

**raleigh
audio**

**Preamplifier
Analog Input**

**Assembly
Manual**

Kit version

Use this manual with: RAKK Input board, version 1.1.

This manual covers the assembly of the analog input hardware for the Raleigh Audio Extreme Preamplifier

Required Tools and Supplies

35 to 50 Watt soldering iron
Diagonal cutting pliers
Wire stripper
Solder

Warnings and Cautions

Caution – Use only solder that is intended for electrical circuits. Do not use acid or corrosive flux of any kind.

Support

You may contact us with questions on constructing this kit by sending an e-mail message to support@raleighaudio.com

Introduction

The Analog Input kit consists of two boards: a selection switch board and an analog input board, along with supporting hardware. The RAKK Input board provides for the attachment and selection of six analog inputs. Four of the inputs are single-ended and two of the inputs are balanced. The select switch board contains the switch which mounts on the front panel. The two boards are connected by a ribbon cable. Only control voltage, not audio signal flow through the ribbon cable.

Table of Contents

Assembly Instructions 3
 Select switch board 3
 RAKK Analog Input board 5
Parts List 7
Document version history 7

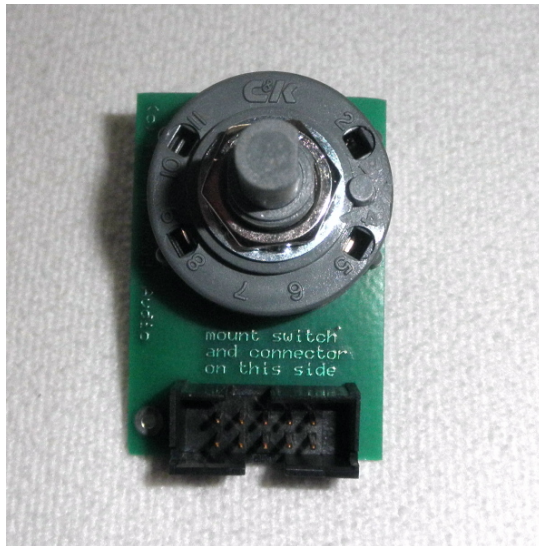
Assembly Instructions

Before you start, read through the instructions completely to the end. Inventory the kit contents to become familiar with the parts and to make sure you have everything.

In the following steps you will populate the PC boards. **All of the components are mounted on the bottom, or back-side, of the boards, which is the opposite side of the components labeled with white silkscreen.**

Steps preceded by a “note” (♪) deal with components which must be oriented properly.

Select switch board



♪

1. Insert the cable connector in its position on the bottom of the board. Make sure that it is mounted on the side of the board opposite from the white silkscreen lettering.

Note that the connector has slots on each side. One slot is in the center of the side and the other slot is offset towards one end of the connector. Orient the connector such that the side of the connector with the slot in the center is closest to the switch. A small triangle on this side is closest to pin 1. Pin 1 on the board has the square pad.

Solder all of the leads.

The switch may be oriented in two different ways and it is important to orient it correctly. If it is oriented incorrectly, the board will not fit properly and the operation from the front panel will be backward.

Notice that the switch has an orientation lug, or post, on its face between the numbers “3” and “4”.

Notice that the board has a small circle printed just above pin 1. This circle shows the orientation of the post on the switch.

♪

2. Insert the switch in its location on the same side of the board as the cable connector. Orient the switch such that the post is over the circle (but on opposite sides of the board).

Do not solder the leads yet.

-
3. Temporarily install the switch and board in its location on the front panel. Ensure that the post on the switch fits into its locating hole in the front panel and that the cable connector is toward the bottom of the panel. The bottom of the panel has the extra screw stud.

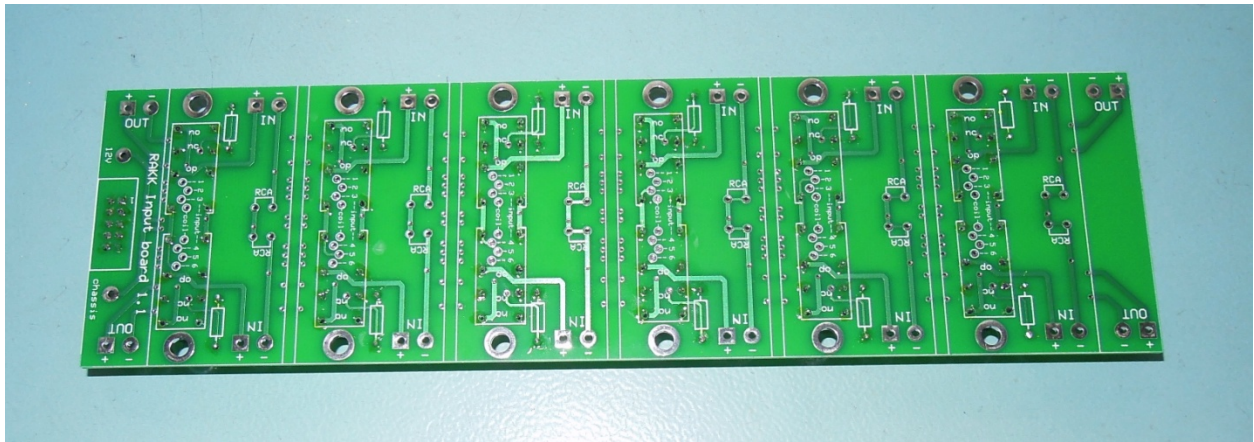
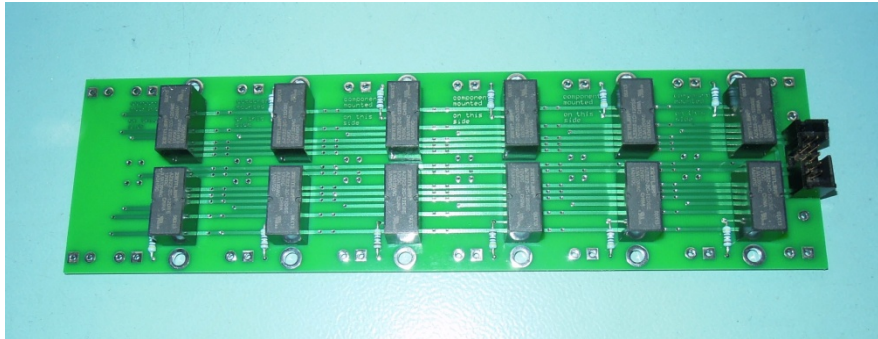
-
4. Remove the switch and board from the panel.

Solder all of the leads.

Check that all leads are soldered and that there are no “solder bridges” that connect things that should not be connected.

RAKK Analog Input board

The RAKK Input board contains the switching circuitry for the six analog inputs.



1. Insert a 47Ω (yellow, violet, black, gold, brown) resistor in its location next to each relay. Make sure that resistors are inserted from the side of the board opposite from the white silkscreen lettering.

Solder and trim all of the leads.



2. Insert the cable connector in its position on the bottom of the board. Make sure that it is mounted on the side of the board opposite from the white silkscreen lettering.

Note that the connector has slots on each side. One slot is in the center of the side and the other slot is offset towards one end of the connector. Orient the connector such that the side of the connector with the slot in the center is closest to the center of the board. A

small triangle on this side is closest to pin 1. Pin 1 on the board has the square pad.

Solder all of the leads.

3. Insert a relay in each location on the same side of the board as the cable connector.

Solder all of the leads.

Parts List

Part	Description	Qty
PC board	Large board for the relays	1
PC board	Small board for the Select Switch	1
Select switch		1
Ribbon cable	20" (Z configuration)	1
cable connector		2
Relay		12
Resistor, 47 Ω	yellow, violet, black, gold, brown bands	12

Document version history

Version	Description
1.0	Original document
1.1	Added wire to BOM
3.0	(this document) Updated to support latest version preamplifier