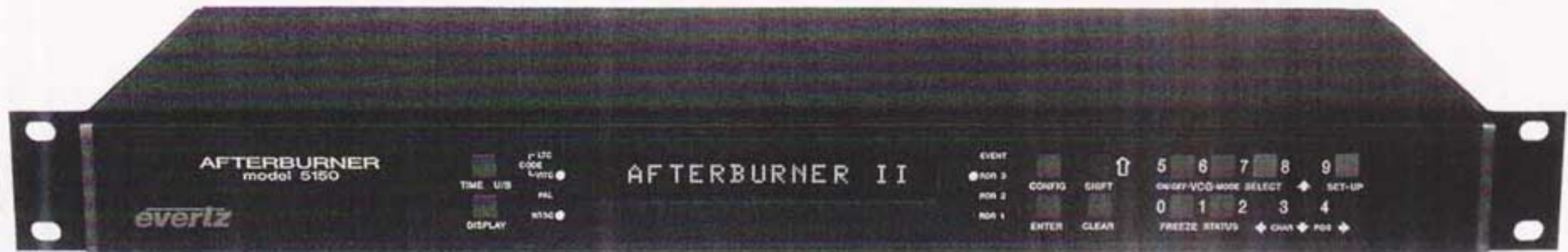


## Model 5150



The 5150 Afterburner is a full featured Analog VITC and LTC Time Code Reader, VITC to LTC Translator with a full function Character Inserter. The Afterburner reads SMPTE RP201 3 line VITC and displays field accurate video and audio time code as well as KeyCode and 3:2 pulldown on material transferred from film.

The unit can be configured to read LTC or VITC or can operate in an automatic switchover mode. The high speed reader in the 5150 employs sophisticated input conditioning and clock/data separator circuits to reliably recover LTC over the full shuttle spread and wind speed of most VTR's and ATR's.

## Features:

- Reads LTC from 1/30th to 70x play speed
- Full speed VITC Reader with line select
- High resolution Character Inserter, with three character sizes: 8, 16 and 32 lines, time and user bits separately positionable on screen
- Dual Standard (NTSC and PAL)
- On-screen programming menu
- VITC to LTC Translator
- LTC reshaper/regenerator
- 16 digit alpha-numeric display
- Decodes 3:2 pulldown from RP201 3 line VITC
- Displays video and audio time code and keycode encoded by Evertz film footage encoders

## Specifications:

### LTC Reader:

**Standard:** SMPTE 12M  
25, 30 Fps Drop & Non Drop Frame  
**Connector:** XLR Type 3 Pin female connector  
**Signal Level:** 0.2 to 4V p-p, balanced or unbalanced  
**Speed:** 1/30th to 70x play speed, forward and rev, machine dependent

### VITC Reader:

**Input:** NTSC or PAL 1V pp,  
**Connector:** BNC per IEC 169-8  
**Speed:** Still frame to <40x play, VTR dependant  
**Impedence:** High Z

### LTC Translator:

**Connector:** XLR Type 3 pin male  
**Signal Level:** Adjustable 0.5V to 4.5V p-p  
**Rise Time:** 40 ± 10µs  
**Jitter:** <2ns  
**Gen Lock:** Reader input video 1 V p-p, Hi Z, BNC loop

### Character Generator:

**Input:** NTSC or PAL 1V p-p + keyed high resolution characters, selectable background and sizes  
**Connector:** BNC per IEC 169-8

### Parallel Remote Control:

**Input:** 6 TTL compatible inputs for control of selected functions  
**Output:** 2 open collector general purpose outputs

### Physical:

**Dimensions:** 19" W x 1.75" H x 7.75" D  
(483mm W x 454mm H x 196mm D)  
**Weight:** 7 lbs (3.5kg)

### Electrical:

**Voltage:** 115/230 VAC, 50/60Hz, 30VA  
**Safety:** ETL Listed  
Complies with EU safety directive  
**EMI/RFI:** Complies with FCC Part 15 Class A  
EU EMC Directive

### Ordering Information:

**5150** Analog Afterburner II LTC/VITC Reader/VCG

# Time Code Generator/Reader with Character Inserter

## Model 5010



## Features

- Generates time code in accordance with SMPTE 12M locked to NTSC or PAL video or free run on internal crystal oscillator
- High resolution Character Inserter, with three Character sizes: 8, 16 and 32 lines, time and user bits separately positionable on raster
- Reads LTC from 1/30th to 70x play speed
- Well proven input circuitry design permits reliable recovery of even severely distorted code
- Momentary or continuous Jam-sync modes
- Time and user bits are presettable from the front panel
- RS-232 serial port permits interfacing to computers
- EBU ↔ SMPTE drop frame time code translator mode
- Parallel control of commonly used functions
- User bit Transfer from Reader Time or User bits
- On-screen programming menu
- Date/Time Zone may be encoded into user bits according to SMPTE 309M
- Generates and reads universal co-ordinated time (UTC) or local time in time/date mode
- Automatic daylight savings time adjustment in time/date mode
- 2 General purpose outputs can be assigned to several output modes

## Model 5010-VITC

The 5010-VITC is a Time Code Generator/Reader/Character Inserter for both Longitudinal and Vertical Interval Time code. As well as having all the listed 5010 features, the 5010-VITC also has the following additional features.

- Vertical Interval Time code Generator and Reader
- Separate genlock and PGM video inputs
- Set VITC Generator Line numbers from the front panel
- Translates LTC to VITC or VITC to LTC
- Reads VITC over the full shuttle range of most VTR's.
- Selectable reader line range
- Optional Bypass relay on VITC Generator

## Model 5010-24Fps

The 5010-24Fps and 5010-VITC-24Fps are special purpose time code generators designed to work with the 23.98Fps time code commonly in use with the high definition 1080p/24 video format.

- Genlocks to 23.98 'slow PAL' or NTSC
- 24 FPS ↔ 30 FPS time code translator mode
- Momentary or continuous Jam-sync modes
- Locks to 6Hz reference in 24Fps mode

## Time Code Feature Comparison

	5010-GPSII	5010-VITC-GPSII	5950	5010	5010-VITC
LTCGenerator	✖	✖		✖	✖
AdjustableOutputLevel		✖		✖	✖
VITCGenerator		✖			✖
LTCReader	✖	✖	✖	✖	✖
VITCReader		✖	✖		✖
VITCtoL TCT ranslator		✖	✖		✖
LTCtoVITCT ranslator		✖			✖
LTCRe-shaper			✖		
PALandNTSC	✖	✖	✖	✖	✖
ColourFraming	✖	✖		✖	✖
DropFrame	✖	✖	✖	✖	✖
SetUser Bits (0-9,A-F)	✖	✖		✖	✖
TransferRDR.T imeorUBtoGEN,UB	✖	✖		✖	✖
SMPTE ↔ EBU Timecodetranslator				✖	✖
Date/TimeZoneinUserBits	✖	✖		✖	✖
Momentaryandcontinue.Jam-sync	✖	✖		✖	✖
CharacterGenerator	✖	✖	✖	✖	✖
On-screenprogrammingmenu	✖	✖	✖	✖	✖
GPSReferenced TimeCode	✖	✖			
SerialRemoteControl				✖	✖
GPIRemoteControl	✖	✖		✖	✖
GPOutputs	✖	✖		✖	✖

## Specifications

### LTC Generator:

**Standard:** SMPTE 12M  
NTSC 2/4 field; PAL 4/8 field menu selectable  
NTSC or 24Fps (5010-24Fps only)

**Output:** 3 pin male XLR type

**Level:** Adjustable, 0.5V to 4.5V p-p

**Rise Time:** 40 +/- 10  $\mu$ s

**Jitter:** < 2  $\mu$ s

### LTC Reader:

**Standard:** SMPTE, 12M Time code

**Input:** 3 pin female XLR type

**Level:** 0.2 to 4V p-p, balanced or unbalanced

**Speed:** 1/30th to 70x play speed, fwd and rev, machine dependent

### VITC Generator (5010-VITC):

**Input:** Comp. Video 1V p-p, 75 $\Omega$  terminated

**Outputs:** 2 Comp. Video + keyed VITC  
1 Output bypass relay protected when +BP option installed

**Differential Gain:** <0.5%

**Differential Phase:** <0.5°

### VITC Reader (5010-VITC):

**Input:** Comp. video 1V p-p, High Z, BNC Loop

**Speed:** Still frame to >40x play

### Character Generator

**Input:** Comp. video 1V p-p, 75 $\Omega$  terminated

**Output:** Com. video 1V p-p + keyed high resolution characters, selectable background and sizes

### Serial Remote Control (5010 & 5010-VITC):

RS-232/422 interface, 9 pin "D" connector  
Computer control of all functions, selectable baud rate

### Physical:

**Dimensions:** 19"W x 1.75"H x 7.75"D  
(483mm W x 45mm H x 196mm D)

**Weight:** 7 lbs. (3.5Kg)

### Electrical:

**Power:** 115/230 V AC 50/60 Hz, 30 VA

**Safety:** ETLListed  
Complies with EU safety directive

**EMI/RFI:** Complies with FCC Part 15 Class A  
EU EMC Directive

### Ordering Information:

**5010** Time Code Generator/Reader  
**5010-24Fps** NTSC/24Fps Time Code Generator/Reader  
**5010-VITC** Time Code Generator/Reader with VITC  
**5010-VITC-24Fps** NTSC/24Fps Time Code Generator/Reader with VITC

### Ordering Options:

**+BP** Optional bypass relay for 5010-VITC, and 5010-VITC-24Fps

# Time Code Generator/Reader with Character Inserter, and GPS Antenna

## Model 5010-GPSII



The Evertz 5010-GPSII Time Code Master combines the features of our standard 5010 time code generator with the ability to produce GPS referenced SMPTE/EBU time code anywhere on the face of the globe. The GPS (Global Positioning System) technology provides the 5010-GPSII Time Code Master with an accurate source of time reference. The system is ideally suited for OB or mobile operations and any professional television broadcast applications where accurate time references are a must. The 5010-GPSII system may be programmed to request a time reference from the GPS receiver automatically, daily, or on demand. The 5010-GPSII can be ordered in two configurations. Model 5010-GPSII is an LTC Generator, Reader, Character Inserter with Accutime 2000 antenna. Model 5010-VITC-GPSII comes complete with Vertical Interval Time Code capability.

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## Features

- Generates Time code in accordance with SMPTE 12M locked to NTSC or PAL video
- Can be operated as standard time code generator/reader or as a GPS referred time code master
- Date/Time Zone encoded into user bits according to SMPTE 309M
- Generates and reads universal co-ordinated time (UTC) or local time in time/date mode
- Automatic daylight savings time adjustment in time/date mode
- High resolution Character Inserter, with three Character sizes, 8, 16 and 32 lines, time and user bits separately positionable on raster
- Reads LTC from 1/30th to 70x play speed. Well proven input circuitry design permits reliable recovery of even severely distorted code
- Momentary or continuous Jam-sync modes
- Time and user bits are presettable from the front panel
- Parallel control of commonly used functions
- User bit Transfer from Reader Time or User bits
- On-screen programming menu
- GPS receiver, 50ft of cable (optional 100 & 400 ft. cables for longer receiver distances)
- Ideal for OB or Mobile applications
- Easy mounting and installation
- 2 General purpose outputs can be assigned to several output modes
- Tally output on loss of lock to GPS receiver
- Optional bypass relay on 5010-VITC-GPSII

# Time Code Generator/Reader with Character Inserter, and GPS Antenna

## Model 5010-VITC-GPSII

### Features

As well as having all the listed 5010-GPSII features, the 5010-GPSII-VITC has the following additional features:

- Vertical Interval Time Code Generator, and Reader
- Separate genlock and PGM video inputs
- Set VITC Generator Line numbers from the front panel
- Translates LTC to VITC or VITC to LTC
- Reads VITC over the full shuttle range of most VTR's
- Selectable reader line range

### Specifications:

#### LTC Generator:

**Standard:** SMPTE 12M  
NTSC 2/4 field; PAL 4/8 field menu selectable

**Output:** 3 pin male XLR type

**Level:** Adjustable, 0.5V to 4.5V p-p

**Rise Time:** 40 +/- 10  $\mu$ sec

**Jitter:** < 2  $\mu$ sec

#### LTC Reader:

**Standard:** SMPTE, EBU Time code

**Input:** 3 pin female XLR type

**Level:** 0.2 to 4V p-p, balanced or unbalanced

**Speed:** 1/30th to 70x play speed, fwd and rev, machine dependent

#### GPS Receiver:

**Temperature:** -30°C to +70°C

**Humidity:** 95% R.H. Condensing at 60°C

**Dimensions:** 5.8" D x 3.9" H (147mm x 100mm)

**Cable Options:** Standard 50'  
Optional 100' (order WA-T76)  
Optional 400' (order WA-T11)

#### VITC Generator: (5010-VITC-GPSII)

**Input:** Comp. Video 1V p-p, 75 $\Omega$  terminated

**Outputs:** 2 Comp. Video + keyed VITC  
1 Output bypass relay protected when +BP option is installed

**Differential Gain:** <0.5%

**Differential Phase:** <0.5°

#### VITC Reader (5010-VITC-GPSII):

**Input:** Comp. video 1V p-p, High Z, BNC Loop

**Speed:** Still frame to >40x play

#### Character Generator

**Input:** Comp. video 1V p-p, 75 $\Omega$  terminated

**Output:** Com. video 1V p-p + keyed high resolution characters, selectable background and sizes

#### Physical:

**Dimensions:** 19"W x 1.75"H x 7.75"D  
(483mm W x 45mm H x 196mm D)

**Weight:** 7 lbs. (3.5Kg)

#### Electrical:

**Power:** 115/230VAC 50/60 Hz, 30VA

**Safety:** ETL listed  
Complies with EU safety directive

**EMI/RFI:** Complies with FCC Part 15 Class A  
EU EMC Directive

#### Ordering Informaton:

**Comes with standard GPS Receiver and 50 ft. weather-proof cable**

**5010-GPSII** Time Code Generator with GPSII  
**5010-VITC-GPSII** VITC Time Code Generator with GPSII

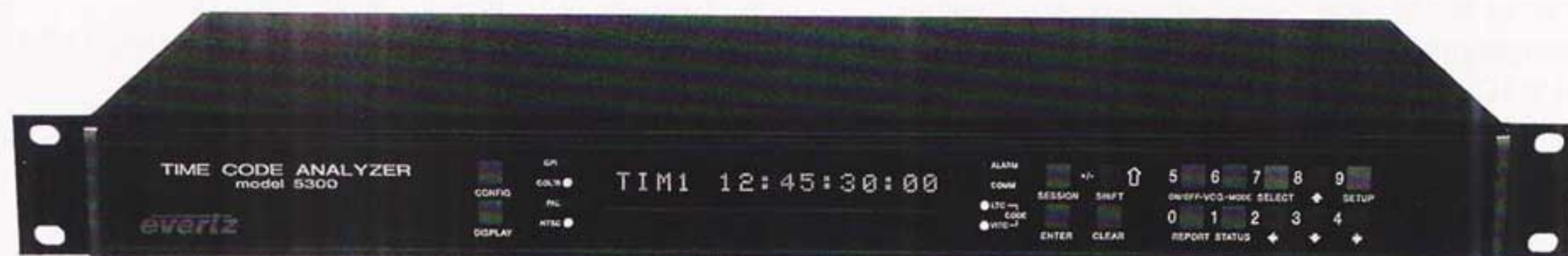
#### Ordering Options:

**+BP** Bypass relay for 5010-GPSII & 5010-VITC-GPSII

**WA-T76** 100 Feet Weatherproof Cable for GPS Receiver

**WA-T11** 400 Feet Weatherproof Cable for GPS Receiver

## Model 5300



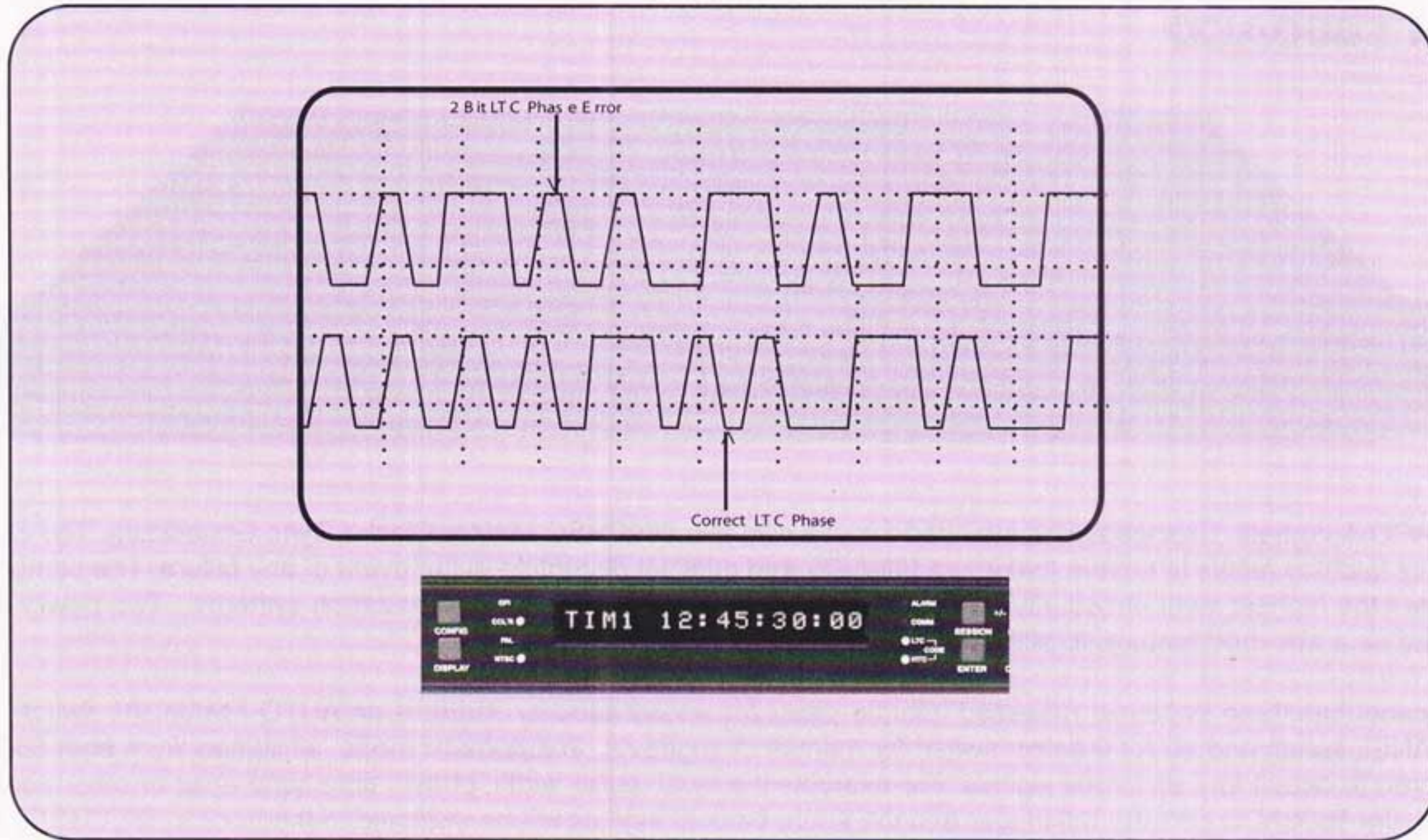
The Model 5300 LTC/VITC Time Code Analyzer combines the latest LSI technology with sophisticated microcontroller firmware to provide a powerful, flexible time code analyzer system. The model 5300, a LTC/VITC reader / analyzer and multi-function character inserter is an invaluable verification and troubleshooting tool for the Video, Audio and Film Post Production industries. Its power and flexibility are unsurpassed in time code analyzer applications. A 16 digit alphanumeric display can be quickly delegated to show the required data. The Time Code Analyzer contains an LTC and VITC reader that can be operated independent of each other, or can be linked to form an auto LTC/VITC reader.

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## Features

- Detects time code counting sequence errors
- Detects color framing sequence errors with respect to a reference video input. Detects changes in the status of the color frame input (changing phase, or color/non color changes etc.)
- Detects Time code dropouts and has a user definable dropout length
- Compares LTC and VITC numbers and reports differences between them
- Displays on screen reports of Time code problems
- Audible alarm plus a contact closure to drive an external alarm
- User definable thresholds for most alarm conditions
- Error messages available on RS-232 port for computer logging and Time code verification
- On screen programming and front panel menus
- Dual standard PAL and NTSC
- Detects LTC phase problems with respect to video sync
- High resolution character inserter with three character sizes: 8, 16 and 32 lines, time and user bits separately positionable on screen
- VITC to LTC translator
- Regenerates incoming LTC to correct LTC phase problems

## 5300 Time Code Phase



### Specifications:

#### LTC Reader:

<b>Standard:</b>	SMPTE 12M 25, 30Fps Drop & Non Drop Frame
<b>Connector:</b>	XLR Type 3 pin female connector
<b>Signal Level:</b>	0.2 to 4V p-p, balanced or unbalanced
<b>Speed:</b>	1/30th to 70x play speed, forward and rev, machine dependent

#### VITC Reader:

<b>Input:</b>	NTSC or PAL 1V pp,
<b>Connector:</b>	BNC per IEC 169-8
<b>Speed:</b>	Still frame to <40x play, VTR dependant
<b>Connector:</b>	BNC per IEC 169-8

#### Character Generator:

<b>Input:</b>	Char. Input from VITC Reader input
<b>Output:</b>	NTSC or PAL 1V p-p + keyed high resolution characters, selectable background and sizes
<b>Connector:</b>	BNC per IEC 169-8

#### LTC Translator:

<b>Connector:</b>	XLR Type 3 pin male
<b>Level:</b>	Adjustable 0.5V to 4.5V p-p
<b>Rise Time:</b>	40 ± 10µsec
<b>Jitter:</b>	<2 µsec
<b>Gen Lock:</b>	Reader input video 1 V p-p, High Z, BNC loop

#### Parallel Remote Control:

<b>Input:</b>	6 TTL compatible inputs for control of selected functions
<b>Output:</b>	2 open collector general purpose outputs

#### Physical:

<b>Dimensions:</b>	19" W x 1.75" H x 7.75" D (483mm W x 45mm H x 196mm D)
<b>Weight:</b>	7 lbs (3.5kg)

#### Electrical:

<b>Voltage:</b>	115/230 VAC, 50/60Hz, 30VA
<b>Safety:</b>	ETL Listed Complies with EU safety directive
<b>EMI/RFI:</b>	Complies with FCC Part 15 Class A EU EMC Directive

#### Ordering Information:

<b>5300</b>	Time Code Analyzer
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