

Wherever there's a show...



## AD903 Input/Output Adapter

### Operating Instructions

The AD903 is an active device, used for feeding a signal into your Production Intercom (or compatible) system from an external source, or for feeding a signal from your Production Intercom system to another audio device (or both). The AD903 will accommodate a wide range of input and output levels. The AD903 contains a studio quality microphone transformer and will accept a signal directly from a good quality, low impedance, balanced or unbalanced microphone, as well as line-level signals. In every case the two systems being interfaced are transformer isolated from one another, provided the AD903 is used as directed.

#### Typical applications include:

- Interfacing an intercom system on a different interconnect standard to a Production Intercom (or compatible) system.
- Feeding a 'run-of-show' signal from a stage microphone or audio mixer into the intercom system so that technical crew or dressing room personnel may follow the progression of the performance.
- Feeding the intercom system signal to a remote amplifier or radio transmitter.

#### Connections:

- Connection to the Production Intercom (or compatible) system is via either of the 3-pin XLR connectors, just as a 'belt pack'. Loop-through is possible, however we recommend against its use in most situations.
- Connections between the external systems and the AD903 are made via the 4-pin XLR as follows:

Output **from** external system - Pin 1- Shield (Low); Pin 2 - Signal (High)

Input **to** external system - Pin 3 - Shield (Low); Pin 4 - Signal (High)

Both connection are transformer isolated and floating.

If using balanced feeds, do not connect shields, even to each other, and insure that they are grounded at the external equipment.

If using unbalanced feeds, connect signal to 'High' and shields to 'Low'. Do not connect shields together. In order to avoid ground loops, do not make any connections to the chassis of the AD903 unless there are NO other ground connections to the external system. If grounding is required, use only one of the shields.

- Plug the external system into the 4-pin XLR and the **Production Intercom** system into either of the 3-pin XLR connectors. Connect the rest of the communications system back to the power supply or master station.

#### Production Intercom Inc.

P.O. Box 3247, Barrington, IL 60011-3247  
Voice: (847) 381-5350 Fax: (847) 381-4360 Sales & Technical Assistance (US & Can): (800) 562-5872  
e-mail: support@beltpack.com Web: beltpack.com

4. The levels of the external system to and from the Production Intercom system are set as follows:

The output from the external system is controlled by the screwdriver preset and attenuator switch marked 'output'. If the signal level is insufficient even with the preset fully clockwise, put the switch to 'lo' and readjust the preset.

The input to the external system is controlled by the screwdriver preset and gain switch marked 'input'. If the signal level is insufficient even with the preset fully clockwise, put the switch to 'hi' and readjust the preset.

NOTE: The screwdriver adjustable potentiometers are 15-turn types. A slight 'clicking' sound indicates that the control has reached its extreme position, in either direction. In most cases, several turns are required to produce a noticeable change in level.

5. Sidetone balance or cancellation is set using the 'Null' screwdriver preset control. This is adjusted until none of the output from the external system is heard back on the input to the external system. The control is then readjusted until the required sidetone level is obtained. See #6 regarding external sidetone.

6. When connecting to other talkback systems (and in particular 3 wire systems) there may be 'sidetone' (a portion of output fed to input) provided on that system. It is most important that this is set to zero, canceled, or otherwise disabled. Sidetone may then be provided from the AD903 'Null' control. Any sidetone created other than in the unit will cause the bridging impedance of the adaptor to reduce.

External sidetone applied to the AD903 will cause the bridging impedance to reduce and cause the sidetone balance throughout the Production Intercom system to be altered. In extreme cases, this can prevent satisfactory operation altogether. Connection to 3 wire systems (4 wire with common return-shield) must be done using the shortest possible cable between the AD903 and the 3 wire connector. If this is a talkback headset unit (e.g: a 'belt pack'), note comments on sidetone above.

7. If you have any problems or suggestions, please contact your local dealer or **Production Intercom**.

NOTE: Production Intercom also manufactures the AD913, which is based upon the AD903, with additional circuitry to activate the PTT function of a simplex transceiver. This device is intended to permit the interface of walkie-talkies to the cabled system. The signal light button in the Production Intercom system are used to trigger the transmit function of a walkie-talkie dedicated as the 'base' station. The audio signals, in and out, are transferred through the walkie-talkie's headset connections.