CLOUD TS Analyze Service

HACOBE-CLOUD

Instruction Manual

Traffic Sim Co.,Ltd

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1. Overview

This service is a cloud TS analyzer that can analyze TS transmitted on the cloud in real time. You can check the analysis results on the web.

✓ Supports RTP / SRT protocol.

The input stream supports RTP and SRT protocols, and it is possible to set the input stream information from the Web UI.

✓ Display analysis results on a web browser

Analysis results and settings can be made by operating the screen on the web browser.

✓ Various TS analysis functions

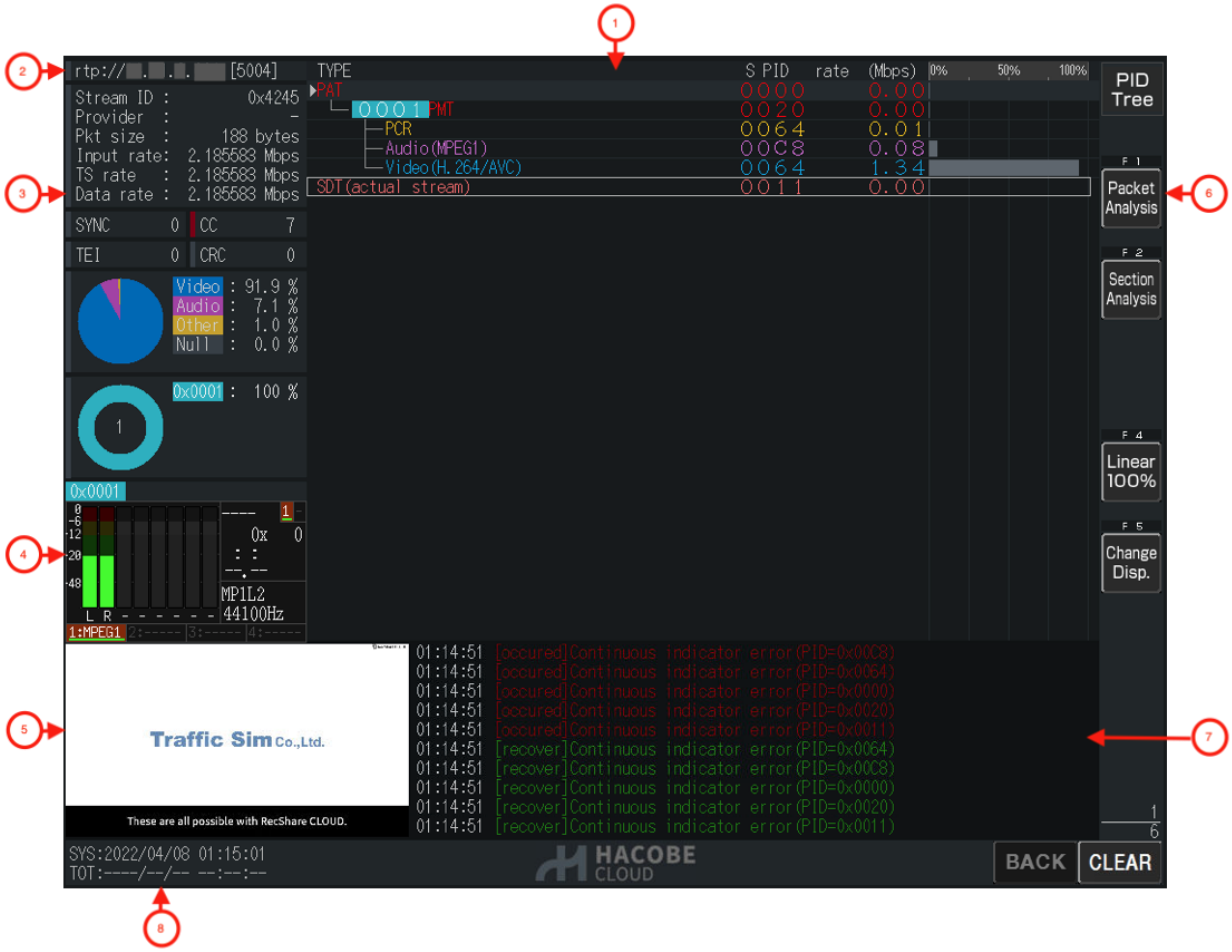
Various analysis functions required for TS analysis, such as TS packet list/tree structure display, packet reception cycle, packet/section structure analysis, codec information, etc., are provided as standard to enable multifaceted analysis.

✓ Built-in Video decoder

Decodes video simultaneously with TS analysis.
It supports various codecs such as MPEG2, H.264(AVC), H.265(HEVC), AAC, and LPCM.

2. Description

2.1. Screen Configuration



① Main window	Displays information for each analysis mode and setting mode.
② Input information	Displays the information of the currently selected input source.
③ Analysis information	Displays comprehensive information about the TS currently being analyzed.
④ Decode information	Displays the picture and sound information of the service that is currently being decoded.
⑤ Videw window	Displays the currently decoded video.
⑥ Function buttons	Displays the functions assigned to the [F1] - [F7] buttons in each mode.
⑦ Log window	Displays error detection information and records of various operations in chronological order.
⑧ Time	・SYS Displays the system time of this unit. ・TOT Displays the TOT time of the TS being analyzed.

2.1.1. Main window

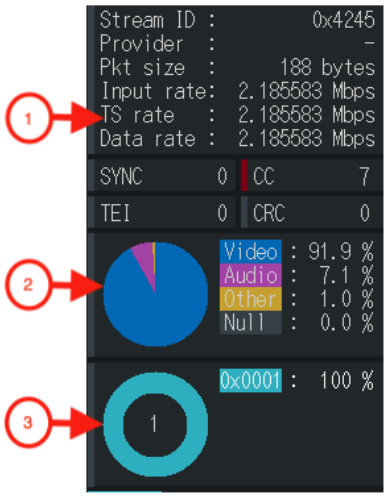
Displays information for each analysis mode and setting mode.
For details, please refer to the description of each mode.

2.1.2. Input information

Displays the information of the currently selected input source.

2.1.3. Analysis information

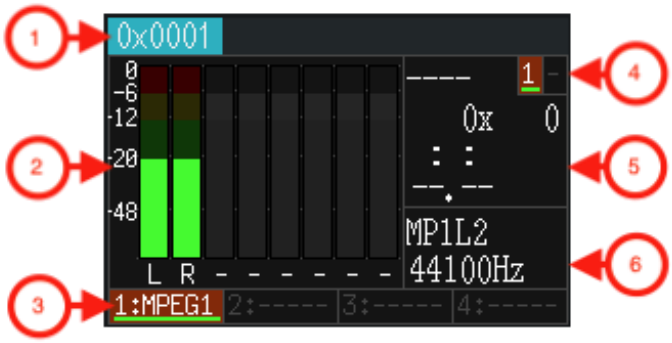
Displays comprehensive information about the TS currently being analyzed.



① TS information	・ Stream ID TSID in PAT and stream name ・ Provider Service name in SDT. ・ Pkt size Bitrate of the entire stream being analyzed. ・ Input rate Bitrate of the entire stream being analyzed. ・ TS rate Bitrate of TS data contained in the stream. ・ Data rate Effective bit rate of TS data excluding null packets ・ Sync Number of synchronization byte errors detected ・ CC Number of continuity index errors detected ・ TEI Number of transport errors detected ・ CRC Number of CRC errors detected
② Bandwidth graph by packet	The bandwidth occupancy ratio by packet type is shown in a pie chart. Video : Video packet Audio : Audio packet Other : Other packet Null : Null packet
③ Bandwidth graph by service	The bandwidth occupancy ratio for each service ID is shown in a pie chart. The number of services is displayed in the center of the graph.

2.1.4. Decode information

Displays the picture and sound information of the service that is currently being decoded.



① Service ID	The service ID of the service currently being decoded is displayed.
② Audio Level	Displays the level of the currently decoded audio by channel.
③ Audio Selection	Displays the status of decoding target selection when multiple voices are included in the service. Up to four voices can be selected. --- Selected audio --- Decoding audio
④ Video Selection	Displays the status of decode target selection when multiple videos are included in the service. A maximum of two videos can be selected. --- Selected vide --- Decoding video
⑤ Video information	Displays the decoded video standard, picture angle, chroma, and scanning method.
⑥ Audio information	The decoded audio standard and sampling frequency are displayed.

2.1.5. Video window

Displays the currently decoded video.

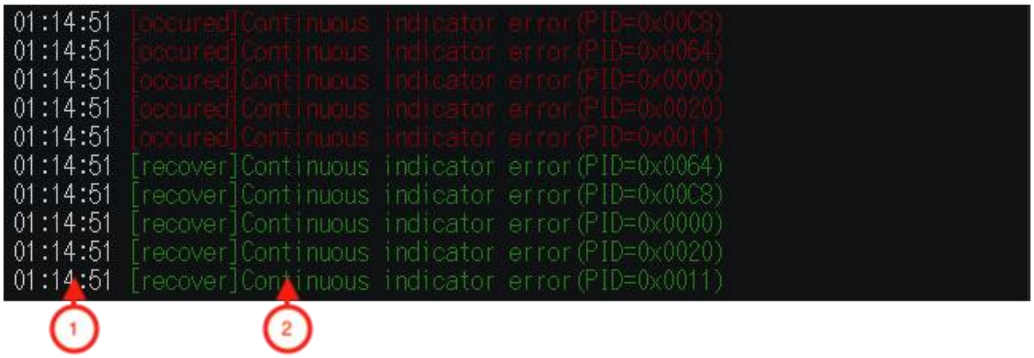
2.1.6. Function buttons

Displays the functions assigned to the [F1] - [F7] buttons in each mode.

Please refer to the description of each mode for details.

2.1.7. Log window

Displays error detection information and operation history in chronological order.
The latest 10 logs (simple format) are always displayed.



① Time	Displays the time the log was generated.
② Log message	Displays an occurrence log message.

The latest 10 or more entries can be viewed in the Log Mode screen.
For details, please refer to "8. Event Log"Event Log

3. Basic Operation

3.1. Operation methods

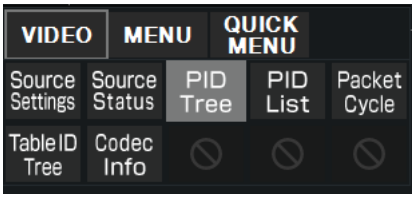
The screen can be operated with a PC keyboard and mouse.

Keyboard operation

keyboard	operation
←	Switches the currently displayed mode.
→	Switches the currently displayed mode.
M	Displays the Quick Menu.
↑	Moves the cursor and items, and changes input values.
↓	Moves the cursor and items, and changes input values.
Enter	Make decisions about selections and changes.
V	Enables/Disables the VIDEO mode.
Home	Toggles between showing and hiding the menu.
F1～F7	Perform the assigned functions.
BackSpace	Cancel the selection or go back to the previous item.
Escape	Clears the current analysis status.

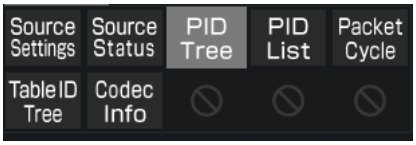
The assigned key can be changed to any other key. For details, please refer to "10.4. Keybind Settings ".

Mouse operation

Left click	Select/decide the item that the mouse cursor is pointing to. By clicking on the TS recording status section, you can start/stop recording. ▪ By clicking on the decoded image area or log area, you can switch to VIDEO mode or log mode.
Wheel	Scroll the screen.
Right click	Display the right-click menu. In addition to mode selection, the VIDEO/MENU/QUICKMENU buttons can be controlled with the mouse. 

3.2. Mode Selection

Switch to various analysis modes and setting screens by operating the key or menu.



List of modes

Source Settings	Select the TS signal input source and check the input signal status.
Source Status	Displays TS signal input status information.
PID Tree	Displays the structure of TS packets in a tree format.
PID List	Displays a list of PIDs of TS packets.
Packet Cycle	Displays the packet reception cycle of TS packets by PID.
TableID Tree	Displays the list of table IDs of TS packets in a tree format.
Codec Info	Analyzes audio packets and displays information about the codec used.

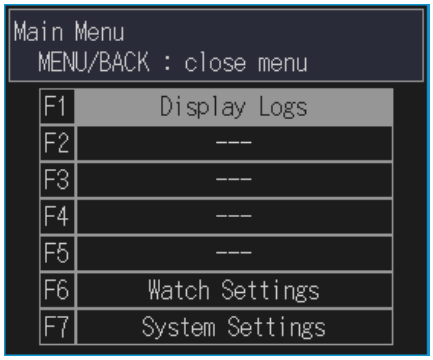
For details, please refer to the description of each mode.

3.3. Menu Operations

Displays a menu with functions and settings common to all modes.

3.3.1. Common Menu

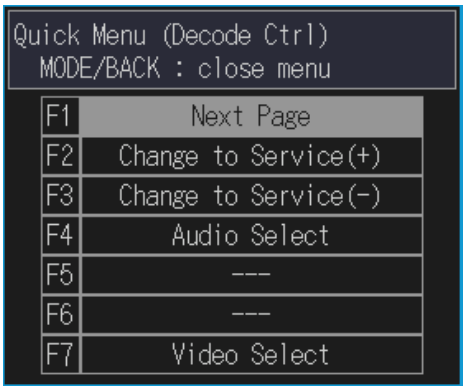
You can switch to the log mode screen, and access various setting screens.



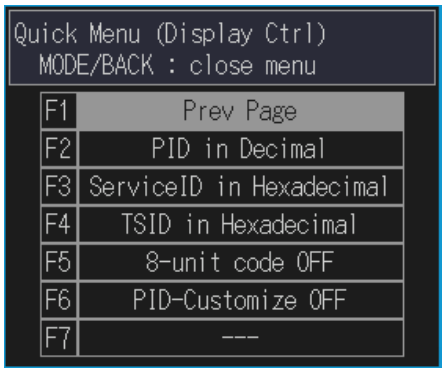
[F1] LOG	Displays the Log Mode screen.
[F6] Watch Settings.	Displays the configuration screen for the error monitoring function.
[F7] System Settings.	Displays the System Settings screen.

3.3.2. Decode Control and Display Control Menu

You can select the decoding target and the display format for various information.



[F1] Next Page	Show the next menu page.
[F2] Change to Service(+)	Switch the decode target to the next service.
[F3] Change to Service(-)	Switch the decode target to the previous service.
[F4] Audio Select	Switches the audio to be decoded when multiple audio are included in the service.
[F7] Video Select	Switches the video to be decoded when multiple videos are included in the service.

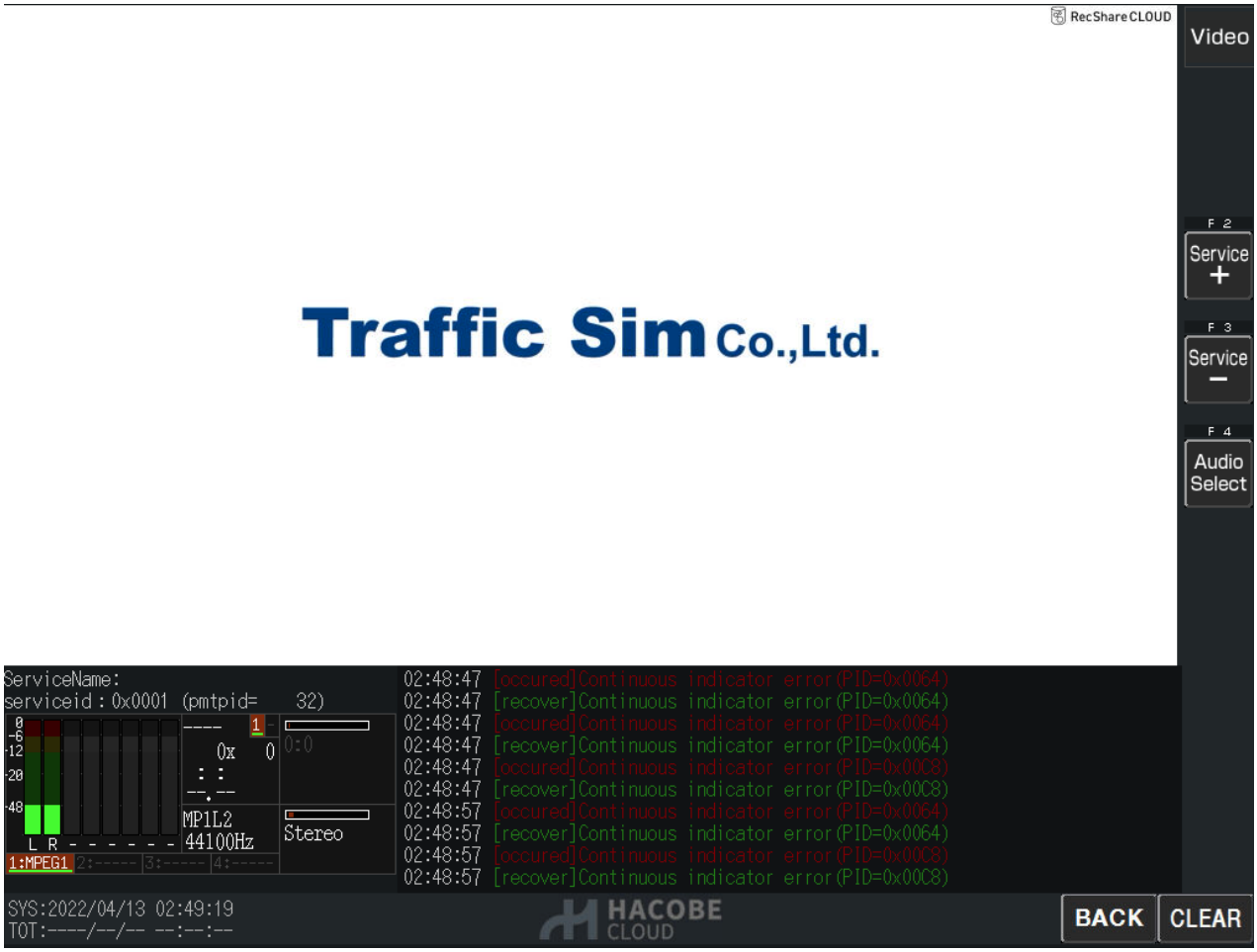


[F1] Prev Page	Displays the previous menu page.
[F2] PID in Hexadecimal	Select the format of the PID display on the analysis screen.
[F3] ServiceID in Hexadecimal	Select the format of the service ID display in the analysis screen.
[F4] TSID in Hexadecimal	Select the format of the TSID display in the analysis screen.
[F5] 8-unit code ON/OFF	Selects the application of the 8 unit code conversion to the interpretation of characters such as service names.

4. VIDEO Mode

Pressing the VIDEO button activates the VIDEO mode, which displays the maximum decoded video area (960 x 540 pixels).

Pressing the VIDEO button again or pressing the BACK button will return to the normal mode.

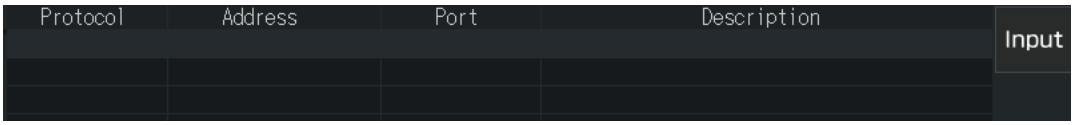


Functions

[F2] Service＋	Switch the decode target to the next service.
[F3] Service－	Switch the decode target to the previous service.
[F4] Audio Select	Switches the audio to be decoded when multiple voices are included in the service.

5. Source Setting Mode

This mode is used to set the input source for TS signals.

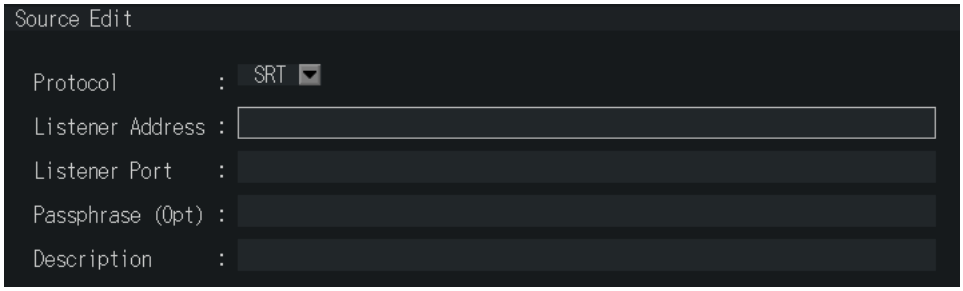


Protocol	Display protocols (SRT/RTP)
Address	Display Listener Addresses (SRT)/ Source Address (RTP)
Port	Display Listener Port (SRT)/ Receive Port (RTP)
Description	Display the input description(Optional)

Functions

[F1] Select	Switch input source.
[F3] New	Add input source settings.
[F6] Delete	Deletes the input source setting.

5.1. SRT



Protocol	Select SRT.
Listener Address	Enter the IP address of the listener for the input.
Listener Port	Enter the port number of the listener for the input.
Passphrase (Opt)	Enter if a passphrase has been set.
Description	Set the input description. (Optional)

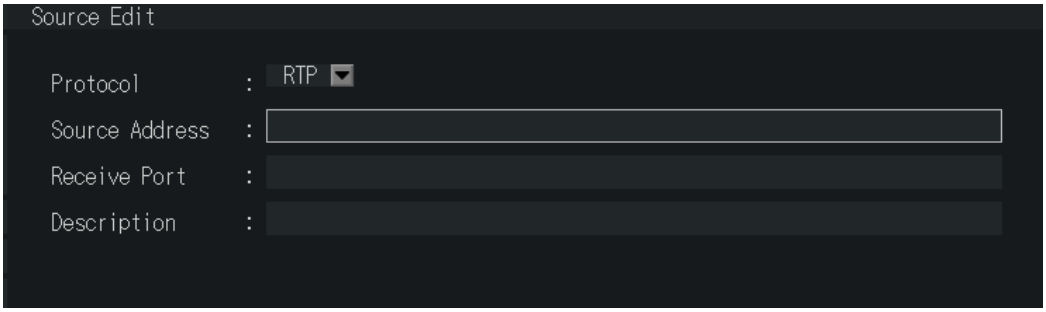
Functions

[F1] Enter	Confirms the input source setting. Listener Address and Listener Port are required. If they are not entered, the operation cannot be performed.
[F6] Cancel	Cancels the addition of the input source setting.

Functions (Item being input)

[F4] Delete	Erase what is being input.
[F6] Enter	Confirm your input.
[F7] Cancel	Erase what is being input and stop input.

5.2. RTP



Protocol	Select RTP.
Source Address	Enter the source IP address.
Receive Port	Enter the receiving port number.
Description	Set the input description. (Optional)

Functions

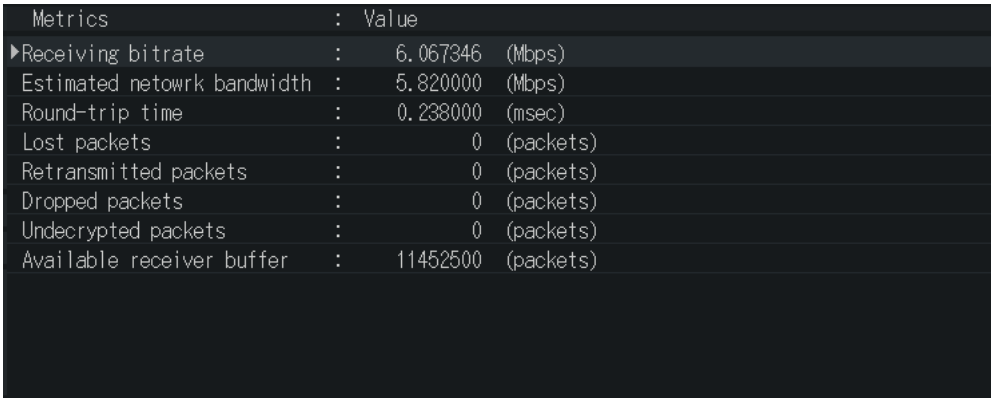
[F1] Enter	Confirms the input source setting. Source Address and Receive Port are required. If they are not entered, the operation cannot be performed.
[F6] Cancel	Cancels the addition of the input source setting.

Functions (Item being input)

[F4] Delete	Erase what is being input.
[F6] Enter	Confirm your input.
[F7] Cancel	Erase what is being input and stop input.

6. Source Status Mode

This mode is used to check TS signal input status information.

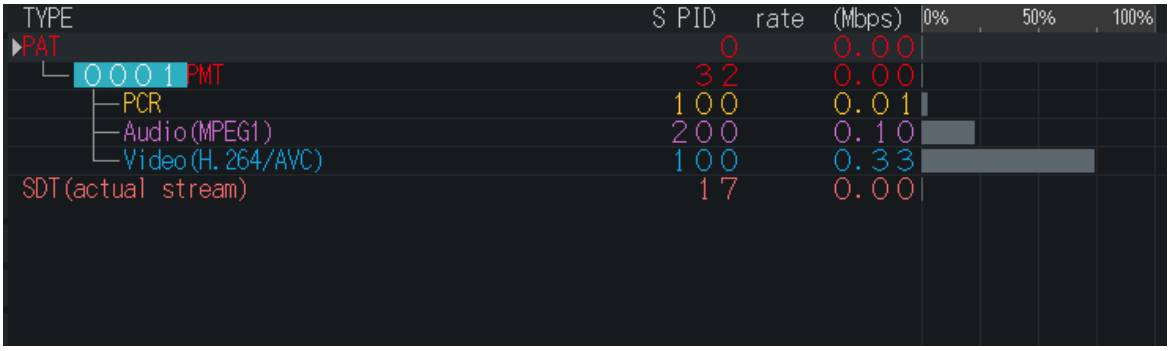


Receiving bitrate	Display received bit rate.
Estimated network bandwidth	Display estimated network bandwidth.
Round-trip time	Display Round-trip time.
Lost packets	Display the number of packets lost.
Retransmitted packets	Display the number of packet retransmissions.
Dropped packets	Display the number of dropped packets.
Undecrypted packets	Display the number of undecrypted packets.
Available receiver buffer	Display the number of available receiver buffer.

7. Analysis Functions

7.1. PID Tree

Displays the TS structure in tree format based on the information described in PAT and PMT.



Screen Items

TYPE	The packet type is displayed. The packet type is determined by table_id and stream_type described in PMT. In the case of video and audio packets, it is possible to select to display simple codec information by switching the display. In the case of PMT, the service ID and the service name obtained from SDT will be displayed.
S	The scrambling and descrambling status is displayed. ▪ [S] Scrambled + without descramble ▪ [ ] Non scrambled.
PID	The packet ID is displayed. Decimal or hexadecimal can be selected by setting.
rate(Mbps)	Displays the bit rate of the target packet.
100.0%	Displays the bit rate of the target packet as a percentage of the total in a bar graph.

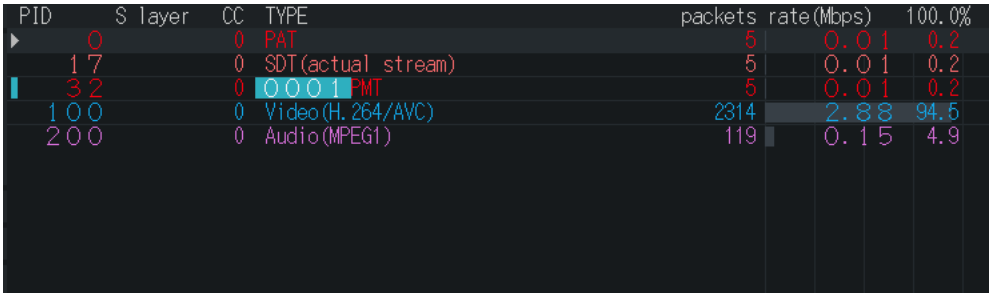
Functions

[F1]	Packet Analysis	Performs packet analysis of the packet selected by the cursor.	
[F2]	Section Analysis	Performs section analysis of the packet selected by the cursor.	
[F4]	Linear 100%	Switches the display scale of the bit rate occupancy bar graph. 100% → 70% → 50% → 30% → 20% → 15% → 10% → 7% → 5% → 3% → 2% → 1% → logarithmic → …	
[F5]	Change Disp.	press	Changes the display unit of the bit rate. Mbps → kbps → Mbps → kbps
		long press	Displays the simple codec information for video and audio on the TYPE display.

- Packets that have not been detected even once in one second will be displayed in dark color.
- In PID tree mode, a tree structure is generated from the information in PAT and PMT, so that even if a packet is listed in the tree structure but not actually sent out, the item will be displayed. In this case, the corresponding packets will be displayed in dark color and the bit rate will be zero.

7.2. PID List

Displays a list of packets included in the TS by PID.



Screen Items

PID	The packet ID is displayed. Decimal or hexadecimal can be selected by setting.
S	The scrambling and descrambling status is displayed. ・[S] Scrambled + without descramble ・[ ] Non scrambled.
CC	The number of occurrences of errors (discontinuities) in the continuity indicator is displayed.
TYPE	The packet type is displayed. The packet type is determined by table_id and stream_type described in PMT. In the case of video and audio packets, it is possible to select to display simple codec information by switching the display. In the case of PMT, the service ID and the service name obtained from SDT will be displayed.
Packets	The number of packets received per second of the target pad will be displayed.
rate(Mbps)	The bit rate of the target packet will be displayed.
100.0%	The share of the bit rate of the target packet to the total will be displayed in %.

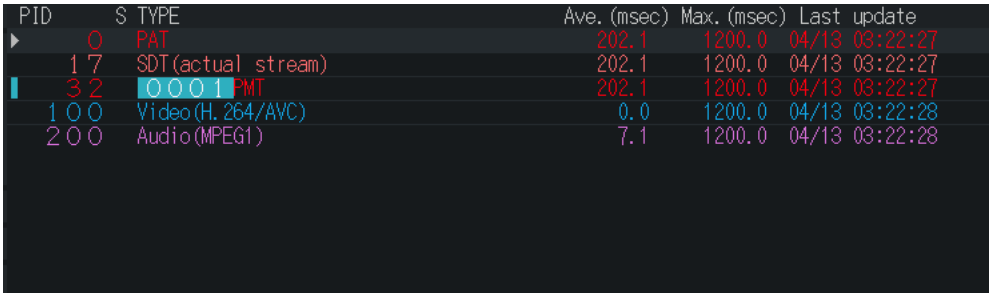
Functions

[F1]	Packet Analysis	Performs packet analysis of the packet selected by the cursor.	
[F2]	Section Analysis	Performs section analysis of the packet selected by the cursor.	
[F5]	Change Disp	Press	Changes the display unit of the bit rate. Mbps → kbps → Mbps(min/ave/max) → kbps(min/ave/max) ・Average is the moving average value for the last 10 seconds. ・The minimum and maximum values are the minimum and maximum values from the start of the analysis to the present, and are retained until the analysis is cleared.
		Long press	Displays the simple codec information for video and audio on the TYPE display.

Packets that are not detected even once in a second will be displayed in dark color.

7.3. Packet Cycle

Displays a list of the reception cycles of each packet by PID.



Screen Items

PID	The packet ID is displayed. Decimal or hexadecimal can be selected by setting.
S	The scrambling and descrambling status is displayed. ▪ [S] Scrambled + without descramble ▪ [ ] Non scrambled.
TYPE	The packet type is displayed. The packet type is determined by table_id and stream_type described in PMT. In the case of video and audio packets, it is possible to select to display simple codec information by switching the display. In the case of PMT, the service ID and the service name obtained from SDT will be displayed.
Ave	Displays the moving average of the reception interval in the last 100 packets.
Min/Max	The minimum/maximum value of the receiving interval from the start of analysis to the present is displayed. The minimum/maximum value will be kept until the analysis is cleared.
Last update	The date and time when the last packet was received is displayed.

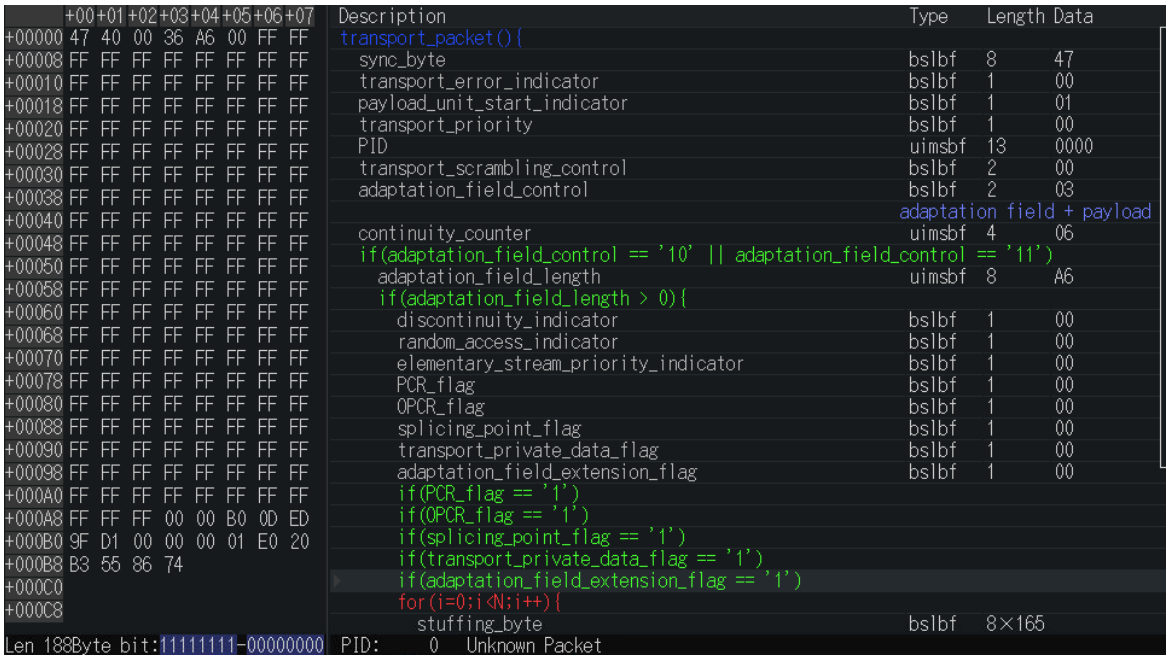
Functions

[F1]	Packet Analysis	Performs packet analysis of the packet selected by the cursor.	
[F2]	Section Analysis	Performs section analysis of the packet selected by the cursor.	
[F5]	Change Disp.	Press	Changes the display unit of the bit rate. sec(min/ave/max) → msec(min/ave/max) → sec(ave/max) → msec(ave/max) ・Average is the moving average value for the last 10 seconds. ・The minimum and maximum values are the minimum and maximum values from the start of the analysis to the present, and are retained until the analysis is cleared.
		Long press	Displays the simple codec information for video and audio on the TYPE display.

Packets that are not detected even once in a second will be displayed in dark color.

7.4. Packet Analysis

Displays TS packets by parsing them. It is possible to check the correspondence between the value of each field and the binary data.



Screen Items

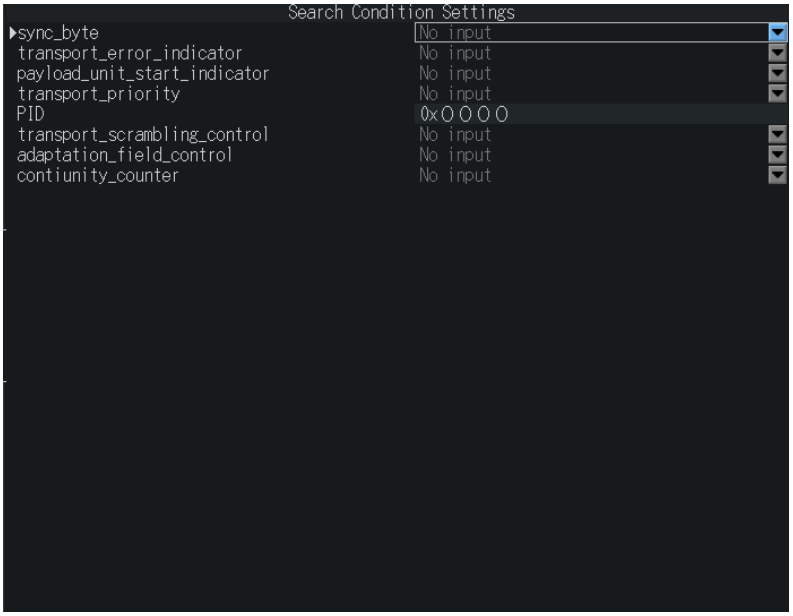
Left screen	The packet data will be displayed in binary format. The part corresponding to the selected field is displayed with a blue background.
Right screen	The syntax structure of the packet data is displayed. The value and meaning of each field are displayed.

Functions

[F1]	Refresh	Reacquires packets of the same PID and refreshes the display. The first packet detected after pressing the button will be displayed.
[F2]	Reacquisition Conditions	Set the condition for retrieving packets of the same PID.
[F3]	PAGE↑	Scrolls the display up one page.
[F4]	PAGE↓	Scrolls the display down one page.

7.4.1. setting conditions for packet analysis acquisition

It is possible to automatically detect and analyze packets with specified field values.



Screen Items

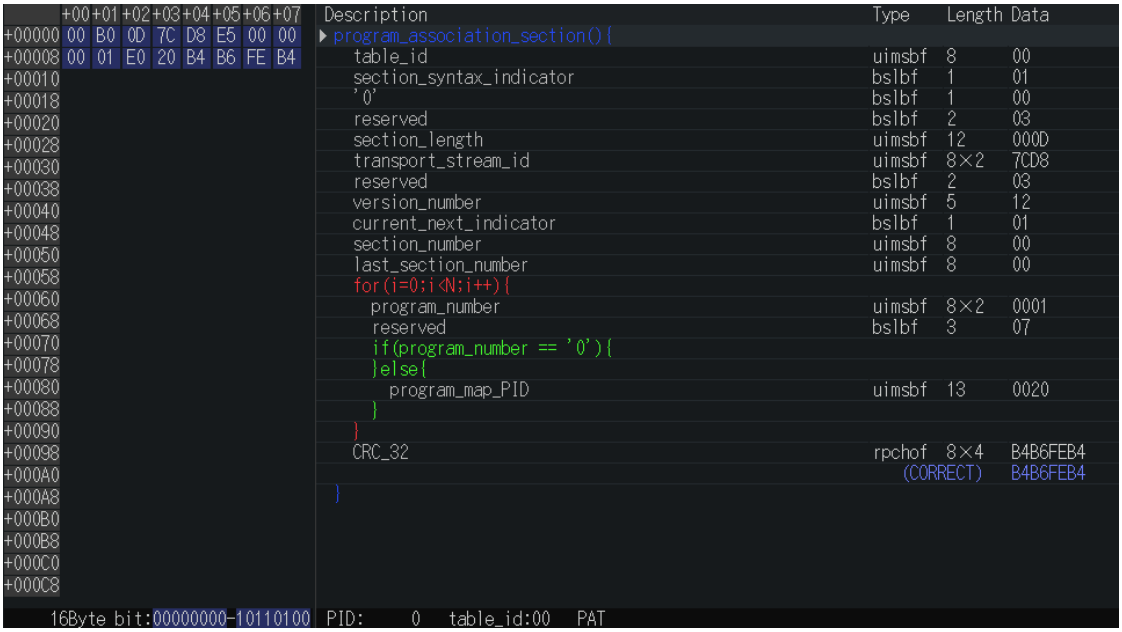
Left screen	The field name will be displayed.
Right screen	Set the conditional value of the field to be retrieved.

Functions

[F1] Enter	Executes packet acquisition with the current settings.
[F2] Enable cond.	Enable/Disable the condition.

7.5. Section Analysis

Displays the section data structure. You can check the value of each field and its binary data.



Screen Items

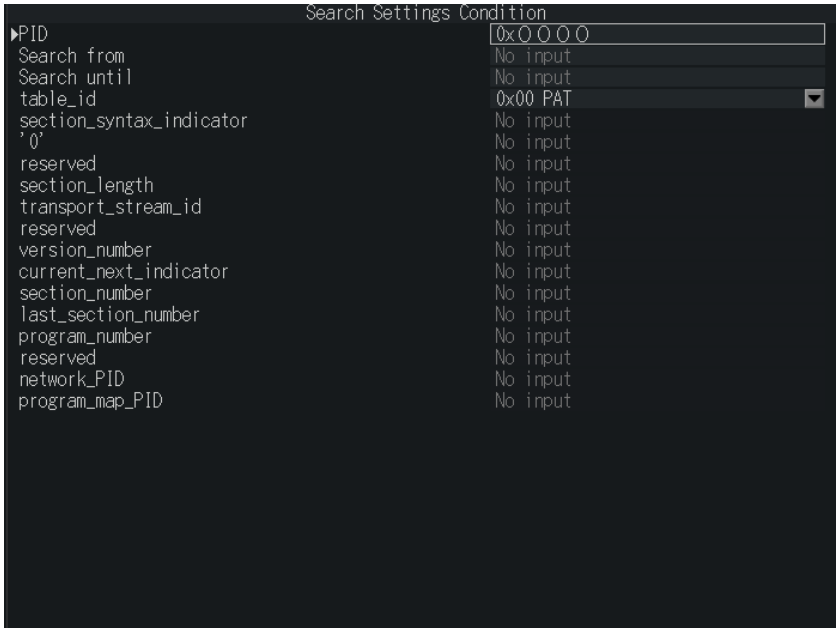
Left screen	The section data will be displayed in binary format. The section corresponding to the selected field will be displayed with a blue background.
Right screen	The syntax structure of the section data is displayed. The value and meaning of each field will be displayed. For items with a white arrow on the left edge when selected, help for the item content will be displayed when the item is selected. (Items with gray arrows are not displayed.)

Functions

[F1] Refresh	Reacquires the section with the same PID and updates the display. The first section detected after the button is pressed will be displayed.
[F2] Reacquisition Conditions	Sets the conditions for retrieving sections with the same PID.
[F3] PAGE↑	Scrolls the display up one page.
[F4] PAGE↓	Scrolls the display down one page.
[F5] History	Displays section data history.

7.5.1. Section Analysis (Condition Settings)

Sections with specified field values can be automatically detected and analyzed.



Screen Items

Left screen	The field name will be displayed.
Right screen	Set the conditional value of the field to be retrieved.

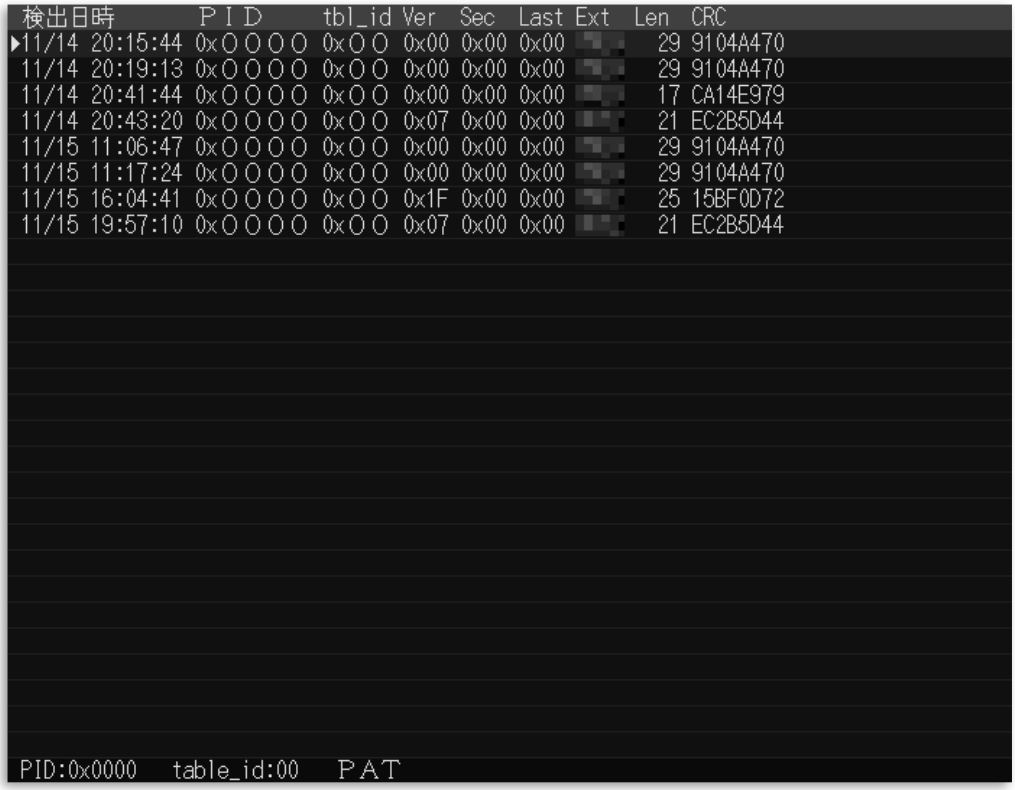
Functions

[F1] Enter	Executes packet acquisition with the current settings.
[F2] Enable cond.	Enable/Disable the condition.

7.5.2. Section History

Displays the historical changes of section data. It is possible to reanalyze the syntactic structure of the section data of the selected history.

It stores the history for the past three days.



Screen Items

Data found	The date and time when the section change is detected is displayed.
PID	Displays the PID of the packet that is transmitting the section.
tlb_id	Displays the table ID of the section.
Ver	The value of version_number is displayed.
Sec	The value of section_syntax_indicator is displayed.
Last	The value of last_section_number is displayed.
Ext	The value of table_id_extension (two bytes from the fourth to the sixth byte of the section data) is displayed.
Len	The value of section_length is displayed.
CRC	The CRC value of the section is displayed.

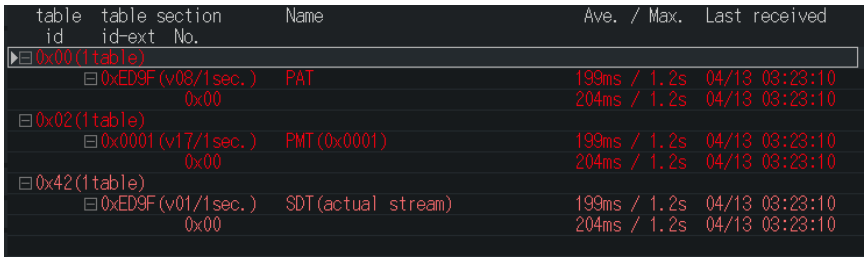
Functions

[F1]	Enter	Execute the reanalysis of the section data selected by the cursor. To return to the History screen from the Section Analysis screen, press the F5 "History" button.
[F2]	**Return to the Reacquisition Conditions**	Sets the conditions for acquiring sections with the same PID.
[F3]	PAGE↑	Scrolls the display up one page.
[F4]	PAGE↓	Scrolls the display down one page.

- The maximum number of histories that can be displayed is 1000.
- Depending on the search range conditions, it may take a few minutes or more to create the history list.

7.6. Table ID Tree

Displays a list of sections for each table ID in a tree format.



Screen Items

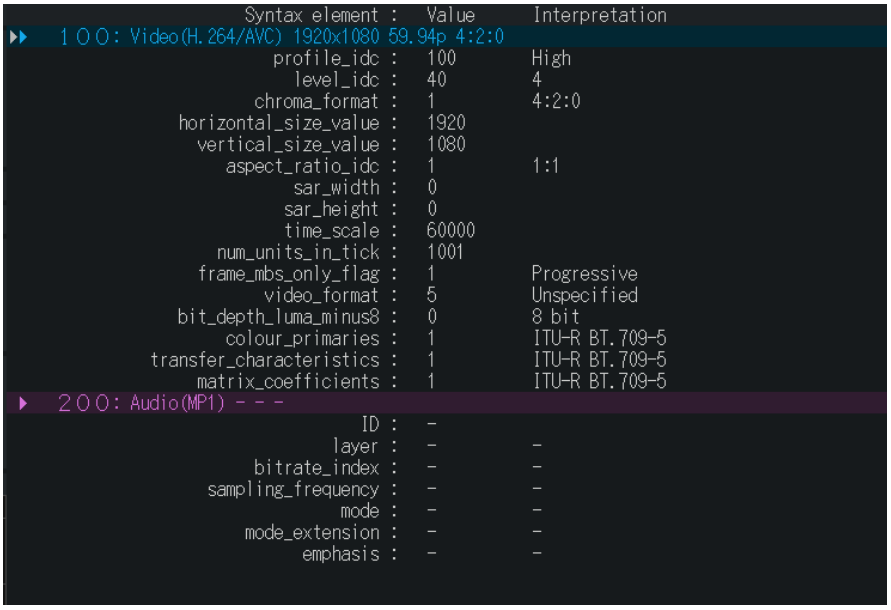
tableid	The value of the table ID will be displayed. The number of sections with the same table ID is displayed in parentheses.
tableid-ext	The value of table_id_extension (two bytes from the fourth to the sixth byte of the section data) is displayed. In parentheses, the version_number and the number of sections with the same table_id and table_id_extension are displayed.
Section No.	The section number of the section with the corresponding table_id and table_id_extension will be displayed.
Name	The packet name of the packet that contains the corresponding section will be displayed.
Ave／Max	Displays the average and maximum values of the section reception cycle.
Last received	The date and time when the section was last received is displayed.

Functions

[F1]	Next Indicator	Switches between the tree with current_next_indicator=0 and the tree with current_next_indicator=1.
[F2]	Section Analysis	Performs section analysis for the section selected by the cursor.
[F3]	Layer[+]／[-]	Expands the tree.
[F4]	-	-
[F5]	Change Disp.	Switches the display contents of the section reception cycle. Ave/Max → Latest/Ave → …
[F6]	PAGE↑	Scrolls the display up one page.
[F7]	PAGE↓	Scrolls the display up one page.

7.7. CODEC Information

Displays the codec information of video and audio data.



Screen Items

Syntax element	Displays the name of the syntax element for each codec.
Value	The immediate value of the syntax element is displayed.
Interpretation	The interpreted value of the value listed in the syntax element is displayed.

Functions

[F1] Config	Displays the setting screen for the codec information change monitoring function.
[F2] Service＋	Switches the decode target to the next service.
[F3] Service－	Switches the decode target to the previous service.
[F4] Audio Select	Switches the target audio for decoding when multiple voices are included in a service.

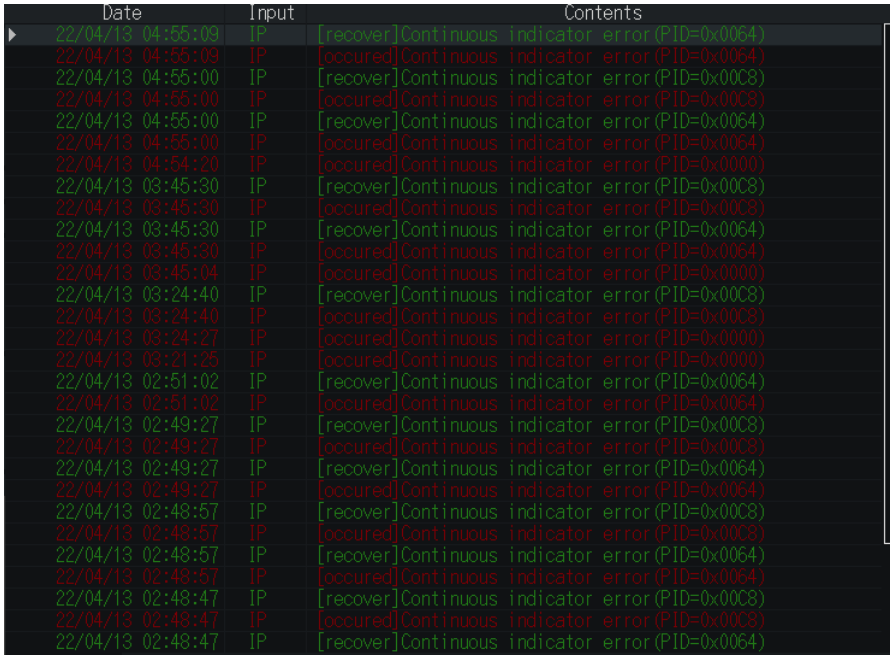
Supported codec Information

MPEG2 (ISO IEC 13818-2)	profile_and_level_indication chroma_format horizontal_size_value vertical_size_value aspect_ratio_information display_horizontal_size_value display_vertical_size_value horizontal_size_extensoin	vertical_size_extension frame_rate_code progressive_sequence video_format colour_primaries transfer_chracteristics matrix_coefficients
H.264/AVC (ITU-T REC H.264)	profile_idc level_idc chroma_format horizontal_size_value vertical_size_value aspect_ratio_idc sar_width sar_height time_scale	num_units_in_tick frame_mbs_only_flag video_format bit_depth_luma_minus8 colour_primaries transfer_characteristics matrix_coefficients
H.265/HEVC (ITU-T REC H.265)	general_profile_idc general_level_idc chroma_format horizontal_size_value vertical_size_value aspect_ratio_idc sar_width sar_height time_scale	num_units_in_tick source_scan_type video_format bit_depth_luma_minus8 colour_primaries transfer_characteristics matrix_coefficients
AAC (ADTS) (ISO IEC 13818-7 ADTS 形式)	ID Profile sampling_frequency channel_configuration protection_absent	
AAC (LATM) (ISO IEC 14496-3 LATM/LOAS 形式)	format audioObjectType sampigFrequencyIndex extensionAudioObjectType extensionSamplingFrequencyIndex channelConfiguration sbrPresentFlag	

If the material is scrambled, the codec information will not be displayed.

8. Event Log

The monitoring error events and various operation events are displayed in chronological order.



Date	Input	Contents
22/04/13 04:55:09	IP	[recover]Continuous indicator error(PID=0x0064)
22/04/13 04:55:09	IP	[occured]Continuous indicator error(PID=0x0064)
22/04/13 04:55:00	IP	[recover]Continuous indicator error(PID=0x00C8)
22/04/13 04:55:00	IP	[occured]Continuous indicator error(PID=0x00C8)
22/04/13 04:55:00	IP	[recover]Continuous indicator error(PID=0x0064)
22/04/13 04:55:00	IP	[occured]Continuous indicator error(PID=0x0064)
22/04/13 04:54:20	IP	[occured]Continuous indicator error(PID=0x0000)
22/04/13 03:45:30	IP	[recover]Continuous indicator error(PID=0x00C8)
22/04/13 03:45:30	IP	[occured]Continuous indicator error(PID=0x00C8)
22/04/13 03:45:30	IP	[recover]Continuous indicator error(PID=0x0064)
22/04/13 03:45:30	IP	[occured]Continuous indicator error(PID=0x0064)
22/04/13 03:45:04	IP	[occured]Continuous indicator error(PID=0x0000)
22/04/13 03:24:40	IP	[recover]Continuous indicator error(PID=0x00C8)
22/04/13 03:24:40	IP	[occured]Continuous indicator error(PID=0x00C8)
22/04/13 03:24:27	IP	[occured]Continuous indicator error(PID=0x0000)
22/04/13 03:21:25	IP	[occured]Continuous indicator error(PID=0x0000)
22/04/13 02:51:02	IP	[recover]Continuous indicator error(PID=0x0064)
22/04/13 02:51:02	IP	[occured]Continuous indicator error(PID=0x0064)
22/04/13 02:49:27	IP	[recover]Continuous indicator error(PID=0x00C8)
22/04/13 02:49:27	IP	[occured]Continuous indicator error(PID=0x00C8)
22/04/13 02:49:27	IP	[recover]Continuous indicator error(PID=0x0064)
22/04/13 02:49:27	IP	[occured]Continuous indicator error(PID=0x0064)
22/04/13 02:48:57	IP	[recover]Continuous indicator error(PID=0x00C8)
22/04/13 02:48:57	IP	[occured]Continuous indicator error(PID=0x00C8)
22/04/13 02:48:57	IP	[recover]Continuous indicator error(PID=0x0064)
22/04/13 02:48:57	IP	[occured]Continuous indicator error(PID=0x0064)
22/04/13 02:48:47	IP	[recover]Continuous indicator error(PID=0x00C8)
22/04/13 02:48:47	IP	[occured]Continuous indicator error(PID=0x00C8)
22/04/13 02:48:47	IP	[recover]Continuous indicator error(PID=0x0064)

Screen Items

Date	The time when the log was generated (system time) is displayed.
Input	The input source from which the log was generated is displayed.
Contents	Displays the contents of the generated log. The display color indicates the log level. Red Indicates that this is an error occurrence log. Green Indicates that this is an error recovery (normal) log. Yellow Indicates that this is a warning level log. White Indicates that this is an information log. The log level assignment for the content can be changed in the monitoring settings. For details, see "9. Monitoring Settings".

Functions

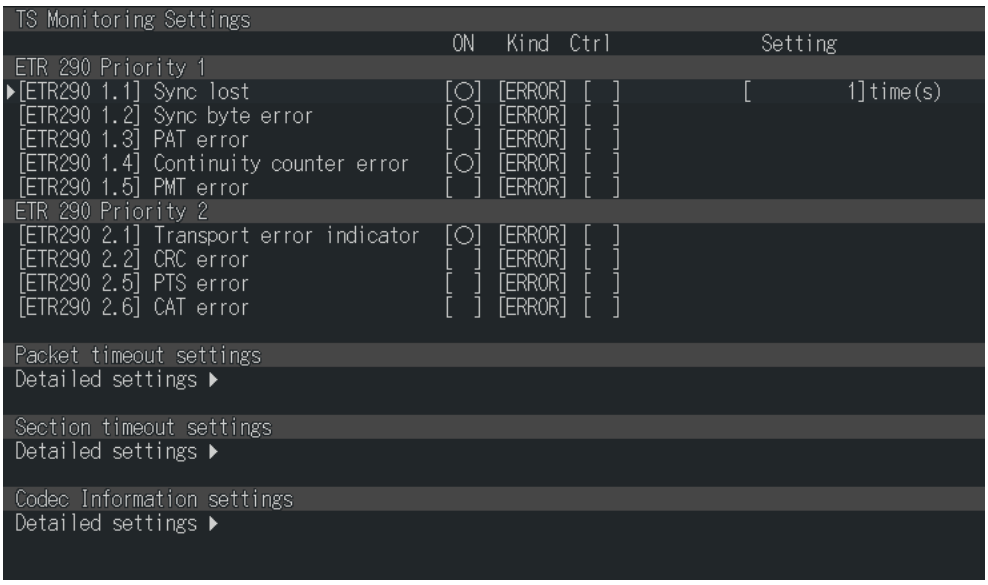
[F1] PAGE↑	Scrolls the display up one page.
[F2] PAGE↓	Scrolls the display down one page.
[F3] ↓↑	Moves the cursor to the beginning or end of the log.
[F4] A→Z／Z→A	Changes the order of log display in ascending or descending order.
[F6] Log Clear	Deletes the currently held log.
[F7] Change Disp.	Maximize the display of the log message area.

9. Monitoring Settings

Watch Config.

TS Monitoring Settings	・ON／OFF　Turn monitoring on or off ・Preset List　Select the preset monitoring settings. ・[Config]　Set the detailed items.
Log Stopping Mode	Configuring conditions can suppress a large number of logs. You can apply the suppression process for each individual monitoring item.
Export metrics data to external services	Configure settings for metrics output to external services. Select OFF to not output metrics to external services.
Metrics aggregation interval	Sets the interval at which metrics are output to external services. Metrics are aggregated and output at the specified interval.

9.1. Specific monitoring settings



Screen Items

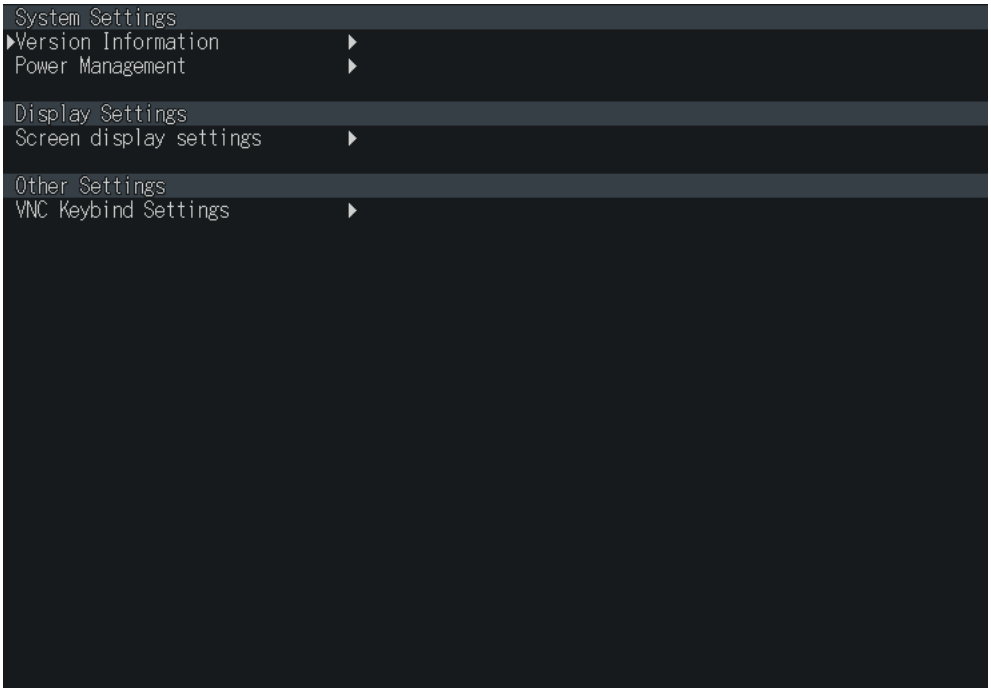
ON	Displays whether monitoring is on or off. A blank space indicates off.
Kind	Displays the log level.
Ctrl	Displays whether the log suppression process is on or off. A blank space indicates off.
Setting	Displays the threshold value.

Functions

[F1] Enable/Disable	Turn monitoring on or off for the item selected with the cursor.
[F2] Status kind	Selects the log level of the item selected by the cursor.
[F3] Control	Turn on or off the log suppression for the item selected by the cursor.
[F6] PAGE↑	Scrolls the display up one page.
[F7] PAGE↓	Scrolls the display up one page.

Refer to "11.1. List of monitoring settings" for the monitoring items that can be set.

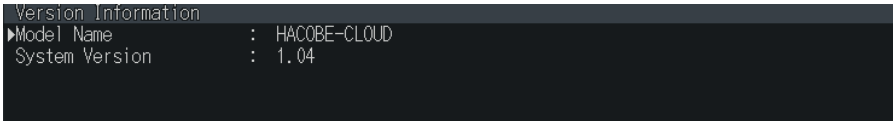
10. System settings



Screen Items

Version Information	Displays the version information of the system's software.
Power Management	Power off and reboot the system.
Screen display settings	Allows you to set the general screen display settings.
Keybind settings	Configure settings for keybind.

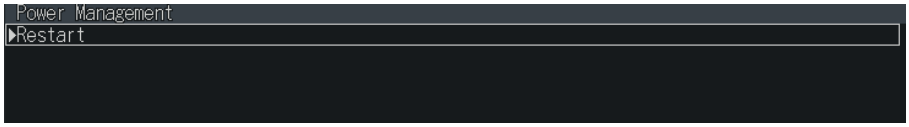
10.1. Version Information



Screen Items

Model Name	Displays the this product name.
System Version	Displays the version of the system software.

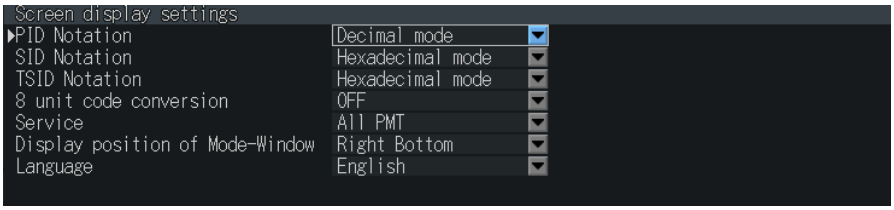
10.2. Power Management



Screen Items

Program Reset	Restart the program.

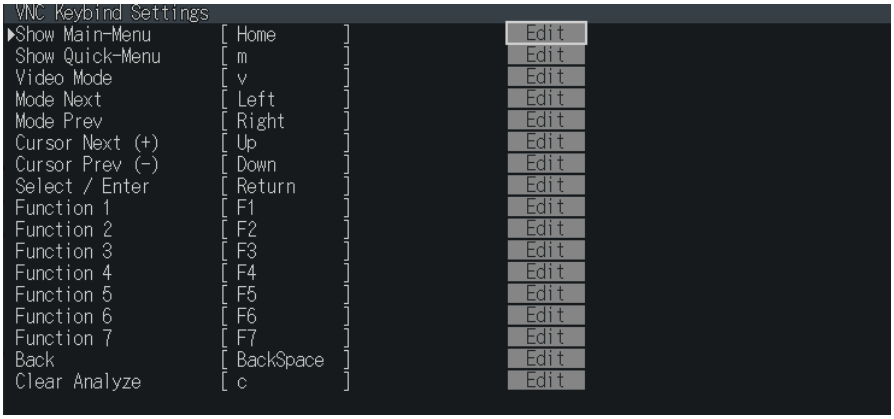
10.3. Screen display settings



Screen Items

PID Notation	Select the display format of packet ID.
SID Notation	Selects the display format of the service ID.
TSID Notation	Selects the display format of TSID.
8-unit code conversion	Applies 8-unit code conversion to characters used in service names, etc.
Service	Selects the display setting for services not listed in PAT (PMT).
Display position of Mode-Window	Sets the display position of the mode selection window.
Language	Selects the display language to be used for screen display. Restart the program to change the settings.

10.4. Keybind Settings



Screen Items

VNC Keybind Settings	It is possible to assign the main unit panel operations to the PC keyboard. After pressing the [Edit] button for the desired operation, press the key on the PC you want to assign the operation to.

11. Appendix

11.1. List of monitoring settings

TS Monitoring Settings

Item Name	Occurence	message	Remarks
Sync lost	TS is not in sync	Synchronization lost	ETR290 1.1
Sync byte error	Synchronous byte is not “0x47”	Synchronous byte error	ETR290 1.2
PAT error	・PID=0x0000 is not detected every 0.5 seconds. ・PID=0x0000 does not contain PAT. ・The transport_scrambling_control of TS packet with PID=0x0000 is not ‘00’.	PAT error	ETR290 1.3
continuity counter error	continuity_counter is not continued	Continuous indicator error	ETR290 1.4
PMT error	・PID of PMT (table_id=0x02) specified by PAT is not detected every 0.5 seconds. ・transport_scrambling_control of PID containing table_id=0x02 is not ‘0’.	PMT error	ETR290 1.5
transport indicator error	transport_error_indicator is ‘1’	Transport indicator error	ETR290 2.1
CRC error	CRC value is different	CRC error	ETR290 2.2
PTS error	PTS cycle is 700ms or more	PTS error	ETR290 2.5
CAT error	・Contents of the section is CAT, when transport_scrambling_control is not ’ 00’, ・Table_id other than 0x01 is found at PID=0x0001.	CAT error	ETR290 2.6
Packet timeout settings	Packets with the specified PID are not detected for the configured time.	Packet timeout	
Section timeout settings	The specified section is not detected for the set time.	Section timeout	

Codec information change monitoring setting

Item Name	Occurence	message	remarks
Detects changes in the items listed in "CODEC Information7.7. CODEC Information".			

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