



VISTEK V1693 DUAL CHANGEOVER SWITCH USER GUIDE

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VISTEK V1693 dual changeover switch

Contents

1.	DESCRIPTION.....	3
1.1	Functional Block Diagram – Screw Terminal Type (Channel A).....	4
1.2	Functional Block Diagram – Screw Terminal Type (Channel B).....	5
1.3	Functional Block Diagram – BNC Type (Channel A).....	6
2.	INSTALLATION	8
2.1	Rear Panel Connections.....	8
3.	OPERATION	11
3.1	Front Panel Controls and Indications	11
3.2	Configuration	12
3.3	Remote Control	12

1. DESCRIPTION

The Vistek V1693 is a dual channel signal changeover unit for switching analogue video, analogue audio, RS 232 or digital audio (AES balanced or unbalanced) signals. It forms part of the V1600 range of interface products and can be fitted into either a V1606 or V1603 chassis, from which it derives its power and control.

Two types of passive rear module are available:

Rear module, type **V16VR3J**, uses 3-pin screw terminal connectors. It is usually used for analogue or digital audio (AES balanced), although can also be used for RS232 and other signal types.

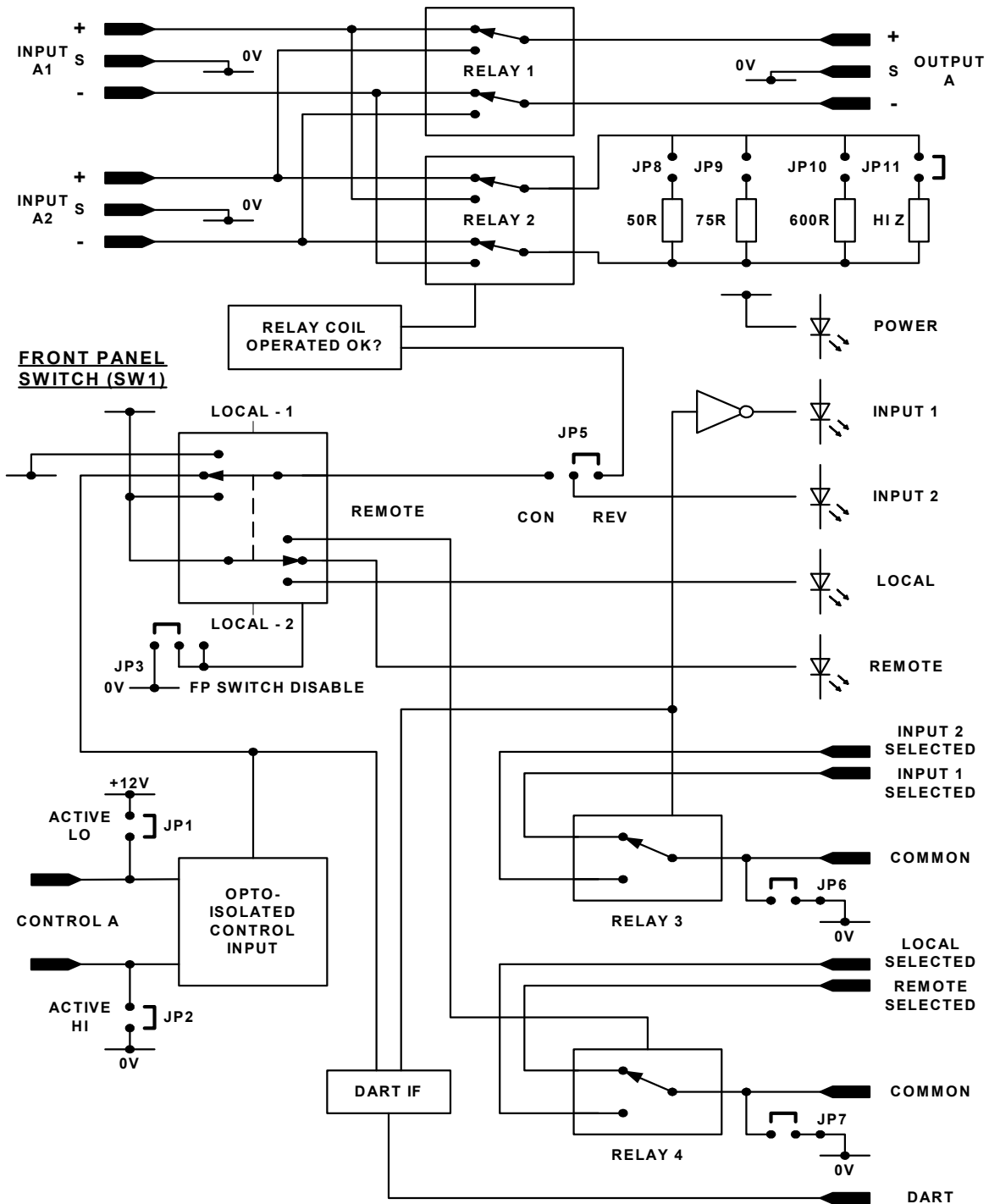
Rear module, type **V16VR3K**, uses BNC connectors. It is usually used for analogue video or digital audio (AES unbalanced).

Each changeover switch is implemented using a high quality relay. Unselected inputs have optional terminations of 50 Ω , 75 Ω , 600 Ω or Hi Z. Control inputs can be active low, active high, or isolated, selected by links on the card.

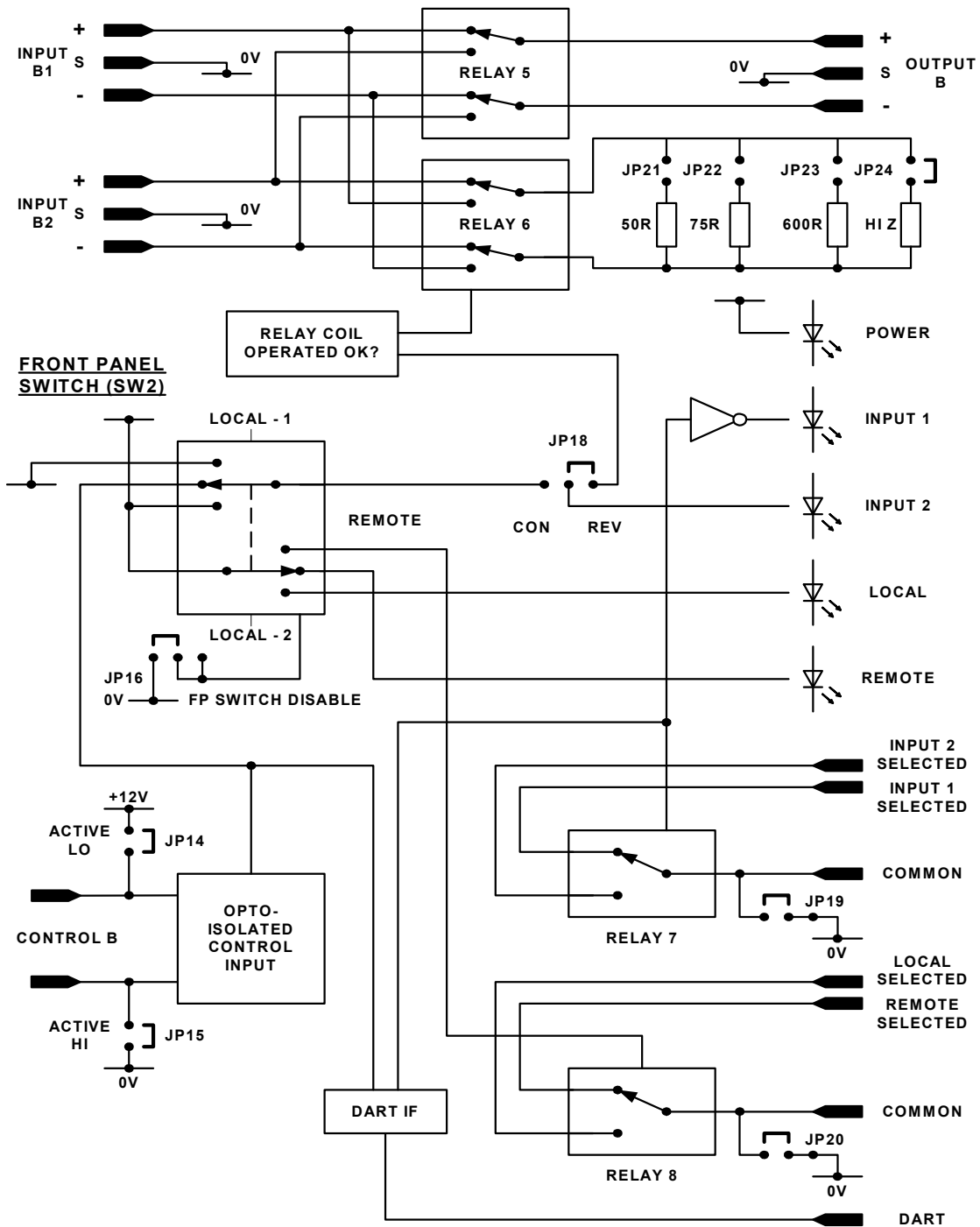
LEDs on the front panel indicate which input is selected and whether the channel is in local or remote mode. A manual control switch for each channel also on the module front panel selects Input 1, Remote or Input 2. Removing a link on the card disables this switch.

Channel selection and local/remote status signals are available as isolated contacts or with a common connected to 0V. In addition the input remote status signals may be configured to indicate if the relay coil has failed to operate. The V1693 can be controlled and monitored remotely from *Viewfind* and/or a V1605 control panel.

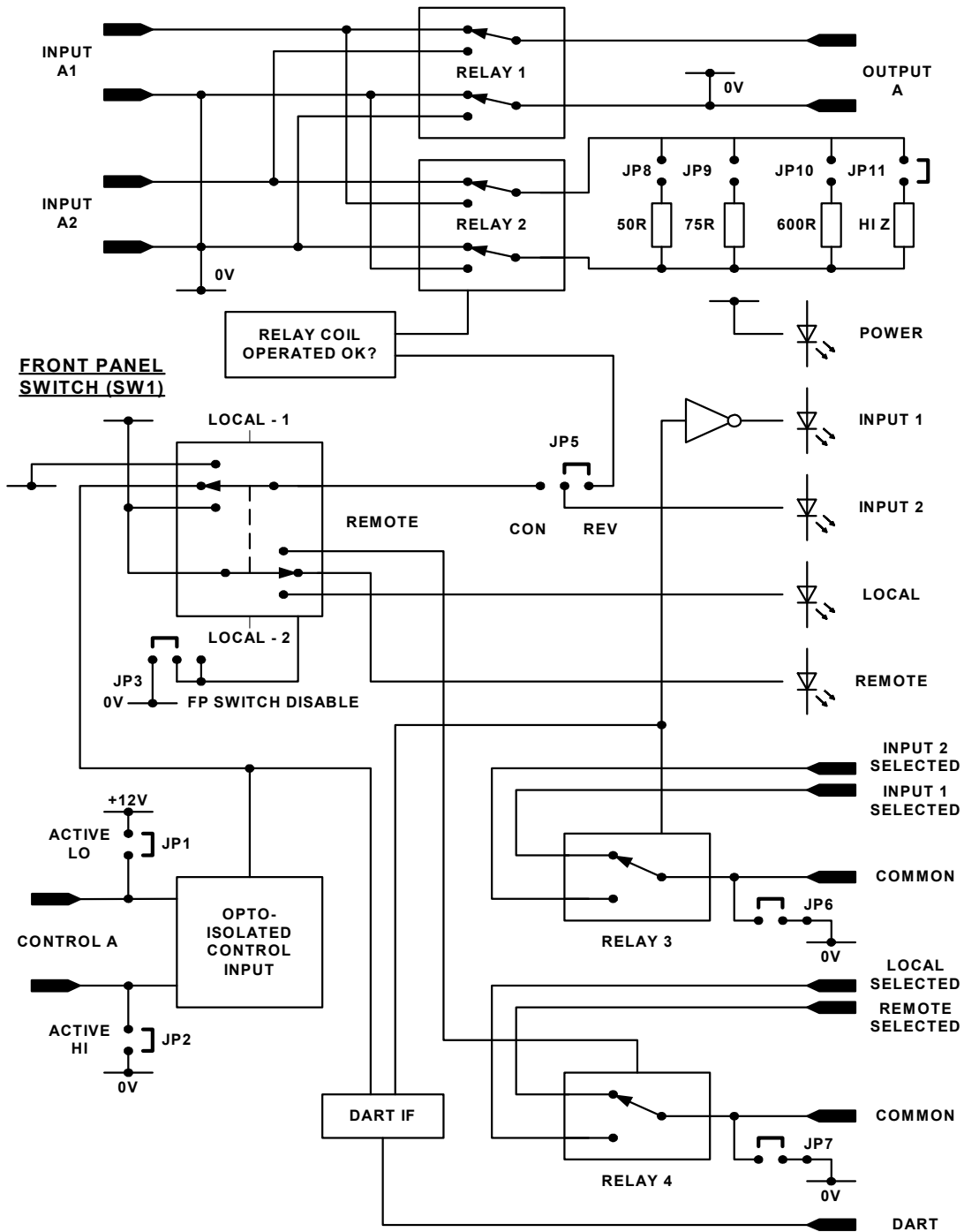
1.1 Functional Block Diagram – Screw Terminal Type (Channel A)



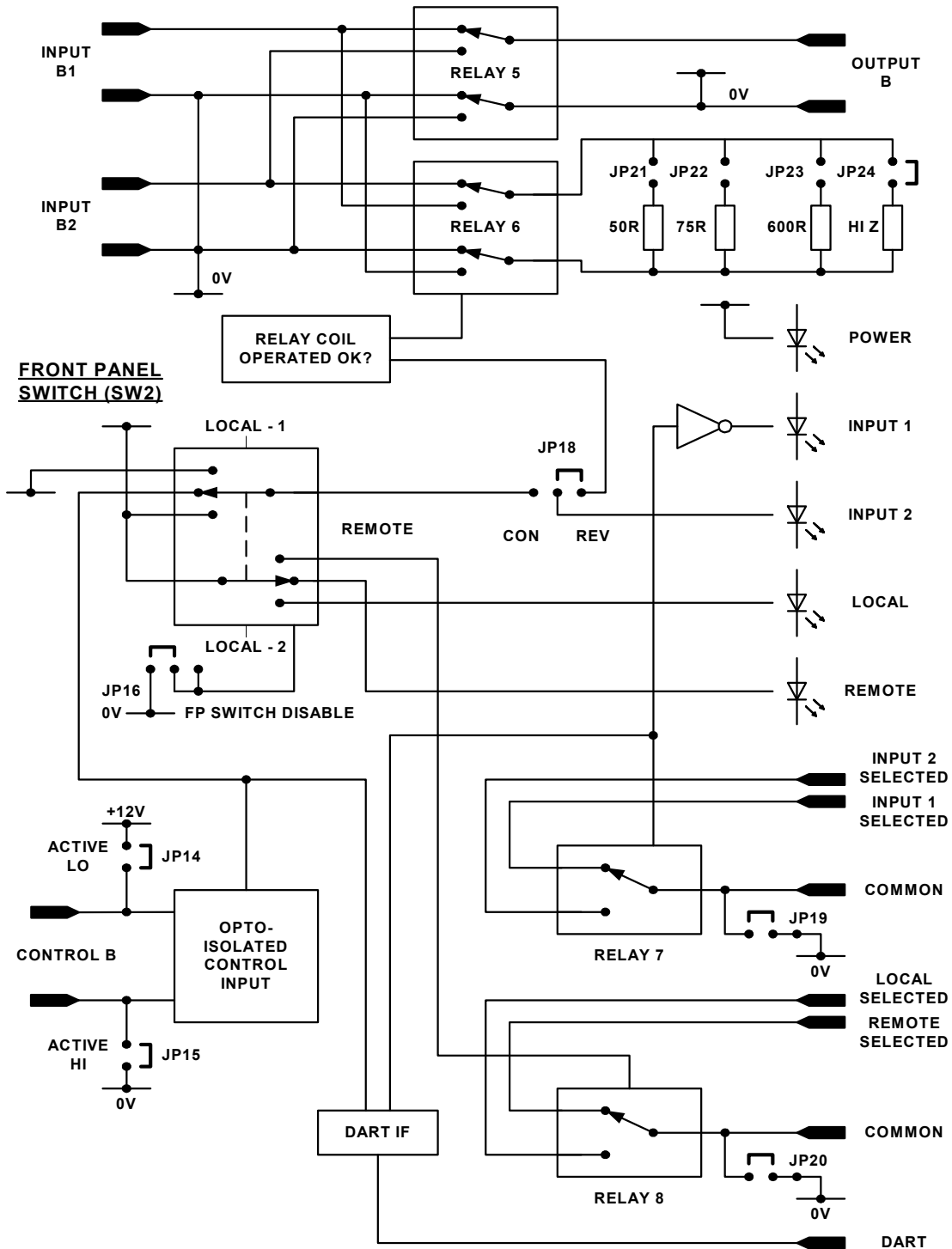
1.2 Functional Block Diagram – Screw Terminal Type (Channel B)



1.3 Functional Block Diagram – BNC Type (Channel A)



1.4 Functional Block Diagram – BNC Type (Channel B)

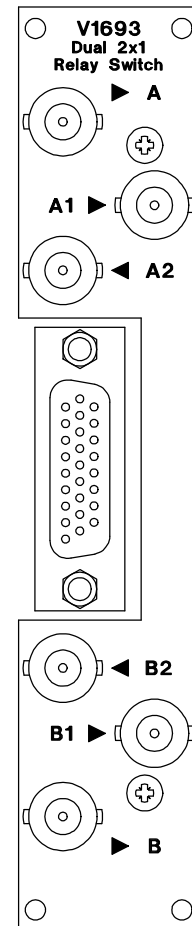
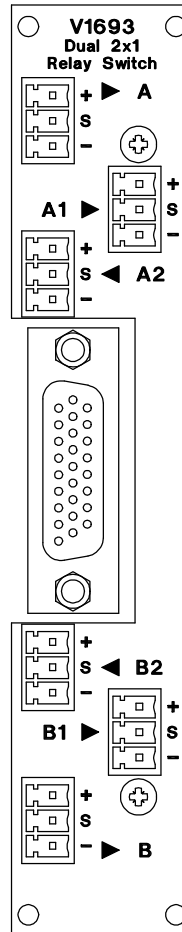


2. INSTALLATION

2.1 Rear Panel Connections

SIGNAL	CONNECTOR	COMMENTS
A1	3-PIN ST / BNC	Channel A Input 1
A2	3-PIN ST / BNC	Channel A Input 2
A	3-PIN ST / BNC	Channel A Output
B1	3-PIN ST / BNC	Channel B Input 1
B2	3-PIN ST / BNC	Channel B Input 2
B	3-PIN ST / BNC	Channel B Output
Control & Status	26 way D type	See table below

GPI REMOTE	
PIN	SIGNAL
1	Control 0V
2	Control +12V
3	Control A (Active Low)
4	Control A (Active High)
5	A Remote Selected
6	A Local Selected
7	A Remote/Local Common
8	A1/A2 Selected Common
9	A1 Selected
10	A2 Selected
11	NC
12	NC
13	NC
14	NC
15	NC
16	NC
17	B2 Selected
18	B1 Selected
19	B2/B1 Selected Common
20	B Local/Remote Common
21	B Local Selected
22	B Remote Selected
23	Control B (Active High)
24	Control B (Active Low)
25	Control +12V
26	Control 0V



Rear Panel Types:

V16VR3J

V16VR3K

Important note: Rear module type V16VR3K is not compatible with module type V1692. See module datasheets for correct types.

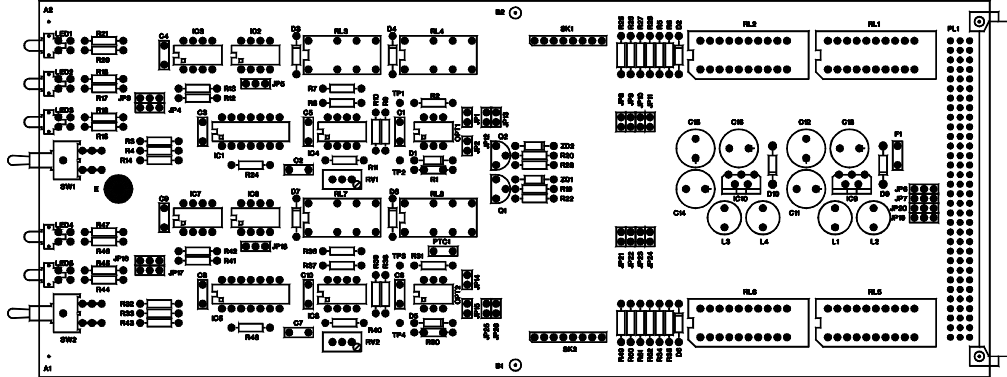
2.2 Hardware Link and Switch Settings

The following table refers to Jumper settings shown in the block diagrams on pages 4 - 7 at the front of this user guide. Their physical locations are given on the printed circuit board overlay on Page 10.

Functions of Links etc.	
JP1	Insert Link for Channel A Active Low Control (JP2 open). Remove both JP1 and JP2 for an isolated control input.
JP2	Insert Link for Channel A Active High Control (JP1 open). Remove both JP1 and JP2 for an isolated control input.
JP3	Insert Link in LH position to enable Channel A front panel input changeover control switch. Insert in RH position to disable.
JP4	Insert Link in LH position for Channel A front panel and external local/remote tallies to follow Channel A front panel control switch. Insert in RH position for permanent remote indication. JP4 is intended to be used in conjunction with JP3. <i>[Note: JP4 is not shown in the functional block diagrams]</i>
JP5	Insert link in the position marked REV for the input selection A1/A2 tallies to be derived from the drive to the signal changeover relay coil. Insert link in the position marked CON for the A1/A2 tallies to be derived from the front panel or external control inputs.
JP6	Insert link in the RH position for the common of the A1/A2 selected tally to be earth-free. Insert link in the LH position for this common to be grounded.
JP7	Insert link in the RH position for the common of the A remote/A local tally to be earth-free. Insert link in the LH position to ground it.
JP8/JP9/JP10/JP11	Selects Channel A Termination Impedance 50R,75R,600R or Hi Z respectively (Fit link to one jumper only).
JP12	Insert Link for Remote Switching via GPI port.
JP13	Insert Link for Remote Switching over DART.
JP14	Insert Link for Channel B Active Low Control (JP15 open).
JP15	Insert Link for Channel B Active High Control (JP14 open).
JP16	Insert Link in LH position to enable Channel B front panel input changeover control switch. Insert in RH position to disable.
JP17	Insert Link in LH position for Channel B front panel and external local/remote tallies to follow Channel B front panel control switch. Insert in RH position for permanent remote indication. JP17 is intended to be used in conjunction with JP16. <i>[Note: JP17 is not shown in the functional block diagrams]</i>
JP18	Insert link in the position marked REV for the input selection B1/B2 tallies to be derived from the drive to the signal changeover relay coil. Insert link in the position marked CON for the B1/B2 tallies to be derived from the front panel or external control inputs.
JP19	Insert link in the RH position for the common of the B1/B2 selected tally to be earth-free. Insert link in the LH position to ground it.
JP20	Insert link in the RH position for the common of the B remote/B local tally to be earth-free. Insert link in the LH position for this common to be grounded.
JP21/JP22/JP23 JP24	Selects Channel B Termination Impedance 50R,75R,600R or Hi Z respectively (Fit link to one jumper only).
JP25	Insert Link for Remote Switching via GPI port.
JP26	Insert Link for Remote Switching over DART.



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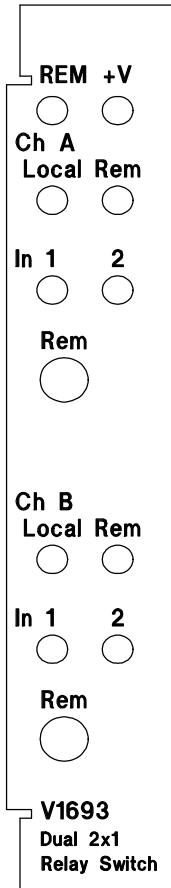




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3. OPERATION

3.1 Front Panel Controls and Indications



LED Indicators:

REM Yellow – Flashing indicates DART control active
+V Green – Indicates DC power present & OK

Local Red – Input selection controlled from front panel
Rem Green – Input selection controlled remotely

In 1 Yellow – Input 1 selected
In 2 Yellow – input 2 selected

Toggle Switches (3 position):

Rem Left: Input 1
Centre: Remote
Right: Input 2



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3.2 Configuration

Configuration of the V1693 consists of positioning links JP1 – JP26 to set the following for each channel:

- Remote control input active high/active low/isolated.
- Front panel signal changeover control and associated remote/local indications enabled/disabled.
- Derivation of input selection tallies.
- Input selection and local/remote tallies to be grounded common or ground-free.

The functions of these links are described in detail in Section 2.2.

3.3 Remote Control

The V1693 has two remote control options:

- Contact closure or 12V (dependent on configuration) applied to the remote control port routes the output of a channel to Input 2. The output is routed to Input 1 in the absence of a control input.
- Control over DARTnet from a V1605 or *Viewfind* controller when the unit is fitted into a DART-equipped V1606 or V1603 rack.