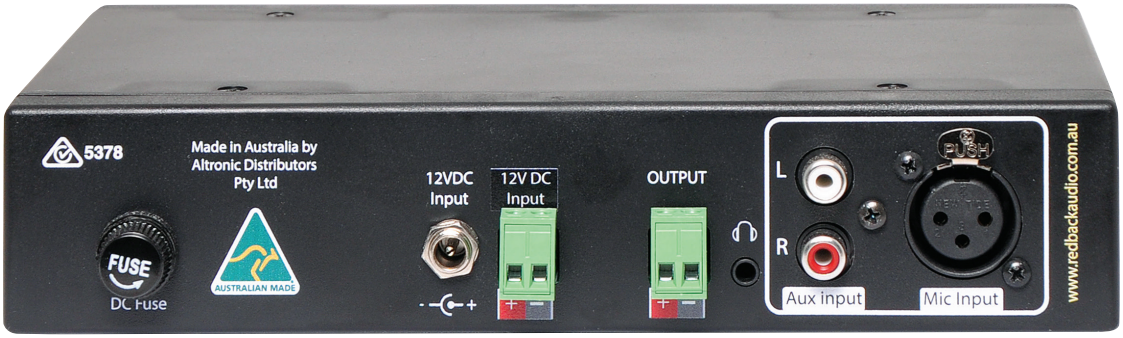

Operating Manual

A 4205 3VA Hearing Induction Loop Amplifier

Redback® Proudly Made In Australia

IMPORTANT NOTE:

Please read these instructions carefully from front to back prior to installation.
They include important setup instructions.
Failure to follow these instructions may prevent the amplifier from working as designed.

User manual revision number: 1.0 24/02/2020

1.0 INTRODUCTION

Induction Loop amplifiers, also known as T-loop or Hearing Loop amplifiers, are installed to greatly enhance the listening experience of people using hearing aids. The hearing loop, as its name suggests, is basically a loop of wire which surrounds a designated area to transmit audio to a hearing aid. An audio source is fed into the Amplifier, and the output of the amplifier then sends a high current signal into the loop, which generates a magnetic field. The magnetic field is then picked up by the Telecoil inside a hearing aid.
Hearing Loops are commonly installed in public areas which are generally noisy, making it difficult for hearing impaired users to hear clearly. The A 4205 amplifier model has been engineered to meet AS60118.4-2007 and includes a compressor/limiter circuit with tailored frequency response ensuring excellent speech intelligibility. It will operate into loads of less than 2 ohms and is short circuit proof.
The amplifier is ideally suited for small installations such as ticket booths, information desks, emergency room interview windows, reception desks etc and has a coverage up to about 1m².
The A 4205 3VA model delivers 0.3A RMS, 0.35 Amps peak into a typical Loop Resistance of 0.2Ω to 1.7Ω (max 2Ω).
Inputs are provided for 3 pin XLR balanced mic with phantom power and a dual auxiliary input. The unit is powered from 12V DC (plugpack supplied).

2.0 FRONT PANEL GUIDE

Figure 1 shows the layout of the front panel.

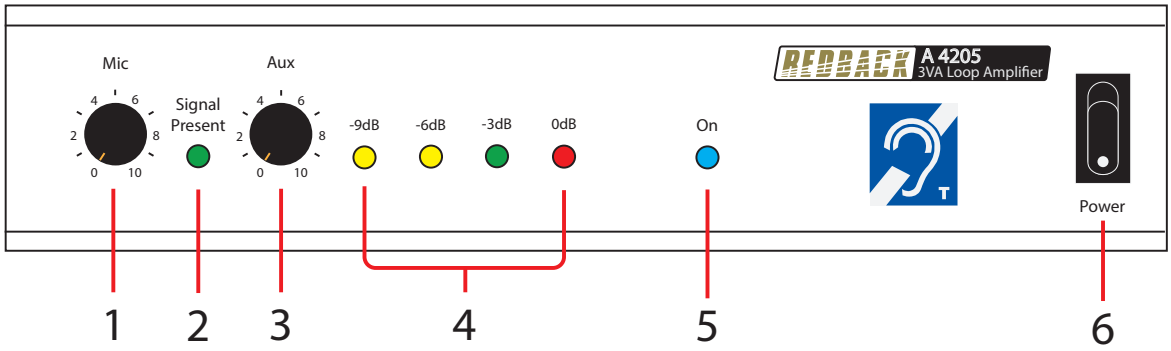

Fig 1

1	**Mic volume control**	**2**	**Signal Presence Indicator**	**3**	**Aux volume control**
4	**VU Indicator**	**5**	**On Indicator**	**6**	**Power Switch**

4.0 REAR PANEL CONNECTIONS

Figure 2 shows the layout of the rear panel.

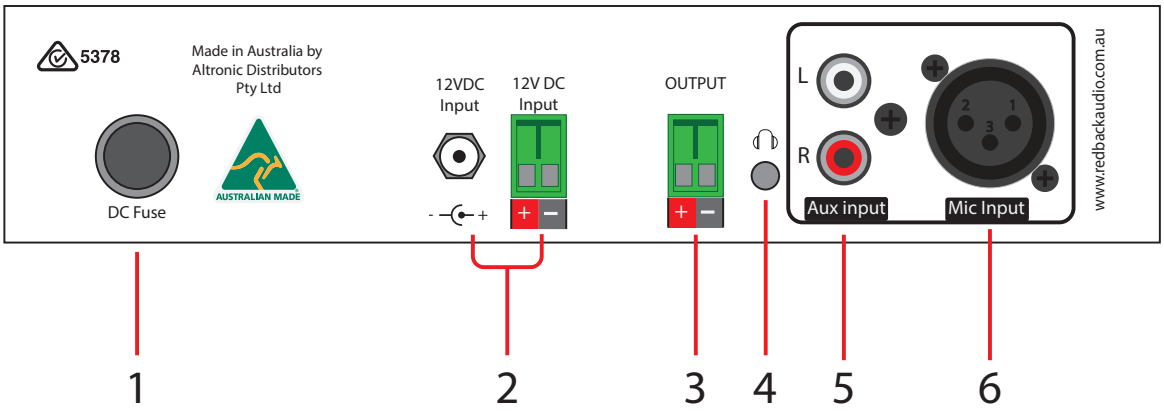

Fig 2

1 **DC Fuse (800mA)**
This fuse protects the amplifier.

2 **12V DC Input**
Connect 12V DC to either of these inputs. A 12V DC plugpack is supplied for connection to the 2.1mm socket.

3 **Output Connections**
Connect the output loop to these terminals. The polarity is not important.

4 **Headphone Output**
Use this 3.5mm connector to connect a set of headphones to listen to the audio output of the amplifier.

5 **Aux Input**
The AUX inputs are dual RCA connectors which are internally mixed to produce a mono input signal.

6 **Mic Input**
A 3 pin balanced Microphone level input.
Phantom power (12V DC) is also available on this input. To activate the phantom power, first remove the lid. Inside there is a 3 pin header labelled JP1. Move the shunt header to the "ON" position. Phantom power is now enabled.

5.0 SETUP GUIDE

The A 4205 loop amplifier has a balanced 3 Pin female XLR Microphone input and a dual RCA Aux input.
The Microphone input has an input sensitivity of 3mV and will overload at 50mV. The aux input has an input sensitivity of 300mV and will overload at 1V. Phantom power (12V DC) is available at the Mic input.
The unit is powered from 12V DC either by the supplied plugpack or another 12V DC source.

The hearing loop, as its name suggests, is basically a loop of wire which surrounds a designated area to transmit audio to a hearing aid. The recommended length of the loop for use with the A 4205 loop amplifier is around 3.5 metres in length with a resistance of between 0.2Ω and 1.7Ω (Max 2Ω). For best results we recommend two turns of 0.4 enamelled copper wire (W 0404) or two turns of 7/0.16 Tinned Light Duty Hook Up Cable (W 2250 series of cable).
Depending on the application this loop can be laid out in a rectagular shape 1.0m x 0.75m or 1.1m x 0.7m etc, as long as the total length is around 3.5m (refer to fig ure 3 for more details).

Fig 3.0 illustrates the input connections and loop details.

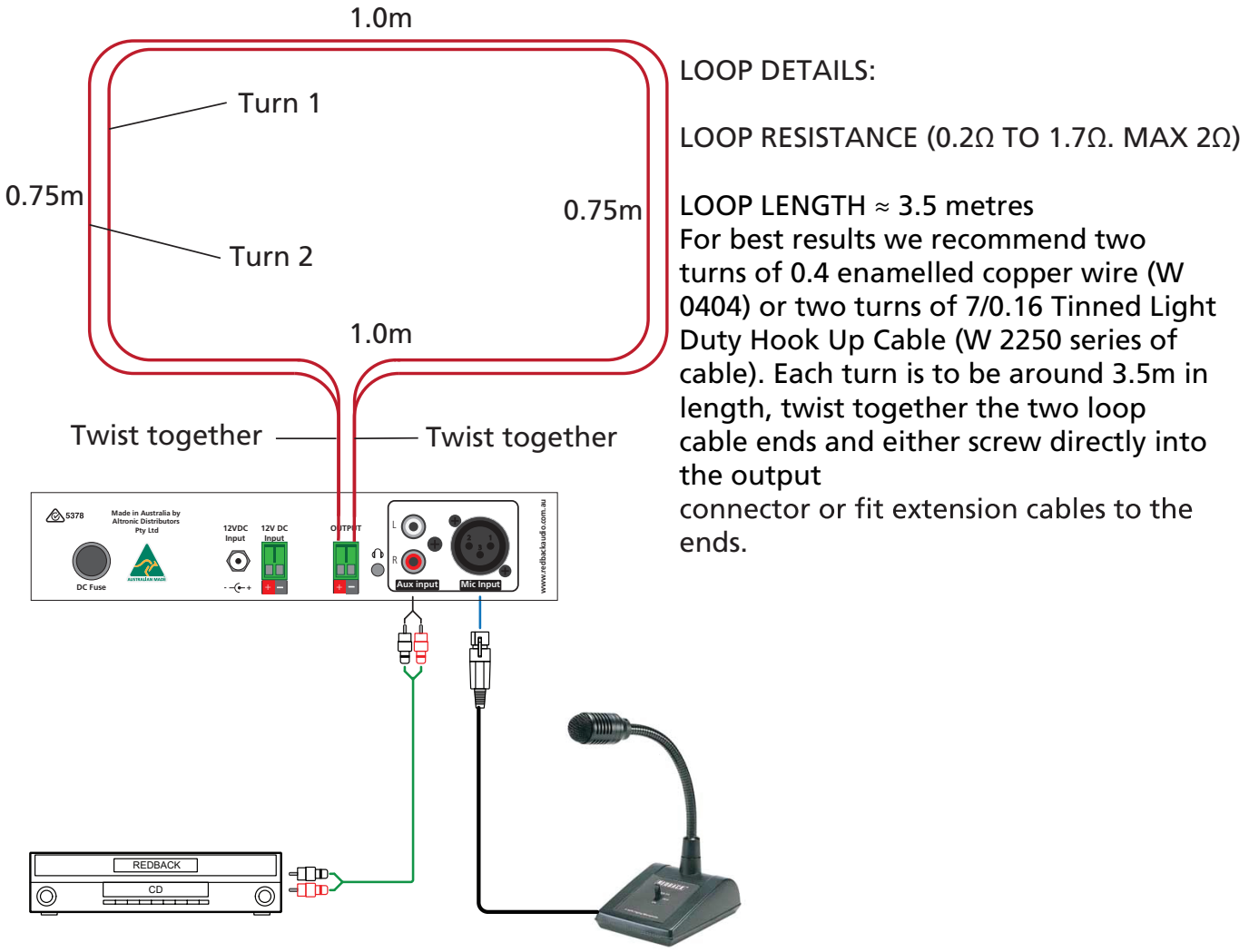

Fig 3

5.0 TYPICAL INSTALL

The A 4205 loop amplifier is designed to work with small installs where the coverage required is around 1m². It is ideal for ticket booths, reception desks, information booths etc. The loop can be installed in a vertical axis such as illustrated in figure 4 where the loop is attached to the back of the interview screen. A preferred installation is shown in figure 5 which provides a loop which works on both the vertical and horizontal axis. In both installs the loop length is around 3.5m in total with a total resistance of 0.2Ω to 1.7Ω (max 2Ω). Twist together the tail wires that don't form part of the loop.

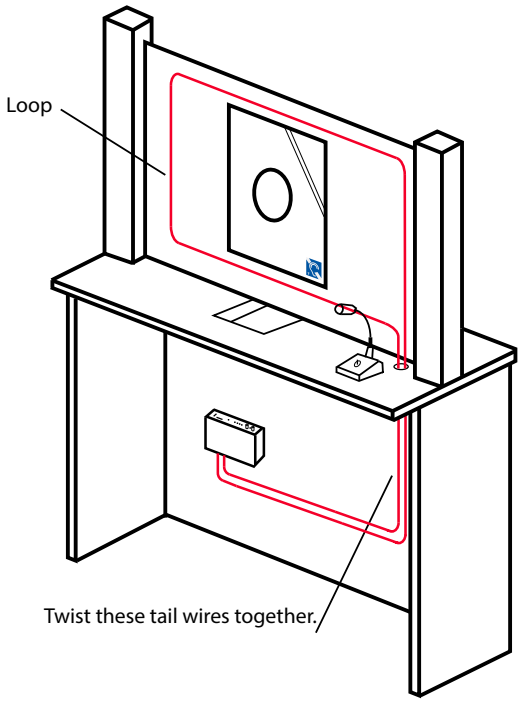

Fig 4. Loop is installed on the back of the interview screen on the vertical axis.

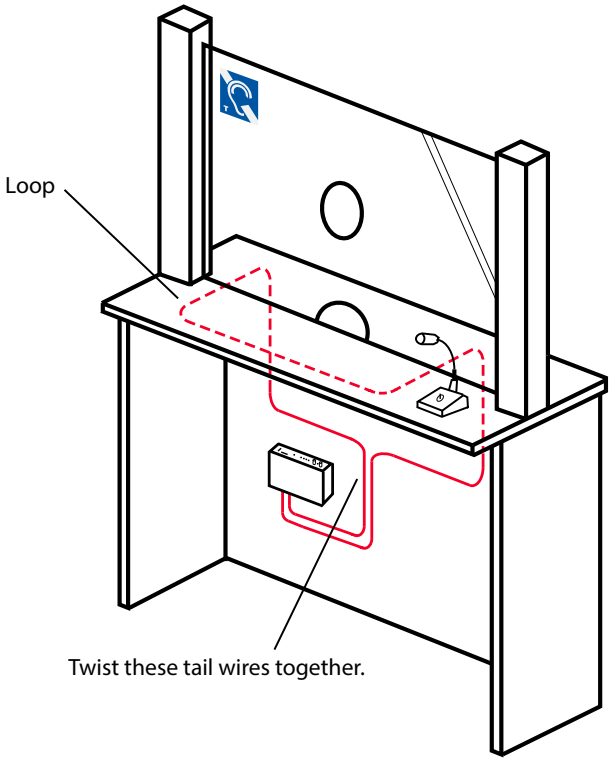

Fig 5. Loop is installed under the desk on both the vertical and horizontal axis.