



**VISTEK V6151 & V6152
HD/SD DISTRIBUTION AMPLIFIERS
USER GUIDE**

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VISTEK V6151 & V6152 hd/sd distribution amplifiers

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VISTEK V6151 & V6152 hd/sd distribution amplifiers



1. DESCRIPTION

The V6151 and V6152 are serial digital video Distribution Amplifiers for use with both High Definition and Standard Definition SDI signals. The V6151 has a single input and five outputs, while the V6152 has one input and ten outputs. The units automatically detect whether the input signal is High Definition (HD) or Standard definition (SD) and sets its parameters accordingly. When operating with an SD signal all outputs can be used with ASI signals.

They are part of the V1600 range of interface modules and are built on a 3U high Eurocard which can be fitted into V1606 3U Chassis along with any other module in the range. (The earlier V1603 3U chassis can also be used, so they can be retro-fitted into earlier installations). Suitable passive rear modules must be used. The V6151 is a standard single width module, but the V6152 occupies two positions to provide enough BNC connectors on the rear panel.

Both modules receive all their power and I/O signals from the rack and rear modules. Unlike most modules in the range it is not possible to use the V6151 DA in a 1U chassis due to the technical requirements of the HD SDI signal. As a double width module, the V6152 could not physically fit into a 1U chassis.

A reclocker is fitted to the modules, but this can be disabled by a link on the board. In some installations the use of a non-reclocking amplifier is preferred since it does not lock jitter errors into a signal.

Both units will operate with all High Definition SMPTE 292 signals, Levels A to M, and with Standard Definition SMPTE 259M signals.

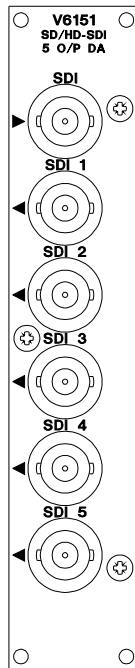
The DART remote monitoring and control system will indicate unit type, Reclocking or non re-clocking, signal present and the operating data rate.

2. INSTALLATION

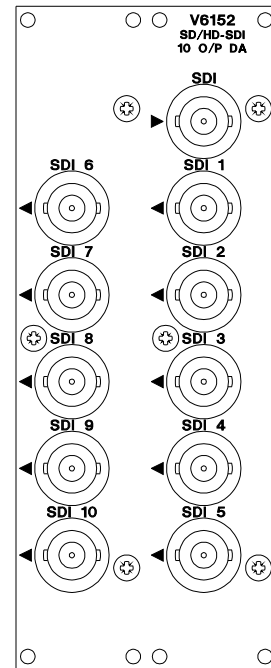
2.1 Rear Panel Connections

The V1651 and V6152 units can only be used in a 3U chassis , but use different width rear modules.

The V16HR3A and 1V6HR3B are shown below:



V16HR3A



V16HR3B

SIGNAL	SOURCE	COMMENTS
SDI	SDI Video I/P	Sourcing cable length up to 250m (270Mb/s, Belden 8281) Sourcing cable length up to 100m (1.485Gb/s, Belden 1694A)
SDI 1-10	SDI Outputs	SDI Outputs to SMPTE 259M and 292M

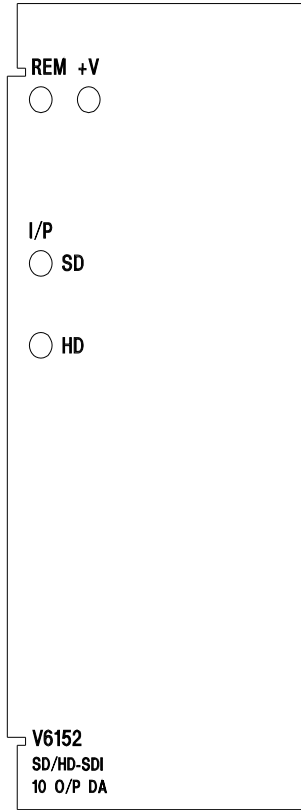
For best performance of these Distribution amplifiers it is recommended that all outputs are terminated, even if they are not being used, with proper high quality terminations.

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2.2 Front Panels

These are the two front panels. Only the re-clocking DA, the V6151, has an indication that the input signal is present.



INDICATORS	DESCRIPTION
+V	Onboard regulated power is present.
REM	Short blips to indicate access from the remote control system. A Rack Controller must be fitted to the Chassis.
SD	Indicates SDI Standard Definition input signal is present and locked.
HD	Indicates SDI High Definition input signal is present and locked.

2.3 Standards

The units will operate correctly with the following standards:

- SMPTE 292M Levels A, B, C, D, E, F, G, H, I, J, K, L, M
- SMPTE 259M
- SMPTE 296M
- SMPTE RP211 Levels 12, 13, 14, 15, 16

2.4 Insertion Delay

UNIT	SD (270Mb/s)		HD (1.485Gb/s)	
	O/Ps 1-5	O/Ps 6-10	O/Ps 1-5	O/Ps 6-10
V6151	11ns	n/a	8ns	n/a
V6152	11ns	11.5ns	8ns	8.5ns

The insertion delay is specified with the re-clocker enabled.

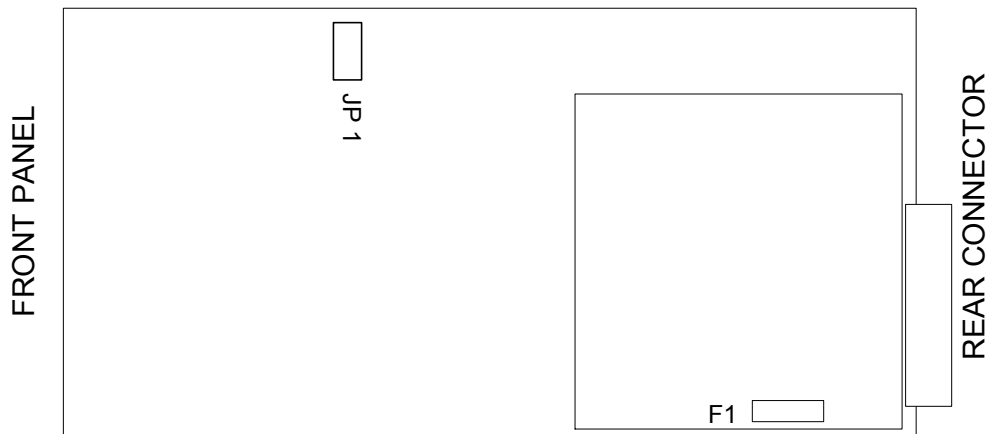
2.5 Hardware

The figure below shows diagrammatically the main board of both DAs along with some components of interest.

The PCB is also used as a baseboard for Vistek's fibre I/O products, but for simpler applications like these DAs many components are not fitted. Of all the adjustables only JP 1 is fitted:

Jumper	Position	Description
JP 1	1-2	Bypass Reclocker
	2-3	Reclocker enabled

Position 2-3 is closest to the edge of the board.



2.6 DART Controls

This unit has no control, but does have status indication as follows:

PARAMETER	States
Input Signal	Present
Re-clocker Status	Normal or Bypass
Reclocker	Locked
Reclocker Data Rate	143 MB/s
	177 MB/s
	270 MB/s
	360 MB/s
	540 MB/s
	1.4835/1.485 Gb/s