

IED MODELS 540I, 540C, and 540I-AC

ATTENUATOR CARDS

The IED Models 540I, 540C and 540I-AC Attenuator Cards are components of the 540 Ambient Analysis System which is a subsystem of the 500 Series Audio Control System. The 540I and 540I-AC have 4 identical channels to process the level of the program audio signals. Each channel includes a digital attenuator which controls the signal level of the program audio, an audio conversion module similar to the one in the 540S Sensor, and an A/D converter. The 540I is similar to the 540I-AC except that it does not include the 4 audio conversion modules to process the program audio. As a result, it operates only in the fixed or controlled attenuation modes. The 540C only provides the interface to four 540S Ambient Noise Sensors. As a result, the sensor channels on the 540C must be combined with channels controlled by a 540I-AC card. The 540C is used when multiple noise sensors are combined to control one audio channel.

Refer to the system block diagram in Section 3, Group 20, Sub A, the product description for the 540M Mainframe. The channel input signal is routed through the digital attenuator for level control. It is also sent through the 540C to the A/D converter and then to the 540CPU Central Processing Unit. If a 540S Sensor is connected to the same channel, its signal is also routed to the A/D converter and then to the 540CPU. Sensor signals are averaged, combined, and processed in the 540CPU, as set up in the Ambient Analysis Software (see Section 9, Group 25, Sub B). The channel signals are compared with the sensor signals in the 540CPU as set up in the software and a command signal is sent to each channel digital attenuator, again as set up in the software. A single sensor can be set up to control a whole room or area, or multiple sensor signals can be averaged to control a single channel or area. If desired, a channel can be set at a fixed attenuation (fixed mode), or it can be made to track another channel identically or with an offset (controlled mode).

>> **For installation instructions refer to Section 3, Group 20, Sub B, the installation instructions for the Model 540M Mainframe.**

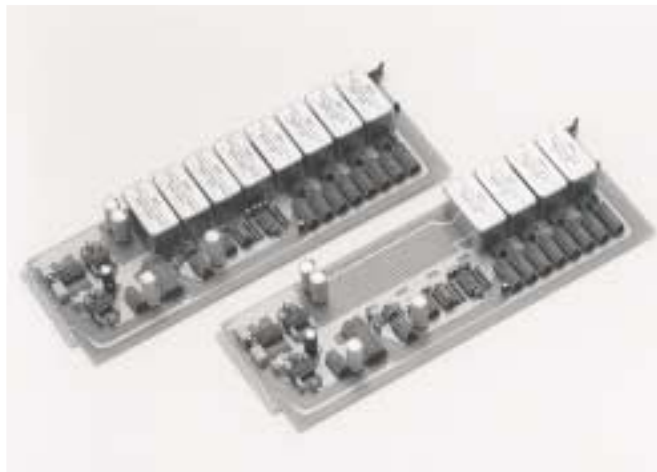


Figure 1 - 540I-AC (upper) and 540I Attenuator Cards



SPECIFICATIONS

ELECTRICAL, +24 dBu, 50 source

- 1. Frequency Response +0, -0.3 dB
20 Hz - 20 kHz
- 2. Total Harmonic Distortion, THD <0.01 %
20 Hz - 20 kHz
- 3. Signal-to-Noise Ratio, S/N >113 dB
20 Hz - 20 kHz
- 4. Attenuation 16 bit linear D/A
- 5. Input Configuration Balanced
- 6. Input Impedance 200 k
- 7. Output Configuration Balanced and Floating
- 8. Output Impedance <0.25
- 9. DC Operating Voltages +30 VDC, +15 VDC, -15 VDC
Supplied by 540P

INPUTS/OUTPUTS

| | 540I-AC | 540C | 540I |
|----------------------------|---------|------|------|
| 1. Number of Inputs | 4 | — | 4 |
| 2. Number of Outputs | 4 | — | 4 |
| 3. Channel Level Detectors | 4 | — | — |
| 4. Remote Sensor Inputs | 4 | 4 | 4 |

INDICATORS

- 1. LED +30 V Present

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