

# SMPTE/EBU TIME CODE VIDEO INSERTERS

The **ES-455** and **ES-452U** read SMPTE or EBU (optional) Time Code and insert it into a video stream. Time Data (Hours, Minutes, Seconds and Frames) or User Bit Data (hexadecimal characters "0 - F") are selected via a front panel mounted toggle switch and the data are keyed onto a black or translucent background with white or translucent characters. A front panel mounted "Hold" switch allows the display to be frozen. A rear mounted XLR connector accepts the time code and a pair of BNC connectors provide a video loop thru. On-time frame count, error detection and correction are common to both units.

## Features:

- Reads & Inserts 8-Digits Of SMPTE Or (Optional) EBU
- Reads "Time" Data Or "User Bit" Data
- Custom Modifications Available
- Drop Frame Indicator
- Rack Mount Enclosure
- Horizontal & Vertical Position Control
- Solid Or Translucent Characters
- NTSC Operation
- Horizontal & Vertical Size Control
- "On-Time" Frame Count
- Error Detection & Correction
- Brightness Control



## MULTI-SPEED BI-DIRECTIONAL SMPTE/EBU TIME CODE READER / WINDOW DUBBER

The **ES-455** can read and insert SMPTE/EBU Time Code at speeds ranging from 20x to 1/30th play speed, in both forward and reverse. Five front panel mounted potentiometers control the video display. The Brightness Control varies the intensity of the white characters. The vertical and horizontal Size and Position Controls vary the overall size of the window and its position on the screen. A rear-mounted DB-9 connector allows the display to be remotely "Blanked" or "Frozen".



## PLAY-SPEED SMPTE/EBU TIME CODE READER / WINDOW DUBBER

The **ES-452U** is a play speed, forward direction SMPTE/EBU "Window Dub" Inserter. On screen programmability is accessed by simply pressing the Menu button to activate the programming modes. Two front panel mounted potentiometers control the video display. The Character Contrast determines the luminance of the characters. The Background Contrast determines the luminance of the background mask (when selected). The display blanking function allows the display to be turned ON and OFF and the display freeze function allows the display to be frozen momentarily.

## SPECIFICATIONS

**ES-455**  
**Time Code Input:** SMPTE or EBU Time Code  
**Code Speed Range:** 20x to 1/30th Play Speed, Bi-Directional  
**Input Level:** 100 mVPP to 10 VPP  
**Input Impedance:** 2kΩ  
**Video Loop:** 1 VPP, 75Ω  
**Controls:** (5) Brightness, Vertical & Horizontal Size & Position  
**Mechanical:** 1.75" x 19" x 10" Deep, rack mount  
**Electrical:** 117 VAC, 50/60 Hz, 10W  
**Options:** Black, J, UL

**ES-452U**  
**SMPTE or EBU Time Code**  
**Play Speed, Forward Direction**  
**100 mVPP to 10 VPP**  
**2kΩ**  
**1 VPP, 75Ω**  
**(5) Menu, Up, Down, Character & Background Contrast**  
**1.75" x 19" x 10" Deep, rack mount**  
**117 VAC, 50/60 Hz, 10W**  
**Black, D, DC, J, L2, L4, P2, R, SV, UL**

