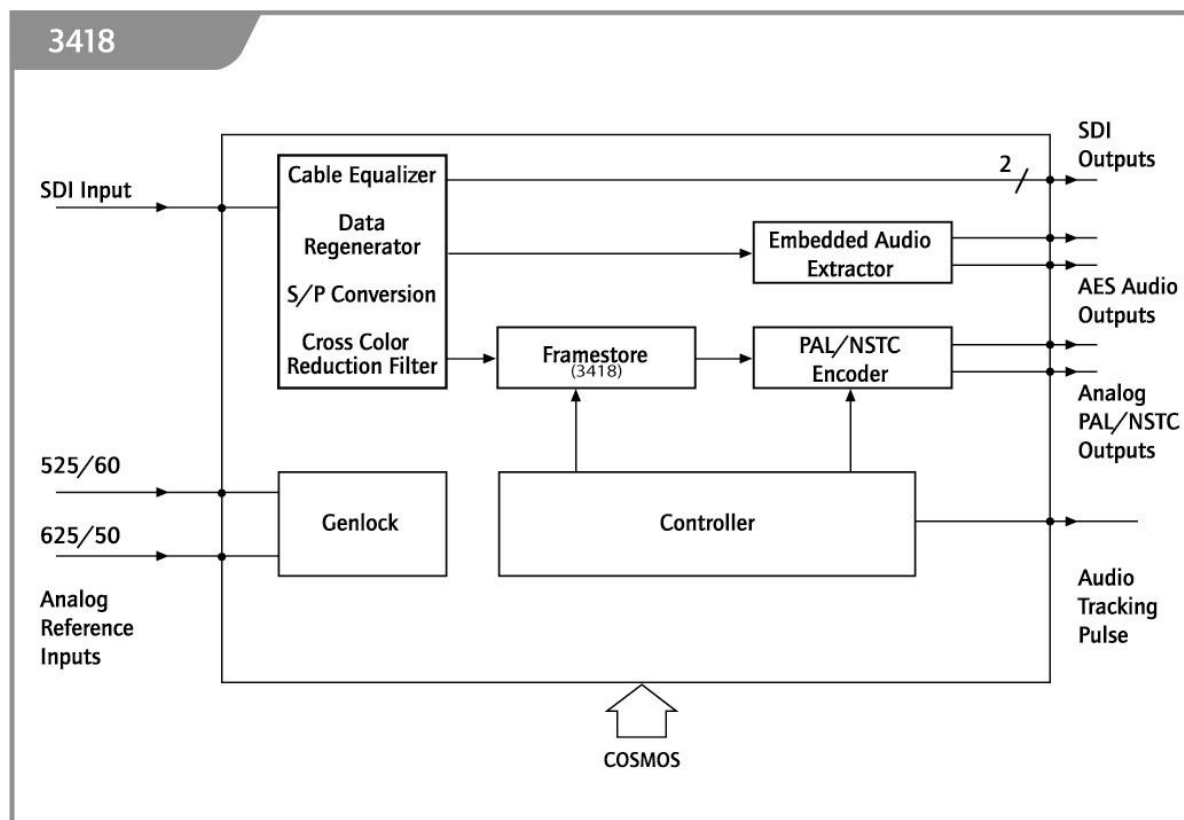


FEATURES

- SDI to analogue composite conversion
- Two composite outputs
- 10 bit processing
- Proc. Amp. controls
- Incoming EDH analysed
- Built-in test signals
- Cross colour reduction
- Extraction of embedded audio
- Two outputs of regenerated SDI
- Frame Synchroniser option (3418)
- Freeze on demand or on loss of input (3418)
- COSMOS remote configuration and status monitoring

FUNCTIONAL BLOCK DIAGRAM



ORDERING INFORMATION

ICO-3418-3B00	SDI to PAL/NTSC Encoder/DAC with Frame Synchroniser and Audio Extractor, balanced AES3 (30mm).
ICO-3418-3U00	SDI to PAL/NTSC Encoder with Frame Synchroniser and Audio Extractor, unbalanced AES3 (30mm).
ICO-3419-3B00	SDI to PAL/NTSC Encoder with Audio Extractor, balanced AES3 (30mm).
ICO-3419-3U00	SDI to PAL/NTSC Encoder with Audio Extractor, unbalanced AES3 (30mm).

SPECIFICATION

Input

Type SDI to SMPTE 259M-C 270Mb/s
Connector BNC

Reference Inputs

Type 2 pairs looping analogue black & burst for 525 and 625, auto selecting
Connectors 4 x BNC

Outputs

Analogue 2, composite PAL, 625/50/4.43 or NTSC, 525/60/3.58
Connectors 2 x BNC

SDI 2, regenerated input, to SMPTE 259M-C
Connectors 2 x BNC
Extracted audio 2 x AES3 streams from selected group.
Connectors 2 x BNC (unbalanced)
D15 (balanced)

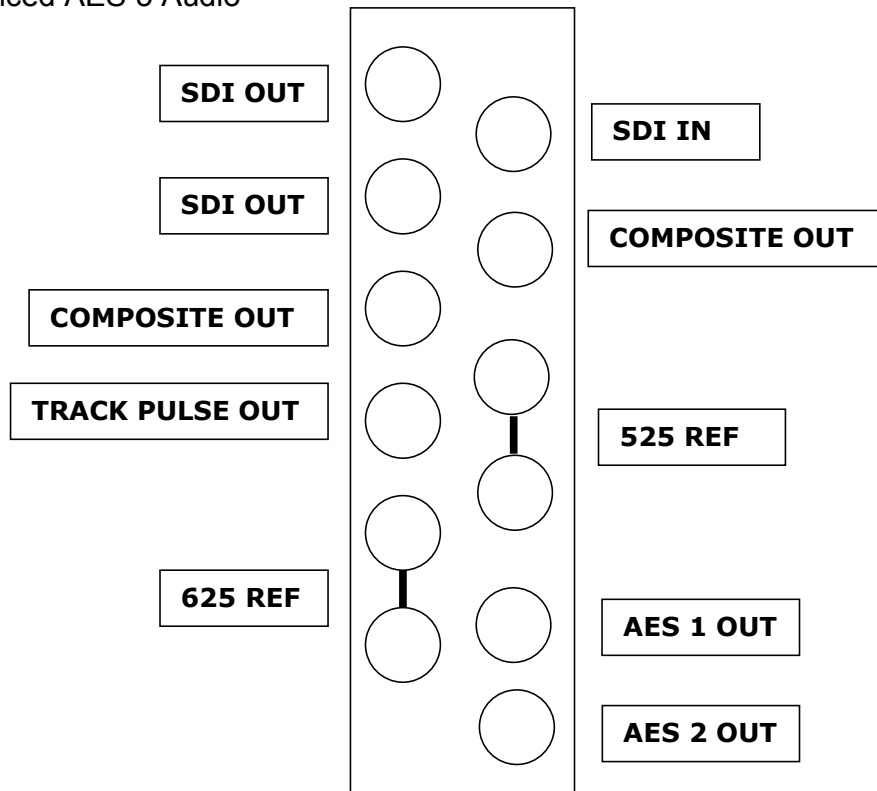
Audio Tracking Pulse Frame rate positive TTL level pulse, width equal to current video delay. (Frame synchroniser option only)
Connector BNC

Performance (analogue output)

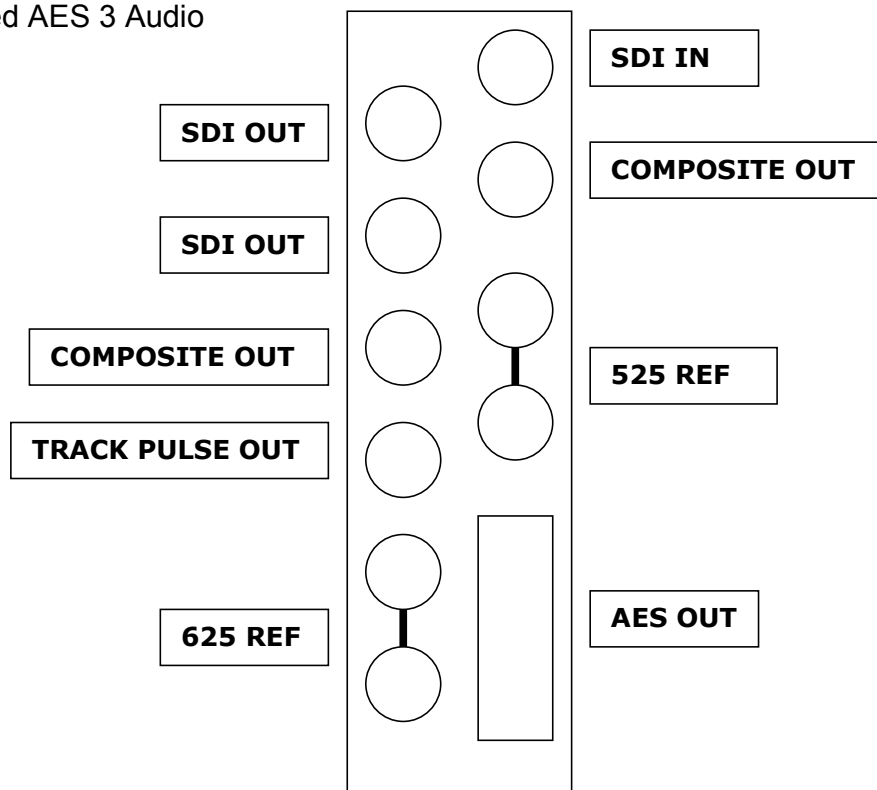
Luminance frequency response +/- 0.1dB to 5.5MHz
2T pulse < 0.5%K
2T pulse to bar inequality <0.5%
Field tilt <0.5%
Differential gain <0.5%
Differential phase <1.0 degree
Luminance SNR >60dB
Return loss >40dB
Y/C delay inequality <2ns

REAR PANEL LAYOUT

Unbalanced AES 3 Audio



Balanced AES 3 Audio



Balanced AES 3 Audio Pin-out (D-15 cable plug)

Pin No.	Connection
1	AES 1, o/p 1 +
9	AES 1, o/p 1 -
2	GND
10	AES 1, o/p 2 +
3	AES 1, o/p 2 -
11	GND
13	AES 2, o/p 1 +
6	AES 2, o/p 1 -
14	GND
7	AES 2, o/p 2 +
15	AES 2, o/p 2 -
8	GND

DIAGNOSTIC LEDs

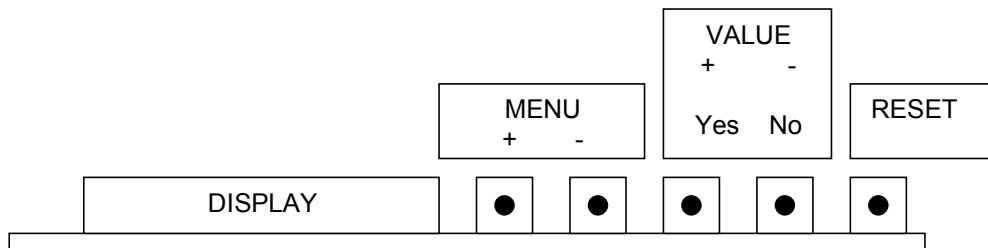
Label	Colour	Description	Normal State
Rem	Yellow	Remote (Cosmos) control enabled	Follows 'Rem' switch
Processor Heartbeat	Yellow	Flashes when processor running	Flashing
Picture Frozen	Yellow	Warns of picture frozen	Off
I/P Error	Red	Main Input Error 2 Flashes- UES error 3 Flashes - EDA error 4 Flashes - EDH error	Off
Ref Error	Red	No suitable reference supplied	Off
Processor Reset	Red	Indicates processor is re-booting	Off
Power OK	Green	Indicates all power rails are OK	On

FRONT EDGE DIP SWITCH

Label	Description
Config 1	Reserved
Config 2	Reserved
Config 3	Reserved
Rem	Enable remote (Cosmos) control (lever down)

FRONT EDGE PUSH BUTTON SWITCHES

Four buttons, in conjunction with the alpha-numeric display, provide local control whilst the fifth re-sets the on-board microcontroller. The menu +/- buttons scroll through the menu items, the Value+/Yes and Value-/No buttons then adjust the selected parameter which changes immediately. Set-ups may be saved in one of eight user registers if required.



LOCAL CONTROL MENU

Menu Item	Sub-item	Description	Comments
3418v1.0		Software Revision	Only visible after reset
Strd	Auto 525 625 Input	Standard Selection	Default Auto Input = Lock to SDI input
Lum	-10 to +10	Luminance gain	Default 0, calibration %
Chr	-10 to +10	Chrominance gain	Default 0, calibration %
Black	-10 to +10	Black level	Default 0, calibration %
Setup	Add Off	Adds setup to NTSC output	525 only
ScPh	0 to 360	Output subcarrier phase	degrees
HPh	-3200 to +3200	Output horizontal phase	Frame sync version (3418) only. $\pm 32\mu\text{s}$ w.r.t. reference
VPh	0 to 524 0 to 624	Output vertical phase	Frame sync version (3418) only. TV lines.
Live Field 1 Field 2 Frame		Framestore freeze status	Frame sync version (3418) only
TSig	Off MdRamp CB75 CB100	Test signals off Modulated ramp 75% colour bars 100% colour bars	
XColr	Del On	Delete cross colour Pass cross colour	
Aud Grp	1 2 3 4	Embedded audio group to be extracted	
PPh	-962 to +962	Picture phase	Relative to syncs. Steps 148ns
RegNum	1 to 8 and default	Config. memory register	
Save	Yes No	Save configuration	To selected register (except default)
Load	Yes No	Load configuration	From selected register

COSMOS STATUS MONITORING AND CONFIGURATION

Cosmos provides configuration of all locally controllable parameters plus monitoring of: -

525/625 mode (selected or detected)

Input status

Reference status

Power status

Card identity