SDI:AUDIO:GROUP4:CH14:LEVEL | -60 - 0 | OK | Sets the level of audio channel 14 in decibels |
| | ? | Queries the transmission | Queries the level of audio channel 14 |

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| | | parameter | |
| SDI:AUDIO:GROUP4:CH14:CLICK | 1 - 4 | OK | Inserts clicks into audio channel 14 every specified number of seconds |
| | OFF | OK | Clicks are not inserted into audio channel 14. |
| | ? | Queries the transmission parameter | Queries whether clicks are inserted into audio channel 14 |
| SDI:AUDIO:GROUP4:CH15:EQUAL-CH13 | OFF | OK | The settings of audio channel 13 are not applied to audio channel 15. |
| | ON | OK | The settings of audio channel 13 are applied to audio channel 15 |
| | ? | Queries the transmission parameter | Queries whether the settings of audio channel 13 are applied to audio channel 15 |
| SDI:AUDIO:GROUP4:CH15:FREQUENCY | SILENCE | OK | The frequency of audio channel 15 is not set |
| | 400 | OK | Sets the frequency of audio channel 15 to 400 Hz |
| | 800 | OK | Sets the frequency of audio channel 15 to 800 Hz |
| | 1k | OK | Sets the frequency of audio channel 15 to 1kHz |
| | ? | Queries the transmission parameter | Queries the frequency of audio channel 15 |
| SDI:AUDIO:GROUP4:CH15:LEVEL | -60 - 0 | OK | Sets the level of audio channel 15 in decibels |
| | ? | Queries the transmission parameter | Queries the level of audio channel 15 |
| SDI:AUDIO:GROUP4:CH15:CLICK | 1 - 4 | OK | Inserts clicks into audio channel 15 every specified number of seconds |
| | OFF | OK | Clicks are not inserted into audio channel 15. |
| | ? | Queries the transmission parameter | Queries whether clicks are inserted into audio channel 15 |
| SDI:AUDIO:GROUP4:CH16:EQUAL-CH13 | OFF | OK | The settings of audio channel 13 are not applied to audio channel 16. |
| | ON | OK | The settings of audio channel 13 are applied to audio channel 16 |
| | ? | Queries the transmission parameter | Queries whether the settings of audio channel 13 are applied to audio channel 16 |
| SDI:AUDIO:GROUP4:CH16:FREQUENCY | SILENCE | OK | The frequency of audio channel 16 is not set |
| | 400 | OK | Sets the frequency of audio channel 16 to 400 Hz |
| | 800 | OK | Sets the frequency of audio channel 16 to 800 Hz |
| | 1k | OK | Sets the frequency of audio channel 1 to 1kHz |
| | ? | Queries the transmission | Queries the frequency of audio channel 16 |

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| | | parameter | |
| SDI:AUDIO:GROUP4:CH16:LEVEL | -60 - 0 | OK | Sets the level of audio channel 16 in decibels |
| | ? | Queries the transmission parameter | Queries the level of audio channel 16 |
| SDI:AUDIO:GROUP4:CH16:CLICK | 1 - 4 | OK | Inserts clicks into audio channel 16 every specified number of seconds |
| | OFF | OK | Clicks are not inserted into audio channel 16. |
| | ? | Queries the transmission parameter | Queries whether clicks are inserted into audio channel 16 |
| SDI:Y | OFF | OK | A Y signal is not displayed. |
| | ON | OK | A Y signal is displayed. |
| | ? | Queries the transmission parameter | Queries whether a Y signal is displayed |
| SDI:CB | OFF | OK | A Cb signal is not displayed. |
| | ON | OK | A Cb signal is displayed. |
| | ? | Queries the transmission parameter | Queries whether a Cb signal is displayed |
| SDI:CR | OFF | OK | A Cr signal is not displayed. |
| | ON | OK | A Cr signal is displayed. |
| | ? | Queries the transmission parameter | Queries whether a Cr signal is displayed |
| SDI:SAFETY:90% | OFF | OK | A 90 % safety marker is not displayed. |
| | ON | OK | A 90 % safety marker is displayed. |
| | ? | Queries the transmission parameter | Queries whether a 90% safety marker is displayed |
| SF90<br>(Commands that are similar to those of the LT 443D) | 0 | OK | A 90 % safety marker is not displayed. |
| | 1 | OK | A 90 % safety marker is displayed. |
| | ? | Queries the transmission parameter | Queries whether a 90% safety marker is displayed<br>(No spaces are required between the command and parameter.) |
| SDI:SAFETY:80% | OFF | OK | A 80 % safety marker is not displayed. |
| | ON | OK | A 80 % safety marker is displayed. |
| | ? | Queries the transmission parameter | Queries whether a 80% safety marker is displayed |
| SF80<br>(Commands that are similar to those of the LT 443D) | 0 | OK | A 80 % safety marker is not displayed. |
| | 1 | OK | A 80 % safety marker is displayed. |
| | ? | Queries the | Queries whether a 90% safety marker is displayed |

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| | | transmission parameter | (No spaces are required between the command and parameter.) |
| SDI:SAFETY:4_3 | OFF | OK | A 4:3 aspect marker is not displayed. |
| | | ERROR | Returned when the format is SD and an attempt is made to hide the 4:3 aspect marker |
| | ON | OK | A 4:3 aspect marker is displayed. |
| | | ERROR | Returned when the format is SD and an attempt is made to show the 4:3 aspect marker |
| | ? | Queries the transmission parameter | Queries whether the 4:3 aspect marker is displayed |
| | | ERROR | Returned when the format is SD and a query is made about whether the 4:3 aspect marker is displayed |
| SF4_3<br>(Commands that are similar to those of the LT 443D) | 0 | OK | A 4:3 aspect marker is not displayed. |
| | | ERROR | Returned when the format is SD and an attempt is made to hide the 4:3 aspect marker |
| | 1 | OK | A 4:3 aspect marker is displayed. |
| | | ERROR | Returned when the format is SD and an attempt is made to show the 4:3 aspect marker |
| | ? | Queries the transmission parameter | Queries whether the 4:3 aspect marker is displayed<br>(No spaces are required between the command and parameter.) |
| | | ERROR | Returned when the format is SD and a query is made about whether the 4:3 aspect marker is displayed |
| SDI:ID:CHARACTER | !"#$%&'()*+,-./0123456789;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[¥]^_~ | OK | Creates an ID character string (up to 20 characters)<br>* :, →, ←, and ◄ cannot be entered.<br>* ◄ is automatically attached to the end of the string.<br>* To enter a space, type a tilde (~). |
| | ? | Queries the transmission parameter | Queries the ID character string<br>* ◄ is represented by <-.<br>* → is represented by `.<br>* ← is represented by a |
| SDI:ID:POSITION:H | 0 - 1919 | OK | Sets the horizontal position of the ID character string |
| | ? | Queries the transmission parameter | Queries the horizontal position of the ID character string |
| SDI:ID:POSITION:V | 0 - 1079 | OK | Sets the vertical position of the ID character string |
| | ? | Queries the transmission parameter | Queries the vertical position of the ID character string |
| SDI:ID:SIZE | 1 | OK | Sets the size of a single ID character to 32 × 32 dots |
| | 2 | OK | Sets the size of a single ID character to 64 × 64 dots |
| | 4 | OK | Sets the size of a single ID character to 128 × 128 dots |

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| | ? | Queries the transmission parameter | Queries the ID character size |
| SDI:ID:LEVEL | 100 | OK | Sets the ID character brightness to 100 %. |
| | 75 | OK | Sets the ID character brightness to 75 % |
| | ? | Queries the transmission parameter | Queries the ID character brightness |
| SDI:ID:BLINK:ON_TIME | 1 - 9 | OK | Sets the ID character blink-on time in seconds |
| | ? | Queries the transmission parameter | Queries the ID character blink-on time |
| SDI:ID:BLINK:OFF_TIME | 1 - 9 | OK | Sets the ID character blink-off time in seconds |
| | ? | Queries the transmission parameter | Queries the ID character blink-off time |
| SDI:ID:BLINK | OFF | OK | ID characters do not blink. |
| | ON | OK | ID characters blink. |
| | ? | Queries the transmission parameter | Queries whether ID characters blink |
| SDI:ID | OFF | OK | ID characters are not displayed. |
| | ON | OK | ID characters are displayed. |
| | ? | Queries the transmission parameter | Queries whether ID characters are displayed |
| ID<br>(Commands that are similar to those of the LT 443D) | 0 | OK | ID characters are not displayed. |
| | 1 | OK | ID characters are displayed. |
| | ? | Queries the transmission parameter | Queries whether ID characters are displayed<br>(No spaces are required between the command and parameter.) |
| SDI:LOGO:POSITION:H | 0 - 1919 | OK | Sets the horizontal position of the logo string |
| | ? | Queries the transmission parameter | Queries the horizontal position of the logo string |
| SDI:LOGO:POSITION:V | 0 - 1079 | OK | Sets the vertical position of the logo string |
| | ? | Queries the transmission parameter | Queries the vertical position of the logo string |
| SDI:LOGO:LEVEL3 | 40 - 3AC | OK | Sets the brightness of logo level 3 |
| | ? | Queries the transmission parameter | Queries the brightness logo level 3 |
| SDI:LOGO:LEVEL2 | 40 - 3AC | OK | Sets the brightness of logo level 2 |

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| | ? | Queries the transmission parameter | Queries the brightness logo level 2 |
| SDI:LOGO:LEVEL1 | 40 - 3AC | OK | Sets the brightness of logo level 1 |
| | ? | Queries the transmission parameter | Queries the brightness logo level 1 |
| SDI:LOGO:LEVEL0 | 40 - 3AC | OK | Sets the brightness of logo level 0 |
| | ? | Queries the transmission parameter | Queries the brightness logo level 0 |
| SDI:LOGO:BACKGROUND | OFF | OK | Logo level 0 is displayed |
| | ON | OK | Logo level 0 is not displayed |
| | ? | Queries the transmission parameter | Queries whether logo level 0 is displayed |
| SDI:LOGO | OFF | OK | Logo is not displayed. |
| | ON | OK | Logo is displayed. |
| | ? | Queries the transmission parameter | Queries whether logo is displayed |
| LG<br>(Commands that are similar to those of the LT 443D) | 0 | OK | Logo is not displayed. |
| | 1 | OK | Logo is displayed. |
| | ? | Queries the transmission parameter | Queries whether logo is displayed<br>(No spaces are required between the command and parameter.) |
| SDI:PATTERN_SCROLL:DIRECTION | UP&RIGHT | OK | Sets the pattern scroll direction to up and right |
| | UP | OK | Sets the pattern scroll direction to up |
| | UP&LEFT | OK | Sets the pattern scroll direction to up and left |
| | LEFT | OK | Sets the pattern scroll direction to left |
| | DOWN&LEFT | OK | Sets the pattern scroll direction to down and left |
| | DOWN | OK | Sets the pattern scroll direction to down |
| | DOWN&RIGHT | OK | Sets the pattern scroll direction to down and right |
| | RIGHT | OK | Sets the pattern scroll direction to right |
| | ? | Queries the transmission parameter | Queries the pattern scroll direction |
| SDI:PATTERN_SCROLL:SPEED:H | 0 - 254<br>(2 step) | OK | Sets the horizontal pattern scroll speed in dots |
| | ? | Queries the transmission parameter | Queries the horizontal pattern scroll speed |
| SDI:PATTERN_SCROLL:SPEED:V | 0 - 255 | OK | Sets the vertical pattern scroll speed in dots |
| | ? | Queries the | Queries the vertical pattern scroll speed |

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| | | transmission parameter | |
| SDI:PATTERN_SCROLL | OFF | OK | Pattern scrolling is not performed |
| | ON | OK | Pattern scrolling is performed |
| | ? | Queries the transmission parameter | Queries whether pattern scrolling is performed |
| SDI:PATTERN_CHANGE:SPEED | 1 - 255 | OK | Sets the pattern change switching time in seconds |
| | ? | Queries the transmission parameter | Queries the pattern change switching time |
| SDI:PATTERN_CHANGE | OFF | OK | Pattern change is not performed |
| | | OPERATION IS INVALID | Pattern change is not performed when LIPSYNC is set to ON |
| | ON | OK | Pattern change is performed |
| | | OPERATION IS INVALID | Pattern change is performed when LIPSYNC is set to ON |
| | ? | Queries the transmission parameter | Queries whether pattern change is performed |

*1 Returned when the output format is 525i/59.94, the LT 4400 cannot produce 24-bit signals on all the audio groups (16 channels). When an error message appears, set the resolution to 20 bits, or turn one or more of the audio signal output groups off.

Table 3-6 WCLK Commands

| Command | Transmission parameter | Response parameter | Description |
|---|---|---|---|
| WCLK:LEVEL | 5VCMOS | OK | Sets the output level to 5 V |
| | 1VP-P | OK | Sets the output level to 1 Vp-p |
| | ? | Queries the transmission parameter | Queries the output level |
| WCLK:TIMING | ±511 | OK | Sets the timing to 1AES, EBU frame, or 511 |
| | ? | Queries the transmission parameter | Queries the timing |

# 4. CONTROL BY SNMP

By using SNMP (Simple Network Management Protocol), you can view the LT 4400 settings from an SNMP manager. Also, in situations such as when the fan stops or the access mode changes, the LT 4400 notifies the SNMP manager by sending a TRAP to it.

To use SNMP control, set both HTTP ACCESS MODE and TELNET ACCESS MODE to OFF. Also, enable the LT 4400 key lock.

## 4.1 Procedure

1. **Set the IP address on the LT 4400.**

   You can configure the settings by selecting UTILITY MENU and then ETHERNET SET. If necessary, ask your network administrator what values you should use.
   The new settings become valid after the instrument restarts.

2. **Restart the LT 4400.**

   The IP address value is now valid.

3. **Connect a cable to the LT 4400 ETHERNET port.**

   After you set the IP address, promptly connect a cable to the ETHERNET port.
   If you do not connect a cable to the ETHERNET port, it may take time for the LT 4400 to initialize after you turn it on.

4. **Start the SNMP managers.**

   To control the LT 4400 over SNMP, you need an SNMP manager. (This software application is not included with the LT 4400.)
   For details on how to use an SNMP manager, see its instruction manual.

   The community names are listed below.
   Read Community : LDRUser
   Write Community : LDRAdm

5. **Perform a SET operation from an SNMP manager, and set the SNMP manager's IP address as indicated below.**

   1.3.6.1.4.1.leader(20111).lt4400(9).lt4400ST1(1).l9trapTBL(10).l9trapManagerIp(2).0
   Perform this operation to receive TRAP information.

6. **Restart the LT 4400.**

   When the LT 4400 starts, it transmits the standard TRAP, "ColdStart." Make sure that the SNMP manager can receive this TRAP.

7. **Enable the key lock.**

   When you control the LT 4400 from network environments such as an SNMP environment, set the LT 4400 key lock setting to ON. The key lock can be enabled through panel operations or through the performance of the SET operation from an SNMP manager. When the key lock setting is changed, a TRAP is sent to notify the SNMP manager of the change.

* SNMP version 1 is supported.
* The SMI definition is as indicated below.

```
IMPORTS
MODULE-IDENTITY, OBJECT-TYPE, NOTIFICATION-TYPE, enterprises
   FROM SNMPv2-SMI
DisplayString
   FROM SNMPv2-TC
OBJECT-GROUP, MODULE-COMPLIANCE
   FROM SNMPv2-Conf;
```

## 4.2 Enterprise MIB

- **Enterprise MIB Structure**

```
lt4400          OBJECT IDENTIFIER ::= { leader 9 }
lt4400ST1       OBJECT IDENTIFIER ::= { lt4400 1 }
l9utilityTBL    OBJECT IDENTIFIER ::= { lt4400ST1 1 }
l9patternTBL    OBJECT IDENTIFIER ::= { lt4400ST1 8 }
l9statusTBL     OBJECT IDENTIFIER ::= { lt4400ST1 9 }
l9trapTBL       OBJECT IDENTIFIER ::= { lt4400ST1 10 }
```

- **About the Expansion MIB**

  Copy lt4400.my to your PC. For details on how to use lt400.my, see the instruction manual of your SNMP manager.

- **Types of Access**

  The types of access indicated in the table are explained below.
  RO: Data can be read. (Read Only)
  R/W: Data can be read and written. (Read / Write)

Table 4-1 l9utilityTBL(1)group

| MIB | OID | SYNTAX | ACCESS | VALUE | RANGE |
|---|---|---|---|---|---|
| l9utlBrightness | l9utilityTBL.1 | INTEGER | RO | 0 | HIGH |
| | | | | 1 | MID |
| | | | | 2 | LOW |
| | | | | 3 | OFF |
| l9utlLightTime | l9utilityTBL.2 | INTEGER | RO | 0 | ALL |
| | | | | 1 - 10 | - |
| l9utlKeylock | l9utilityTBL.3 | INTEGER | R/W | 0 | OFF |
| | | | | 1 | ON |
| l9utlPoweronRecall | l9utilityTBL.4 | INTEGER | RO | 0 | OFF |
| | | | | 1 | ON |
| l9utlPoweronRecallMedia | l9utilityTBL.5 | INTEGER | RO | 0 | INT |
| | | | | 1 | EXT |
| l9utlPoweronRecallNumber | l9utilityTBL.6 | INTEGER | RO | 0 - 9 | - |
| l9utlEthernetHttp | l9utilityTBL.7 | INTEGER | R/W | 0 | OFF |
| | | | | 1 | READ ONLY |
| l9utlEthernetTelnet | l9utilityTBL.8 | INTEGER | R/W | 0 | OFF |
| | | | | 1 | READ ONLY |
| | | | | 2 | ON |

Table 4-2 l9patternTBL(8)group

| MIB | OID | SYNTAX | ACCESS | VALUE | RANGE |
|---|---|---|---|---|---|
| l9pattern | l9pattern TBL.1 | INTEGER | RO | 0 | COLOR BAR 100% |
| | | | | 1 | COLOR BAR 75% |
| | | | | 2 | MULTI COLOR BAR 100% |
| | | | | 3 | MULTI COLOR BAR 75% |
| | | | | 4 | MULTI COLOR BAR (+I) |
| | | | | 5 | SMPTE COLOR BAR |
| | | | | 6 | EBU COLOR BAR |
| | | | | 7 | BBC COLOR BAR |
| | | | | 8 | CHECK FIELD |
| | | | | 1000 | COLOR BAR 100% (LIPSYNC = ON) |
| | | | | 1001 | COLOR BAR 75% (LIPSYNC = ON) |
| | | | | 1002 | MULTI COLOR BAR 100% (LIPSYNC = ON) |
| | | | | 1003 | MULTI COLOR BAR 75% (LIPSYNC = ON) |
| | | | | 1004 | MULTI COLOR BAR (+I) (LIPSYNC = ON) |
| | | | | 1005 | SMPTE COLOR BAR (LIPSYNC = ON) |
| | | | | 1006 | EBU COLOR BAR (LIPSYNC = ON) |

| MIB | OID | SYNTAX | ACCESS | VALUE | RANGE |
|---|---|---|---|---|---|
| | | | | 1007 | BBC COLOR BAR<br>(LIPSYNC = ON) |

Table 4-3 l9statusTBL(9)group

| MIB | OID | SYNTAX | ACCESS | VALUE | RANGE |
|---|---|---|---|---|---|
| l9statusGenlock | l9statusTBL.1 | INTEGER | RO | 0 | INT |
| | | | | 1 | STAY in SYNC |
| | | | | 2 | EXT 1125i/60 |
| | | | | 3 | EXT 1125i/59.94 |
| | | | | 4 | EXT 1125i/50 |
| | | | | 5 | EXT 1125p/30 |
| | | | | 6 | EXT 1125p/29.97 |
| | | | | 7 | EXT 1125p/25 |
| | | | | 8 | EXT 1125p/24 |
| | | | | 9 | EXT 1080p/23.98 |
| | | | | 10 | EXT 1125PsF/24 |
| | | | | 11 | EXT 1125PsF/23.98 |
| | | | | 12 | EXT 750p/60 |
| | | | | 13 | EXT 750p/59.94 |
| | | | | 14 | EXT 750p/50 |
| | | | | 15 | EXT 750p/30 |
| | | | | 16 | EXT 750p/29.97 |
| | | | | 17 | EXT 750p/25 |
| | | | | 18 | EXT 750p/24 |
| | | | | 19 | EXT 750p/23.98 |
| | | | | 20 | EXT NTSC BB |
| | | | | 21 | EXT NTSC BB+Ref |
| | | | | 22 | EXT NTSC BB+ID |
| | | | | 23 | EXT NTSC BB+Ref+ID |
| | | | | 24 | EXT 525i/59.94 |
| | | | | 25 | EXT 525p/59.94 |
| | | | | 26 | EXT PAL BB |
| | | | | 27 | EXT PAL BB+Ref |
| | | | | 28 | EXT 625i/50 |
| | | | | 29 | EXT 625p/50 |
| l9statusBlk12 | l9statusTBL.2 | INTEGER | RO | 0 | 1080i/60 |
| | | | | 1 | 1080i/59.94 |
| | | | | 2 | 1080i/50 |
| | | | | 3 | 1080p/30 |
| | | | | 4 | 1080p/29.97 |
| | | | | 5 | 1080p/25 |
| | | | | 6 | 1080p/24 |
| | | | | 7 | 1080p/23.98 |
| | | | | 8 | 1080PsF/24 |
| | | | | 9 | 1080PsF/23.98 |

| MIB | OID | SYNTAX | ACCESS | VALUE | RANGE |
|---|---|---|---|---|---|
| | | | | 20 | 720p/60 |
| | | | | 21 | 720p/59.94 |
| | | | | 22 | 720p/50 |
| | | | | 23 | 720p/30 |
| | | | | 24 | 720p/29.97 |
| | | | | 25 | 720p/25 |
| | | | | 26 | 720p/24 |
| | | | | 27 | 720p/23.98 |
| | | | | 30 | NTSC BB |
| | | | | 31 | NTSC BB+REF |
| | | | | 32 | NTSC BB+ID |
| | | | | 33 | NTSC BB+REF+ID |
| | | | | 34 | NTSC BB+SETUP |
| | | | | 35 | NTSC BB+S+REF |
| | | | | 36 | NTSC BB+S+ID |
| | | | | 37 | NTSC BB+S+R+ID |
| | | | | 38 | 525i/59.94 |
| | | | | 39 | 525p/59.94 |
| | | | | 40 | PAL BB |
| | | | | 41 | PAL BB+REF |
| | | | | 42 | 625i/50 |
| | | | | 43 | 625p/50 |
| l9statusBlk34 | l9statusTBL.3 | INTEGER | RO | 0 | 1080i/60 |
| | | | | 1 | 1080i/59.94 |
| | | | | 2 | 1080i/50 |
| | | | | 3 | 1080p/30 |
| | | | | 4 | 1080p/29.97 |
| | | | | 5 | 1080p/25 |
| | | | | 6 | 1080p/24 |
| | | | | 7 | 1080p/23.98 |
| | | | | 8 | 1080PsF/24 |
| | | | | 9 | 1080PsF/23.98 |
| | | | | 20 | 720p/60 |
| | | | | 21 | 720p/59.94 |
| | | | | 22 | 720p/50 |
| | | | | 23 | 720p/30 |
| | | | | 24 | 720p/29.97 |
| | | | | 25 | 720p/25 |
| | | | | 26 | 720p/24 |
| | | | | 27 | 720p/23.98 |
| | | | | 30 | NTSC BB |
| | | | | 31 | NTSC BB+REF |
| | | | | 32 | NTSC BB+ID |
| | | | | 33 | NTSC BB+REF+ID |
| | | | | 34 | NTSC BB+SETUP |

| MIB | OID | SYNTAX | ACCESS | VALUE | RANGE |
|---|---|---|---|---|---|
| | | | | 35 | NTSC BB+S+REF |
| | | | | 36 | NTSC BB+S+ID |
| | | | | 37 | NTSC BB+S+R+ID |
| | | | | 38 | 525i/59.94 |
| | | | | 39 | 525p/59.94 |
| | | | | 40 | PAL BB |
| | | | | 41 | PAL BB+REF |
| | | | | 42 | 625i/50 |
| | | | | 43 | 625p/50 |
| l9statusBlk56 | l9statusTBL.4 | INTEGER | RO | 0 | 1080i/60 |
| | | | | 1 | 1080i/59.94 |
| | | | | 2 | 1080i/50 |
| | | | | 3 | 1080p/30 |
| | | | | 4 | 1080p/29.97 |
| | | | | 5 | 1080p/25 |
| | | | | 6 | 1080p/24 |
| | | | | 7 | 1080p/23.98 |
| | | | | 8 | 1080PsF/24 |
| | | | | 9 | 1080PsF/23.98 |
| | | | | 20 | 720p/60 |
| | | | | 21 | 720p/59.94 |
| | | | | 22 | 720p/50 |
| | | | | 23 | 720p/30 |
| | | | | 24 | 720p/29.97 |
| | | | | 25 | 720p/25 |
| | | | | 26 | 720p/24 |
| | | | | 27 | 720p/23.98 |
| | | | | 30 | NTSC BB |
| | | | | 31 | NTSC BB+REF |
| | | | | 32 | NTSC BB+ID |
| | | | | 33 | NTSC BB+REF+ID |
| | | | | 34 | NTSC BB+SETUP |
| | | | | 35 | NTSC BB+S+REF |
| | | | | 36 | NTSC BB+S+ID |
| | | | | 37 | NTSC BB+S+R+ID |
| | | | | 38 | 525i/59.94 |
| | | | | 39 | 525p/59.94 |
| | | | | 40 | PAL BB |
| | | | | 41 | PAL BB+REF |
| | | | | 42 | 625i/50 |
| | | | | 43 | 625p/50 |
| l9statusSdi | l9statusTBL.5 | INTEGER | RO | 0 | 1080i/60 |
| | | | | 1 | 1080i/59.94 |
| | | | | 2 | 1080i/50 |
| | | | | 3 | 1080p/30 |

| MIB | OID | SYNTAX | ACCESS | VALUE | RANGE |
|---|---|---|---|---|---|
| | | | | 4 | 1080p/29.97 |
| | | | | 5 | 1080p/25 |
| | | | | 6 | 1080p/24 |
| | | | | 7 | 1080p/23.98 |
| | | | | 8 | 1080PsF/24 |
| | | | | 9 | 1080PsF/23.98 |
| | | | | 20 | 720p/60 |
| | | | | 21 | 720p/59.94 |
| | | | | 22 | 720p/50 |
| | | | | 23 | 720p/30 |
| | | | | 24 | 720p/29.97 |
| | | | | 25 | 720p/25 |
| | | | | 26 | 720p/24 |
| | | | | 27 | 720p/23.98 |
| | | | | 30 | 525i/59.94 |
| | | | | 40 | 625i/50 |
| l9statusSdiTimingV | l9statusTBL.6 | INTEGER | RO | ±1124 | - |
| l9statusSdiTimingH | l9statusTBL.7 | INTEGER | RO | ±4124 | - |
| l9statusSdiEMBaudio | l9statusTBL.8 | INTEGER | RO | 0 | □G1 □G2 □G3 □G4 |
| | | | | 1 | □G1 □G2 □G3 ■G4 |
| | | | | 2 | □G1 □G2 ■G3 □G4 |
| | | | | 3 | □G1 □G2 ■G3 ■G4 |
| | | | | 4 | □G1 ■G2 □G3 □G4 |
| | | | | 5 | □G1 ■G2 □G3 ■G4 |
| | | | | 6 | □G1 ■G2 ■G3 □G4 |
| | | | | 7 | □G1 ■G2 ■G3 ■G4 |
| | | | | 8 | ■G1 □G2 □G3 □G4 |
| | | | | 9 | ■G1 □G2 □G3 ■G4 |
| | | | | 10 | ■G1 □G2 ■G3 □G4 |
| | | | | 11 | ■G1 □G2 ■G3 ■G4 |
| | | | | 12 | ■G1 ■G2 □G3 □G4 |
| | | | | 13 | ■G1 ■G2 □G3 ■G4 |
| | | | | 14 | ■G1 ■G2 ■G3 □G4 |
| | | | | 15 | ■G1 ■G2 ■G3 ■G4 |
| l9statusSdiOutput | l9statusTBL.9 | INTEGER | RO | 0 | □Y □Cb □Cr |
| | | | | 1 | □Y □Cb ■Cr |
| | | | | 2 | □Y ■Cb □Cr |
| | | | | 3 | □Y ■Cb ■Cr |
| | | | | 4 | ■Y □Cb □Cr |
| | | | | 5 | ■Y □Cb ■Cr |
| | | | | 6 | ■Y ■Cb □Cr |
| | | | | 7 | ■Y ■Cb ■Cr |
| l9statusSafetyArea90 | l9statusTBL.1 0 | INTEGER | RO | 0 | OFF |
| | | | | 1 | ON |
| l9statusSafetyArea80 | l9statusTBL.11 | INTEGER | RO | 0 | OFF |

| MIB | OID | SYNTAX | ACCESS | VALUE | RANGE |
|---|---|---|---|---|---|
| | | | | 1 | ON |
| l9statusSafetyArea43 | l9statusTBL.12 | INTEGER | RO | 0 | OFF |
| | | | | 1 | ON |
| | | | | -1 | Invalid (when the format is SD) |
| l9statusIdCharacter | l9statusTBL.13 | INTEGER | RO | 0 | OFF |
| | | | | 1 | ON |
| l9statusLogo | l9statusTBL.14 | INTEGER | RO | 0 | OFF |
| | | | | 1 | ON |
| l9statusPTNscroll | l9statusTBL.15 | INTEGER | RO | 0 | OFF |
| | | | | 1 | ON |

Table 4-4 l9trapTBL(10)group

| MIB | OID | SYNTAX | ACCESS | VALUE | RANGE |
|---|---|---|---|---|---|
| l9trapStrTBL | l9trapTBL.1 | - | - | - | - |
| l9trapStrCnt | l9trapStrTBL.1 | INTEGER | RO | 1 - | Number of extended TRAP transmissions |
| l9trapStrInfo | l9trapStrTBL.2 | OCTET STRING | RO | YYYY/MM/DD hh:mm:ss | Date/time when the error occurred |
| l9trapStrFormat | l9trapStrTBL.3 | OCTET STRING | RO | NULL | - |
| l9trapStrErr | l9trapStrTBL.4 | OCTET STRING | RO | Message strings | Error information |
| l9trapManagerIp | l9trapTBL.2 | IP ADDRESS | R/W | *.*.*.* | TRAP destination |

## 4.3 Specific Trap

Table 4-5 Table of specific trap IDs

| Specific Trap ID | Description | Specific Trap ID | Description |
|---|---|---|---|
| 1 | FAN_STOP | 9 | HTTP READ ONLY |
| 2 | FAN_RESTART | 10 | HTTP OFF |
| 3 | GENLOCK LOCKED(INT).[NO SIGNAL] | 11 | TELNET ON |
| 4 | GENLOCK SYNC ABSENT.[NO SIGNAL] | 12 | TELNET READ ONLY |
| 5 | GENLOCK BURST ABSENT.[INT] | 13 | TELNET OFF |
| 6 | GENLOCK BURST ABSENT.[FLYWHEEL] | 14 | LIPSYNC ON |
| 7 | KEY LOCK ON | 15 | LIPSYNC OFF |
| 8 | KEY LOCK OFF | | |

## 4.4 Variable Binding List

Table 4-6 Index1

| | |
|---|---|
| OID | leader(20111).lt4400(9).lt4400ST1(1).trapTBL(10).trapStrTBL(1).1.0 |
| Syntax | Counter32 |
| Range | 1～4294967295 (overflow occurs if this range is exceeded) |
| Description | The total number of enterprise traps sent after starting up |

Table 4-7 Index2

| | |
|---|---|
| OID | leader(20111). lt4400(9).lt4400ST1(1).trapTBL(10).trapStrTBL(1).2.0 |
| Syntax | Octet String |
| Range | Up to 40 characters |
| Description | Date/time when the error occurred (the time on the LT 4400 is transmitted)<br>YYYY/MM/DD hh:mm:ss sdi (example: 2004/07/15 11:30:11)<br>YYYY = year, MM = month, DD = day, hh = hour, mm = minute, ss = second |

Table 4-8 Index3

| | |
|---|---|
| OID | leader(20111). lt4400(9).lt4400ST1(1).trapTBL(10).trapStrTBL(1).3.0 |
| Syntax | Octet String |
| Range | Up to 40 characters |
| Description | NULL |

Table 4-9 Index4

| | | |
|---|---|---|
| OID | leader(20111). lt4400(9).lt4400ST1(1).trapTBL(10).trapStrTBL(1).4.0 | |
| Syntax | Octet String | |
| Range | Up to 40 characters | |
| Description | Error information | |
| | FAN_STOP | Fan stop detection |
| | FAN_RESTART | Fan restart detection |
| | GENLOCK LOCKED(INT).[NO SIGNAL] | Detection of the LT 4400 changing from NO SIGNAL to INTERNAL mode |
| | GENLOCK SYNC ABSENT.[NO SIGNAL] | SYNC ABSENT detection |
| | GENLOCK BURST ABSENT.[INT] | Detection of the LT 4400 changing from BURST ABSENT to INTERNAL mode |
| | GENLOCK BURST ABSENT.[FLYWHEEL] | Detection of the LT 4400 changing from BURST ABSENT to FLYWHEEL mode |
| | KEY LOCK ON | KEY LOCK ON detection |
| | KEY LOCK OFF | KEY LOCK OFF detection |
| | HTTP READ ONLY | HTTP READ ONLY detection |
| | HTTP OFF | HTTP OFF detection |
| | TELNET ON | TELNET ON detection |
| | TELNET READ ONLY | TELNET READ ONLY detection |
| | TELNET OFF | TELNET OFF detection |
| | LIPSYNC ON | LIPSYNC ON detection |
| | LIPSYNC OFF | LIPSYNC OFF detection |

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