

# Dynaco PAS 2, 3 & 3X New Input-Output Connector Strip Installation Instructions

## Introduction

The original Dynaco PAS 2, 3 and 3X preamplifiers provided for the interconnection to source components (turntables, tuners, tape decks, etc) and power amplifiers via a strip of RCA connectors located on the rear panel of the preamplifier. Each channel provides nine positions (7 inputs, 1 tape output and 1 main output) for each channel. Dynaco released several design iterations including a 3 position & 4 position strip pair (per channel) and a full 9 position (per channel) strip. The CAE replacement strip is designed to replace all 18 positions (9 right channel and 9 left channel) with a single module.

The original Dynaco design engineers when working within strict cost constraints placed their emphasis on the audio performance and made the compromises in the selection of the hardware. Over the first few years of service these choices did not impact performance however over time and exposure to atmospheric contaminants and rigors of inserting and removing cables, the connections associated with these hardware choices became compromised showing surface deterioration (pitting and oxidation) and loss of connector tensioning. The result is intermittent audio and/or loud hum due to open ground connections.

The CAE I-O strip houses 18 high quality ¼" RCA panel mount connectors. It is available in two versions: 1) a cost effective nickel plated version (P/N P3-RCA-N) or 2) a high quality gold plated version (P/N P3-RCA-G). Once completed intermittent connections resulting in lost audio and/or loud hum due to open grounds will be eliminated. Additionally it has been shown that subjective audible improvements are clearly noticeable when clean and low resistance connections are utilized within the signal path.

This document describes the procedure to remove the original PAS Input-Output Connector Strips and replacement with the CAE Input-Output Module. The steps defined will require basic soldering skills and tools outlined in the following documents (available from our web page [www.curcioaudio.com](http://www.curcioaudio.com)):

- a. Soldering Tutorial (CAE Tech Note # 2)
- b. Recommended Tools & Test Instruments (CAE Tech Note # 3)

Please take the time to familiarize yourself with all of these documents in particular Tech Note # 2.

**Note 1: During the removal of the original Dynaco Input-Output Strip(s) you will be required to de-solder and label all of the original wires. You will need to be very careful not to melt any of the original insulation (PVC) – this will require some skill and most importantly good tools including a high quality soldering station (temp controlled), de-solder sucker, and soldering aids. To dramatically improve your chance of success (not to mention going from a chore to fun) I strongly recommend obtaining the correct tools.**

**Note 2: If you will be installing our Replacement Selector Switch Kit (P/N SSW-PAS) it includes a full set of 22ga. Stranded Teflon insulated wire so you may cut and discard all of the original wires (except to PC-5) connected to the Input-Output strip.**

## Procedure

The procedure involves basically 3 steps:

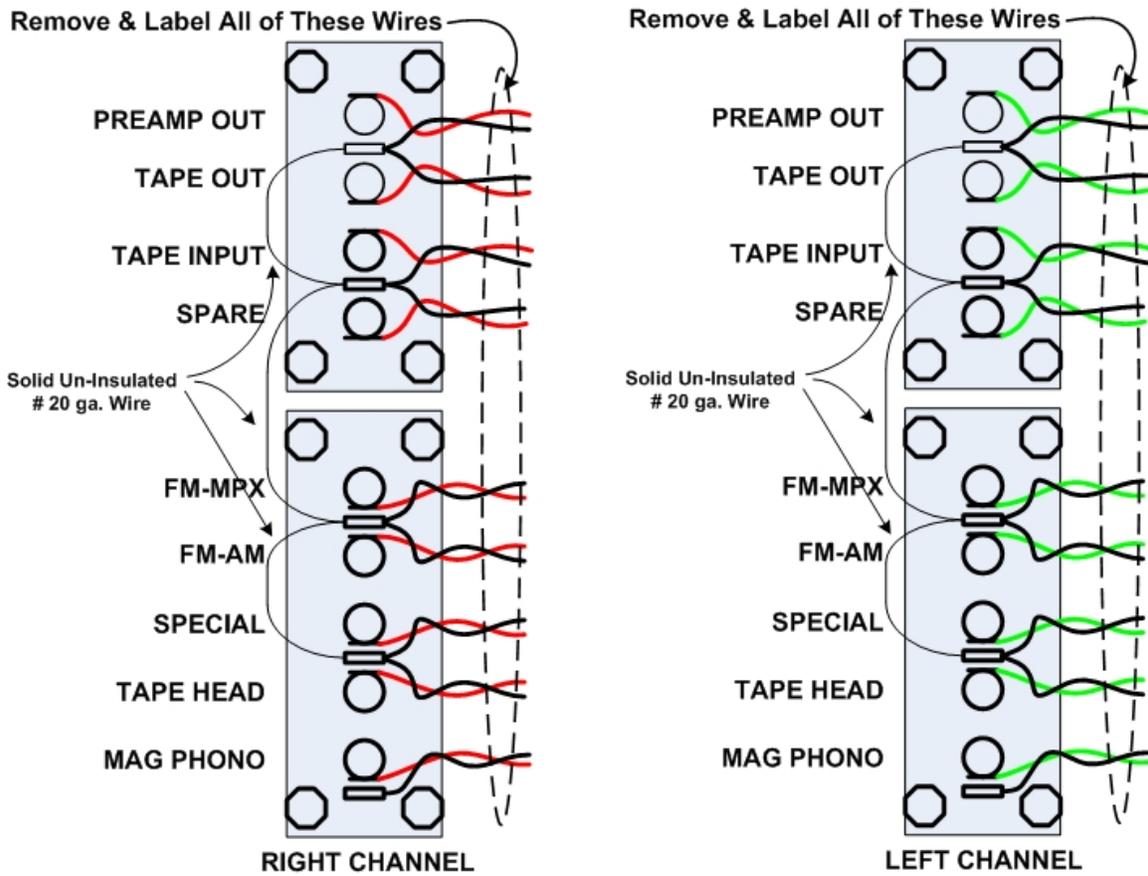
- a. The removal and labeling of all of the wires connected to the original Dynaco Input-Output strip(s) and removal of these strips (both channels)
- b. The Assembly of the CAE replacement I-O module
- c. The installation and re-wiring of the CAE replacement I-O module

Refer to figure 1 and proceed with the following steps:

1. Disconnect your PAS preamplifier from the AC mains and allow the internal voltages possibly stored in the electrolytic capacitor to discharge over a 20 minute period.
2. Remove the four screws holding the top cover and remove the top cover and bottom plate.
3. Locate the LEFT channel I-O Strip near the top of the preamp. Refer to Figure 1 and de-solder each wire as shown in this figure. Note that Figure 1 may indicate more Black wires than are actually present – nonetheless, de-solder all of the wires indicated and label with the name of the Connector as shown in the figure. Depending on the assembly technique of the original assembler, it may be necessary for you to carefully heat and dislodge each wire. Be careful so not to melt the PVC insulation.
4. De-solder the 10 ohm (1/2 watt) resistor connected between the LEFT Preamp Output and Tape Output Ground lugs. Note – this resistor is not shown in figure 1. De-solder the 510K (1/2 watt) resistor connected between the LEFT Preamp Output center and ground lugs. Both of these resistors will be used in your new installation.
5. Locate the RIGHT channel I-O Strip near the bottom of the preamp. Refer to Figure 1 and de-solder each wire as shown in this figure. Note that Figure 1 may indicate more Black wires than are actually present – nonetheless, de-solder all of the wires indicated and label with the name of the Connector as shown in the figure. Depending on the assembly technique of the original assembler, it may be necessary for you to carefully heat and dislodge each wire. Be careful so not to melt the PVC insulation.
6. De-solder the 10 ohm (1/2 watt) resistor connected between the RIGHT Preamp Output and Tape Output Ground lugs. Note – this resistor is not shown in figure 1. De-solder the 510K (1/2 watt) resistor connected between the RIGHT Preamp Output center and ground lugs. Both of these resistors will be used in your new installation.
7. Remove all of the original Dynaco I-O strips. Depending on the issue of your preamp, there may be two strips or four strips in total. Nonetheless, remove all instances of the original I-O strips.
8. Locate the CAE I-O replacement module and the 18 panel mount RCA connectors included in your kit. For each RCA connector, remove the retaining nut and both washers (including the ground lug washer). You can discard all of the washers.
9. Locate the two 10 ohm (1/2 watt) resistors and install in the two positions as shown in Figure 2.
10. Beginning at the PREAMP OUTPUT end of the CAE I-O module, begin installing all of the 18 RCA connectors. Each RCA connector should be inserted from the Non-Foil side of the board by placing the connector into the pc board from the non-foil side. Place the associated Nut on the foil side of the board and tighten snugly (be careful not to over tighten as too much torque can damage the connector).
11. Once you have installed all 18 RCA connectors you can now install the CAE I-O module. The module should be installed against the inside of the rear panel with the RCA connectors facing outward. You can use the original ¼-40 hardware for this installation.
12. Beginning with the RIGHT channel (lower side of the strip), begin re-connecting the wires you de-soldered originally. Note that none of the original ground wires are needed as the PC board foil is in place to make these connections.
13. Finally, re-connect all of the LEFT channel wires you removed originally.

You have now completed the modification. Replace the bottom plate and top cover and secure with the four screws.

**Figure 1 – PAS 2/3 Original Input-Output Connector Strips**



**Figure 2 – CAE PAS I-O Module Assembly - Top View**

