

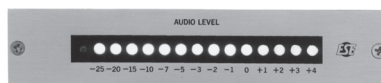
# AUDIO LEVEL INDICATORS

**ESE** offers two basic versions of the "Digital" Audio Level (VU) Indicator. Each version has a reference level ("0 dB") adjustment and is optionally available in a rack mount configuration with as many as six units mounted on a single 1 3/4" x 19" panel.

## Features:

- Accurate
- Easy To Read
- Peak or VU Mode
- Simple Installation
- Attractive & Low Cost
- Low Power Consumption

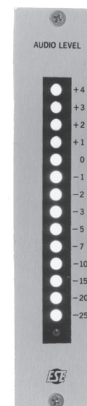
ES-215



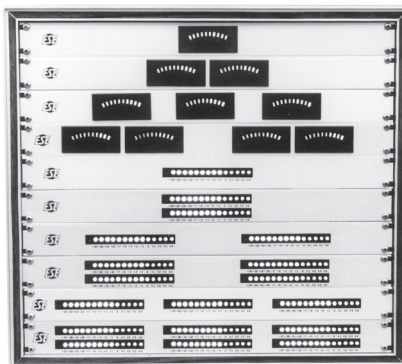
ES-216



ES-214



The **ES-214** (vertical mount) and **ES-215** (horizontal & rack mount) are "in-line" VU Indicators which provide a purely digital representation of an audio signal's loudness. Each has identical circuitry with fourteen LED's (nine green, one yellow and four red) that display loudness at -25, -20, -15, -10, -7, -5, -3, -2, -1, 0, +1, +2, +3 and +4dB. Units are shipped in the Peak mode unless otherwise specified, however, Fast Averaging or Slow Averaging (VU) can be optionally requested. The **ES-215** can be ordered on a rack mount panel with one, two, three, four or six units mounted on the same panel.



The **ES-216** is a small meter-sized unit which simulates the "flying wand" effect of its "analog" counterparts. The unit displays audio levels in ten discrete steps (-20, -10, -7, -5, -3, -1, 0, +1, +2 and +3 dB) using three red, one yellow and six green LED's. It can be console or panel mounted and is designed to fit into the same opening as many of the commonly used mechanical meters. The rack mount options allow the unit(s) to be mounted one, two, three or four per panel. Either **Peak** or **VU** operation can be specified, (the unit is shipped in the Peak mode unless otherwise specified).

## Specifications

### ES-214 / ES-215

|                                 |                                                                                                    |
|---------------------------------|----------------------------------------------------------------------------------------------------|
| Indicators:                     | 14                                                                                                 |
| Scale:                          | +4 dB thru -25 dB                                                                                  |
| Reference Level "0" Adjustment: | -16 dB to +30 dB                                                                                   |
| Input Impedance:                | 2200 ohms @ max. sensitivity<br>6800 ohms @ +8 dBm "House Level"<br>10,000 ohms @ min. sensitivity |
| Input Circuit:                  | Transformer isolated, balanced bridging                                                            |
| Frequency Response:             | 20 - 20 KHz +/- 1 dB (all modes)                                                                   |
| Rise Times:                     | Peak Mode - < 250 uSec<br>Fast Averaging Mode - < 25 mSec<br>VU Mode - ~ 300 mSec                  |
| Fall Time:                      | 300 mSec from full scale (all modes)                                                               |
| Power Requirement:              | Unregulated +15 to +35 VDC<br>or regulated +12 VDC (220 mA max.)                                   |
| Modes of Operation:             | Peak (unless otherwise specified),<br>Fast Averaging (Apparent Loudness)<br>VU (Slow Averaging)    |
| Mode Selection:                 | PCB jumper/component value change                                                                  |
| Mechanical:                     | 7" x 1 1/2" x 3 1/2" Deep                                                                          |
| Options:                        | P, P2, HP2, P3, P4, P6 (ES-215 only)                                                               |

### ES-216

|                                 |                                                           |
|---------------------------------|-----------------------------------------------------------|
| Indicators:                     | 10                                                        |
| Scale:                          | +3 dB thru -20 dB                                         |
| Reference Level "0" Adjustment: | -14 dB to +30 dB                                          |
| Input Impedance:                | 6000 ohms, balanced (any sensitivity)                     |
| Input Circuit:                  | Transformerless                                           |
| Frequency Response:             | 20 - 20 KHz +/- 1 dB (all modes)                          |
| Rise Times:                     | Peak Mode - 1 mSec<br>VU Mode - 300 mSec                  |
| Fall Time:                      | 300 mSec                                                  |
| Power Requirement:              | +10 to +24 VDC @ 24 mA<br>(regulated or unregulated)      |
| Modes of Operation:             | Peak (unless otherwise specified),<br>VU (Slow Averaging) |
| Mode Selection:                 | PCB Jumper                                                |
| Mechanical:                     | 3" x 1.4" x 1.5" Deep                                     |
| Options:                        | P, P2, P3, P4                                             |

