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ACT-70 Audio Coupling Transformer Product Installation Document

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This product has been certified to comply with requirements in the Standard for Control Units and accessories for Fire Alarm Systems, UL 864 9th Edition. Operation of this product with products not tested for UL 864 9th Edition has not been evaluated. Such operation requires the approval of the local Authority Having Jurisdiction.

Applications

When used with the high-level 70.7V output of a Notifier amplifier in riser mode, a ACT-70 Audio Coupling Transformers will provide a means to drive thousands of amplifiers in large audio system applications.

- It attenuates high-level 70.7V_{RMS} to create a low-level audio signal.
- It isolates input from output.
- It provides CMNR (Common Mode Noise Rejection)

The low-level signal created by the ACT-70 may be used to deliver audio to analog amplifiers, as well as to the AUX B inputs of the DVC and DAA. Refer to the Digital Audio Manual for more DVC and DAA information.

The ACT-70 provides electrical isolation between its input and output and attenuates the signal from high-level audio to low-level audio. Ground faults on the AUDIO IN input must be detected by the amplifier driving the audio. Ground faults on the THRU output must be detected by the destination. Ground fault detection for the input and output can be merged together by using the "COMM" input. Up to 40 analog audio amplifiers may be fed by the output of an ACT-70 as long as the wiring does not exceed 200 ft (61 m), 18-12 AWG (0.75-3.25 mm^2).

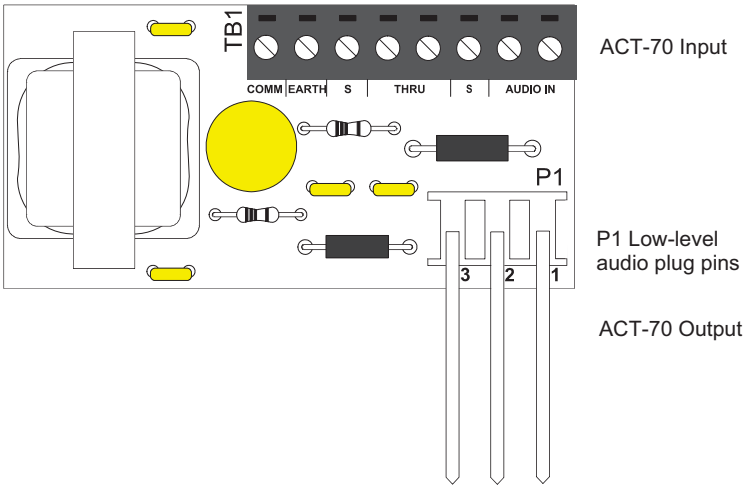
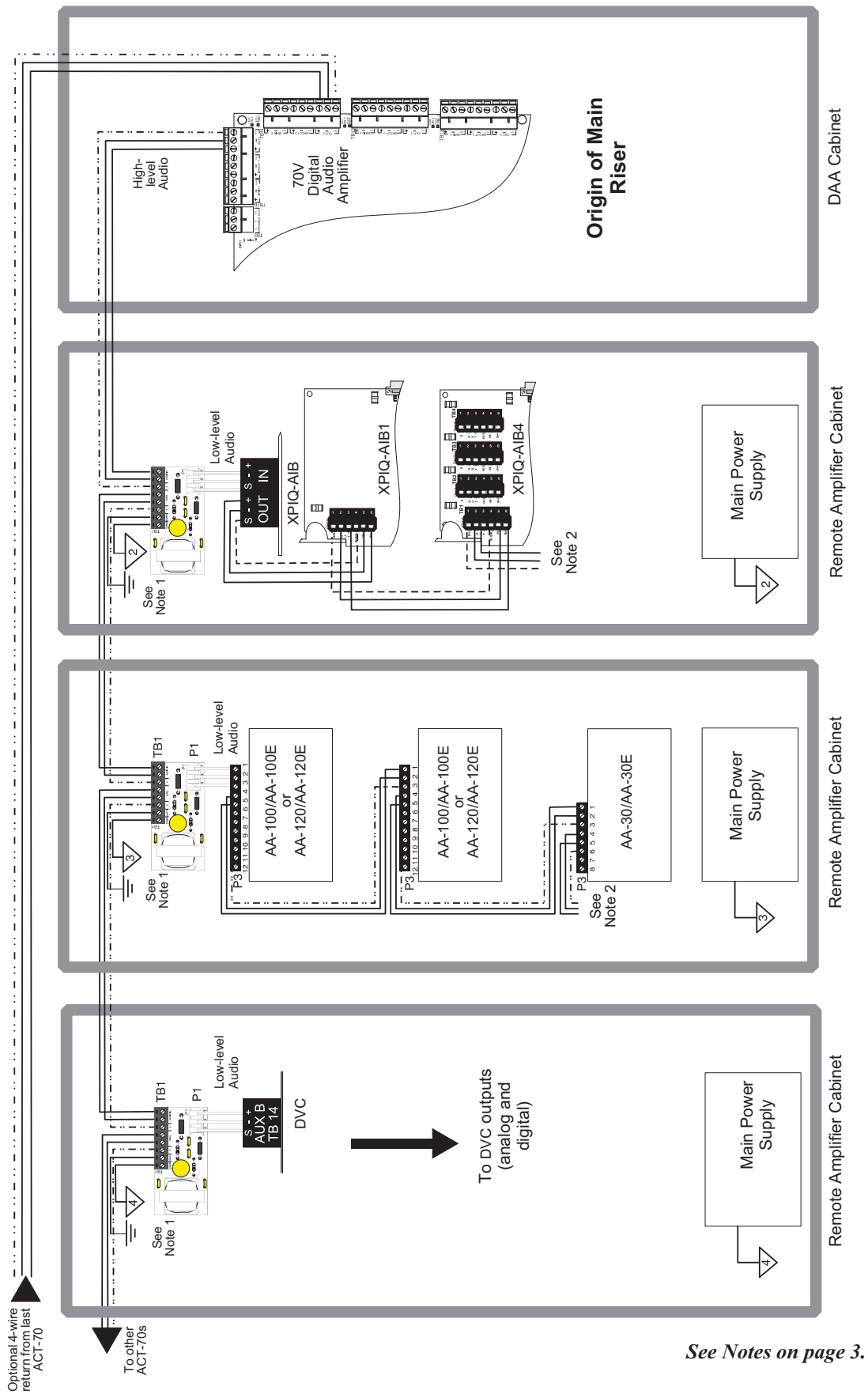


Figure 1 The ACT-70

Signal from a Digital Audio Amplifier in Riser Mode

The ACT-70 will accept high-level audio signals from any 70.7V digital audio amplifier. It can then drive DVC audio systems, AA-120/AA-120E, AA-100, and/or AA-30/AA-30E audio amplifiers, as well as the XPIQ-AIB audio input boards.

The high-level output of the amplifier will support a Class A or Class B wiring arrangement and can be fed to the input of up to 500 ACT-70 units. The outputs of each of the 500 ACT-70 transformers may then be used to feed a low-level audio signal to the input of as many as 40 additional AA Series amplifiers. The output of an ACT-70 supports Class B wiring only. Where Class A is required, all amplifiers served by an ACT-70 must be housed in the enclosure containing the ACT-70.



See Notes on page 3.

Figure 2 Wiring Illustration: Signal from 70.7V Amplifier in Riser Mode

NOTES: In Figure 2, note the following:

1. Using the grounding wire supplied, connect the "EARTH" ground terminal of each ACT-70 to P8, terminal 9 or 10 on the AA-100/AA-100E or AA-120/AA-120E, or to P2, terminal 1 or 8 of the AA-30/AA-30E. The "COMM" terminal is intended for shielding of the output of the ACT-70. Connect to the common of the local power supply.
2.  This symbol indicates a local common, in this case for power supply number three.
3. Dotted lines indicate shield.

Refer to the appropriate fire system manual for further information.