

**MODELS 596ML/H**

**AUDIO MONITOR/TEST SWITCH MAINFRAMES**

The Models 596ML/H Audio Monitor/Test Switch Mainframes are integral parts of the IED Monitor/Test System. They are specifically designed to perform audio switching functions for the purpose of either audible monitoring with a monitor speaker, or for testing with a test tone device.

Models 596ML/H have 64 balanced, differential audio input channels which can be switched individually through remote computer control, to a balanced, floating audio output module, Model 200L. This enables the 596ML/H to drive long lengths of audio cable without high frequency rolloff, allowing for inaudible 20 kHz testing.

The input gain of each channel can be adjusted to accept input levels as high as a 70 V power amplifier line, and as low as -40 dBu. It can also switch DC voltages for monitoring power supply outputs.

The Models 596ML/H communicate via an RS422 link. The design includes both transmit and receive ports on each unit, allowing loop through for easier connection. Each 596ML/H has an 8 position DIP switch for address selection which permits addressing up to 256 units on a single RS422 port.

Each unit includes an on-board power supply which produces the required DC power for the audio and logic devices. The units require only AC power input; 120 VAC for the 596ML, and 220 VAC for the 596MH.

The 596 mother board mounts on the rear of the 596 housing. It provides the external connections described in Table 1:

QUANTITY	CONNECTION
64	Balanced monitor input circuits (192 connections)
1	Balanced output connection
1	Balanced input loopthrough connection
1	RS422 input
1	RS422 output

Table 1 - Rear Panel Connections



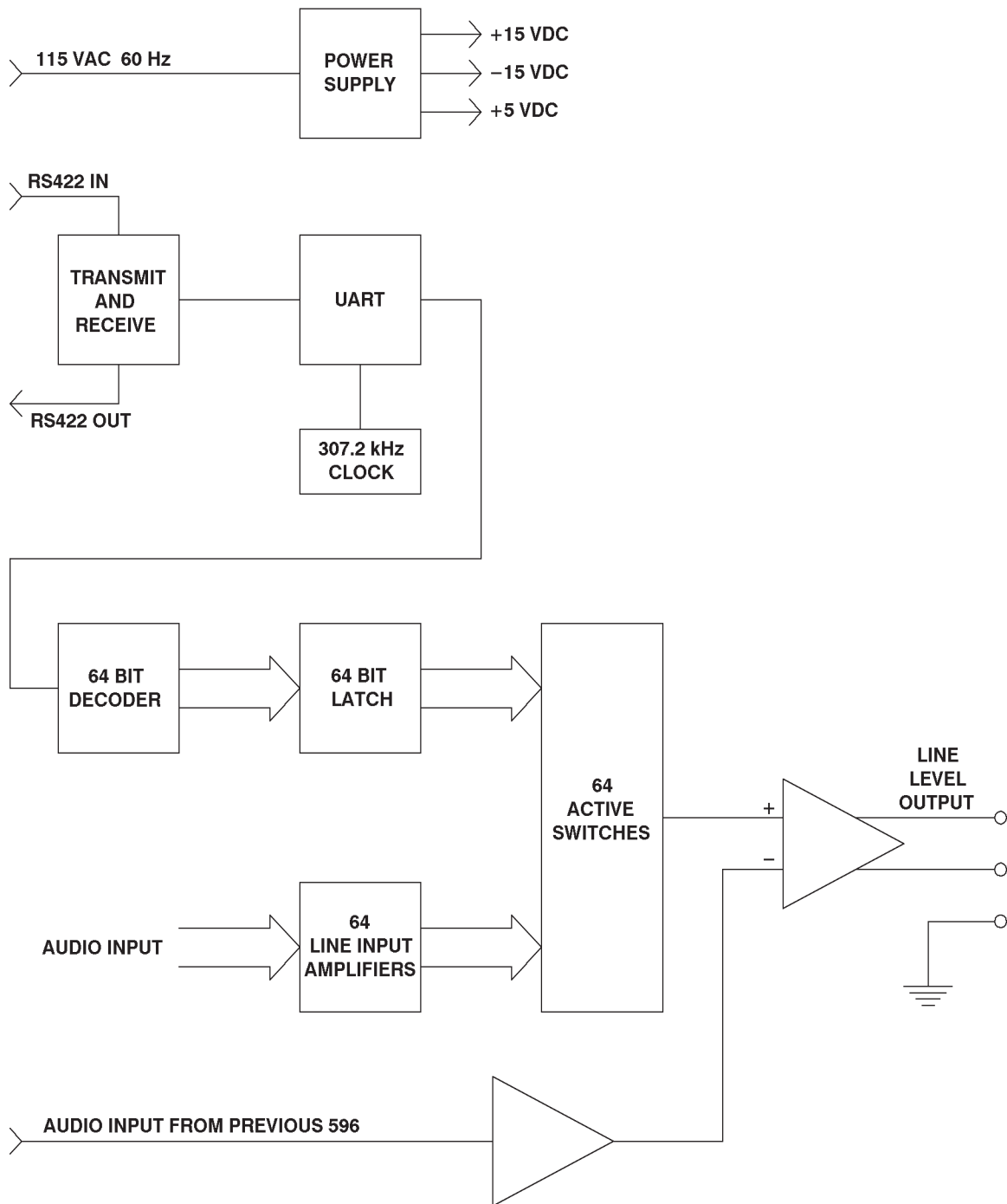


Figure 1 - Model 596 Audio Monitor/Test Switch Block Diagram

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## SPECIFICATIONS

### ELECTRICAL, ANALOG, $V_S = +15$ VDV, $-15$ VDC, tested at unity gain, $+18$ dBu output

- |                                             |                                                                              |                |
|---------------------------------------------|------------------------------------------------------------------------------|----------------|
| 1. Frequency Response . . . . .             | 20 Hz - 20 kHz . . . . .                                                     | +0, -0.1 dB    |
| 2. Total Harmonic Distortion, THD. . . . .  | 20 Hz - 20 kHz, 10 Hz - 80 kHz filters                                       | <0.07%         |
| 3. Intermodulation Distortion, IMD. . . . . | 60 Hz/8 kHz                                                                  | <0.07%         |
| 4. Signal-to-Noise Ratio, S/N . . . . .     | Input switches on 'Referenced to $+18$ dBu', 22 Hz - 22 kHz filters          | >95 dB         |
| 5. Crosstalk . . . . .                      | Between any 2 input channels, 2 kHz                                          | <-60 dB        |
| 6. Input Signal (max.)                      | At maximum attenuation (220 k $\Omega$ gain SIP) . . . (70 Vrms, 100 V peak) | +39.2 dBu      |
|                                             | At maximum gain (22 k $\Omega$ gain SIP) . . . . .                           | +18 dBu        |
| 7. Gain Range                               | Max. gain (22 k $\Omega$ gain SIP) . . . . .                                 | 0 dB           |
|                                             | Max. Attenuation (220 k $\Omega$ gain SIP) . . . . .                         | 20 dB          |
| 8. Output (max.)                            | Audio Output . . . . .                                                       | +24 dBu        |
|                                             | $R_L = 600 \Omega$                                                           |                |
| 9. Power Supply (AC Input Voltage)          | Model 596ML . . . . .                                                        | 110 to 130 VAC |
|                                             | Model 596MH . . . . .                                                        | 220 to 260 VAC |

### INDICATORS

- |                                                         |            |
|---------------------------------------------------------|------------|
| 1. (3) Power Indicators ( $\pm 15$ V, $+5$ V) . . . . . | Green LEDs |
|---------------------------------------------------------|------------|

### MECHANICAL

- |                                                               |                   |
|---------------------------------------------------------------|-------------------|
| 1. Size (maximum overall dimensions as viewed from the front) |                   |
| Height . . . . .                                              | (8.89 cm) 3.5"    |
| Width . . . . .                                               | (48.3 cm) 19"     |
| Depth . . . . .                                               | (36.3 cm) 14.3"   |
| 2. Weight . . . . .                                           | (3.59 kg) 7.92 lb |

### ENVIRONMENTAL

- |                                          |                                             |
|------------------------------------------|---------------------------------------------|
| 1. Operating Temperature Range . . . . . | ( $+32$ °F - $+104$ °F) $0$ °C - $+40$ °C   |
| 2. Storage Temperature Range . . . . .   | ( $-40$ °F - $+158$ °F) $-40$ °C - $+70$ °C |



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