

FALCON THREE TV

TV DIGITAL AUDIO PROCESSOR



3 BAND TV AUDIO PROCESSORS

- Digital TV audio processor 3 band
- Powerful AGC on the entire audio band
- Protection against audio overmodulation
- LOUDNESS Control: ITU-R BS1770 Compliant
- Analog, AES/EBU
- SDI Input and Output
- Real Lip- Sync audio/video
- Flexible, dynamic and user friendly
- Remote control via Serial
- Best price / features

TECHNICAL SPECIFICATIONS

GENERAL

Dimensions:	1 rack unit, 352 x 483 x 44 mm (LxHxD)
AC Rate:	230 Vac 50 Hz / 115 Vac 60 Hz +-10%
Type of power supply:	Transformer based
Processing architecture:	Fully digital. Based on DSP 24bit/100Mhz. Signal processing is performed by phase linear filters.
Operating temp. range:	-5 to +50 °C

AUDIO PROCESSOR

SYSTEM PERFORMANCE

Frequency Response:	30 Hz - 15 KHz (-0.1 dB) - Analog Processing Chain
Sample Rate:	Depending on processing being performed, from 47.5 to 760 KHz
Total System Distortion:	0.008% - (0.005% at 1 KHz)
Output Noise:	The Falcon Three TV/Three Tv SDI's noise floor, in bypass mode, is primarily governed by the dynamic range of CS8420 digital rate converter, which has a specified Dynamic Range of 126 dB
Stereo CrossTalk:	>-80 dB (from 30 Hz to 15 KHz)

PROCESS ARCHITECTURE

Min. Processing Delay:	as low as technically possible: max 4 msec for all processing curves
Number of Presets:	10 Factory Presets + 10 User Presets
Preset Memory type:	Non volatile memory, factory presets protected against accidental deletion
Preset Import / Export:	import / export from and to a file, either in groups or individually
Wizard procedure controls:	Density, Compression, Equalization, Expansion

3 BAND PROCESS

Falcon Three TV SDI:	Audio Agc Mode, Agc Speed, ITU BS.1770
Falcon Three TV SDI Preprocess:	Loudness Control, Loudness Reference, Output Delay
Falcon Three TV SDI Process:	Band1 Compressor, Band2 Compressor, Band3 Compressor, Compressor Release, Band Coupling, Limiter Drive

INPUT & OUTPUT

ANALOG INPUT MODULES

A/D Conversion:	24bit Sigma-Delta Conversion (Crystal CS4272)
Connectors:	XLR, female - Electronically balanced
AD Clipping Point:	+20.0dBu
Operative Nominal Level:	From -12.0dBu to +12.0dBu (0.1dBu Step)
Impedance:	600OHM / 50KOHM (Electronically balselectable) EMI -suppressed
AD Dynamic Range:	104 dB RMS (108dB A weighted)
Input Modes:	Stereo, Mono L+R, Mono L, Mono R
Distorsion:	Less than 0.01% TDH+NOISE (0.0dBu 1Khz)

DIGITAL INPUT MODULES

Connectors:	XLR female
Format:	AES3/EBU
Sample Rates:	32KHz / 44.1KHz / 48KHz / 64KHz / 88.2KHz / 96KHz with automatic selection and jitter correction
Operative Nominal Level:	From 0.0dBFs to -24dBFs (0.1dBu Step)
Dynamic Range:	125 dB (Typ), 122 dB (Min)
Input Modes:	Stereo, Mono L+R, Mono L, Mono R, L/R Swaped, R / L Inverted, L / R Inverted.
Distorsion:	Less than 0.001% TDH+NOISE (-10dBFs @ 1Khz)

ANALOG OUTPUT MODULES

D/A Conversion:	24bit Sigma-Delta Conversion (Crystal CS4272)
Connectors:	XLR, male - Electronically balanced
Output Level:	-12.0 dBu to +14.0dBu (0.1dBu Step) - Max (+19dBu)
Impedance Source:	10 Ohm
Load Impedance:	600Ohm or greater
Distorsion:	Less than 0.01% TDH+NOISE (0.0dBu 1Khz)
Group Delay:	3 ms

DIGITAL OUTPUT MODULES

Connectors:	XLR male
Formats:	AES3/EBU, IEC60958, EIAJCP1201
Sample Rates:	32KHz / 44.1KHz / 48KHz / 64KHz / 88.2KHz/96KHz (Internal)
Output Level:	From 0.0 dBFs To -24.0dBFs (0.1dBFs Step)
Distorsion:	Less than 0.002% TDH+NOISE (-10 dBFs @ 1Khz)
Group Delay:	3 ms

SDI TECHNICAL SPECS

SDI Video Input:	Switchable between SD, HD and 3 Gb/s SDI
SDI Video Outputs:	Automatically matches the SD, HD and 3 Gb/s SDI video input
Multi Rate Support:	Auto detection of HD or standard definition SDI inputs
SDI Format Support:	625/25 PAL, 525/29.97 NTSC, 1080PsF23.98, 1080PsF24, 1080PsF25, 1080i50, 1080i59.94, 1080i60, 720p50, 720p59.94 and 720p60
SDI Compliance:	SMPTE 259M, SMPTE 292M, SMPTE 296M, ITU-R BT.656, ITU-R BT.601 and SMPTE 297M for Optical Fiber SDI
Re-clocking:	Yes
SDI Video Sampling:	4:2:2
SDI Video Rates:	SDI video connections are switchable between standard definition and high definition
SDI Color Precision:	4:2:2
SDI Color Space:	YUV
SDI Audio Sampling:	Television standard sample rate of 48 kHz and 24 bit
SDI Auto Switching:	Automatically selects between SD SDI, HD-SDI and 3 Gb/s SDI

REMOTE CONTROLS

Digital Inputs GPin:	4 Digital Input TTL. Compatibles optically decoupled
Digital Outputs GPOut:	4 Digital Output with relays
Serial Ports RS-232:	3x RS232 SubD 9p optically decoupled (default 38400 Baud)
Ethernet / LAN:	10-100Mbits Ethernet Interface (Elite version)

Pictures and technical specs in this leaflet are provided for information purpose only and are subject to change without further notification (Ver. 2.0)