

digital keying modular
interface audio
converters analogue video

BLACK102

Test pattern generator

USER MANUAL

Crystal  Vision

BLACK102 Digital Black Generator

USERS MANUAL

Black102man1.dtp

spa 16/07/98

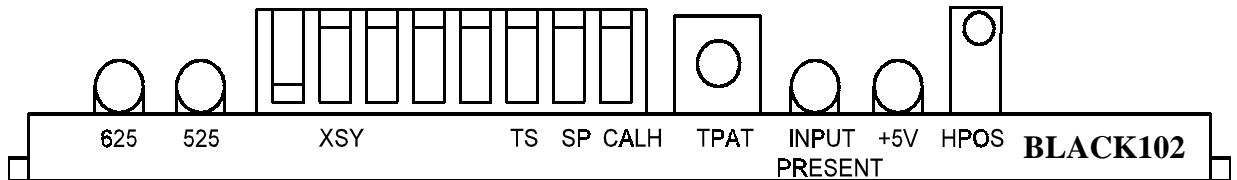
INTRODUCTION

The BLACK102 is a 10 bit Serial Digital Black Generator. It is very compact with 6 modules fitting in a 1U frame. It will generate either 625 or 525 line standard outputs, with automatic detection from external SYNC signal.

The unit will plug into the front of the rack frame, and the universal connection system will allow a mixture of Crystal Vision modules, without the use of extra rear panels, in both 1U and 2U frames. The hinged front panel of the case reveals user control of the card, and also LED indication of status. There is an 8 way piano switch that allows selection of some user options. Further configuration is possible using movable links.

SPECIFICATION

Size:	100mm x 266mm module with DIN 41612 connector. User adjustments and indication at end of board to allow access from hinged front panel.
Weight:	180g
Analogue Input:	Sync input 300mV or 2 volt into 75 ohms. Auto or manual 525/625 selection. +/- 2uS adjustment of picture position from syncs.
Output:	2 x 270Mb/s serial digital to EBU Tech 3267-E & SMPTE 259M
Test Patterns:	Fixed serial digital Black.



OPTIONS AVAILABLE FROM FRONT PANEL

DIL SWITCH

1		Not used.
2	SYNC	Up for free running, down for external syncs.
3		Not used.
4		Not used.
5		Not used.
6	TEST	Must be Up.
7	SPLIT	Must be Up.
8	CALH	Up selects horizontal position set by user adjustment (HPOS), down selects factory default (set by RV10)

TEST PATTERN ROTARY SWITCH: This has no function on this module.

HORIZONTAL POSITION ADJUSTMENT (HPOS)

Allows adjustment of horizontal picture position up to +/- 2uS from reference sync input when selected by the relevant DIL switch (see above).

FRONT PANEL LEDES (from left)

Yellow 625	625 input detected. Only valid if input present
Yellow 525	525 input detected. Only valid if input present.
Green Input Present	Valid sync input detected (only if selected)
Green +5V	Supply Voltage present.

625 / 525 LINE MODE SELECTION

625/525 line selection is controlled by a link on J1 and J2 on the left hand edge of the board near the connector end. With the link on J1 the BLACK102 will auto-select between 625 and 525 line mode based on the input. With the link on J2 the BLACK102 will be forced into 525 line mode. With the link removed the BLACK102 will be forced into 625 line mode.

INSTALLATION INFORMATION

The BLACK102 plugs into the front of a suitable Crystal Vision frame. The standard 1U version is the FR1-6 and the 2U is FR2-12. These take 6 and 12 modules respectively. The modules can be plugged into and removed from the frame while it is powered without damage.

Rear Connectors

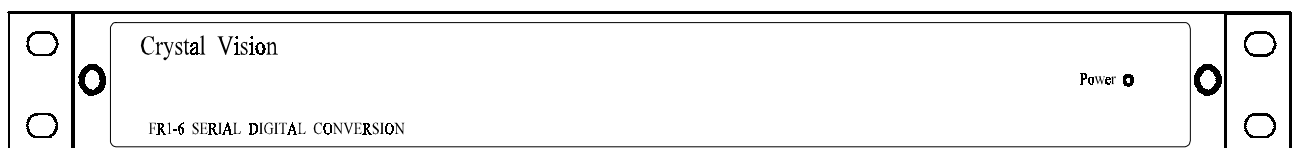


The rear bnc connections to the BLACK102 come from the standard connection set of 6 bncs on a Crystal Vision universal rack frame. These give an external sync input and two serial digital outputs.

The connections are as follows:

SDI/1	Serial Digital Output
SD2	Serial Digital Output
Y/G/OPA	Not used
U/B/OPB	Not used
V/R/OPC	Not used
SYNC/OPD	External sync input

FR1-6 1U Frame For 6 Modules



1U FRAME for 6 modules, includes rear panel bnc connections, and plug-in power supply. A hinged front panel gives access to the PSU and all modules. The universal frame wiring system allows any of the interface range of modules to be fitted in any position. Some modules have the option of occupying 2 positions to enable them to use extra bnc connection. There are also 2U frames that will house up to 12 modules.