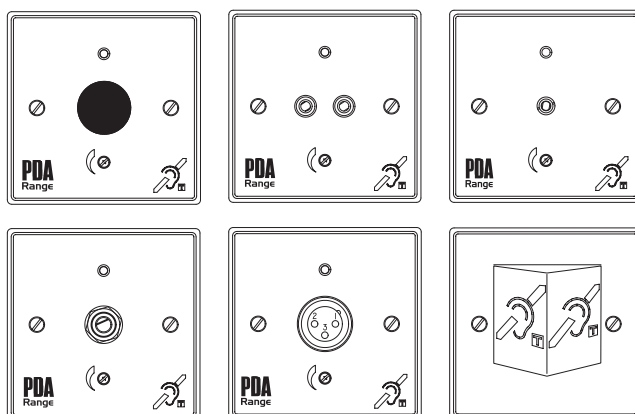


OUTREACH PLATES

AUDIO INPUT EXTENSION SYSTEM



INSTALLATION GUIDE

This equipment must be installed by a suitably skilled and technically competent person. Please read these instructions carefully before installation.

The Outreach Plate audio input extension system comprises a range of wall, ceiling and desk mountable single gang audio input plates specifically designed to increase the audio input capability of any audio system. Covering the most common variants of audio connector, they work by mixing the signals from various audio input sources into a single balanced line level input on a compatible amplifier.

Mountable on 25mm single gang back boxes, each plate features a built-in mixer, pre-amp, input level control and balanced output. They can be installed at the most convenient point on an installation, thus overcoming the need for excessively long and potentially hazardous microphone/audio leads.

Typically, up to 10* Outreach plates (any mix) can be daisy-chained to one balanced line level input with cable lengths of up to 100m easily achievable using standard two-pair audio cable (i.e. Belden 8723) with no recognisable degradation of audio signal quality.

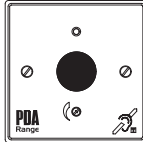
Each plate requires four wires, two balanced line (Line/A +, Line/A -), one ground and one power connection (12-32V d.c.).

Most PDA Range audio-frequency induction loop amplifiers are fitted with an Outreach connection socket as standard (see inside for compatible models). However, if you wish to connect Outreach plates to an audio system that does not have a 12-32V auxiliary output, an external 24V 250mA d.c. regulated power supply (part no. APV) is available.

* Max. 10 outreach plates when connecting to a PDA102, 200E, 200/2, 500/2, 1000/2 induction loop amplifier or a third-party amplifier using an APV 250mA power supply. Max. 3 outreach plates when connecting to an ML1 mini-induction loop amplifier. When connecting outreach plates to other amplifiers, note that the supply current required for each plate is 12-15mA.

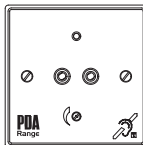


'Outreach' plate variants



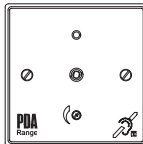
APM OMNI-DIRECTIONAL PLATED MICROPHONE

A self-contained omni-directional electret microphone complete with onboard mic to line level converter. Typical coverage up to 25m² when located at a ceiling height of 2.5-3m.



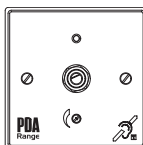
APL DUAL PHONO LINE LEVEL PLATE

Accepts stereo phono line-level signals (usually from a stereo source such as a TV). Includes an on-board stereo phono to mono converter. (An APS SCART to dual phono lead is also available).



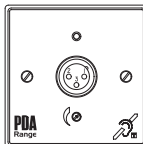
APJ 3.5mm MICROPHONE JACK PLATE

Accepts unbalanced electret microphones with 3.5mm mono jack plugs. Includes an onboard mic to line level converter, high gain pre-amplifier and 8V phantom power.



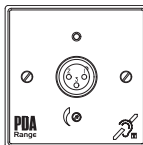
APQM 6.35mm (1/4\") MICROPHONE JACK PLATE

Accepts balanced or unbalanced electret microphones with 6.35mm (1/4\") jack plugs. Includes an on-board mic to line level converter, high gain pre-amplifier and 8V phantom power.



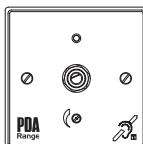
APXM XLR 3 PIN MICROPHONE PLATE

Accepts balanced or unbalanced microphones with standard 3 pin XLR connectors. Includes an on-board mic to line level converter, high gain pre-amplifier and 8V phantom power.



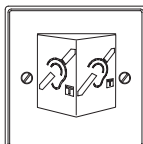
APXL XLR 3 PIN LINE LEVEL PLATE

Accepts standard 3 pin XLR feeds from audio equipment such as stage or church mixing desks, etc.



APQL 6.35mm (1/4\") LINE LEVEL PLATE

Accepts 6.35mm (1/4\") jack feeds from audio equipment such as stage or church mixing desks, etc.

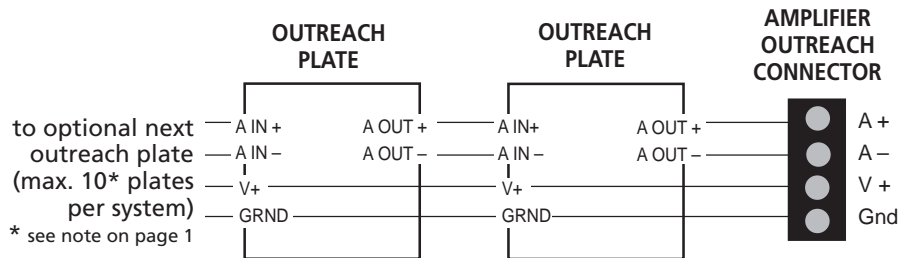


API 'AFILS ACTIVE' PLATE

Includes two ultra-bright LEDs in a translucent diffuser overprinted with the AFILS 'ear' symbol. The LEDs illuminate when the Outreach network is powered to indicate that an AFILS system is installed.

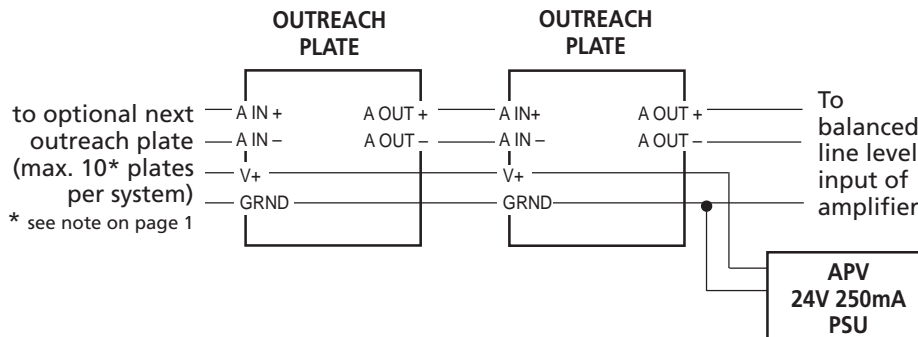
Example wiring to equipment fitted with an 'Outreach' socket

Many PDA RANGE audio frequency induction loop amplifiers are fitted with an 'Outreach' connection socket as standard. These include the ML1, PDA102, PDA200E, PDA200/2, PDA500/2 and PDA1000/2. Outreach plates should be daisy chained to these models using standard two pair audio cable (such as Belden 8723) as shown below.



Example wiring to equipment that does not have an 'Outreach' socket or a 12-32V d.c. output

To connect Outreach plates to the balanced line level input of an amplifier that does not have a 12-32V d.c. output, you will need to use an APV 24V 250mA regulated power supply. Outreach plates should be daisy chained to the amplifier and PSU using standard two pair audio cable (such as Belden 8723) as shown below.



System setup (when connecting Outreach plates to an induction loop amplifier)

Before applying power to the Outreach network we recommend the input level controls on ALL Outreach plates are turned to their mid-settings.

- (1) Connect all relevant inputs to all Outreach plates on the network.
- (2) Power up the amplifier to which the Outreach chain is connected and adjust the amplifier's level control until its limit light is flickering occasionally.
- (3) Set the amplifier's drive level as detailed in the amplifier's installation manual.

continued overleaf >>>

- (4) Listen to the audio signal with a loop listening device (such as a FoSmeter H) and adjust the input level control on each outreach plate until the desired audio mix is achieved. Note that the signal from one outreach plate will not be affected by adjustments made at another (i.e. if the input control on the outreach plate located nearest to the amplifier is turned to zero, the signal from all other outreach plates will still be heard).
- (5) Check the magnetic field strength throughout the covered area (using a FoSmeter, FoSmeter H or FoSmeter +) to ensure it complies with relevant standards. If not, adjust the amplifier's 'drive' control accordingly.

Technical specifications

Technical overview: The system has two inputs per outreach plate - a balanced line level input from the previous outreach plate and its own adjustable input. These inputs are mixed in a way that ensures the input from the previous stage is unaffected whilst generating a composite signal for the output in the form of a balanced line level signal. As very low levels of insertion loss and signal-to-noise ratios are guaranteed and the inherent interference rejection of balanced and floating line level inputs and outputs, long lengths of interconnecting cable may be used without significantly degrading the signal. This, coupled with the system's cascability, allows the designer to effectively 'tailor make' a distributed multiple input mixer that is compatible with virtually any audio system.

Power requirements

Supply volts	12-32V regulated d.c.
Supply current	12-15mA

Common outreach plate characteristics between balanced line in & balanced line out

Input - balanced/unbalanced line	1v (0dbv)
Output - balanced line	1v (0dbv) + 6db (overload)
Frequency response	40Hz - 20kHz
Input impedance	>10K
Output impedance	<100
Insertion loss/gain	< ±0.05db
Insertion signal to noise ratio	>95db Insertion
THD+noise	<0.01%

Individual outreach plate specifications

	APJ / APQM / APXM	APL / APXL / APQL	APM
Input signal level	-50dBv (5mV mic)	-12dBv to +6dBv	n/a
Gain	55dB	+6dB	55dB
Level control	0dB to -46dB	-30dBv to +6dB	0dB to -46dB
Input impedance	500	>10K	n/a
Phantom volts	8V/0V (link selectable)	n/a	n/a
Signal to noise ratio	>75dB	>95dB	>75dB
THD + noise	<0.02%	<0.01%	<0.02%

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