

TECHNICAL SPECIFICATION

THE OUTREACH CONCEPT

The Outreach system effectively acts as a multi-point distributed mixer with individual level controls. Each Outreach plate has two inputs - 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 cascadability, 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 to 37V regulated d.c.	Supply current: 6 to 11mA
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COMMON CHARACTERISTICS BETWEEN BALANCED LINE IN & BALANCED LINE OUT

Input - balanced/unbalanced line: 0.775Vrms (0dBu)	Input impedance: >10KΩ
Output - balanced line: 0.775Vrms (0dBu) + 6dB (overload)	Output impedance: <100Ω
Frequency response: 90Hz to 20kHz	Insertion loss/gain: <±0.05dB
Insertion signal to noise ratio: >79dB	THD + noise: <0.07%

INDIVIDUAL ADJUSTABLE INPUT SPECIFICATIONS

	APJ / APQM / APXM	APL / APXL / APQL	APM
Input signal level	-40dBu to -30dBu	-10dBu to +6dBu	n/a
Input gain control	∞ to 0dB	∞ to 10dB	∞ to 0dB
Input impedance	500Ω	>1KΩ	n/a
Phantom volts	11V/0V (link selectable)	n/a	n/a
Signal to noise ratio	>60dB	>71dB	>60dB
THD + noise	<0.07%	<0.03%	<0.07%

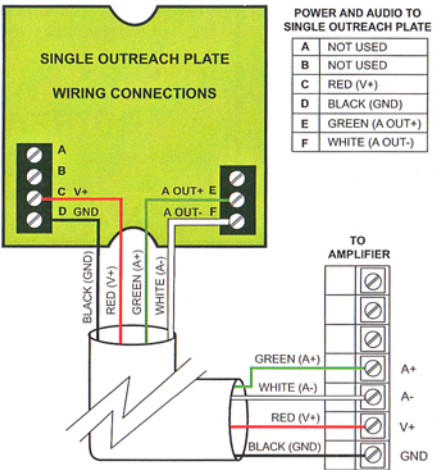
APXO OUTPUT PLATE SPECIFICATIONS

Max. Output signal level XLR: +12dBu balanced	Signal to noise ratio: >95dB
Output level control XLR: ∞ to +12dB	THD + noise: <0.01%
Output signal level line: 0dBu balanced fixed	

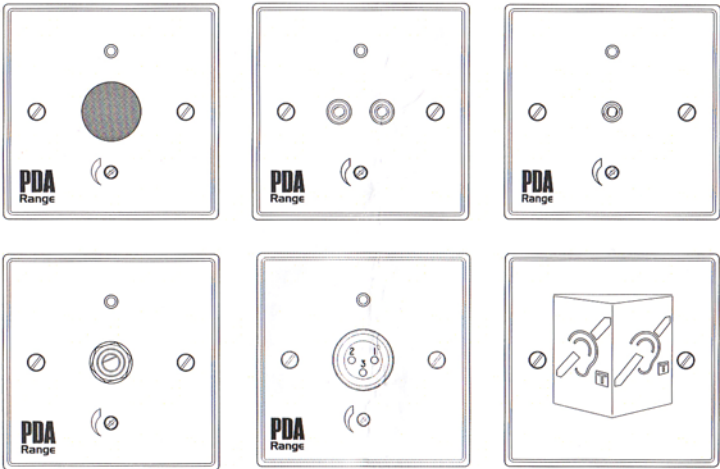
TROUBLESHOOTING

Problem	Solution
LED lit, but no audio.	Check wiring is as per this instruction. NB: For a single outreach plate, the wiring connections are shown in the diagram right.
LED not lit.	Check V+, GND are correctly wired.

E&OE. No responsibility can be accepted by the manufacturer or distributors of these outreach plates for any misinterpretation of this instruction, or for the compliance of the system as a whole. The manufacturers policy is one of continuous improvement and we reserve the right to make changes to product specifications at our discretion and without prior notice.



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 plates specifically designed to increase the audio input capability of any audio system. Covering the most common variants of audio connectors, 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 input plate features a built-in mixer, pre-amp, input level control and balanced output.

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

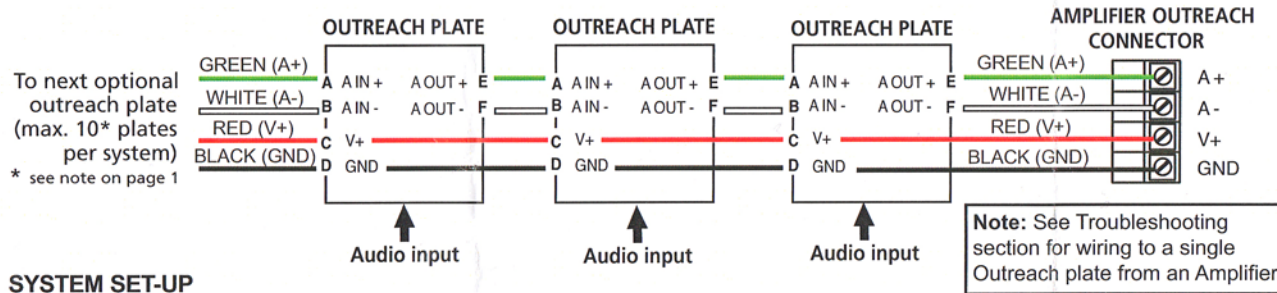
Each plate requires four wires; two balanced line (Line/A +, Line/A -), one ground (GND) and one power connection (V+ = 12-37V d.c.).

Most PDA Range induction loop amplifiers are fitted with an Outreach connection socket as standard. For audio systems that do not have an Outreach socket, straightforward network connection can be achieved using an 'APV' 24V 250mA d.c. regulated power supply and an 'APXO' 3 pin XLR balanced line output plate.

* 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 24V 250mA power supply. Max. 3 Outreach plates when connecting to an ML1 mini-induction loop amplifier.

EXAMPLE WIRING TO EQUIPMENT WITH AN OUTREACH SOCKET

Many PDA Range induction loop amplifiers are fitted with an 'Outreach' connection socket as standard. Outreach plates should be daisy-chained to these amplifiers using standard two pair audio cable (such as Belden 8723) as shown below:



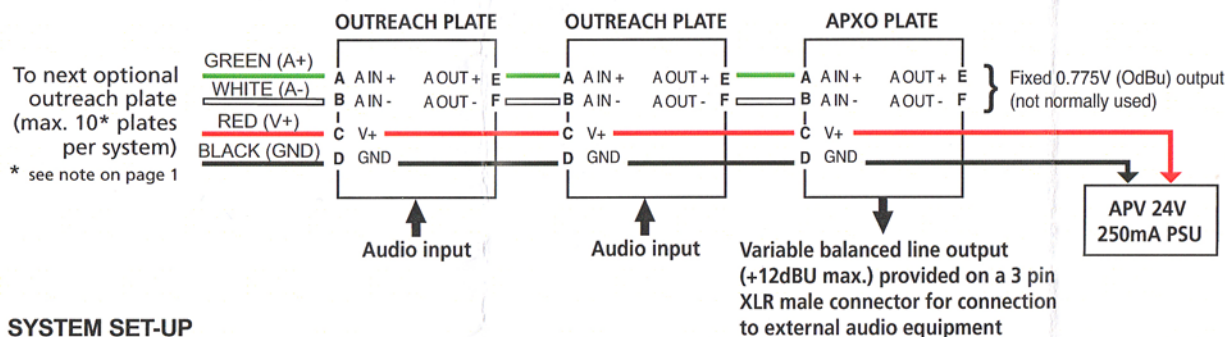
SYSTEM SET-UP

Before applying power to the Outreach network turn the input level controls on ALL Outreach plates to their mid-settings.

- (1) Connect all relevant inputs to all Outreach plates on the network.
- (2) Power up the amplifier and adjust the amplifier's level control until its limit light flickers occasionally.
- (3) Set the amplifier's drive level as detailed in the amplifier's installation manual.
- (4) Listen to the audio signal (using a FPROK FoSmeter-Pro Loop Listener/Tester) and adjust the input level control on each Outreach plate until the desired audio mix is achieved. Note 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 FPROK FoSmeter-Pro Loop Listener/Tester) to ensure it complies with relevant standards. If not, adjust the amplifier's 'drive' control accordingly.

EXAMPLE WIRING TO EQUIPMENT WITHOUT AN OUTREACH SOCKET

To connect Outreach plates to the balanced line level input of an amplifier that does not have an Outreach socket, you will need an APV 24V 250mA regulated power supply and an APXO 3 pin XLR output plate with an appropriate lead. Outreach plates should be daisy-chained to the APXO and PSU using standard two pair audio cable (such as Belden 8723) as shown below:

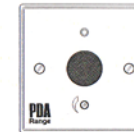


SYSTEM SET-UP

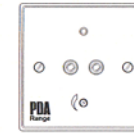
Before applying power to the Outreach network turn the input level controls on ALL Outreach plates to their mid-settings.

- (1) Connect all relevant inputs and outputs to all Outreach plates on the network.
- (2) Power up the APV PSU and adjust the APXO and amplifier's level controls until the required output is obtained.
- (3) Listen to the audio signal and adjust the input level control on each Outreach plate until the desired audio mix is achieved. Note that the signal from one Outreach input plate will not be affected by adjustments made at another (i.e. if the input control on the Outreach plate located nearest to the APXO is turned to zero, the signal from all other Outreach plates will still be heard).

OUTREACH PLATE INPUT 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 (ambient) or 2.5m² (direct speech) when located at a ceiling height of 2.5 to 3m.



APL DUAL PHONO LINE LEVEL PLATE
Accepts stereo phono line-level signals (typically from a stereo source such as a TV, CD or DVD). Includes an on-board stereo line to mono converter. (An APS SCART to dual phono lead is also available.)



APJ 3.5mm JACK MICROPHONE PLATE
Accepts balanced or unbalanced electret microphones with 3.5mm mono jack plugs. Includes an onboard mic to line level converter, high gain pre-amplifier and 11V phantom power.



APQM 6.35mm (1/4") JACK MICROPHONE 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 11V phantom power.



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



APXM XLR 3 PIN MICROPHONE PLATE
Accepts balanced or unbalanced microphones with standard 3 pin male XLR connectors. Includes an on-board mic to line level converter, high gain pre-amplifier and 11V phantom power.

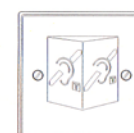


APXL XLR 3 PIN LINE LEVEL PLATE
Accepts standard 3 pin male XLR feeds from audio equipment such as stage or church mixing desks, etc.

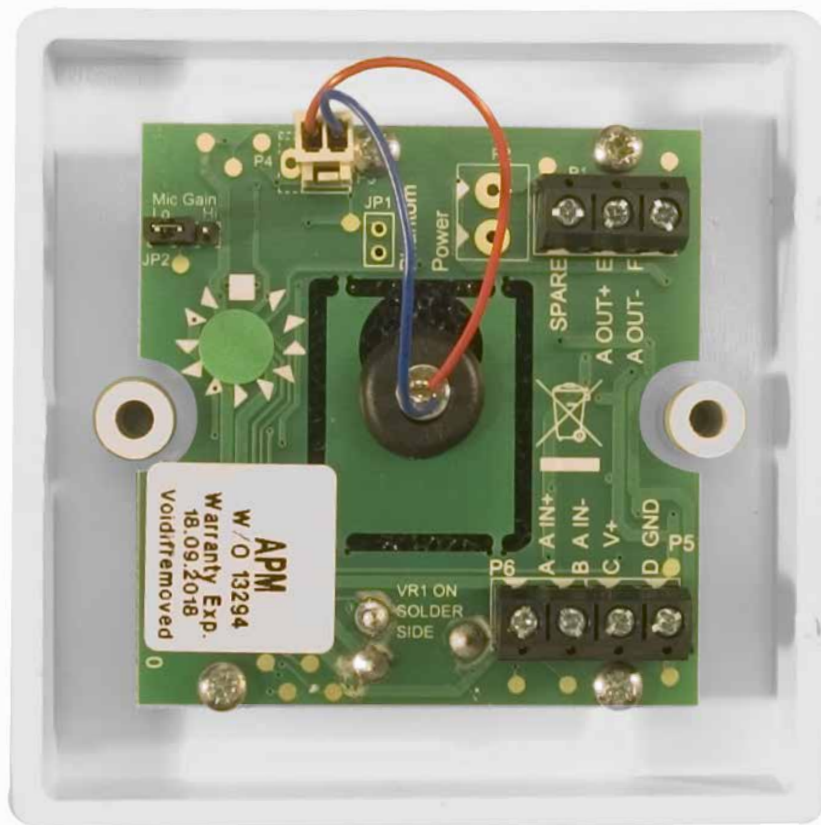
OUTREACH PLATE OUTPUT VARIANTS



APXO XLR 3 PIN BALANCED LINE OUTPUT PLATE
Provides an adjustable balanced line output (+12dB max.) on a standard 3 pin male XLR connector. Typically used to connect an Outreach chain to third-party audio equipment such as conventional amplifiers.



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.

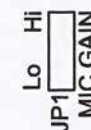


APM Omni-Directional Plated Microphone

Please note this product is now fitted with a '**Microphone Gain**' function.

When Jumper link JP1 is fitted in the **Lo** position, the microphone's gain is **55dB**.

When Jumper link JP1 is fitted in the **Hi** position, the microphone's gain is increased by 12dB to **67dB**.



Refer to the main Outreach Plate instructions for full installation details.

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