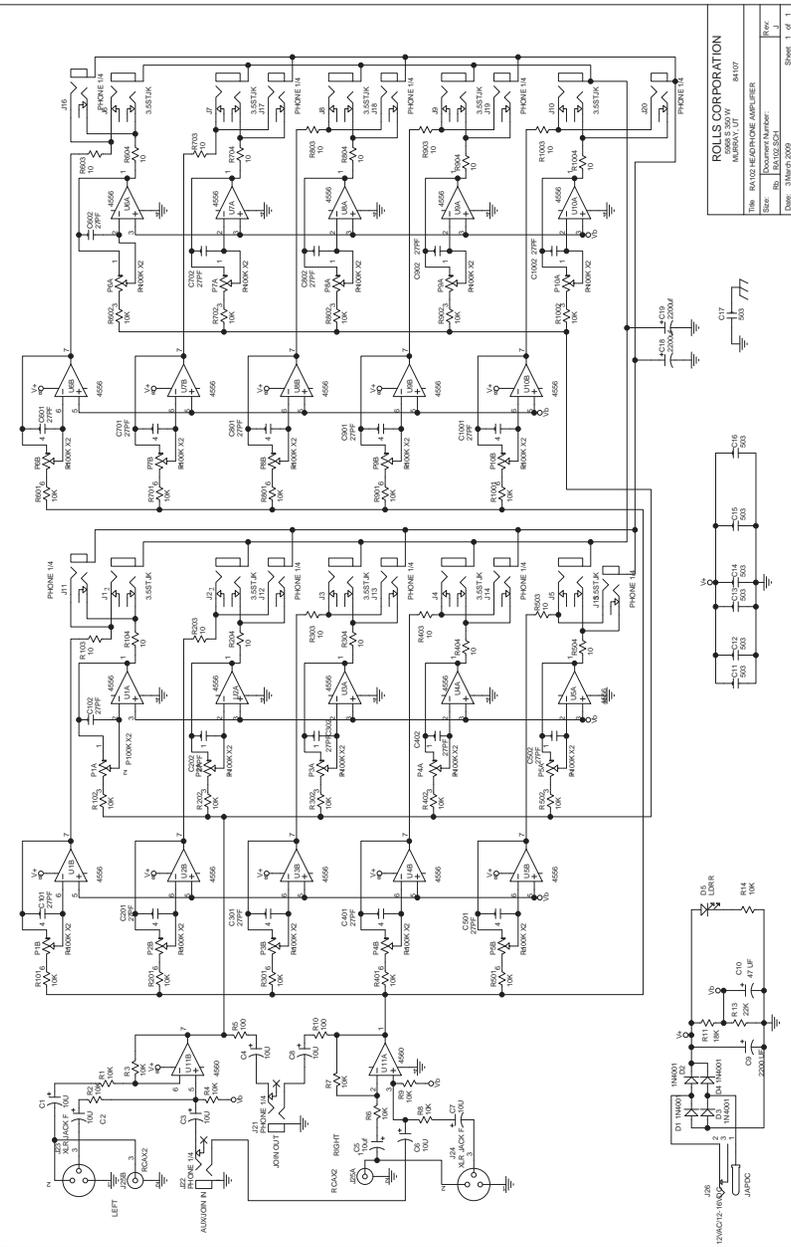


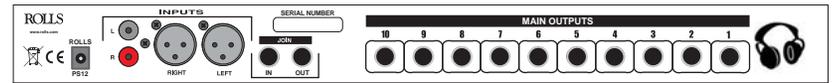
SCHEMATIC



ROLLS CORPORATION  
 2045 S 200 W  
 MURRAY UT 84107  
 Title: RA102 HEADPHONE AMPLIFIER  
 Size: 8 1/2" X 10 1/2" X 2 1/4"  
 Date: 3/14/07  
 Rev: 1  
 Sheet 1 of 1

# ROLLS

## RA102 Ten Channel Pro Headphone Amplifier



### SPECIFICATIONS

- Input Impedance: 10K Ohms unbalanced
- Max Input Level: +18 dBV
- Input Connectors: RCA, R & L balanced XLR
- Outputs: 10: 1/4" TRS Stereo jacks  
 10: 1/8" (3.5 mm) TRS Stereo jacks
- Max Gain: 20 dB/Channel
- Frequency Response: 20 Hz - 30 kHz
- S/N Ratio: 90 dB
- THD: <.008%
- IMD: <.008%
- Phase Shift (In to Out): 0 deg.
- Slew Rate: 2 V per microsecond
- Crosstalk: - 65 dB
- Power: Rolls Model PS15 or PS12
- Weight: 7 lbs (3KG)
- Size: 19" x 1.75" x 3.125" (48cm x 4.5cm x 17cm)
- Headphone impedance: 8 Ohms to 1000 Ohms

**WARNING:** THE MINIMUM HEADPHONE IMPEDANCE FOR THE RA102 IS 8 OHMS. THE MAXIMUM HEADPHONE IMPEDANCE IS 1000 OHMS. IF YOU CONNECT AND USE THE RA102 WITH A LOWER HEADPHONE IMPEDANCE THAN LISTED ABOVE YOU WILL DAMAGE THE UNIT AND POSSIBLY OTHER EQUIPMENT THAT IS CONNECTED TO THE RA102.



**ROLLS**  
 ROLLS CORPORATION  
 SALT LAKE CITY, UTAH

3/09



**OPERATION GUIDE**

## INTRODUCTION

Thank you for your purchase of the Rolls RA102 Professional Stereo Headphone Amplifier. The ROLLS RA102 is a ten-channel headphone amplifier for professional audio monitoring. A variety of input options are available including RCA and balanced XLR separate right and left. The JOIN section is for connecting more than one RA102 directly together without any signal loss or impedance issues. You can connect many RA102's together with the JOIN function. Each channel has a 1/4" headphone output jack on the rear for professional installations and a 1/8" jack on the front for ease of operation (both jacks may be used at the same time if needed).

### NOTE: THIS MANUAL ASSUMES THE USER HAS A WORKING KNOWLEDGE OF AUDIO ELECTRONICS, BALANCED AND UNBALANCED CONNECTIONS, AND PROPER SIGNAL LEVEL SETTING.

#### INSPECTION / WARRANTY

1. Unpack and inspect the RA102 box and package. If obvious physical damage is noticed, contact the carrier immediately to make a damage claim. We suggest saving the shipping carton and packing materials for safely transporting the unit in the future.
2. Please visit our web site at [www.rolls.com](http://www.rolls.com) and click on the Register Your Warranty Here button, or complete the Warranty Registration Card and return it to the factory.



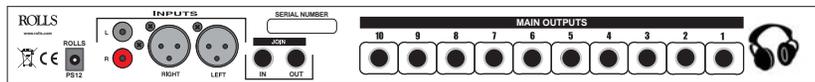
## FRONT PANEL

Note: Descriptions for Channel One through Channel Ten are identical.

OUTPUTS 1 - 10 : 1/8" (3.5 mm) Tip-Ring-Sleeve jacks for connection to a standard pair of headphones or earphones.

VOLUME 1 - 10: Controls the amount of output signal from the indicated channel for both the front 1/8" and rear 1/4" jacks.

POWER LED: Indicates that the RA102 is connected to the power supply and is on.



## REAR PANEL

POWER INPUT: Connects to the Rolls PS15 or Rolls PS12 (Included).

INPUTS: Left and Right  
- Balanced XLR jacks  
- RCA Unbalanced jacks

Note: Descriptions for Channel Six through Channel One are identical.

OUTPUT: 1/4" TRS jack - parallels the channel's front panel 1/8" Output jack.

JOIN: 2 X 1/4" TRS jacks (IN and OUT) for joining RA102's together

## CONNECTION

Connect the AC adapter to an outlet with the proper voltage. For installations there is intentionally no Power switch designed on the front of the unit. To turn the RA102 off the power must be terminated at the adapter. The RA102 was designed for professional applications where most functions are not accessed from the front. In these applications it is acceptable for the unit to be left on. No damage will occur to the RA102 in this application, it was designed for it.

## Mono/Stereo Operation:

Determine which input configuration you will use; either RCA or XLR stereo. Mono can be achieved by connecting the mono input signal to both left and right inputs at the same time.

For a discreet right/left input configuration, connect a balanced XLR, or RCA plug containing the "Right" portion of the stereo signal to the Right Main Input. Connect a balanced XLR, or RCA plug containing the "Left" portion of the stereo signal to the Left Input.

For a TRS stereo input configuration, connect a Tip-Ring-Sleeve stereo to dual Tip-sleeve (mono) RCA jack cable. This is a very specific jack referred to as an insert jack and must be purchased at a specialty store, to the rear panel LEFT and RIGHT RCA Input's on the RA102. This cable may come from a mixer's AUX output for example.

To send a mono signal to the RA102: connect a mono XLR or RCA to both the LEFT and RIGHT inputs at the same time this will require a specialty cable. The mono signal will be fed to both the right and left sides of the headphone outputs.

## JOIN EXPLANATION:

The JOIN section is for connecting RA102's directly together so you can use one source plugged into the first RA102 and by connecting them with the JOIN in and outs you can have as many headphone outs as you have units.

To properly connect the JOIN: Plug source material into the first RA102, then plug a TRS 1/4" cable (also referred to as a 1/4" stereo cable) from the JOIN OUT of the first unit into the JOIN IN of the second unit. Repeat the JOIN in and out scheme for as many RA102's as you need, only plugging the source material in the very first unit in the chain.

## WARNING

USING THIS SYSTEM AT EXCESSIVE VOLUMES CAN CAUSE PERMANENT HEARING DAMAGE.

USE AS LOW A VOLUME AS POSSIBLE

In order to use this system safely, avoid prolonged listening at excessive sound pressure levels. Please use the following guidelines established by the Occupational Safety Health Administration (OSHA) on maximum time exposure to sound pressure levels before hearing damage occurs.

90 dB SPL at 8 hours

95 dB SPL at 4 hours

100 dB SPL at 2 hours

105 dB SPL at 1 hour

110 dB SPL at 1/2 hour

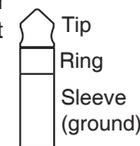
115 dB SPL at 15 minutes

120 dB SPL - avoid or damage may occur



**CAUTION:** Plugging a mono 1/4" or 1/8" TS plug into the Headphone Outputs on the front or rear of the RA102 will cause permanent damage to the unit because one side would be shorted to ground. **Never plug a mono plug into any of the Headphone Outputs THE RA102 WILL BE PERMANENTLY DAMAGED.**

This is a TRS or stereo jack that is compatible with the RA102 Headphone Outputs.



This is a MONO jack and should never be plugged into the Headphone Output of a RA102.

