



BA-2/BB-2

SDI bug inserters (updated 14-10-2006)

user manual

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I System Overview

The BA-2 is a animating Bug unit, the BB-2 is a non-animating bug unit. The main features of these bug inserters are:-

BA-2

- The system will store up to 64 user defined “animating” or “still” bugs. Animations are up to 10-second duration.
- Bugs are stored in “play directories” with user definable names. A simple bug management system enables the user to make full use of available 5 Mb bug storage.
- Animations can be played forward, backward, looped, bounced or triggered at regular intervals.
- Independent program and preview channels.
- Internal keyer with bug fade facility.
- Real time “grab” of bug animation using “cue dot” system
- Internal fade to black on main program output.
- Legaliser (To EBU 2000 spec) and EDH on main program output.
- Safe area generator on preview output.
- High speed computer download using the eyeheight BU-7 software package
- Automation control.
- 6 User memories store all user settings.

BB-2

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- Bugs are stored in “play directories” with user definable names. A simple bug management system enables the user to make full use of available 5 Mb bug storage.
- Independent program and preview channels.
- Internal keyer with bug fade facility.
- Real time “grab” of bug.
- Internal fade to black on main program output.
- Legaliser (To EBU 2000 spec) and EDH on main program output.
- Safe area generator on preview output.
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- Automation control.
- 6 User memories store all user settings.

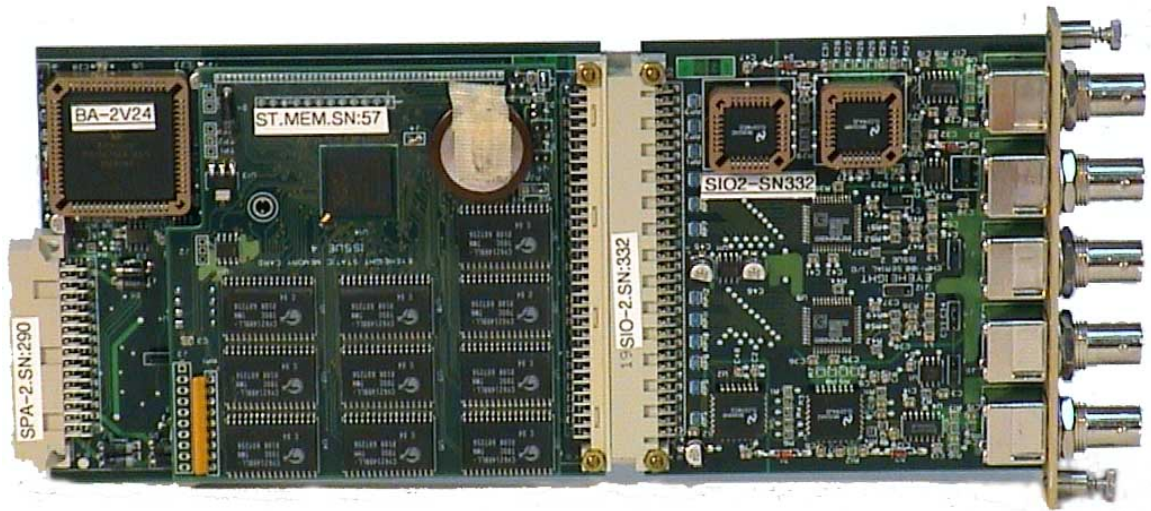


Figure 1 BA-2/BB-2 Bug inserter card

I.1 Associated Equipment for the BA-2/BB-2

The BA-2/BB-2 is a module and requires both a chassis and a control surface to function.

I.1.1 Chassis Types

- **flexiBox** is a 1RU chassis. The order code is FB-9. This will hold a maximum of 6 BA-2/BB-2 Modules with “Hot Swap” redundant PSU option and “Hot Swap” BA-2/BB-2 modules.
- **maxiBox** is an alternative low cost 1RU chassis. The order code is MX-9. This also will hold a maximum of 6 BA-2/BB-2 modules but it has no redundant PSU option and the BA-2/BB-2 units must be factory fitted.

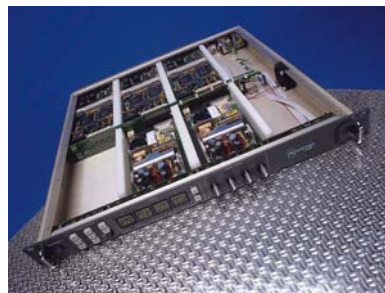


Figure 2 flexiBox with flexiPanel fitted

I.1.2 Control Surfaces

- **flexiPanel** is a 1RU control surface that fits on the Front of a 1RU flexiBox. The order code is FP-9. A FlexiPanel can also be used in conjunction with a miniBox, in this case the extra accessory (Order code RR-9) will be required

- **FP-10** is a desk mounting control surface (Order code FP-10). This unit is a modular unit which can be used in conjunction with the units below.



Figure 3 FP-10 desktop modular panel

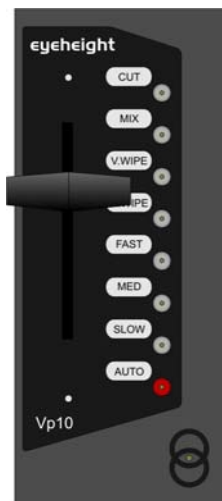


Figure 4 VP-10 desktop modular T-Bar

2 Installation

2.1 Installation of the BA-2/BB-2 product

If this unit is already pre-installed in a flexiBox (FB-9), or a maxiBox, with either a local or a remote panel from the factory then refer to the "Hardware Installation Guide" which will be enclosed with the system. If this unit is pre-installed in a miniBox (MB-9), then also refer to the "Hardware Installation Guide" which will be enclosed with the system

If this unit has been ordered separately, we assume here that you already have a flexiBox system with a Flexipanel and that the flexiBox has at least two spare slots above each other for the BA-2/BB-2 card.

2.2 Installing the BA-2/BB-2 into a flexiBox

To install the BA-2/BB-2 into a flexiBox it is desirable (but not necessary) to power down the flexiBox. Follow these instructions.

On the rear of the flexiBox are 6 slots for Products. Remove any spare blanking plate. There are 2 off M2.5 Screws, which require unfastening for each blanking plate.

Slide the Product PCB into the spare slot and firmly push it "home".

Use the two thumbscrews to fasten the unit in place.

Now refer to the "GeNETics User Guide". If your system consists of a single flexiBox with a single flexiPanel then refer to the section titled "flexiPanel Auto Set-up". If your system is part of a network with more than one flexiPanel then refer to the section titled "flexiPanel Manual Set-up". This will guide you through acquiring your product as a device on the flexiPanel.

2.3 Connecting Video to an BA-2/BB-2

A Typical Connection diagram for the BA-2/BB-2 is shown below. All signals are SDI:

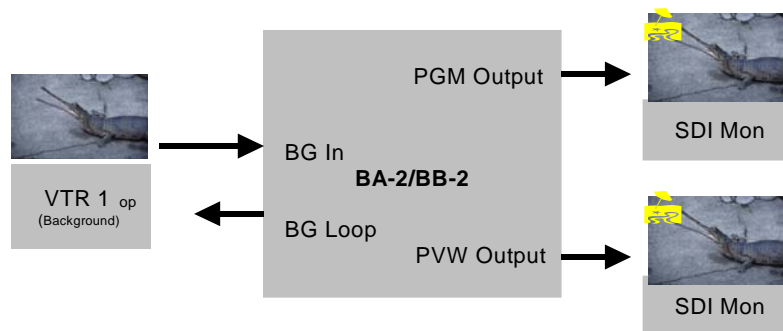


Figure 5 Typical connection for a BA-2/BB-2 unit

The BA-2/BB-2 Module has a number of user configurable jumpers which can change the function of the 5 SDI BNC Connectors. These are shown along with their default configuration below. These jumpers are found close to the BNC Connectors.

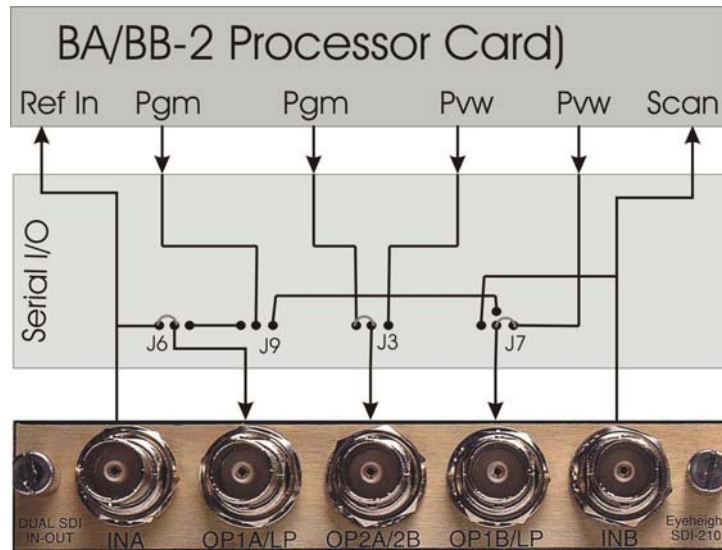


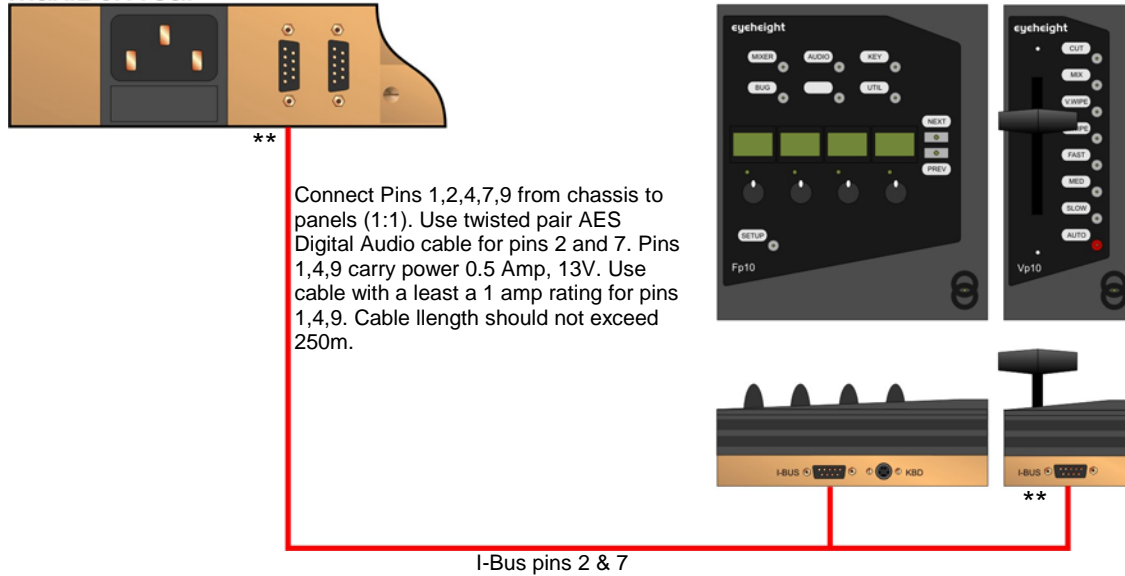
Figure 6 Connections on the BA-2/BB-2 showing internal link options

2.4 Connecting Panels to the BA-2/BB-2

The BA-2/BB-2 may be operated using a FP-9 Flexipanel locally mounted. For a more operational environment the BA-2/BB-2 may be supplied with a desk mounting FP-10 unit and also possible a VP-10 Desk mounting Video T-Bar manual transition unit. For detailed information on connecting remote panels refer to the section “Connection of Remote Panels to a flexiBox” in the geNETics Hardware Installation Guide.

Below is shown a typical system consisting of a BA-2/BB-2 in a flexiBox controlled by an FP-10 and a VP-10.

maxiBox rear



** The I-BUS Network requires terminating with 100 Ohms at each extreme end of the network. Ensure that this is done either by an external 100 ohm resistor OR ONE Panel/Product at each end has the termination set. See the "Genetics User Guide" Under the sections "Flexipanel Power/I-BUS Jumpers". For the 4RU Panels see "4RU Panel (FP-10) Jumpers for I-BUS" and "4RU Panel (VP-10, SW-10, AP-10) Jumpers for I-BUS". Alternatively The termination can be set on a Product (ie the MW-2 module). Information about this is given in this manual.

Figure 7 I-Bus Connections and Termination

N.B. From 1/10/02 Eyeheight introduced a change in the flexiBox Chassis. Most versions now have two 9 way connectors on the rear labelled "I-Bus" and "D-Bus". The "I-Bus" connector is the same as the previously labelled "Can-B" connector. Although a maxiBox is shown in this diagram the same arrangement applies for a flexiBox chassis.

3 Operation

3.1 Manual control of the BA-2/BB-2

Manual Control of the BA-2/BB-2 is done using one or more of the following control surfaces:

- The 1RU FP-9 Flexipanel.
- The FP10 Desk mounting Panel
- The VP-10 Desk mounting Video T-BAR Manual Transition Panel.
- The TK-10 Desk mounting Auto Transition Panel.

The FP-9 and the FP-10 have identical manual control systems. (The FP-10 is simply a desktop version of the FP-9). The VP-10 brings further functionality to the unit in the T-BAR manual transitions and the other switch functions.

The BA-2/BB-2 is, as are all genetics modules, controlled using a set of MENUS. Each of these menus contains up to 3 parameters that are adjusted using the rotary digipots. The Menus define all of the adjustable operational parameters in the BA-2/BB-2. Pressing the rotary digipots brings the parameter to its default value. Device selection is done using the device select switches which, when pressed, will offer the name of the device in the LCD Window. Modules can be acquired and then de-acquired using the set-up switch. For a full description of the operation philosophy of the geNETics system refer to the “geNETics User Guide” (section “Operation of the flexiPanel”)

A full list of the Menus and their functions are given in section 3 of this chapter.

3.2 Automation Control of the BA-2/BB-2

Automation of the geNETics products is achieved via an RS422 port.** This port is marked RS422 on the rear of a flexiBox. For the port to work a flexiPanel MUST be connected locally on the front of the flexiBox.

Automation control of the BA-2/BB-2 can be done using two protocol methods:

- geNETics Automation Protocol.
- PresTX Automation Protocol.

Genetics protocol is described in detail in the “GeNETics User Guide” section titled “Automation Protocol on the geNETics Platform”. The menu list in section 3 of this chapter contains the data information for the protocol.

PresTX Automation Protocol is used only for the PresTX Presentation Mixer and channel branding system. In this case an AU-2 Automation card is also required. Refer to the PresTX Product manual

**On most flexiBoxes later than 1/10/02 the RS422 port has been replaced by a “D-Bus” Port. The D-Bus port is for High Speed data transfer and is not used for serial control. In order to achieve serial control of any products on an I-Bus network Eyeheight Ltd have developed a RS232→I-bus converter “dongle”, (DG-

9) which enables greater flexibility of products on the I-Bus network whilst using the same protocols as the RS422 port. Please refer to the “User guide for the DG-9 eyeheight dongle and set-up software.

3.3 Operation of BA-2/BB-2

3.3.1 The play menus

The Top Level menu takes you into 4 distinct areas of the BA-2/BB-2. The PLAY menus are where the user actually take a Bug to “air” and selects the next bug to “air” on the preview monitor. In PLAY mode the preview monitor always show the “Transmission Preview” as indicated by the On-Screen Text. Only “PLAYS” can be taken to air. A “PLAY” is a captured bug/animating bug that has been edited by the user using the EDIT menus and then Added to the Play List. “PLAYS” can also be given names of up to 12 characters.

3.3.2 Assigning names to a play

Names are assigned by the user to a PLAY while play menu#5 is displayed. (Please refer to the section “Menus for the BA-2/BB-2 Unit” for all the menu numbers). Using an Eyeheight KB-9 keyboard connected to the FB-9/10 the user types “ENTER” and then can type a 12-character name. To exit the text editor type “ENTER” again. Each PLAY has a default name of “NewPlyNoName” (New play with no name assigned).

3.3.3 The edit Menus

The EDIT menus are used for capturing Bugs and then manipulating them and adding them to the play list. Once an edited bug has been added to the play list it cannot then be changed in any way. These menus also enable the user to delete bugs and delete plays so providing a simple but effective bug management system.

3.3.4 Grabbing bugs

Bugs are grabbed from the “scan in” input of the BA/BB-2 units. Bugs must be prepared offline by a graphic system and then presented SDI to the scan input of the BA-2. In preparing a bug the artist must consider the “fill” (The bug picture) and the “key”. The brightness of the key signal at any point determines the opacity of the final overlaid bug. If the user is grabbing a animation sequence then a frame with at least 1/100th of a frame of “Peak White”. (A full white frame is perfectly good also- This is called a cue-dot), must proceed the animation fill and key sequences. A few seconds of black prior to the cue dot is also advisable. The cue-dot starts the BA-2 recording the sequence.

The sequence for grabbing bugs is as follows:

- Set up the cursors in menus#36→39 to the required grab area.
- Set the number of frames in menu#40. (1 for a “still” and more for a animation)

- Press “GRAB” (menu#42). The system will say “VIDEO READY”
- Present the fill to the Scan Input of the BA-2 and press again. After a time the unit will say “KEY READY”
- Present the key to the Scan Input of the BA-2 and press again.

The system will now return to menu#12 in the EDIT menu where the user can start preparing the grabbed bug for the PLAY list.

After grabbing a bug, first, it is a good idea to name it. The process for this is the same as for naming a PLAY. Please refer to “**Assigning names to a play**” except, this time, using displayed menu#12.

3.3.5 Preparing a bug for a play list

The following is a typical sequence used to prepare a bug for a play list.

Use the H-Pos and the V-Pos menus (menus#13,14) to position the bug to the required position.

IF this bug is a “still” go directly to menu#21 to Add this to the play list. No more options are available for a “still”

IF the bug is a animation then press NEXT and use menus#16,17 to Trim the animation IF this is required. (To preview the animation at any time, use menu#20 to start it going).

Press Menu#18 to enter Animation Modes and set these as required.

Go to menu#21 to Add this to the play list.

Refer to “Menus for the BA-2/BB-2” unit for further explanation of the individual menus.

3.3.6 Fade to black

From the Top Menu the user can enter the FTB nest. This is very straightforward and allows the user to Fade the whole output to black using the specified Fade time.

3.3.7 GPI operation

There is now an “Internal GPI OFF/LATCH/MOMENT” menu which can be found by navigating, MISC→UTILS→NEXT (grey button) and this menu will be found. This menu will default to OFF and is only useful for users with an RJ-45 connector on the rear of the BA-2 or BB-2 unit. The RJ-45 connector has 2 GPI's which can be used to trigger the current logo on and off.

IMPORTANT. IF YOU DO NOT HAVE AN RJ-45 CONNECTOR AT THE REAR OF YOUR UNIT, THE GPI MENU MUST BE OFF.

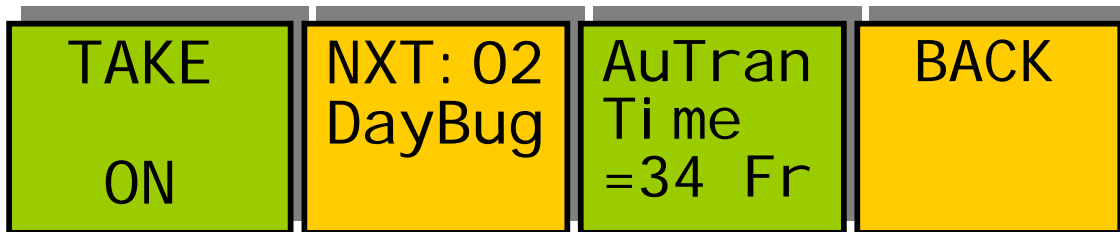
Pin Number	Function -LATCH	Function - MOMENT
1	GPI#1, = OPEN for Bug OFF GPI#1, = SHORT to GND for Bug ON	Momentary Short to ground will put logo ON (>100mS)
2	NOT USED	Momentary Short to ground will put logo OFF (>100mS)
3	NOT USED	NOT USED
4	Ground	Ground
5	NOT USED	NOT USED
6	NOT USED	NOT USED
7	NOT USED	NOT USED
8	NOT USED	NOT USED

Menus 00-03 Top Level Menus



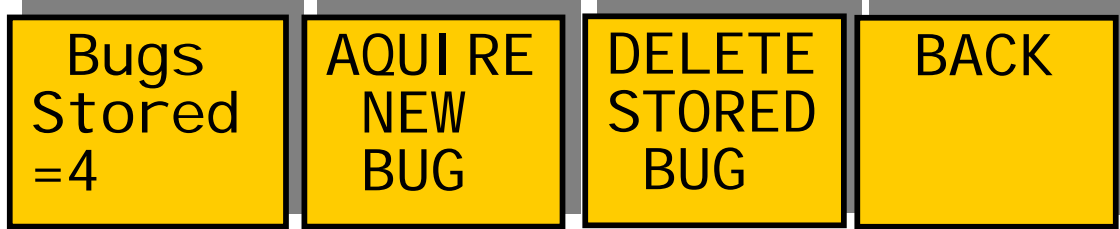
Menu Num.	Heading	Automation	Function
00	PLAY	none	Go To the main Play menu 4
01	EDIT	none	Go To the edit menu 8
02	FTB	none	Go To the fade to black menu 52
03	MISC	none	Go To the main miscellaneous menu 56

Menus 04-07 PLAY Menus



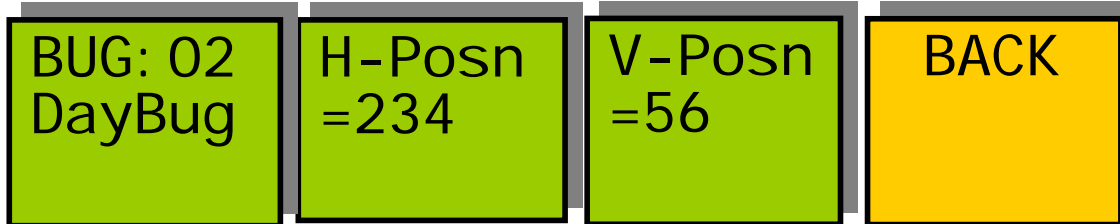
Menu Num.	Heading	Automation	Function
04	TAKE	[2=Fade Up 1=Fade Down]	Pressing this key causes a Fade Up/Down of the "Next Bug Play" shown in menu#5.
05	Next Bug	[1→nn]	The user selects here which "Bug Play" is called up next to Program. This may be changed while the previous bug is faded up and viewed on the Preview Output. The program output does not take this bug until the current bug is faded down and the next fade up transition is performed.
06	Auto transition time	0→5Secs [1→200]	This determines the time taken to make a transition on the program output. (Bug fades up or down). The readout is in seconds.
07	BACK	none	Go To the Top Level Menus

Menus 08-11 Edit menu tree



Menu Num.	Heading	Automation	Function
08	Bugs stored	none	This indicates to the user the number of Bugs in the Bug Store.
09	Acquire new bug	none	This takes the user to menus#36→43. It is using these menus, that the user grabs new bugs into the system.
10	Delete stored bug	none	This takes the user to menus#36→43. It is using these menus that the user grabs new bugs into the system.
11	BACK	none	Go To the Top Level Menus

Menus 12-15 Edit menu, bug positioning (NEXT to navigate)



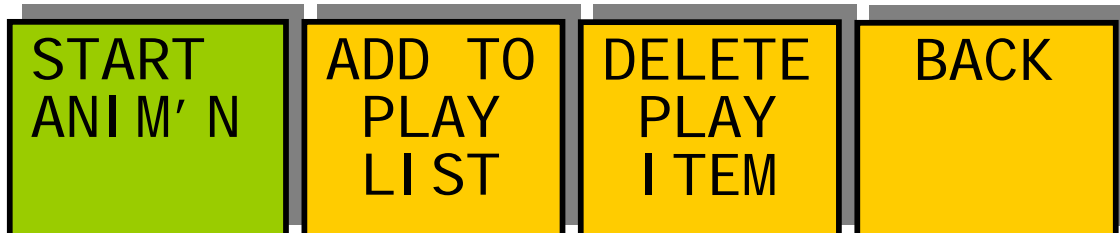
Menu Num.	Heading	Automation	Function
12	BUG:nn {Bug User Name}	[1→nn]	This selects the current Bug for editing into the “Bug Play List”. The user can move this bug into position and alter its animation parameters if applicable before adding it to the “Bug Play List”. The bug will be displayed on the preview output.
13	H-Posn <xxxx>	[0→719]	This will move the Bug selected in menu 12 horizontally.
14	V-Posn <xxxx>	[0→575] [0→488 for 525 sysms]	This will move the Bug selected in menu 12 vertically.
15	<BACK>	None	This Returns to the top menu#0→3 .

Menus 16-20 Edit menu, animation trimming (NEXT/PREV to navigate)



Menu Num.	Heading	Automation	Function
16	ANIM TRIM-H	[0→number of frames in animation-1]	This applies to animations only. If a bug with animation of say 50 Frames is selected in menu#12, the user can trim the end down using this before it is added to the play list. This will NOT delete these frames from the bug store but effects how the animation is displayed.
17	ANIM TRIM-L	[0→number of frames in animation-1]	This applies to animations only. If a bug with animation of say 50 Frames is selected in menu#12, the user can trim the start down using this before it is added to the play list. This will NOT delete these frames from the bug store but effects how the animation is displayed.
18	ANIM PLAY MODES	None	This takes the user to menus#68→71. The user can set the way the animation is played here.
19	<BACK>	None	This Returns to the top menu#0→3 .

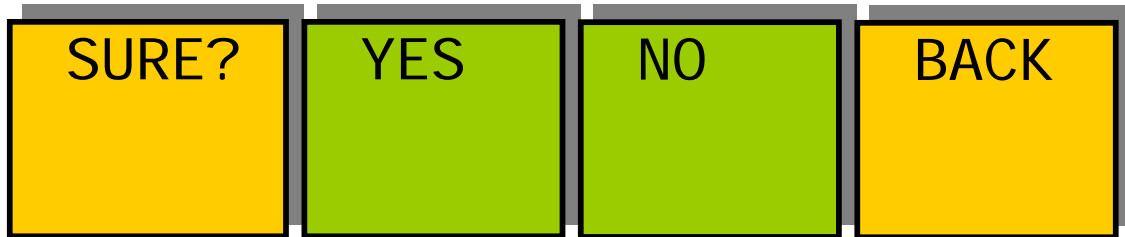
Menus 20-23 Edit menu, play list management (PREV to navigate)



Menu Num.	Heading	Automation	Function
20	START ANIM'n	[0→1] Write a 1 for Take	Pressing this will start an animation preview. This will reflect the actual display of the animation should it be added to a play list.
21	ADD TO PLAY LIST	None	This takes the user to menus#24→27. Once the Bug shown on the preview monitor has been set up as the user

			requires it can then be added to the “Bug Play List” by pressing this button.
22	DELETE PLAY ITEM	None	This takes the user to menus#28→31. This will delete an item in the “Bug Play List” if it is no longer required.
23	<BACK>	None	This Returns to the top menu#0→3 .

Menus 24-27 Confirm add to play list menus



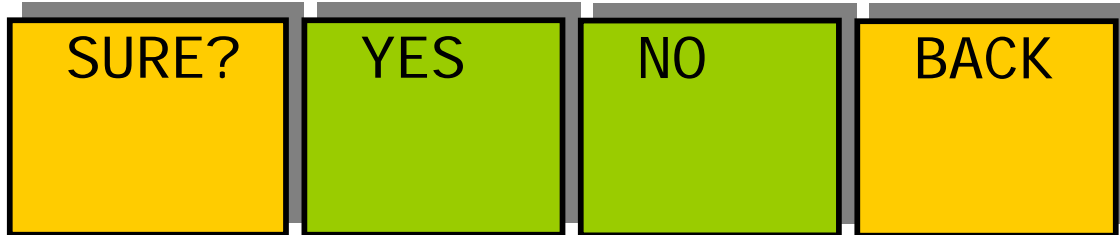
Menu Num.	Heading	Automation	Function
24	Sure?	None	Info
25	YES	[0→1] write a “1” to take.	This Accepts the “ADD TO PLAY LIST” Request.
26	NO	[0→1] write a “1” to take.	This Declines the “ADD TO PLAY LIST” Request.
27	<BACK>	None	This Returns to menus#20→23.

Menus 28-31 Play delete menus



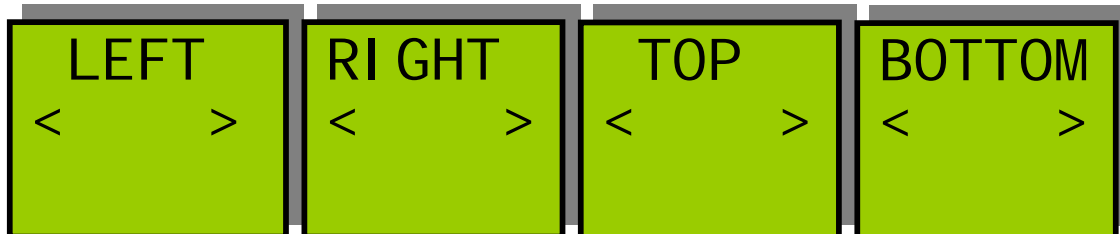
Menu Num.	Heading	Automation	Function
28	PLAYnn {Bug Play User Name}	[1→nn]	This selects the “Bug Play” that the user wishes to delete.
29	P-LIST STORED =nn	None	This shows the user the current number of “Bug Plays” in the “Bug Play List”. Max 64.
30	DELETE THIS PLAY	[0→1] write a “1” to take.	This will perform the deletion of the “Bug Play” shown in menu number 28.
31	<BACK>	None	This Returns to menus#20→23.

Menus 32-35 Confirm delete play menus



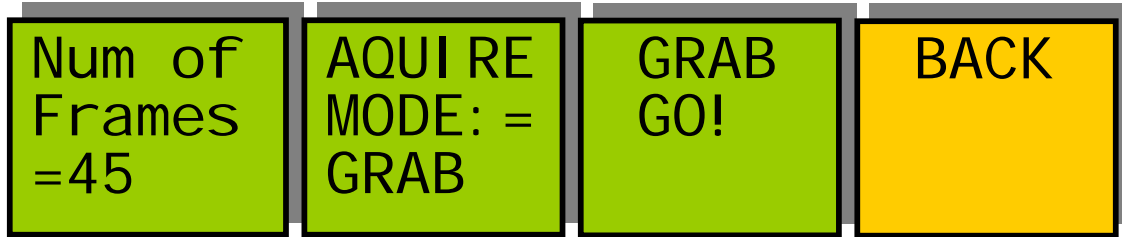
Menu Num.	Heading	Automation	Function
32	Sure?	None	Info
33	YES	[0→1] write a "1" to take.	This Accepts the "DELETE PLAY ITEM" Request.
34	NO	None	This Declines the "DELETE PLAY ITEM" Request.
35	<BACK>	None	This Returns to menus#20→23.

Menus 36-39 Grab cursor control (NEXT to navigate)



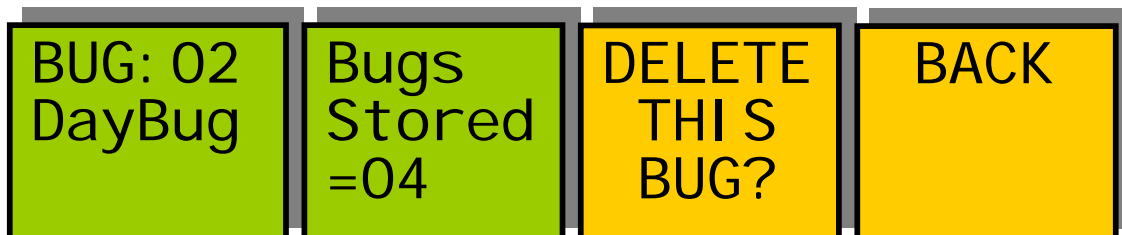
Menu Num.	Heading	Automation	Function
36	LEFT <XXXX>	[0→719]	On entering these menus a cursor "Box" appears and the Preview monitor switches to the "Grab" input of the unit. It is within this area that the Bug will be captured from the "Grab input". This Menu adjusts the left hand cursor.
37	RIGHT <XXXX>	[0→719]	Refer to above. This Menu adjusts the right hand cursor.
38	TOP <XXXX>	[0→576] 488 for 525 Systems	Refer to above. This Menu adjusts the Top cursor.
39	BOTTOM <XXXX>	[0→576] 488 for 525 Systems	Refer to above. This Menu adjusts the Bottom cursor.

Menus 40-43 Grab logo menus (PREV to navigate)



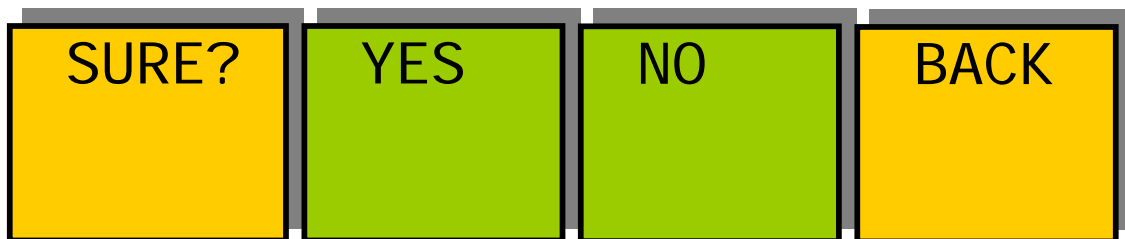
Menu Num.	Heading	Automation	Function
40	Num.Of Frames =nn	[0→255]	This selects the number of Video frames that the user wishes to Grab. For a “Still Frame” set this to “1”. For an animation, select the number of frames in the animation.
41	AQUIRE MODE <mode>	None	This displays the “Grab Mode” this will be “normal” for a still frame and “cue-dot” for animation.
42	!GRAB! !!!!!!!!!!!!!!	[0=OFF 2=Grab Vid 5=Grab Key]	This menu takes the user through the Bug Grab Process. Hit Once: “Video Ready” Mode. The user must get ready the Bug Fill. Hit Again:[Grabs Video Input] The user must now get ready the bug key. Hit again:[Grabs Key Input]. The user is required to Provide a video (Fill) and a key signal consecutively. If an animation is being grabbed the user must provide a frame with a “cue-dot” on the frame prior to the actual Bug animation and the Bug animation Key.
43	<BACK>	None	This Returns to menus#8→23.

Menus 44-47 Delete bug menus



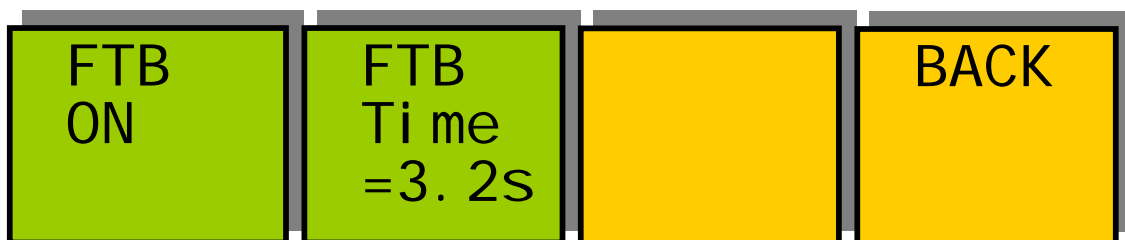
Menu Num.	Heading	Automation	Function
44	BUG:nn {Bug User Name}	[1→nn]	This selects the "Bug" that the user wishes to delete.
45	BUGS STORED =nn	None	This shows the user the current number of "Bugs" in the "Bug Store". Max 64.
46	DELETE THIS BUG	[0→1] write a "1" to take.	This will perform the deletion of the "Bug" shown in menu number 44.
47	<BACK>	None	This Returns to menus#8→23.

Menus 48-51 Confirm bug delete menus



Menu Num.	Heading	Automation	Function
48	Sure?	None	Info
49	YES	[0→1] write a "1" to take.	This Accepts the "DELETE THIS BUG" Request.
50	NO	None	This Declines the "DELETE THIS BUG" Request.
51	<BACK>	None	This Returns to menus#8→23.

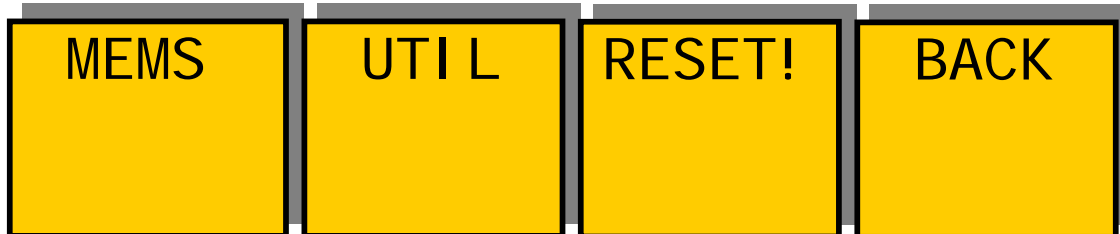
Menus 52-55 Fade to black menus



Menu Num.	Heading	Automation	Function
52	FTB: {status}	[0→1] 0=Fade to Prog 1=Fade to Black	This is effectively the "Take" button causing a fade FROM black or a fade TO Black.
53	FTB Time	0 Secs→ 20 Secs [0→200] (1/10 th sec's)	This indicates the time taken to fade to and from black.

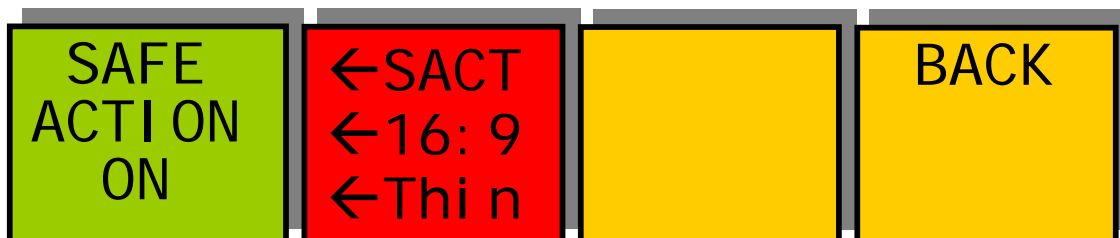
	Nn Sec		
54		None	Blank
55	<BACK>	None	This Returns to menus#0→3.

Menus 56-59 Miscellaneous menu nests



Menu Num.	Heading	Automation	Function
56	MEMS	None	This takes the user to menus#72→87. These menus enable use of the 6 internal Memories.
57	UTIL	None	This takes the user to menus#60→67. These menus are for some of the added value features of the unit.
58	RESET!	None	This takes the user to menus#88→91. These are for Power on reset settings and Total Reset (First Birthday)
59	<BACK>	None	This Returns to menus#0→3.

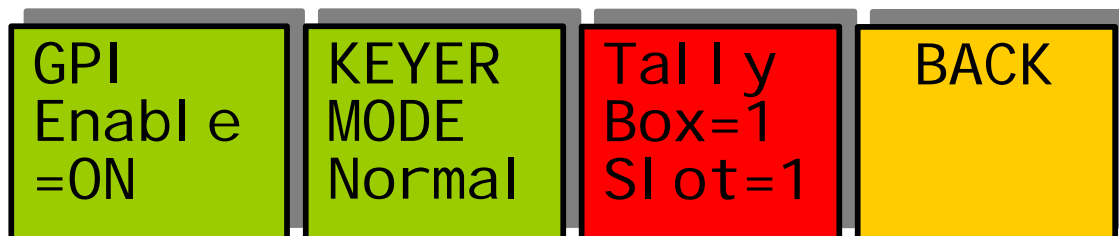
Menus 60-63 Preview safe area generator menus



Menu Num.	Heading	Automation	Function
60	Safe Action Area Safe Caption Area Digital Edge Indicate Analogue Edge Indicate	On Off [0→1]	This Switches on and off the currently selected area. Pressing the "Red" switch next to this one and adjusting the rotary digipots with the lighted green LED's chooses the Selected area.

61	Area selected by menu#60	<p><u>Digipot A</u> S.Action S.Capt. Dig Edge An Edge [0→3]</p> <p><u>Digipot B</u> 4:3 16:9 16p4:3 16p149 43p16:9 [0→4]</p> <p><u>Digipot C</u> Thin Thick Shade Black [0→3]</p>	<p>When this button is pressed to "Green". The Three-line display in the window indicates the three options, which can be changed by adjusting the three rotary digipots A, B and C.</p> <p>Determines the basic Function Selects "Safe Action" option Selects "Safe Caption" option Selects "Digital Edge" option Selects the "An. Edge" option</p> <p>Determines the Screen Format Standard 4:3 Screen Standard 16:9 Screen 16:9 Shoot to protect 4:3 16:9 Shoot to protect 14:9 (*) 4:3 Shoot to protect 16:9 (*) (* -- Not available in 525)</p> <p>Determines the Style of Indicate Thin White lines are used Thick White lines are used Shade is used for "danger area" Black is used for "danger area"</p>
62	Legal'r <On/Off>	[0→1] 0=off 1=on	This switches on/off the internal legaliser on the program output. This is equivalent to an eyeheight OL-2 Legaliser which has been set to the EBU-R103 2000 setting.
63	<BACK>	None	This Returns to menus#56→59.

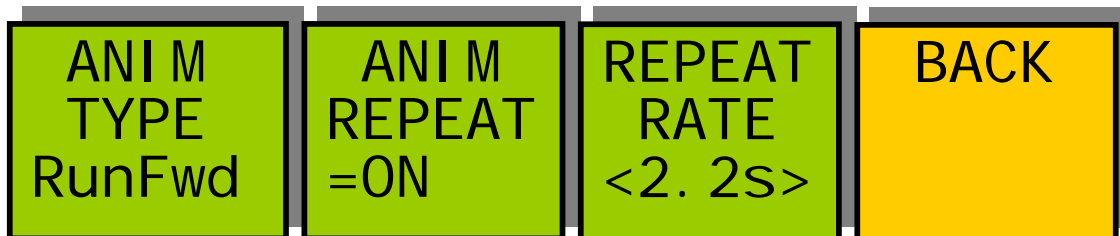
Menus 64-67 EDH and keying mode menus



Menu Num.	Heading	Automation	Function
64	GPI enable OFF/Latch/Momentary	[0→2] 0=off 1=Latching 2=momentary	This enables the GPI's which are on the RJ-45 connector at the rear of the unit.

			<p>OFF=GPI's NOT enabled. Latching= If the GPI#1 is open circuit the logo is OFF, if the GPI#1 is shorted to ground, the logo is ON. Momentary= Momentary short on GPI#1 causes logo to go ON, momentary short on GPI#2 causes logo to go OFF. Short >100mS.</p>
65	KEYER MODE: <Normal/Additive Mix>	[0→1] 0=off 1=on	This Sets the internal keyer used for the Bug Keying to normal (Multiplicative) or Additive Mixing.
66	Location of the GP-2 (GPI/Tally card option)	Digipot A: Box=1→16 Digipot B: Slot=1→6	This is the Box and Slot number of the GP-2 GPI option card. This will cause the GPO#1 (Tally) to indicate when the logo is on air. This will activate GPO#1 on the GP-2 card.
67	<BACK>	None	This Returns to menus#56→59.

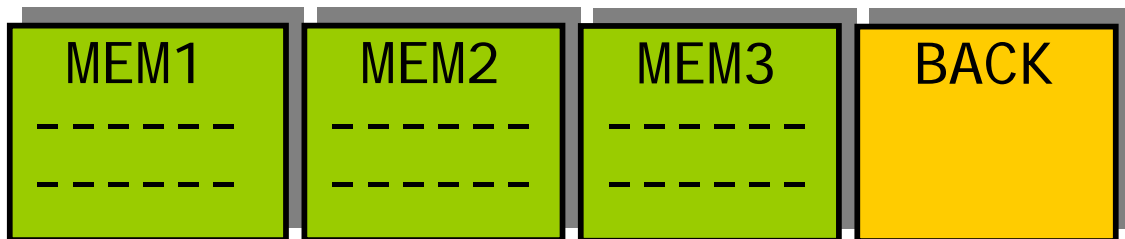
Menus 68-71 Animation set up menus



Menu Num.	Heading	Automation	Function
68	ANIM TYPE	[0→4 0=No Anim 1=Run Fwd 2=Run Bwd 3=Loop 4=Bounce	<p>This determines the way that the animation is played when it is stored in a play list. For a still frame this will report "No Anim".</p> <p>Run Fwd=The animation will run from the start frame to the end frame and stop Run Bwd=The animation will run from the end frame to the start frame and stop. Loop=The animation will run from the start frame to the end frame and then start again in a continuous loop.</p>

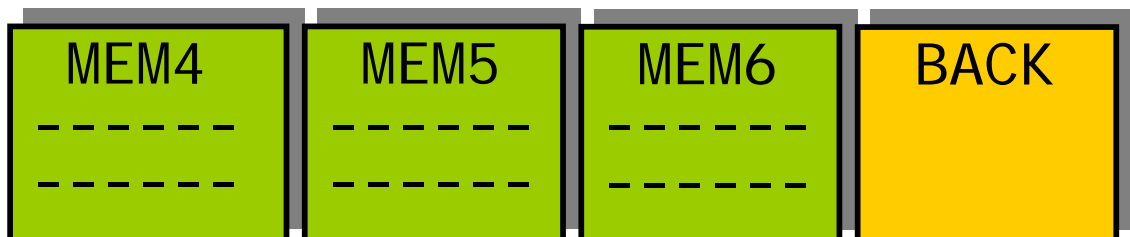
			Bounce=The animation will run from the start frame to the end frame and then from the end frame to the start frame and so on in a continuous loop.
69	ANIM REPEAT <On/Off>	[0→1] 0=off 1=on	If this is ON this will cause the animation to reset to the start every nn seconds, where nn is set in menu#70.
70	REPEAT RATE nn Secs	[1→99]	If menu#69 is "ON" the animation will restart every "nn" seconds.
71	<BACK>	None	This Returns to menus#8→23 (16)

Menus 72-75 Memory 1→3 menus (NEXT to navigate)



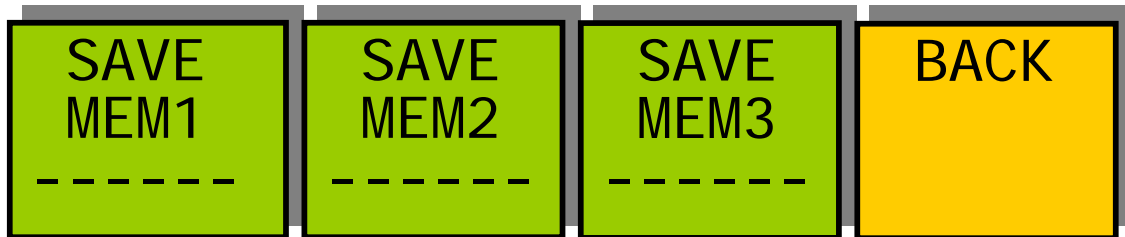
Menu Num.	Heading	Automation	Function
72	MEM1	1=Recall	Pressing this will recall Memory number 1. User Names can be programmed in to the memories using a keyboard. See "geNETics User guide", section "Giving product Memories names"
73	MEM2	1=Recall	Pressing this will recall Memory number 2.
74	MEM3	1=Recall	Pressing this will recall Memory number 3.
75	BACK	none	Go To the Top Level Menus

Menus 76-79 Memory 4→6 menus (NEXT/PREV to navigate)



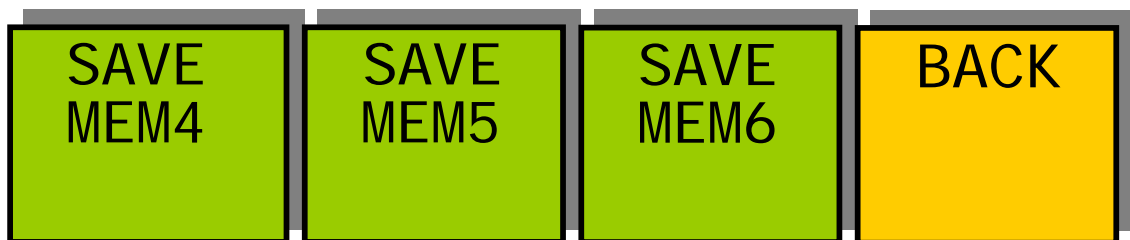
Menu Num.	Heading	Automation	Function
76	MEM4	1=Recall	Pressing this will recall Memory number 4.
77	MEM5	1=Recall	Pressing this will recall Memory number 5.
78	MEM6	1=Recall	Pressing this will recall Memory number 6.
79	BACK	none	Go To the Top Level Menus

Menus 80-83 Save memory 1→3 menus (NEXT/PREV to navigate)



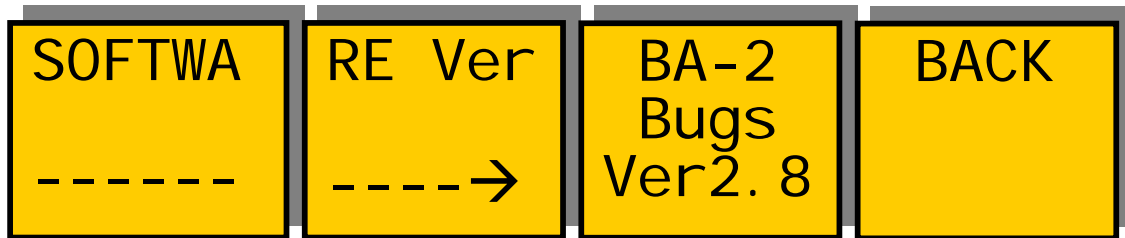
Menu Num.	Heading	Automation	Function
80	SAVE MEM1	1=Save	Pressing this will Save Memory number 1.
81	SAVE MEM2	1= Save	Pressing this will Save Memory number 2.
82	SAVE MEM3	1= Save	Pressing this will Save Memory number 3.
83	BACK	none	Go To the Top Level Menus

Menus 84-87 Save memory 4→6 menus (NEXT/PREV to navigate)



Menu Num.	Heading	Automation	Function
84	SAVE MEM4	1= Save	Pressing this will Save Memory number 4.
85	SAVE MEM5	1= Save	Pressing this will Save Memory number 5.
86	SAVE MEM6	1= Save	Pressing this will Save Memory number 6.
87	BACK	none	Go To the Top Level Menus

Menus 88-91 Software version menu



Menu Num.	Heading	Automation	Function
88	Info	none	Information
89	Info	none	Information
90	none	none	Software Version Information
91	BACK	none	Go To the Top Level Menus

Menus 92-95 Power on memory menus



Menu Num.	Heading	Automation	Function
95	Set As Pow On Memory	1=Set	Pressing this will set the current system set-up as the Power on memory default.
96	Recall Pow On Memory	1=Recall	Pressing this will recall The Power-on memory set up in the last menu.
97	Total Reset	1=Reset	Pressing this will cause a first Birthday of the unit. All current memories and settings will be lost.
98	BACK	none	Go To the Top Level Menus

4 Technical Appendix

4.1 Technical Specification for the BA/BB/LK-2

SDI Inputs	2 off 270Mbit Serial Digital Video Inputs 75 Ohm
SDI cable equalisation	At least 200 Meters of PSF1/3 (Typically 275 Meters)
SDI Outputs	3 off 270Mbit Serial Digital Video Inputs 75 Ohm
SDI Output Jitter	The system will add less than 0.2UI to the input Jitter.

4.2 Jumpering the I-BUS (CAN-BUS) Termination

The I-BUS Network is the "control system" under which all Products and Panels are networked together. Under certain circumstances it is necessary to terminate the network. This can be done on a Panel or a "Product". To terminate this product, locate J6 on the BA/BB/LK-2 Processor Card supplied which is between U1 (The large square "chip") and the Edge connector. (This is on the half of the card labelled "CHP-100 Spartan2 Processor"). Jumper this with a 2mm link.

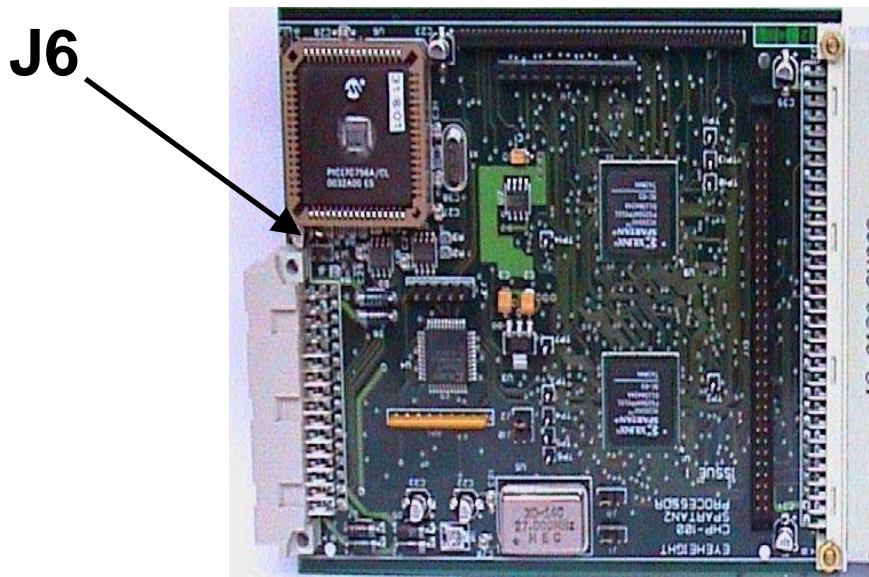


Figure 4-1 Location Of I-Bus Termination Link