editware
GRASS VALLEY, CALIFORNIA

TECH NOTE
Super Edit™ Version 8.6A / 1.2A
and later

Rev: 01-05-00

Philips DD35 Digital Video Switcher

INTRODUCTION

This document describes the interface between Super Edit and the Philips DD35 Digital switcher using Philips DD35 protocol.

Detailed operations instructions for Super Edit are given in the Super Edit Operator's Guide. This document discusses only those features that are unique to the Philips DD35 switcher.

CONNECTION TO EDITOR

Editor control is accomplished via RS-422. The following instructions are for the DD35 Editor control #2 using port #2.

A. Connect the RS-422 cable from the designated port on the editor to the E-Box Port 2 connector on the switcher.

B. Using the Install / E-Box / Editor menus on the switcher, check box for Editor 2. Select "port 2" and "dd35" protocol.

C. Ensure the editor configuration in Super Edit is set for 38.4 k baud, Odd parity.

FIELD DOMINANCE

Field Dominance of switcher commands is determined by the switcher's field dominance setting, accessible under Config / E-Box / Global. Selections available are "Field 1", "Field 2" and "Any Field". Normally this would be set to "Field 1".

CROSS-POINT SELECTION

Cross-point selections are made as described in the Super Edit Operator's Guide. The following are the valid cross-point numbers for this device:

0	Black
1 through 62	Video Inputs 1 through 62
128	Video Store
129	Montage Processor channel 1
130	Montage Processor channel 2
144	Color BGD 1
145	Color BGD 2
146	Color BGD 3
193	M/E 1 layered key
194	M/E 2 layered key
195	M/E 3 layered key
224 through 239	Virtual Inputs
240	White

AUX BUS PREVIEWING AND PRE-SELECTOR

AUX Bus previews are supported on any of the 15 AUX Busses numbered 1 through 15. Operation is similar to that described in the Super Edit Operator's Guide.

To enable AUX Bus previewing, access Initialization Page #3 on Super Edit.

INIT #73 PVW AUX BUS :

1 through 15	Enables previewing on the defined AUX Bus
0	Disables previewing on the AUX Bus. Previewing will be done on the alternate preview device (i.e. E-E, 8466, Performer, Leitch Xpress, etc., depending on the Super Edit configuration).

INIT #74 PGM OUT XPT:

Once enabled, the selected AUX Bus behaves as a video-only preview switcher, switching between the R-VTR cross-point and the PGM OUT cross-point. INIT page item #74 on Super Edit allows the user to enter PGM OUT cross-point selection. Set this to the AUX Bus cross-point number assigned to Program Out. The default value is cross-point 161.

The default values for the PGM out cross-point will be one of the following:

160	Main Out (PGM/PST Bus)
161	M/E 1 Out
162	M/E 2 Out
163	M/E 3 Out

The SWAP VTR feature of Super Edit will interact with the AUX Bus as a preview pre-selector. The R-VTR cross-point assignment on the AUX Bus will follow any changes made with the SWAP function.

Aux-bus preview uses the cross-point identified as BLK in the assignment page for the black in BVB or VBV AUX Bus previews.

MEMORY INTERFACE.

The DD35 switcher supports a panel memory capability variously called T-Memo or TiM/E-Memo, and previously called EXTRA.

These memories can either be Snapshots or Timelines. A Snapshot is a single switcher state (called a "status" by Philips). A Timeline can contain a number of Snapshots along with duration and transition information.

From the editor user view, recalling and triggering of memories is similar, regardless of whether they are Snapshots or Timelines. A M/E can have 100 Snapshots or Timelines in any combination.

LEARN MEMORY

The Learn Memory function is similar to the operation described in the Super Edit Operator's Guide with the additional capability of multiple M/E selection as discussed below.

To learn a memory register press **[SHIFT][L].** The user is then prompted for the register number to learn:

LEARN EMEM *nnn* ?

nnn can be any number from 000 through 699. The hundreds digit is the M/E. For example, to learn register 10 of M/E 1, enter "110". Then press **[ENTER]** to accept the selection. The ranges are:

000 through 099	Register 0 through 99 of PGM/PST Bus
100 through 199	Register 0 through 99 of M/E 1
200 through 299	Register 0 through 99 of M/E 2
300 through 399	Register 0 through 99 of M/E 3
600 through 699	Learn all registers 0 through 99 of all selected M/Es

The M/Es named by a 600-series video PEGS are selected by a pop-up selection menu. This menu is activated by pressing **[SHIFT][VIDEO].** This menu allows you to enable or disable all M/Es, or to selectively enable/disable M/Es.

Timelines are built (learned) on the Switcher panel using its editing tools.

MEMORY RECALL AND TRIGGER

Memories, either Snapshots or Timelines, can be recalled and triggered using the video PEGS dialog as described in the Super Edit Operator's Guide. The 3-digit number 000 through 699 as described above is the base video Memory number. An optional recall modifier is specified as the thousands digit, so video memory 101 and 1101 are identical except for the recall method, discussed next.

To specify Memory System Commands, first select a PEGS entry by pressing the **[PEGS]** key. Answer the prompts as follows:

REGISTER # ?   Enter any PEGS register 1 through 16, then press **[ENTER].**

FUNCTION= ?   Press **[VIDEO]** then **[ENTER].**

COMMAND= ?   Enter the Memory Register n001 through n699 as described above, then press **[ENTER]**.

TIME=   Enter the trigger time, and then press **[ENTER].**

Multiple M/Es can be recalled and triggered using a memory number of 600 through 699 and the pop-up M/E selection menu.

Snapshot memories are normally Recalled and Cut to the PGM bus. This case is specified by no thousands digit. Use the video memory number of 000 through 699.

Timeline memories are Selected and then passed an Operation. These memories should be recalled with video memory numbers containing a thousands value. These values are:

1000 through 1699	Select, and operation STOP	Recalls but does not run
2000 through 2699	Select, and operation CUT	Recalls and runs using the durations specified in the memory keyframes
3000 through 3699	Select, and operation AUTO	Recalls and runs using the total duration specified as the switchers AUTO time on the panel
4000 through 4699	Select, and operation FADE.	N/A

X-PEGS COMMANDS

Some of the buttons on the M/E and the DSK panel are assigned numeric values. The table below shows these values. The hundreds digit indicates the M/E, with the PGM/PST being indicated as M/E 0.

To select these functions, specify **FUNCTION= X** rather than FUNCTION= V when entering the PEGS command. I.e. Select **[PEGS]** and answer the prompts as follows:

REGISTER # ? Enter any PEGS register 1 through 16, then press **[ENTER]**.

FUNCTION= ? Press **[X]**, then **[ENTER].**

COMMAND= ? Enter the Memory Register then press **[ENTER].**

TIME= Enter the start time, then press **[ENTER].**

Numeric values are sum additive, and are as follows:

Key1 has a value of **1**
Key2 has a value of **2**
Key1 & 2 have a combined value of **3**
Bkgnd has a value of **4**
Bkgnd & Key1 have a combined value of **5**
Bkgnd & Key2 have a combined value of **6**
Bkgnd & Key1 & Key2 have a combined value of **7**
FTB has a value of **8**

A table of the PEGS command codes is shown below.

Code	Function
DSK Mix	
050	Auto Trans Start
051	DSK Key 1, Mix mode & Auto Trans.
052	DSK Key 2, Mix mode & Auto Trans.
053	DSK Key 1, Key 2, Mix mode & Auto Trans.
054	BKGD, Mix mode & Auto Trans.
055	DSK Key 1, BKGD, Mix mode & Auto Trans.
056	DSK Key 2, BKGD, Mix mode & Auto Trans.
057	DSK Key 1, Key 2, BKGD, Mix mode & Auto Trans.
058	DSK FTB Transition.

M/E1, 2, 3 Mix	
150/250/350	Auto Trans Start.
151/251/351	Key 1, Mix mode & Auto Trans.
152/252/352	Key 2, Mix mode & Auto Trans.
153/253/353	Key 1, Key 2, Mix mode & Auto Trans.
154/254/354	BKGD, Mix mode & Auto Trans.
155/255/355	Key 1, BKGD, Mix mode & Auto Trans.
156/256/356	Key 2, BKGD, Mix mode & Auto Trans.
157/257/357	Key1, Key 2, BKGD, Mix mode & Auto Trans.
158/258/358	DSK FTB Transition (Same as 058)

DSK Wipe 1	
060	Auto Trans Start
061	DSK Key1, Wipe_1 mode & Auto Trans.
062	DKS Key2, Wipe_1 mode & Auto Trans.
063	DSK Keys1,2, Wipe_1 mode & Auto Trans.
064	BKGD, Wipe mode_1 & Auto Trans.
065	DSK Key1, BKGD, Wipe_1 mode & Auto Trans.
066	DSK Key2, BKGD, Wipe_1 mode & Auto Trans.
067	DSK Keys1,2, BKGD, Wipe_1 & Auto Trans.

M/E1, 2, 3 Wipe 1	
160/260/360	Auto Trans Start.
161/261/361	Key1, Wipe_1 mode & Auto Trans.
162/262/362	Key2, Wipe_1 mode & Auto Trans.
163/263/363	Key1, Key2, Wipe_1 mode & Auto Trans.
164/264/364	BKGD, Wipe mode_1 & Auto Trans.
165/265/365	Key1, BKGD, Wipe_1 mode & Auto Trans.
166/266/366	Key2, BKGD, Wipe_1 mode & Auto Trans.
167/267/367	Key1, Key2, BKGD, Wipe_1 & Auto Trans.

M/E1, 2, 3 Wipe 2	Same as above, but with a "7" in the 10ths position

Note: To operate the Preset Black Mix Special Transition mode which fades the Program source to Black then fades the Preset source from Black, two PEGS are required; Use a PEG 159/259/359 to initiate the Fade to Black (of the Program source) and use a PEG 150/250/350 to initiate the Fade From Black of the Preset source.

RE-ESTABLISHING COMMUNICATIONS WITH THE SWITCHER

To re-establishing communications with the switcher, or to remove any active Keys on the currently controlled M/E, press **[SHIFT][RESET].** This will also clear an active FTB on M/E 0. (Also see
"PGM/PST Bus re-entry")

PGM/PST BUS RE-ENTRY

If INIT #42 SWR REENTRY ON/OFF is ON, then a **[SHIFT][RESET]** will set the re-entry cross-point of the PGM/PST Bus to the current working M/E as set by INIT #39 EFFECTS ADDR =. If this INIT item is OFF, then performing a **[SHIFT][RESET]** will not affect the PGM/PST Bus cross-point. (Also see "Re-establishing communications with the switcher")

DD35 SOFTWARE VERSION:

The Software level of the DD35 switcher can be found under the Install / Diagnose menu.

For development of this interface the version was 2.01, shown as follows:

Version: DS0203.201
Side Panel.202
OcxControls.200
OcxPopup.200
OcxExtra.200