PERTRONIC INDUSTRIES LTD
50W AMPLIFIER PREAMP
INSTALLATION NOTE ISSUE 3.1

Overview:

The 50W Amplifier Preamp is a piggyback board designed to enable the connection of a public address or fire microphone to the Pertronic Industries 50W Amplifier.

The 50W Amplifier Preamp is easily connected to the 50W Amplifier by simply plugging it into two provided connectors. No separate supply or connection is needed.

The microphone input is balanced for maximum noise immunity, and is designed specifically for moving coil microphones. A switch input is available for monitoring a 'Push to talk' switch.

A 100 mVrms line input is provided for when a pre-amplified signal is used, as in a noisy environment or for a remote microphone.

Jumpers are available on the board for selecting which mode the amplifier is to operate in. Operation of the 50W Amplifier Preamp is country specific. Please see table 1 for details.

Table1. Operation	New Zealand		Australia	
Link Selected	**Normal**	**Alarm**	**Normal**	**Alarm**
PA	Operational	Disabled	Operational	Disabled
FIRE	Disabled	Operational	Operational	

Installation:

50W Amplifier Preamp Connection:

The Preamp is connected to the 50W Amplifier by piggybacking it onto connectors provided on the 50W Amplifier PCB.

First remove the link labelled MJ6 from the 50W Amplifier. Insure that a 10 way IDC box header is installed just above the '100's' BCD switch. If the IDC box header is not installed, then the 50W Amplifier is not compatible with the Preamp.

Position the 50W Amplifier Preamp so that the microphone connector is aligned to the same side as the 50W Amplifier's RS485 connector. Line up the Amplifier Preamp's 10-way and 3-way plugs with the appropriate connectors provided on the 50W Amplifier and gently insert. Use the provided standoff to securely mount the 50W Amplifier Preamp to the Amplifier. If the 50W Amplifier Preamp is installed correctly, the 50W Amplifier when active will operate normally even when no microphone is connected. Note: Monitoring of the 100V line ceases whenever an announcement is made. This is to make allowance for the monitoring circuit confusing a long pause in an announcement as a short circuit.

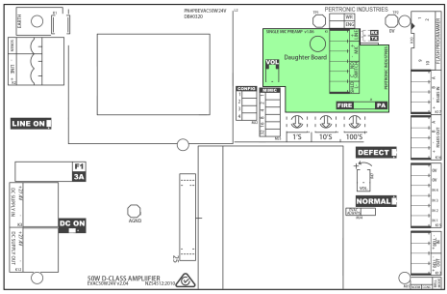

Fig1. Location of 50W Amplifier Preamp

Microphone Connection:

A microphone is connected to the 50W Amplifier Preamp as shown below. Terminals are provided for the microphone, push-to-talk switch, and cable shield. Connect the wires ensuring that the microphone +ve wire is connected to the 50W Amplifier Preamp's +ve input, and the microphone –ve wire to the 50W Amplifier Preamp's -ve input.

Ensure that the cable shield is connected to the shield input. Leaving the shield unconnected will impact on the quality of the signal received. The shield **must not** be connected to panel earth as this will also reduce the quality of the signal received by the 50W Amplifier Preamp.

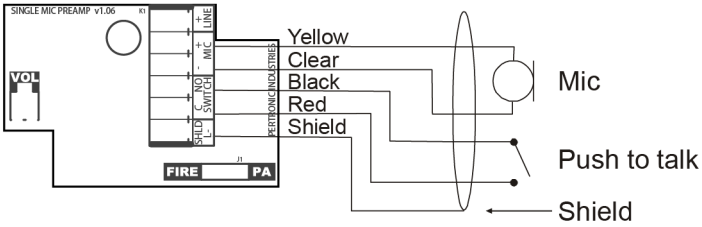

Fig2. Microphone Wiring

Line Connection:

A 100 mVrms line input is provided if a remote preamplifier is desired. Connect the wires ensuring the line +ve wire is connected to the Line + input, and connect the Line –ve wire to the 'SHLD, L-' input. If the line audio cable has a shield, also connect this to the 'SHLD, L-' input.

Links are provided to select the required microphone operation. Install the "Fire link" to select Fire Microphone mode. To select PA mode install the PA link jumper. As a rule of thumb, if the microphone is to be used by the occupants of the building, then set the jumpers to PA mode.

The sensitivity of the 50W Amplifier Preamp is set to maximum by default. If distortion occurs, or the volume simply needs reducing, a volume pot is provided.

Specification:

Microphone Input Sensitivity:	1.5 mVrms – 15 mVrms
Microphone Input Impedance:	680 ohm
Line Input Sensitivity:	100 mV – 1.5 Vrms
Line Input Impedance:	68K ohm
Frequency Response:	400 Hz to 20 KHz
Current Consumption:	< 1 mA
Recommended Cable:	0.2 mm^2 4-core twisted wire shielded audio cable
Maximum length:	5 meters maximum
Maximum Daisy Chained Mic Inputs:	4
Maximum Daisy Chained Line inputs:	10
Compatible 50W Amplifier Hardware:	v2.02 and above
Compatible 50W Amplifier Software:	v1.80 and above

Product Code	Description
EVAC50PREA	Pre-Amp (Mic I/P) for EVAC50W24V Amplifier, SMD version