

# SMPTE/EBU TIME CODE CONVERTERS

All too often communication between various equipment is impossible due to a "language barrier". When time information must be shared, a Time Code Converter (Translator) may be a very simple solution. With more than a dozen "standard" Time Code Converters (and at least that many "Custom" Time Code Converter products), **ESE** is certain to offer a solution to any language barrier.

Described below are four Time Code Converters that have solved many Time Code "communication" problems when SMPTE/EBU Time Code is being used. If a problem exists that is not addressed in this brochure, please contact the **ESE** factory for a simple solution to your "communication" needs.

## Features:

- Translate SMPTE/EBU, **ESE**, ASCII & IRIG Time Codes
- Simple Installation & "Hands-Off" Operation
- Optional 220 VAC And/Or "UL" Operation
- Synchronization Of Automation Equipment



**ES-274U**  
IRIG-B Time Code  
into SMPTE/EBU Time Code

The **ES-274U** is a Time Code Converter that translates IRIG-B Time Code into SMPTE/EBU Time Code. The unit allows video tape (previously striped with IRIG-B) to be easily edited using SMPTE editing equipment.

IRIG-B input, color frame input and loop-thru video sync are accessible on rear-mounted BNC connectors (the SMPTE output is via an XLR connector). Drop frame or non-drop frame mode is selected via a front panel mounted toggle switch. The **ES-274U** is housed in 1.75" x 19" rack mount enclosure, 10" deep.



**ES-462U**  
ESE Time Code  
into SMPTE/EBU Time Code

The **ES-462U** is a Time Code Converter that translates **ESE** Time Code (TC76, TC89 or TC90) into SMPTE/EBU Time Code. The unit is frequently used when an older **ESE** Master Clock (one without a SMPTE/EBU output) finds itself needing to interface with SMPTE/EBU equipment.

The **ES-462U** automatically "Jam Syncs" itself upon the first application of AC power, at midnight (00:00:00:00) every day, or if real time differs by more than six frames from that output by the **ES-462U**.



**ES-453U/ESE & ES-453U/RS**  
SMPTE/EBU Time Code  
into ESE & ASCII Time Code

The **ES-453U/ESE & ES-453U/RS** are Time Code Converters that accept SMPTE/EBU Time Code and translates it into **ESE** & ASCII (RS 232C or RS422A) Time Code, respectively.

The .56" eight-digit yellow LED display is perfectly synchronized with the six-digit output of **ESE** or ASCII. User Bits may be selected for display and output via the rear mounted toggle switch. A "Hold" switch is also provided that freezes the time being displayed (only). Option "P" houses each unit in a rack mount enclosure (1.75" x 19", 10" deep).

## SPECIFICATIONS

### ES-274U

**Power:** 5 Watts Maximum  
**Electrical:** 117 VAC, 50/60 Hz  
**Mechanical:** 1.75" x 19" Rack Mount, 10" deep  
**Time Code Input:** IRIG-B: 100 mVPP to 10 VPP  
**Video Input:** Composite, 1 VPP, unterminated  
**Color Frame Input:** TTL or CMOS, field #1 negative pulse  
**Time Code Output:** SMPTE, 0 dB into 600Ω, balanced  
**Connectors:** BNC, XLR  
**Options:** DC, EBU, J, UL, 1PPS

### ES-462U

5 Watts Maximum  
 117 VAC, 50/60 Hz  
 1.75" x 19" Rack Mount, 10" deep  
**ESE** (TC76-24Hr, TC89 or TC90)  
 Composite, 1 VPP, unterminated  
 TTL or CMOS, field #1 negative pulse  
 SMPTE, 0 dB into 600Ω, balanced  
 BNC, XLR  
 EBU, J, UL

### ES-453U/ESE & (ES-453U/RS)

5 Watts Maximum  
 117 VAC, 50/60 Hz  
 2.8" H x 10" W x 6" D, desktop  
 SMPTE/EBU, 0 dB into 600Ω, balanced  
 N/A  
 N/A  
**ESE** -TC90 (ASCII-RS232C or RS422A)  
 XLR, BNC (XLR, DB-9)  
 Black, J, P, TZ, UL

