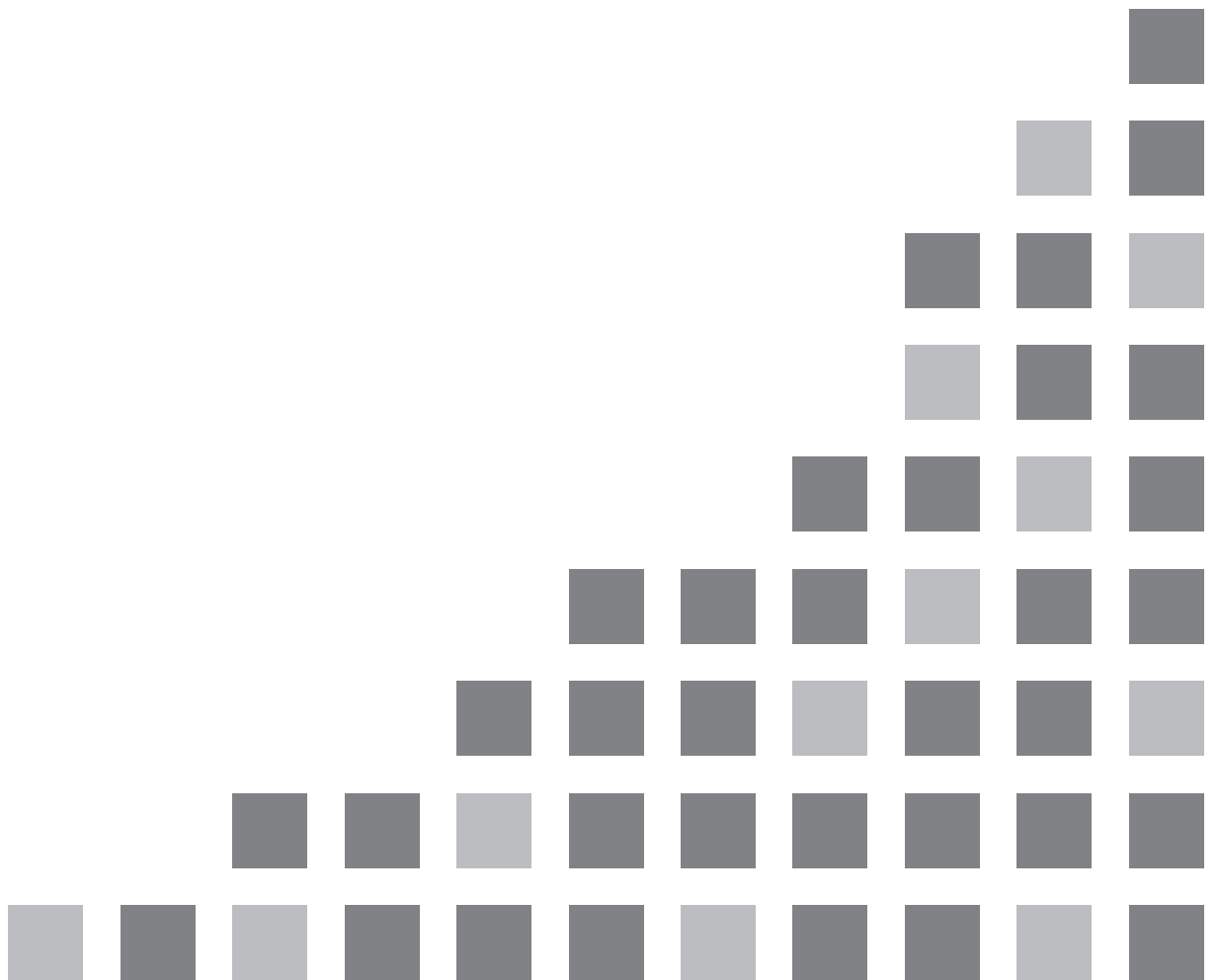


Panasonic

User Guide

AV-HS6000 Series Plug-in Software



Contents

Introduction	3
Registration and Launch Setting	3
AUX_IP(V3.XX)	4
<Overview>	4
<Setup>	4
<Configuration>	4
GVG200(V3.XX)	6
<Overview>	6
<Setup>	6
<Configuration>	6
<GVG200 Protocol>	6
TALLY(V3.XX)	11
<Overview>	11
<Setup>	11
<Configuration>	11
<TSL UMD V3.1 Mapping>	12
P2_Control(V3.XX)	14
<Overview>	14
<Setup>	14
<Configuration>	14
<Functions>	14
External_Control(V3.XX)	15
<Overview>	15
<Setup>	15
<Configuration>	15
<Command specifications>	16
CAM_Control(V1.XX)	17
<Overview>	17
<Setup>	17
<Configuration>	17
<Functions>	17
Macro Trigger IP	19
<Overview>	19
<Setup>	19
<Configuration>	19
<Command specifications>	20

Introduction

The AV-HS6000 series 2ME Live Switcher supports plug-in software that can be registered to include additional functionality.

The following types of plug-in software are available.

- **AUX_IP^{*1}**: Allows you to select AUX output material from a remote control panel (Venetex VS-R45) connected on the network.
- **GVG200^{*1}**: Allows you to control GVG200-protocol compliant devices connected to the serial port (RS-422) on the switcher.
- **TALLY^{*1}**: Allows you to output tally information in serial communication format compatible with TSL UMD Protocol V3.1.
- **P2_Control**: Allows you to connect P2 devices via a serial communication format (RS-422) and control operations such as recording and playback.
- **External Control**: Allows you to switch buses and transmit/receive material name information between external devices connected to the network. You can also switch the SourceLink settings (Master/Slave) from external devices.
- **CAM_Control**: Allows you to perform pan, tilt, preset playback, and other controls for remote cameras connected to the network.

*1) Preinstalled in system version 1.XX.

Registration and Launch Setting

You can register, delete, and set launch settings for plug-in software by pressing the <PLUG IN> button in the top menu and selecting [PLUGIN Maint]→[Configuration]/[Load] tab. For details, refer to the AV-HS6000 series User Guide.

Note:

- 1) The plug-in software registration and launch setting functions are enabled in V2.00.00 and later of the device software.
The plug-in software cannot be registered in versions earlier than V2.00.00.
- 2) Launching of the plug-in software is enabled in V3.00.00 and later of the device software. The plug-in software will not launch, even if it is registered in device software versions earlier than V3.00.00. You can determine whether the plug-in has launched properly based on whether the plug-in menu appears.
- 3) Multiple instances of the same plug-in software cannot be registered and used. If an older version of the plug-in software is already registered, delete it before registering this plug-in software.
- 4) Use the plug-in after the AV-HS6000 mainframe's power reboots with the launch setting set to [Enable on boot] is ON.
- 5) CAM_Control and Macro Trigger IP can be used in V4.00.00 and later of the device software.

AUX_IP(V3.XX)

<Overview>

AUX IP software is a plug-in for the AV-HS6000 series 2ME Live Switcher. It allows you to select the following buses from a remote control panel (Venetex VS-R45) connected to the network.

- AUX output
- PGM and PVW of each ME
- Fill and Source of KEY1 to KEY4 of each ME
- UTIL1/2 output of each ME
- Fill and Source for DSK1 to DSK4
- Fill and Source for DISP and VMEM

[PGM / PVW] button

When any of the AUX1 to AUX16 buses of the AV-HS6000 are configured for the VS-R45 AUX1 to AUX4 bus switch labels, you can switch configured AUX bus crosspoints to DSK PGM1 / DSK PVW1 by pressing the [PGM / PVW] button of the VS-R45.

[AUTO] button

- When any of the ME1KEY1 to KEY4, ME2KEY1 to KEY4, or Fill or Source of DSK1 to 4 buses of the AV-HS6000 are configured for the VS-R45 KEY, PinP1, PinP2, DSK1, or DSK2 bus switch labels, you can transition between ON/OFF for the configured key bus key by pressing the [AUTO] button of the VS-R45.
- When any of the AUX1 to AUX4 buses of the AV-HS6000 are configured for the VS-R45 AUX1 bus switch label, you can transition between ON/OFF for the configured AUX bus by pressing the [AUTO] button of the VS-R45.
- When any of the ME1PGM, ME1PVW, ME2PGM, or ME2PVW buses of the AV-HS6000 are configured for the VS-R45 PGM/A and PST/B bus switch labels, you can perform BKGD AUTO transitions for the configured ME by pressing the [AUTO] button of the VS-R45.
* If different ME are configured for PGM/A and PST/B, BKGD AUTO will be performed for the ME configured for PST/B.

<Setup>

Connect the VS-R45 to the LAN port on the rear panel of the AV-HS60U1/AV-HS60U2 using a LAN cable.

A single plug-in can support six VS-R45 units. If connecting to multiple VS-R45 units, connect the units using a distribution hub. Configure the VS-R45 units for use with an AV-HS450.

<Configuration>

1. Display the AUX_IP plug-in registered number menu.
 - Press the <PLUG IN> button in the top menu and select [Plugin 1-6]→[AUX_IP] tab.
2. Configure the AUX_IP plug-in network.
 - Configure the receive port number of the AV-HS60U1/AV-HS60U2 in the Port No column. The value is "60020" (fixed).
3. Configure the IP address of VS-R45.

In the [AUX_IP IP Address1] to [AUX_IP IP Address3] columns, configure the IP addresses for the six VS-R45 units to be connected.

Associate the columns that correspond to the Convert1 to 11 VS-R45 bus switch labels and AUXPT1 to 32 with AV-HS6000 AUX buses and materials for each of the VS-R45 units (AUX_IP1 to 6) corresponding to the IP addresses configured in this menu.

4. Configure the columns that correspond to the Convert1 to 11 VS-R45 bus switch labels for each of the six VS-R45 units (AUX_IP1 to AUX_IP6). Configure the target AUX_IP1 to 6 in the [AUX_IP] column, and configure the AV-HS6000 buses in the columns corresponding to the Convert1 to 11 VS-R45 bus switch labels.

AV-HS6000 bus	Assignable buses
AUX	No Assign, AUX1 to 16
ME1	No Assign, PGM, PVW, KEY1 F, KEY1 S to KEY4 F, KEY4 S, UTIL1, UTIL2
ME2	No Assign, PGM, PVW, KEY1 F, KEY1 S to KEY4 F, KEY4 S, UTIL1, UTIL2
DSK	No Assign, KEY1 F, KEY1 S to KEY4 F, KEY4 S
Other	No Assign, DISP, VMEM F, VMEM S

Configure the [AUX XPT1] to [AUX XPT32] columns for each of the six VS-R45 units (AUX_IP1 to AUX_IP6). Configure the target AUX_IP1 to 6 in the AUX_IP column, and configure the material corresponding to the VS-R45 crosspoint buttons in the [AUX XPT1] to [AUX XPT32] column.

AV-HS6000 material	Assignable buses
Input 1-20	No Assign, SDI IN1 to SDI IN20
Input 21-32	No Assign, SDI IN21 to SDI IN32, DVI IN1, DVI IN2
Internal Source	No Assign, Still 1V, Still 1K to Still 4V, Still 4K, Clip 1V, Clip 1K to Clip 4V, Clip 4K, CBGD 1, CBGD 2, CBAR, Black
MEOut	No Assign, ME1PGM, ME1PVW, ME1CLN, ME1KEYPVW, ME2PGM, ME2PVW, ME2CLN, ME2KEYPVW, DSKPGM1, DSKPGM2, DSKPVW1, DSKPVW2, DSK1CLN to DSK4CLN, SEL_KEYPVW
MV / Special	No Assign, MV1, MV2, MV3, MV4

GVG200(V3.XX)

<Overview>

GVG200 software is a plug-in for the AV-HS6000 series 2ME Live Switcher. It allows you to control GVG200-protocol compliant devices connected to the serial port (RS-422) on the switcher.

- Bus switching
- Button triggers (push-button control)
- Pattern switching
- Transition configuration

<Setup>

Connect a GVG200-protocol compliant device to one of the ports(COM1 to COM4) on the rear panel of the AV-HS60U1/AV-HS60U2. For details about the pin assignment, refer to the AV-HS6000 series User Guide.

<Configuration>

1. Display the GVG Protocol plug-in registered number menu.
 - 1) Press the <PLUG IN> button in the top menu and select [Plug-in 1-6]→[GVG200] tab.
2. Configure the serial transmission setting in the Setting column.

Port	Select the main frame COM port (MF-COM1 to MF-COM4).
------	--

*1) Communication settings (fixed): 8-bit data, 1 stop bit, odd parity, 38k4 baud

*2) Do not set the same port as used by other plug-in.

<GVG200 Protocol>

1. Overview
 - Communication is compatible with the GVG200 protocol.
 - The write command response will be one of the following two bytes.
0x0180: ACK response
0x0140: NAK response
 - The read command response uses the write command format.
 - Break command (Break signal)
AV-HS6000 series devices can receive each command without using the break command.

2. Bus switching
 - Crosspoint Bus Command (write command)
Selects the material on the PGM, PVW, and other buses.

Switcher Function	Byte Count	Effects Address	Command Code	Message
Program Bus	03	ME1:01 ME2:02	C1	Crosspoint#
Preset Bus	03	ME1:01 ME2:02	C2	Crosspoint#
Key1 Bus (Fill)	03	ME1:01 ME2:02	C3	Crosspoint#
Key2 Bus (Fill)	03	ME1:01 ME2:02	C4	Crosspoint#
Key3 Bus (Fill)	03	ME1:01 ME2:02	D1	Crosspoint#
Key4 Bus (Fill)	03	ME1:01 ME2:02	D2	Crosspoint#
DSK1 Bus (Fill)	03	00	C1	Crosspoint#
DSK2 Bus	03	00	C2	Crosspoint#
DSK3 Bus	03	00	C3	Crosspoint#
DSK4 Bus	03	00	C4	Crosspoint#
AUX1 Bus	03	07	C1	Crosspoint#
to	to	to	to	to
AUX16 Bus	03	07	D0	Crosspoint#

- Crosspoint Bus Command (read command)

Obtains the selection status of material on the PGM, PVW, and other buses.

Switcher Function	Byte Count	Effects Address	Command Code	Message
Program Bus	02	ME1:01 ME2:02	41	-
Preset Bus	02	ME1:01 ME2:02	42	-
Key1 Bus (Fill)	02	ME1:01 ME2:02	43	-
Key2 Bus (Fill)	02	ME1:01 ME2:02	44	-
Key3 Bus (Fill)	02	ME1:01 ME2:02	51	-
Key4 Bus (Fill)	02	ME1:01 ME2:02	52	-
DSK1 Bus (Fill)	02	00	41	-
DSK2 Bus (Fill)	02	00	42	-
DSK3 Bus (Fill)	02	00	43	-
DSK4 Bus (Fill)	02	00	44	-
AUX1 Bus	02	07	41	-
to	to	to	to	to
AUX16 Bus	02	07	50	-

<Crosspoint#>

Crosspoint#	Source	
00h to 1Fh	SDI IN1 to 32	
20h to 21h	DVI IN1 to 2	
30h	Still1V	
31h	Still1K	
32h	Still2V	
33h	Still2K	
34h	Still3V	
35h	Still3K	
36h	Still4V	
37h	Still4K	
40h	Clip1V	
41h	Clip1K	
42h	Clip2V	
43h	Clip2K	
44h	Clip3V	
45h	Clip3K	
46h	Clip4V	
47h	Clip4K	
50h	Color Bar	
51h	Color BackGround1	
52h	Color BackGround2	
53h	Black	
60h	ME1PGM	*1
61h	ME1PVW	*1
62h	ME1CLN	*1
63h	ME1KEYPVW	*1

Crosspoint#	Source	
64h	ME2PGM	*1
65h	ME2PVW	*1
66h	ME2CLN	*1
67h	ME2KEYPVW	*1
68h	DSKPGM1	*1
69h	DSKPGM2	*1
6Ah	DSKPVW1	*1
6Bh	DSKPVW2	*1
6Ch	DSK1CLN	*1
6Dh	DSK2CLN	*1
6Eh	DSK3CLN	*1
6Fh	DSK4CLN	*1
70h	SEL_KEYPVW	*1

*1: Selectable using an AUX bus only.

3. Button Trigger (Transition Pushbutton Select Command)

Performs the same operation as a button push on the panel (if in the On state, pushing the button transitions to the Off state, and vice versa).

Switcher Function	Byte Count	Effects Address	Command Code	Message
Auto	03	ME1:01 ME2:02	FB	1B
Cut	03	ME1:01 ME2:02	FB	1C
DSK1 Trans	03	00	FB	18
DSK2 Trans	03	00	FB	19
DSK3 Trans	03	00	FB	1A
DSK4 Trans	03	00	FB	1B
KEY1 Trans	03	00	FB	20
KEY2 Trans	03	00	FB	21
KEY3 Trans	03	00	FB	22
KEY4 Trans	03	00	FB	23
FTB	03	00	FB	1F

4. Pattern Switching (Wipe Pattern Select Command)

Selects a BKGD wipe pattern.

Function	Byte Count	Effects Address	Command Code	Message
Wipe Pattern	03	ME1:01 ME2:02	C8	Wipe No#

“Wipe No” is the number displayed in the wipe pattern icon on the wipe pattern screen on the AV-HS6000 series menu display.

5. Transition Configuration

- Transition mode (Transition Mode Control Command)

Selects the transition target (BKGD, KEY1-4).

Function	Byte Count	Effects Address	Command Code	Message
Transition Mode Control Command	03	ME1:01 ME2:02	CA	Mode Byte

Mode Byte

Bit 7 (MSB)	Don't Care
Bit 6	Don't Care
Bit 5	Don't Care
Bit 4	0=KEY4 unselected, 1=KEY4 selected
Bit 3	0=KEY3 unselected, 1=KEY3 selected
Bit 2	0=BKGD unselected, 1=BKGD selected
Bit 1	0=KEY1 unselected, 1=KEY1 selected
Bit 0 (LSB)	0=KEY2 unselected, 1=KEY2 selected

- Auto transition time (Transition Rate Control Command)

Configures the BKGD, KEY, DSK, and AUX transitions.

Function	Byte Count	Effects Address	Command Code	Message
BKGD, KEY1-4	05	ME1:01 ME2:02	CC	Rate Bytes
DSK1-4	05	00	CC	Rate Bytes
AUX1-4	05	07	CC	Rate Bytes

The transition time can be configured by specifying a duration of 0-999 frames.

If none of the BKGD and KEY1-4 commands are selected, all are presumed to be selected (BKGD, KEY1-4).

Rate Bytes

Byte 1: Indicates the designated target and 1st time digit (10² digit).

Bit 7 (MSB)	0=time change only (fixed)
Bit 6	0=BKGD unselected, 1=BKGD selected
Bit 5	KEY1/DSK1/AUX1: 0=unselected, 1=selected
Bit 4	KEY2/DSK2/AUX2: 0=unselected, 1=selected
Bit 3 to Bit 0 (LSB)	1st time digit (10 ² digit) value 0-9 (0000 to 1001)

Byte 2: Indicates the designated target and 2nd time digit (10¹ digit).

Bit 7 (MSB)	Don't Care
Bit 6	Don't Care
Bit 5	KEY3/DSK3/AUX3: 0=unselected, 1=selected
Bit 4	KEY4/DSK4/AUX4: 0=unselected, 1=selected
Bit 3 to Bit 0 (LSB)	2nd time digit (10 ¹ digit) value 0-9 (0000 to 1001)

Byte 3: Indicates the designated target and 3rd time digit (10^0 digit).

Bit 7 (MSB)	Don't Care
Bit 6	Don't Care
Bit 5	Don't Care
Bit 4	Don't Care
Bit 3 to Bit 0 (LSB)	3rd time digit (10^0 digit) value 0-9 (0000 to 1001)

TALLY(V3.XX)

<Overview>

This software is a plug-in for the AV-HS6000 series 2ME Live Switcher. It allows you to output tally information and Source ID information in serial communication format compatible with TSL UMD Protocol V3.1.

For IDs 71 to 86, 98, 99, 102, 103, 114, 115, 116, and 117, transmission with the name of the material selected for the corresponding bus assigned is possible. Assignment of the selected material name can be performed via the plug-in menu.

<Setup>

Connect a tally generator to one of the ports (COM1 to COM4) on the rear panel of the AV-HS60U1/AV-HS60U2. For details about the pin assignment, refer to the AV-HS6000 series User Guide.

<Configuration>

1. Display the TALLY Control plug-in registered number menu.
Press the <PLUG IN> button in the top menu and select [Plugin 1-6]→[TALLY] tab.
2. Configure the serial transmission setting in the Port Setting column.

Port	Select the main frame COM port (MF-COM1 to MF-COM4).
Timing	Set the interval between retransmissions in the range 1 to 10 seconds.

*1) Communication settings (fixed): 8-bit data, 1 stop bit, even parity, 38k4 baud

*2) Do not set the same port as used by other plug-in.

3. Specify the IDs for TSL UMD V3.1 in the Status and Tally columns to check the transmission data.
Status column

ID	Set the ID for TSL UMD v3.1 in the range 0 to 126.
Source ID	Displays the Source ID corresponding to the specified ID parameter.
Source Name	Displays the Source Name corresponding to the specified ID parameter.

* For the materials for IDs 71 and later, the source names specified via User will not be applied.

4. Tally column

Tally1 to Tally4	Displays tally information for Tally Group1 to Tally Group4 corresponding to the specified ID parameter.
Test	Setting Test to ON transmits the Tally1 to Tally4 information for the specified ID parameter for testing.

5. In the [Reentry Display] column, enable/disable (ON/OFF) assignment of the name of the material selected for the corresponding bus.

PGM/PVW	When disabled, the names of the materials selected for bus IDs 98, 99, 102, 103, 114, 115, 116, and 117 will not be assigned.
AUX	When disabled, the names of the materials selected for bus IDs 71 to 86 will not be assigned.

* The default setting is ON.

<TSL UMD V3.1 Mapping>

Header (1 byte)	ID (0 to 126)	Source ID
ID (0 to 126) +80h	0	-
	1-32	SDIIN1-32
	33-34	DVIIN1,2
	35-50	-
	51	CBGD1
	52	CBGD2
	53	CBAR
	54	Black
	55-62	Still1-4V/K
	63-70	CLIP1-4V/K
	71-86	AUX1-16-"Panel Name of selected material" (ON/OFF of the name of the selected material can be performed with MENU)
	87-97	-
	98	ME1PGM-"Panel Name of selected material" (ON/OFF of the name of the selected material can be performed with MENU)
	99	ME1PVW-"Panel Name of selected material" (ON/OFF of the name of the selected material can be performed with MENU)
	100	ME1CLN
	101	ME1KEYPVW
	102	ME2PGM-"Panel Name of selected material" (ON/OFF of the name of the selected material can be performed with MENU)
	103	ME2PVW-"Panel Name of selected material" (ON/OFF of the name of the selected material can be performed with MENU)
	104	ME2CLN
	105	ME2KEYPVW
	106-113	-
	114	DSKPGM1-"Panel Name of selected material" (ON/OFF of the name of the selected material can be performed with MENU)
	115	DSKPGM2-"Panel Name of selected material" (ON/OFF of the name of the selected material can be performed with MENU)
	116	DSKPVW1-"Panel Name of selected material" (ON/OFF of the name of the selected material can be performed with MENU)
	117	DSKPVW2-"Panel Name of selected material" (ON/OFF of the name of the selected material can be performed with MENU)
	118	DSK1CLN
	119	DSK2CLN
	120	DSK3CLN
	121	DSK4CLN
	122	SEL_KEYPVW
123-126	MV1-4	

Control (1 byte)	Bit0: Tally Group1 (1=On, 0=Off) Bit1: Tally Group2 (1=On, 0=Off) Bit2: Tally Group3 (1=On, 0=Off) Bit3: Tally Group4 (1=On, 0=Off) Bit4: 1 Bit5: 1 Bit6: 0 Bit7: 0
Display Data (16 bytes)	Name of material on multi-view display

P2_Control(V3.XX)

<Overview>

This software is a plug-in for the AV-HS6000 series 2ME Live Switcher. It allows you to connect Panasonic P2 devices via a serial communication format (RS-422) and control operations such as recording and playback from the AV-HS6000.

<Setup>

Connect a P2 device to one of the ports (COM1 to COM4) on the rear panel of the AV-HS60U1/AV-HS60U2. For details about the pin assignment, refer to the AV-HS6000 series User Guide.

Only one P2 device can be connected per plug-in. By registering four instances of the plug-in, you can connect and control up to four P2 devices via COM1 to COM4.

To use COM4, set <SYS> button → [PERIPHERAL] → [General] tab → [MF COM4] column → [Master/Slave] to [Master].

<Configuration>

- Display the P2_Control plug-in registered number menu.
Press the <PLUG IN> button in the top menu and select [PlugIn #-#] → [P2_Control] tab.
- Specify the COM port of the mainframe to which the P2 device will be connected with [Port] of the [Port Setting].
Be sure to configure the setting so that it does not overlap with a COM port that is already configured for another plug-in.
If there is a conflict other plug-ins and COM ports, "conflict" will appear in [Connection] of the [Port Setting] column. "good" appears when there is not conflict.

<Functions>

- Verify the status of connected P2 devices in the [Status] column.

Remote	Remote	The P2 device is set to "remote." Control from the AV-HS6000 is possible.
	Local	The P2 device is set to "local." Control from the AV-HS6000 is not possible.
	---	The P2 device is not turned on, or it is not connected.
Operate	Displays the operation currently in progress on the connected P2 device.	

- Perform controls for connected P2 devices in the [Operation] column.

REW	Rewind
STOP	Stop recording or playback
FF	Fast forward
PLAY	Start playback
PAUSE	Pause playback
REC	Start recording
REC PAUSE	Pause recording

* The target files for control stored on the P2 device must be specified beforehand.

External_Control(V3.XX)

<Overview>

This software is a plug-in for the AV-HS6000 series 2ME Live Switcher. It allows you to switch materials for all buses on the AV-HS6000 and transmit/receive material name information between system controllers, tally lamp interfaces, and other external devices connected to the network. You can also switch the SourceLink settings (Master/Slave) from external devices.

You transmit/receive tally information and Source ID information in a communication format compatible with TSL UMD Protocol V5.0.

By connecting a Panasonic AW-RP120 remote control controller via IP connection, material switching for the AV-HS6000 buses, tally information transmission, focus assist, and material name acquisition via RP120 camera select.

* For details on control bus settings and other information, refer to the AW-RP120 operating instructions.

<Setup>

Connect the external device to the LAN port on the rear panel of the AV-HS60U1/AV-HS60U2 using a LAN cable.

A single plug-in can support up to 20 IP connection lines. If connecting to multiple external devices, connect the devices using a distribution hub. Configure the IP settings so that there is not overlap.

Verify the network settings for the AV-HS6000 in the <SYSTEM> button → [SYSTEM] → [NetWork] tab.

The default IP address and subnet mask are "192.168.0.5" and "255.255.255.0" respectively.

<Configuration>

1. Display the External Control plug-in registered number menu.
 - Press the <PLUG IN> button in the top menu and select [Plugin #-#] → [External_Control] tab.
2. Configure the External Control plug-in network.
 - Configure the receive port number of the AV-HS60U1/AV-HS60U2 in the [Switcher1] column. The default setting is 62000. The setting range is 62000 to 65535.
 - The command transmission interval is configured in [Transmission Interval] of the [Switcher2] column. The default setting is 16ms. The setting range is 0ms to 80ms.
3. Configure the IP address of the external device.

Specify the IP address of the external device to be connected in IP Address1-20 of the [AUX Panel1] to [AUX Panel10] columns.
4. Configure the receive port number of the external device in the [AUX Panel11] column.

The default setting is 65000. The setting range is 60000 to 65535.

When connecting an AW-RP120 remote camera controller, set this to 60031.
5. Note on the DMSG-CONTROL parameters for TSL UMD Protocol V5.0 commands.

During RH tally output, TallyGroup1 settings are output.

During TXT tally output, TallyGroup2 settings are output.

During LH tally output, TallyGroup3 settings are output.
6. To change material names for the control panel, you must set the [Type] for each input source column to [User] in the <CONF> button → [SOURCE NAME] → [Panel Name] tab.

Similarly, to change material names for the multi-view, you must set the [Type] for each input source column to [User] in the <CONF> button → [SOURCE NAME] → [MV Name] tab.

Material name changing for individual input sources is not possible via external control. Changes will be applied to all materials set to [User].

Material name changing can also be performed on the HS6000 menu, but the information changed later will be applied.

<Command specifications>

Refer to the AV-HS6000 External Interface Communication Protocol Specifications (separate document).

CAM_Control(V1.XX)

<Overview>

This software is a plug-in for the AV-HS6000 series 2ME Live Switcher. It allows you to perform pan, tilt, preset playback, and other controls for remote cameras connected to the network.

* As this software does not include basic or digest authentication functions, be sure to disable authentication functions on the remote camera side. * For details on the authentication settings, refer to the operating instructions for the remote camera.

<Setup>

Connect the remote cameras to the LAN port on the rear panel of the AV-HS60U1/AV-HS60U2 using a LAN cable.

A single plug-in can support up to 10 IP connection lines. If connecting to multiple remote cameras, connect the devices using a distribution hub. Configure the IP settings so that there is not overlap.

Verify the network settings for the AV-HS6000 in the <SYSTEM> button → [SYSTEM] → [Network] tab.

The default IP address and subnet mask are "192.168.0.5" and "255.255.255.0" respectively.

The supported remote camera models are as follows.

Supported models

- AW-HE130/AW-HE40/AW-UE70 series

<Configuration>

1. Display the number menu to which the CAM_Control plug-in is registered.
 - Press the <PLUG IN> button in the top menu and select [Plugin #-#] → [CAM_Control] tab.
2. Configure the IP addresses and port numbers of the remote cameras.
 - Configure the IP addresses and receiving port numbers of the remote cameras in [IP Address] and [Port] of the [CAM1] to [CAM2] columns. You can verify the following connection statuses in [Status].
 - Off: Not connected
 - Connect: Connected (remote camera in "Power ON" mode)
 - Standby: Connected (remote camera in "Standby" mode)
3. Select the camera you want to control.
 - Select the camera to control in [Cam Sel] of the [Camera Select] column. [CAM1] to [CAM10] correspond to [CAM1] to [CAM10] configured in step 2.

<Functions>

1. Play back preset memories.
 - Select the preset mode and preset speed in [Mode] of the [PMEM Recall] column. The mode and speed are values stored on the remote camera. For details, refer to the operating instructions for the remote camera.
 - Select the page in [Page] of the [PMEM Recall] column, and press the preset numbers ([MEM1] to [PMEM10]) in the [PMEM Recall1] and [PMEM Recall2] columns. When pressed, preset playback of the selected preset is performed on the remote camera.
2. Enable or disable auto focus.
 - Set [Auto Focus] to [ON] or [OFF] in the [Lens Control] column to toggle auto focus on the remote camera.
3. Enable or disable auto iris.
 - Set [Auto Iris] to [ON] or [OFF] in the [Lens Control] column to toggle auto iris on the remote camera.

4. Control the pan and tilt.
 - Set [Manual Cont] to [ON] in the [Manual Control] column, and operate the positioner lever*² on the switcher's panel to control the pan and tilt on the remote camera.
Select [Slow], [Middle], or [Fast] in [Speed] to adjust the pan/tilt speed.
5. Control the zoom.
 - Set [Manual Cont] to [ON] in the [Manual Control] column, select [Zoom] in [Lens], and operate the Z-axis dial*² on the switcher's panel to control the zoom.
Select [Slow], [Middle], or [Fast] in [Speed] to adjust the zoom speed.
6. Control the iris.
 - Set [Manual Cont] to [ON] in the [Manual Control] column, select [Iris] in [Lens], and operate the Z-axis dial*² on the switcher's panel to control the zoom.
Select [Slow], [Middle], or [Fast] in [Speed] to adjust the iris speed.

*2) When [Manual Cont] is set to [ON] in the [Manual Control] column, unintended remote camera controls will be performed via the positioner and Z-axis dial settings in the switcher's menu. Therefore, we recommend setting this to [OFF] when changing the settings in the switcher's menu.

Macro Trigger IP

<Overview>

This software is a plug-in for the AV-HS6000 series 2ME Live Switcher. Specified macro can be executed by receiving a specific command sent via the TCP/IP protocol from the external device connected to the network. Use 63000 for the TCP/IP port number.

<Setup>

Connect the external device that triggers macro execution on the network to the LAN port on the rear panel of the AV-HS60U1/AV-HS60U2 using a LAN cable.

A single plug-in can support up to 20 IP connection lines. If connecting to multiple external devices, connect the devices using a distribution hub. Configure the IP settings so that there is not overlap.

<Configuration>

1. Display the setup menu of this plug-in software.
 - Press the <PLUG IN> button in the top menu and select [Plugin 1-6] → [Macro Trgger IP] tab.
2. Set the IP address of the external device that triggers macro execution on the network and macro to be executed.
 - Up to 20 devices (Connect 1 to 20) can be registered.



3. Register macro to be executed on AV-HS6000. For details about macro registration, refer to the AV-HS6000 series User Guide.

<Command specifications>

This document describes the TCP/IP protocol commands transmitted/received between the external device and AV-HS6000.

When the macro setup command (401) is sent from the external device to AV-HS6000, the macro setup response command (451) is returned.

- Macro setup command (401) (the external device → AV-HS6000)

No.	Name		Size (byte)	Details
0	Start code		2	Fixed to "@S"
2	Source information	Device code	2	Upper 1 byte: device specific 0x19 fixed Lower 1 byte: device number (arbitrarily set from 1 to avoid duplication.)
4		PROTOCOL ID	1	Fixed to 0
5		Transaction ID	1	Set to an arbitrary value
6		IP address	4	IP address of the device
10		Port number	2	Device port number
12	Destination information	Device code	2	Upper 1 byte: device specific 0x02 fixed Lower 1 byte: device number (arbitrarily set from 1 to avoid duplication.)
14		PROTOCOL ID	1	Fixed to 0
15		Transaction ID	1	Set to an arbitrary value
16		IP address	4	IP address of the device
20		Port number	2	Device port number 63000=0xF618
22	Information section header	Control code	1	Fixed to 0
23		Number of controls	1	Fixed to 0
24		Data length	2	Fixed to 3
26	Information section data	Command	2	Macro setup 401=0x191
28		Data	1	Fixed to 0
29		Reserved	481	Fixed to 0
510	End code		2	Fixed to "@E"

● Macro setup response command (451) (AV-HS6000 → the external device)

No.	Name		Size (byte)	Details
0	Start code		2	Fixed to "@S"
2	Source information	Device code	2	Upper 1 byte: device specific 0x02 fixed Lower 1 byte: device number (arbitrarily set from 1 to avoid duplication.)
4		PROTOCOL ID	1	Fixed to 0
5		Transaction ID	1	Transaction ID of the destination when receiving the command
6		IP address	4	IP address of the device
10		Port number	2	Device port number 63000=0xF618
12	Destination information	Device code	2	Upper 1 byte: device specific 0x19 fixed Lower 1 byte: device number (arbitrarily set from 1 to avoid duplication.)
14		PROTOCOL ID	1	Fixed to 0
15		Transaction ID	1	Transaction ID of the source when receiving the command
16		IP address	4	IP address of the device
20		Port number	2	Device port number
22	Information section header	Control code	1	Fixed to 0
23		Number of controls	1	Fixed to 0
24		Data length	2	Fixed to 3
26	Information section data	Command	2	Macro setup response 451=0x1C3
28		Data	1	Fixed to 0
29		Reserved	481	Fixed to 0
510	End code		2	Fixed to "@E"