Compact Live Switcher
AW-HS50
Interface Specifications

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AVC Networks Company
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Contents

1. Configuration outline
These interface specifications describe the interface protocol between the AW-HS50 (multi-format compact live switcher) and external devices.
The interface enables bus switching and control of AUTO transition and other functions from an application which runs on the PC connected to the AW-HS50 through the network.

2. Switcher control
2.1. Communication settings
The configuration settings for communication with the AW-HS50 are given below.

- 10Base-T/100Base-T
- IPv4
- TCP/IP
- IP Address: Adjustable by menu (Factory setting:192.168.0.8)
- Subnet Mask: Adjustable by menu (Factory setting:255.255.255.0)
- Port No.:   60040
                        (fixed: connection to up to four ports concurrently is possible for the purposes of external control)
- Minimum command interval:
                        1 frame or more

For details on the configuration of the communication commands, refer to chapter 2, for details on the commands of the functions, refer to chapter 3.

2.2. Command configuration
A packet starts with [STX]0x02 and ends with [ETX]0x03.
A command consists of four characters which are followed by a colon (:) and the data.
With some commands, multiple sets of data follow one command, in which case the sets of data are each separated by a colon (:).
Numerical data is also sent using the ASCII format.

2.3. Command sequence

2.3.1. Control commands

Example: Bus selection setting
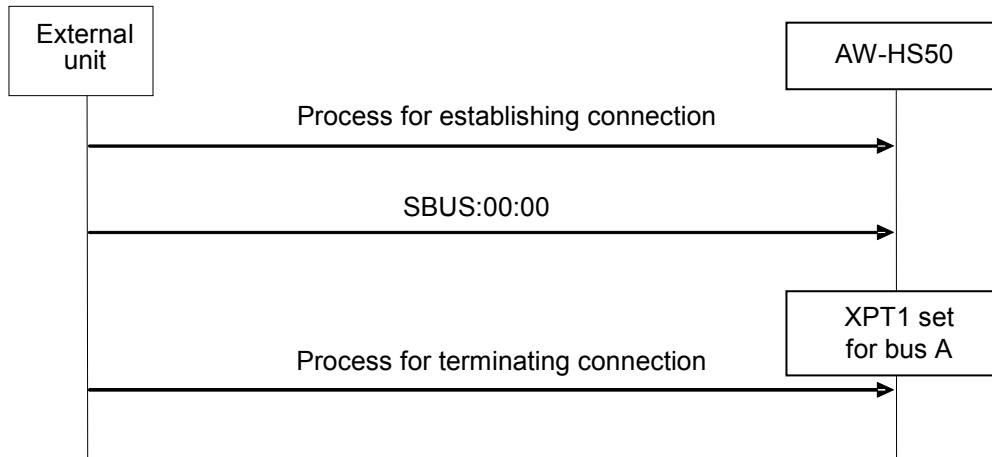
When XPT1 is set for bus A:

Fig.2.3.1. Sequence of control commands

2.3.2. Query commands

Example: Bus status query (XPT)

When XPT1 is set for bus A and a query is made when the tally is in the "Off" status:
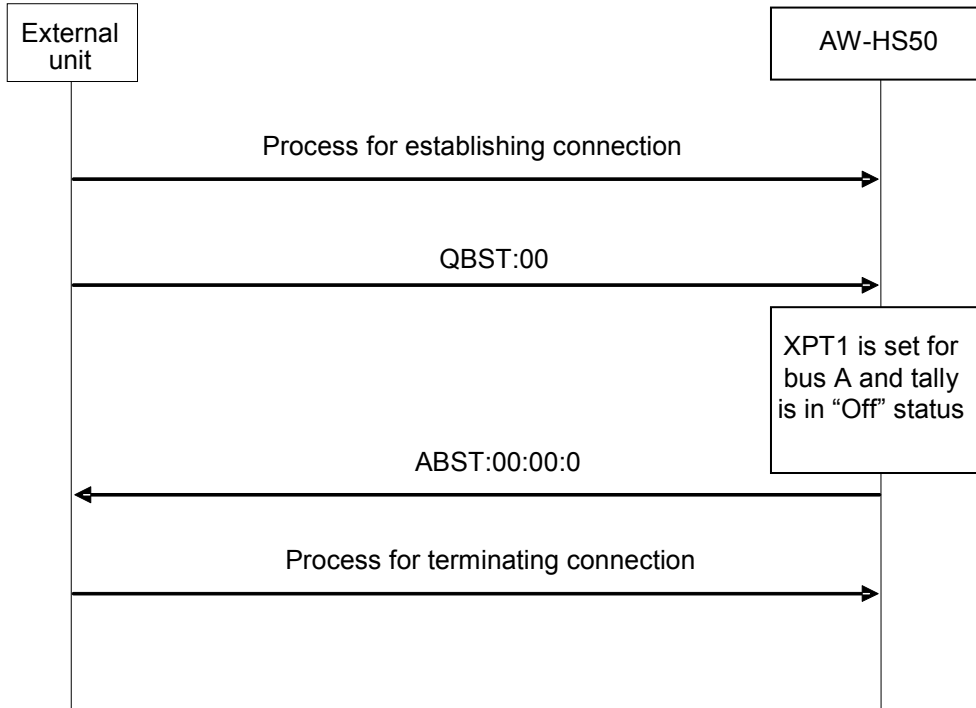

Fig.2.3.2. Sequence of query commands

3. Command details
The command format for reception and transmission is given below.

3.1. Command format

Format
<STX> Command name [:Parameter1] [:Parameter2] [:Parameter3] <ETX>

Format description
<STX> ....Start Of Text(=0x02)
Command name.....Refer to the table of commands below (each command consists of 4 letters).
[:Parameter1]..........Refer to the parameter values of the commands.
[:Parameter2]..........Refer to the parameter values of the commands.
[:Parameter3]..........Refer to the parameter values of the commands.
<ETX> ....End Of Text(=0x03)

3.2. List of commands

Table 3. List of commands

Command name	Function	Communication port
SBUS	Sets the bus selection.	60040
QBST	Queries the status of the bus concerned (Crosspoint).	60040
ABST	Returns the status of the bus concerned (Crosspoint).	60040
QBSC	Queries the status of the bus concerned (Input materials).	60040
ABSC	Returns the status of the bus concerned (Input materials).	60040
SAUT	Executes the BKGD, KEY, PinP and FTB auto transitions.	60040
SCUT	Sets the BKGD and KEY cut transitions.	60040

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3.3. Bus crosspoint control

This command exercises bus crosspoint control.

Command name	Category	Command	Parameter value	Setting	Remarks

Bus crosspoint control	Control	SBUS [:Parameter1] [:Parameter2]	[:Parameter1] :00
			
			:01
			
			:02
			
			:03
			
			:04
			:05
			:10
			:12
			
			[:Parameter2]
			:00
			≀
			:09
			:50
			≀
			:54
			:70
			:71
			:72
			:73
			:74
			:77
			:78
			:79
			:80
			:81
				Select the bus command
				  Bus A
				  (top side regardless of mode)
				  Bus B
				  (bottom side regardless of mode)
				  PGM
				  (PGM column regardless of mode)
				  PVW
				  (PVW column regardless of mode)
				  KEY-F
				  KEY-S
				  PinP
				  AUX
				
				Materials
				  XPT1
				  ≀
				  XPT10
				  INPUT1
				  ≀
				  INPUT5
				  Color bars
				  Color background
				  Black
				  Frame memory 1
				  Frame memory 2
				  PGM
				  PVW
				  KEYOUT
				  CLN
				  MULTI VIEW
					The QBST command or QBSC command is used when the current bus selection is to be acquired.

3.4. Bus crosspoint query

This command queries the crosspoints which have been taken by the buses.

Command name	Category	Command	Parameter value	Setting	Remarks
Bus crosspoint query	Request	QBST [:Parameter1]	[:Parameter1] :00 :01 :02 :03 :04 :05 :10 :11 :12 :16	Select the bus command Bus A (top side regardless of mode) Bus B (bottom side regardless of mode) PGM (PGM column regardless of mode) PVW (PVW column regardless of mode) KEY-F KEY-S PinP (transition destination) PinPS (transition source) AUX (transition destination) AUXS (transition source)	This command, which is the crosspoint query command, is returned by ABST. To ascertain the status of materials, use the QBSC command instead.
	Response	ABST [:Parameter1] [:Parameter2] [:Parameter3]	[:Parameter1] :00 :01 :02 :03 :04 :05 :10 :11 :12 :16 [:Parameter2] :00 ≀ :09 :99 [:Parameter3] :0 :1	Select the bus command Bus A (top side regardless of mode) Bus B (bottom side regardless of mode) PGM (PGM column regardless of mode) PVW (PVW column regardless of mode) KEY-F KEY-S PinP (transition destination) PinPS (transition source) AUX (transition destination) AUXS (transition source) Crosspoint XPT1 ≀ XPT10 No selection Tally information Tally Off Tally On	This command is returned in response to the QBST command.

3.5. Bus materials query

This command queries the materials which have been taken by the buses.

Command name	Category	Command	Parameter value	Setting	Remarks
Bus materials query	Request	QBSC [:Parameter1]	[:Parameter1] :00 :01 :02 :03 :04 :05 :10 :11 :12 :16	Select the bus command 　Bus A 　　(top side regardless of mode) 　Bus B 　　(bottom side regardless of mode) 　PGM 　　(PGM column regardless of mode) 　PVW 　　(PVW column regardless of mode) 　KEY-F 　KEY-S 　PinP (transition destination) 　PinPS (transition source) 　AUX (transition destination) 　AUXS (transition source)	This command, which is the materials query command, is returned by ABSC. To ascertain the status of crosspoints, use the QBST command instead.
	Response	ABSC [:Parameter1] [:Parameter2] [:Parameter3]	[:Parameter1] :00 :01 :02 :03 :04 :05 :10 :11 :12 :16 [:Parameter2] :50 　≀ :54 :70 :71 :72 :73 :74 :77 :78 :79 :80 :81 [:Parameter3] :0 :1	Select the bus command 　Bus A 　　(top side regardless of mode) 　Bus B 　　(bottom side regardless of mode) 　PGM 　　(PGM column regardless of mode) 　PVW 　　(PVW column regardless of mode) 　KEY-F 　KEY-S 　PinP (transition destination) 　PinPS (transition source) 　AUX (transition destination) 　AUXS (transition source) Materials 　INPUT1 　　≀ 　INPUT5 　Color bars 　Color background 　Black 　Frame memory 1 　Frame memory 2 　PGM 　PVW 　KEYOUT 　CLN 　MULTI VIEW Tally information 　Tally Off 　Tally On	This command is returned in response to the QBSC command.

3.6.   BKGD, KEY, PinP and FTB auto transition control command

This command controls the AUTO transitions (issues the triggers).

Command name	Category	Command	Parameter value	Setting	Remarks
AUTO transitions control (issues the triggers)	Control	SAUT [:Parameter1] [:Parameter2]	[:Parameter1] :00 :01 :04 :06 [:Parameter2] :0	Transition target settings 　　BKGD 　　KEY 　　PinP 　　FTB Operation setting 　　Trigger On 　　(issued when the regular AUTO 　　button is pressed)	This command results in the same operation as when the corresponding buttons on the panel have been pressed.

3.7.   BKGD and KEY cut transition control command

This command controls the cut transitions (issues the triggers).

Command name	Category	Command	Parameter value	Setting	Remarks
CUT transitions control (issues the triggers)	Control	SCUT [:Parameter1]	[:Parameter1] :00 :01	Transition target settings 　　BKGD 　　KEY	