Headend Systems

Series 6385 Stereo Encoders

22881

INTRODUCTION

The Series 6385 Stereo Encoders are designed for cable television headends that must encode locally-originated or satellite-delivered stereo audio programming into BTSC stereo format. They are economical, top-of-the-line encoders with superior performance specifications and unsurpassed interfacing flexibility. Two models support NTSC and PAL-N video formats respectively.

FEATURES	BENEFITS
LCD front panel with keypad data entry	Simple operator interface Shows all audio levels and operating status
Balanced audio inputs L, R, and SAP channels	Provides standard interface to most audio equipment and optimum hum rejection
Main and alternate inputs	Allows selection of a secondary program source for L, R, and SAP channels
SAP (second audio program) channel	Allows second audio programs to be activated at any time
Complies to OET-60 specifications	Compatible with NTSC broadcast standards
Complete remote control and status monitoring via Scientific-Atlanta SMC interface	Coordination of encoder functions with Status Monitoring software via TTL & RS-422 / 485
Built-in 10.396 kHz calibration tone	Allows accurate deviation setting using Bessel Null method
Selectable AGC operation on L and R inputs	Allows user to enable or disable baseband AGC
BTSC baseband multiplex output	Supports baseband switching and transport
4.5 MHz subcarrier output	Supports subcarrier interfacing and transport
Alternate subcarrier switching	Supports ad insert and backup switching applications
“Surround Sound” compatible and Selectable Mono mode	Allows use with any audio programming format

DESCRIPTION

The Series 6385 Encoder encodes stereo audio signals into the BTSC multi-channel television sound format. The encoder uses the dbx noise reduction system as required by the BTSC standard. The Model 6385 Encoder accepts discrete left / right stereo and / or SAP audio as standard inputs. Available outputs include a wideband BTSC encoded baseband signal and a 4.5 MHz subcarrier for use with a wide variety of video equipment.

All controls and indicators are accessed via keypad and integrated liquid crystal display (LCD) for easy setup and monitoring. Critical internal operating levels are preset at the factory. Additionally, L and R baseband AGC circuitry is provided for consistency in subcarrier deviation, regardless of amplitude variations in program content.

LED status indicators show alarm, video lock, and store functions. EAS audio inputs and override function allow simple override of main or alternate inputs for Emergency Alert System compliance. Video "Loop Through" with Hi-Z impedance feature supports interfacing to other video equipment. An integral AC power supply supports all powering configurations.

TECHNICAL DETAILS

Remote Control and Status Monitoring

Encoder functions can be controlled and monitored from a remote location using Element Management software provided by Scientific-Atlanta. These functions are accessed via the built-in SMC interface. SMC commands are received by the encoder using a unique address for each device in the system. The encoder's responses to the SMC commands are then returned to the system controller via the SMC interface. All controllable and monitorable functions of the Series 6385 Encoders are available via the SMC interface.

Flexibility for Multiple Inputs

The encoder can accept multiple program sources. Alternate video, left, right, and SAP channels are supported. Selections are made via the front panel or by remote control. This feature enables various alternate program sources and interface techniques to be supported. A video loop through feature allows synchronizing video to be passed on to other video equipment for applications such as ad insertion or scrambling.

Flexibility for Multiple Configurations

Standard powering configurations includes both AC and -48 V DC formats. Additionally, a PAL-N version is available. 220 V AC powering is available for either NTSC or PAL-N video.

Compact Size

The compact EIA standard 1 RU (1.75 inch) chassis makes system integration simple. Space restricted systems benefit from the low profile packaging. The Model 6385 Encoder styling matches other Scientific-Atlanta Headend Systems 1 RU products like the Model 9660 Satellite Receiver and Models 9270 / 9280 Agile Modulators.

ENCODER SPECIFICATIONS

Audio Specifications	*Value*	
Audio input level	-15 to +15 dBm for 100% level	
Audio input impedance	600 Ω balanced or Hi-Z (menu selectable)	
Audio common mode hum rejection	>40 dB	
Frequency response - with dbx (L or R)	±0.5, 50 Hz to 14.5 kHz, -3 dB @ 15 kHz	
Frequency response (SAP)	±1.5 dB (50 Hz to 9 kHz)	
S / N ratio (L, R, SAP)	>60 dB down (with dbx)	
L-R carrier suppression	>40 dB	
Channel separation - with dbx Typical separation Guaranteed separation @ 25°C Guaranteed separation over temperature range of 0 to +50°C	NTSC (591442, 591443) >33 dB (50 Hz to 14 kHz) >30 dB (50 Hz to 14 kHz) >26 dB (50 Hz to 14 kHz)	PAL-N (591444, 591445) >26 dB (50 Hz to 14 kHz) N / A N / A
Total harmonic distortion Main audio distortion SAP channel	 <0.5% <1% (10 kHz BW)	
Calibration Tone	10.396 kHz	
4.5 MHz subcarrier output level	40 ±3 dBmV	

Video Specification	*Value*
Input level (video loop-through)	0.5 V to 2.0 V p-p
Input impedance	Hi-Z
Input return loss (30 Hz to 4.2 MHz)	>30 dB (when terminated in 75 Ω)
Horizontal sync lock range	±4 Hz

General Specifications	*Value*
AC power input	90 to 130 V AC, 50 / 60 Hz OR 208 to 230 V AC, 50 / 60 Hz (See Ordering Information)
DC power input	-42 to -56 V DC
Power dissipation	25 Watts (AC Powering) 20 Watts (DC Powering)
Operating temperature	0° to 50°C
Shipping weight	15 lbs

Specifications subject to change without notice.

Note: Both AC and DC power inputs are available. Either may be used.

Series 6385 Stereo Encoders

Terminal Strip Connection	*Function*
ALT S (+), ALT S (-)	Balanced Alternate SAP channel audio inputs
SAP (+), SAP (-)	Balanced Primary SAP channel audio inputs
ALT R(+) ALT R(-)	Balanced Alternate R channel audio inputs
ALT L(+) ALT L(-)	Balanced Alternate L channel audio inputs
R(+), R(-)	Balanced Primary R channel audio inputs
L(+), L(-)	Balanced Primary R channel audio inputs
EAS AUD (+), EAS AUD (-)	Balanced EAS channel audio input
GND	Ground (signal GND for shields of audio cable)
BTSC OUT (+) & (-)	Balanced BTSC baseband multiplex output
EAS SEL	Selects EAS audio override function (GND activation)
ALTERNATE SEL	Selects alternate inputs (GND activation)
SUBCARRIER BYPASS	Activates subcarrier bypass switch (GND activation)
48 V DC INPUT (+) & (-)	-48 V DC power input

Connector	*Function*
VIDEO	Primary video input
ALT VIDEO	Alternate video input
VIDEO OUT	Provides video loop through output
BYPASS SUBCARRIER IN	Externally generated 4.5 MHz aural subcarrier input
SUBCARRIER OUT	Provides 4.5 MHz BTSC modulated subcarrier output

ORDERING INFORMATION

Model	*Format*	*Input Voltage*	*Part Number*
Model 6385 BTSC Stereo Encoder	NTSC	120 V AC	591442
Model 6385 BTSC Stereo Encoder	NTSC	220 V AC	591443
Model 6385 BTSC Stereo Encoder	PAL-N	120 V AC	591444
Model 6385 BTSC Stereo Encoder	PAL-N	220 V AC	591445

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