AV-HS410-Protocol-Ver1.3E

Live Switcher AW-HS410
Interface Specifications

Vol.1
Serial Control Protocol

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AVC Networks Company
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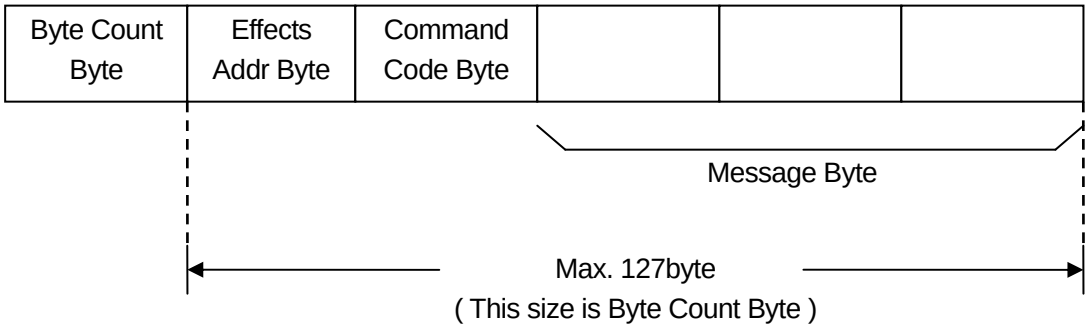
1. Purpose of this Document

This document explain the protocol of AV-HS410 for
(1) Protocol between AV-HS410 and the AUX remote panel.
(2) Protocol between AV-HS410 and Editing controller support GVG100.
The communication specification is based on DVD100
The communication commands are explaned for specif functions which AV-HS410 has.

2. About GVG100 protocol



Byte Count Byte: Byte numbers followed.

Effects Address Byte:
Model 100 has only 00h and 01h.
00h: To access DSK analog controller
01h: To control of Effect system
Un difined in other cases.
HS410 use this data for other purpose.

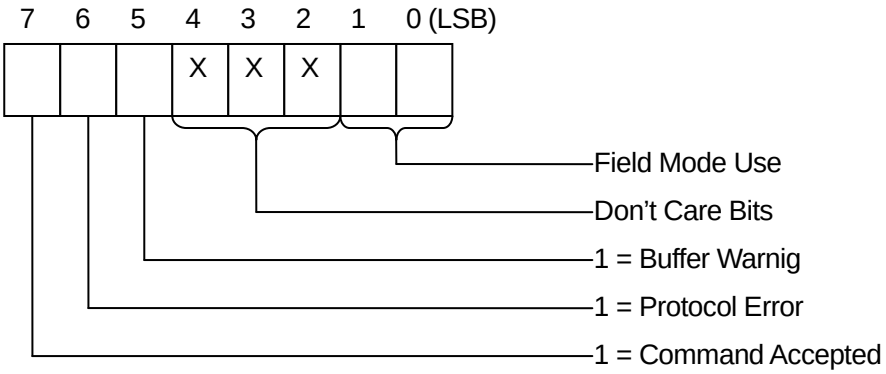
Command Code Byte:
The operation command is defined here.

Reply to the Wite Command

Replay to the Witecommand has 2Byte.

The first Byte is 01h.

The second Byte indicates the status.



bit7: Set "1" when the received command is accepted.

bit6: Set "1" when the received command has error.

bit5: Set "1" when the received buffer of serial interface come to almost full.

bit7 and bit6 has also have the following combination.

0x0180: ACK Reply

0x0140: NAK Reply

The Reply to the Read Commands are the same with Wite command.

Break Command

AV-HS410 will receive the commands without break command.

The receiving command is accepted after receiving address byte (0x30).

The reply to the address byte is (0x84).

3. AV-HS410 Commands

CROSS POINTS

Function	Byte Count	Effects Address	Command Code	Message
WRITE				
Program Bus	03	Except 07	C1	Crosspoint#
Preset Bus	03	Except 07	C2	Crosspoint#
KeyS Bus	03	Except 07,3B,3D	C3	Crosspoint#
KeyF Bus	03	Except 07,3B,3C,3D,3E 3B	C4	Crosspoint#
Dsk1S Bus	03	3B	C3	Crosspoint#
Dsk1F Bus	03	3D	C4	Crosspoint#
PinP1 Bus	03	3E	C4	Crosspoint#
PinP2 Bus	03	07	C4	Crosspoint#
Aux 1 Bus	03	07	C1	Crosspoint#
Aux 2 Bus	03	07	C2	Crosspoint#
Aux 3 Bus	03	07	C3	Crosspoint#
Aux 4 Bus	03		C4	Crosspoint#
READ				
Program Bus	02	Except 07	41	-
Preset Bus	02	Except 07	42	-
KeyS Bus	02	Except 07,3B,3D	43	-
KeyF Bus	02	Except 07,3B,3C,3D,3E 3B	44	-
Dsk1S Bus	02	3B	43	-
Dsk1F Bus	02	3D	44	-
PinP1 Bus	02	3E	44	-
PinP2 Bus	02	07	44	-
Aux 1 Bus	02	07	41	-
Aux 2 Bus	02	07	42	-
Aux 3 Bus	02	07	43	-
Aux 4 Bus	02		44	-

Crosspoint# 00h～18h are relate to Button of switcher 1 to 24.
Crosspoint# 32h～55h are for source signal selection.
The source signal is selected regardless the crosspoint assignment.
32h - 3Eh：Input1 - 13
46h：Color Bar
47h：Color BackGround1
48h：Black
49h：Still1V
4Ah：Still2V
4Bh：Clip1V
4Ch：Clip2V
51h：Still1K
52h：Still2K

53h:Clip1K
54h:Clip2K
55h:Color BackGround2

Whe the Aux Bus is selected;
4Dh:PGM
4Eh:PVW
4Fh:KEYOUT
50h:CLN
55h:MEM-PVW

PUSH BUTTON CONTROL (EXEC_PRESS_RELEASE)

Function	Byte Count	Effects Address	Command Code	Message
WRITE				
Auto Trans	03	Ex	FB	0B
DSK	03	Ex	FB	0C
WIPE	03	Ex	FB	0E
MIX	03	Ex	FB	0F
PinP1	03	Ex	FB	11
Pinp2	03	Ex	FB	12
Key	03	Ex	FB	13

PUSH BUTTON LUMP ON CONTROL (EXEC_FORCE_ON)

Function	Byte Count	Effects Address	Command Code	Message
WRITE				
Dsk On Take	03	01	C6	0D
Wipe On	03	01	C6	0E
Mix On	03	01	C6	0F
RevWipe On	03	01	C6	1D
Dsk Pvw On	03	01	C6	1E
Ftb On Take	03	01	C6	1F
Bkgd(N.Trns) On	03	01	C6	48
Key(N.Trns) On	03	01	C6	49
Key On Take	03	01	C6	52
Key On Take	03	01	C6	3A
Dsk On Take	03	01	C6	3B
PinP1 On Take	03	01	C6	3C
PinP2 On Take	03	01	C6	63
Key Pvw On	03	01	C6	3D
Dsk Pvw On	03	01	C6	3E
PinP1,2 Pvw On	03	01	C6	3F
AUX Trans Enable	03	01	C6	70
PinP1Trans Enable	03	01	C6	71
PinP2Trans Enable	03	01	C6	72

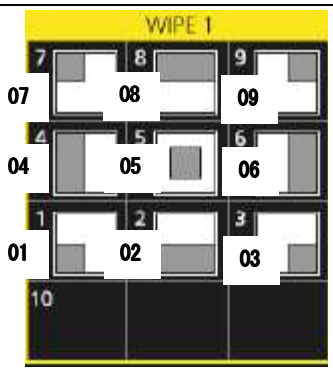
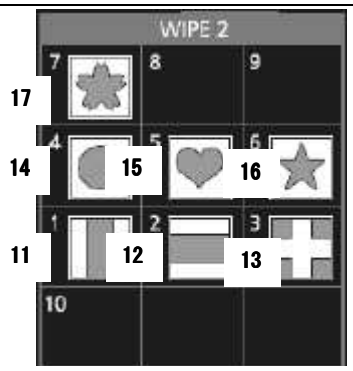
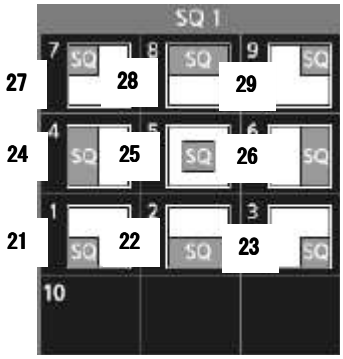
PUSH BUTTON LUMP OFF CONTROL

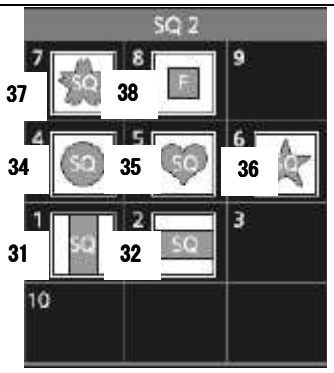
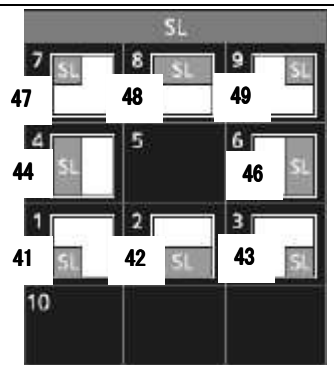
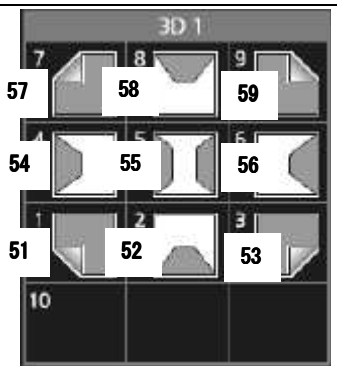
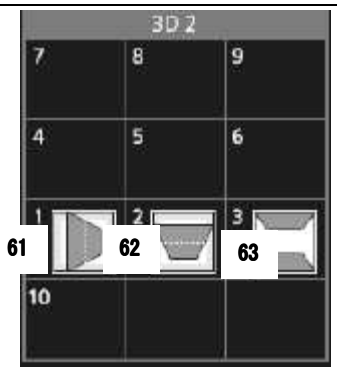
Function	Byte Count	Effects Address	Command Code	Message
WRITE				
Dsk Off Take	03	01	C7	0D
Wipe Off	03	01	C7	0E
Mix Off	03	01	C7	0F
RevWipe Off	03	01	C7	1D
Dsk Pvw Off	03	01	C7	1E
Dsk Pvw Off	03	01	C7	61
Ftb Off Take	03	01	C7	1F
Bkgd(N.Trns) Off	03	01	C7	48
Key(N.Trns) Off	03	01	C7	49
Key Off Take	03	01	C7	52
Key Off Take	03	01	C7	3A
Dsk Off Take	03	0	C7	3B
PinP1 Off Take	03	01	C7	3C
PinP2 Off Take	03	01	C7	63
Key Pvw Off	03	01	C7	3D
Dsk1 Pvw Off	03	01	C7	3E
PinP1,2 Pvw Off	03	01	C7	3F
AUX Trans Disable	03	01	C7	70
PinP1Trans Enable	03	01	C7	71
PinP2Trans Enable	03	01	C7	72

WIPE PATTERN SELECT

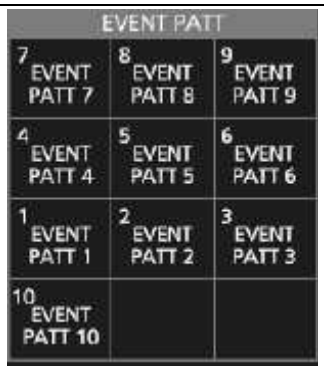
Function	Byte Count	Effects Address	Command Code	Message
WRITE WipePattern	03	Ex	C8	Wipe#

wipe# are as folows。

Wipe Number	WipePattern	
01	Left Bottom	
02	Bottom	
03	Right Bottom	
04	Left	
05	Center	
06	Right	
07	Left Top	
08	Top	
09	Right Top	
10	Not Use	
11	Center Open (Vertical)	
12	Center Open (Horizontal)	
13	Cross	
14	Circle	
15	Heart	
16	Star	
17	Fllower	
18	Not Use	
19	Not Use	
20	Not Use	
21	SQ Left Bottom	
22	SQ Bottom	
23	SQ Righ Bottom	
24	SQ Left	
25	SQ Center	
26	SQ Right	
27	SQ Left Top	
28	SQTop	
29	SQ Right Top	
30	Not Use	

Wipe Number	Wipe Pattern	
31	SQ Center Open (V)	
32	SQCenter Open (H)	
33	Not Use	
34	SQ Circle	
35	SQ Heart	
36	SQ Star	
37	SQ Fllower	
38	Frying Key *	
39	Not Use	
40	Not Use	
41	SL Left Bottom	
42	SL Bottom	
43	SL Right Bottom	
44	SL Left	
45	Not Use	
46	SL Right	
47	SL Left Top	
48	SL Top	
49	SL Right Top	
50	Not Use	
51	Page Turn (Left Top)	
52	Door (Bottom)	
53	Page Turn (Left Bottom)	
54	Door (Left)	
55	Double Door (LR)	
56	Door (Right)	
57	Page Turn (Left Top)	
58	Door (Top)	
59	Page Turn (Right Top)	
60	Not Use	
61	Rotation Door (H)	
62	Rotation Door (V)	
63	Double Door(TB)	
64	Not Use	
65	Not Use	
66	Not Use	
67	Not Use	
68	Not Use	
69	Not Use	
70	Not Use	

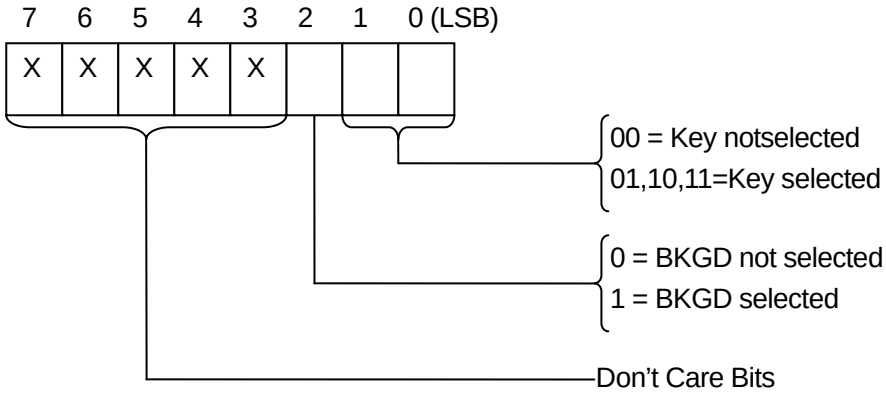
Wipe Number	Wipe Pattern
71	Not Use
72	Not Use
73	Not Use
74	Not Use
75	Not Use
76	Not Use
77	Not Use
78	Not Use
79	Not Use
80	Not Use



TRANSITION MODE

Function	Byte Count	Effects Address	Command Code	Message
WRITE Transition Mode	03	Ex	CA	Mode

Mode data is as follows

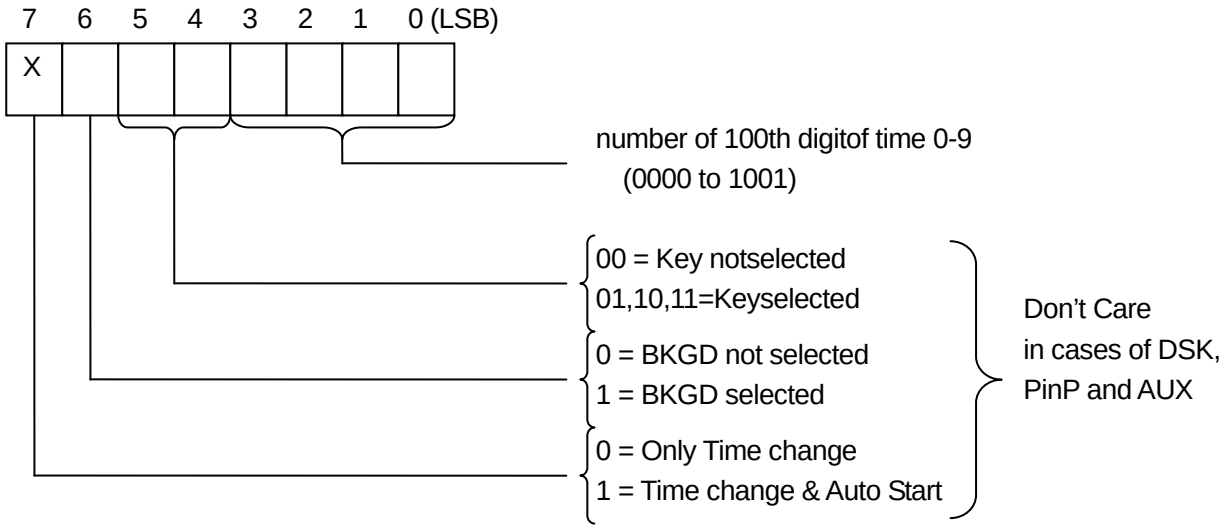


AUTO TRANSITION TIME

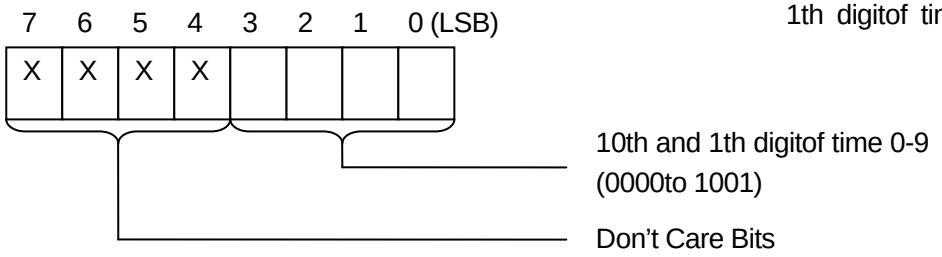
Function	Byte Count	Effects Address	Command Code	Message
WRITE				
Bkgd,Key time	05	Except 3B,3C,3D,3E,3F,40	CC	Rate1,2,3
Dsk time	05	3B	CC	Rate1,2,3
PinP1 time	05	3C	CC	Rate1,2,3
PinP2 time	05	3E	CC	Rate1,2,3
AUXBus time	05	3F	CC	Rate1,2,3
EFEDSLV time	05	40	CC	Rate1,2,3
PinP1Bus time	05	41	CC	Rate1,2,3
PinP2Bus time	05	42	CC	Rate1,2,3

Transition timeis defined with frame number, which range is 0 – 999.
Rate1,2,3 data are as follows。

Rate1 : number of 100th digit of time



Rate2,3 : number of 10th and 1th digitof time



End