

VCA HEADPHONE AMPLIFIER 4 OUT

SERVICE / INSTALLATION

Serial No

MANUFACTURED BY
CHILTON



The CHILTON VCA 4 OUT Headphone Amplifier allows balanced or unbalanced stereo line inputs with MASTER VOLUME control and MONO select to 4 separate stereo output jacks with VOLUME level control.

The source signal is normally connected to the rear XLR inputs or front panel jack sockets, the latter has priority, outputs are either by front panel jack sockets or rear XLR's. See Flow Diagram.

Each VCA can be controlled from 3 summing inputs.

1. Front panel VOLUME.

2. Remote port for each stereo output.

3. Remote port for master control of all outputs.

Normally the master volume control is turned fully up and is adjusted for very high input levels, maximum input +26dBu.

1. Can be used as manual VOLUME control or limit level to headphones.

2. Used by either control-room to adjust level or headphone user preference.

3. Allows remote setting of maximum level or fade of all outputs simultaneously from level set by front panel VOLUME control.

The REMOTE PORT 15way 'D' connector allows 4 stereo and 1 master each with 3 wire connections to a standard 10k ohm linear potentiometer or fader. No additional common or supply is required. Each has a separate 5volt regulator with 100 ohm limit resistor.

Updated information Version 5

Table of maximum power and voltage outputs Per channel (total 8) for various HP Impedance.

50ohms	652mW	5.7volts AC
100ohms	413mW	6.4volts AC
300ohms	216mW	8.0volts AC
600ohms	108mW	8.0volts AC

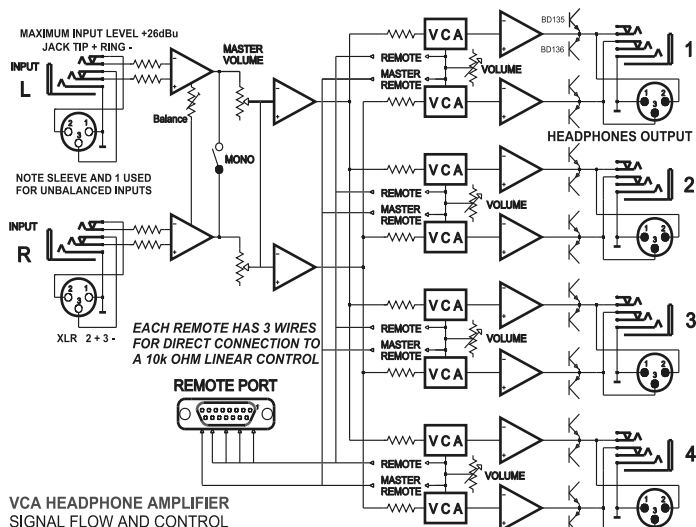
Below Power and Voltage requirements for Various Headphones to achieve 110 S.P.L. Considered maximum as a safe sound level. Headphones are rated in both 1V and mW

K702	@ 62Z	1.78V	50.1mW
K701	@ 55Z	2.0V	79.4mW
K712	@ 62Z	1.78V	50.1mW
HD590	@ 120Z	1.58V	19.9mW
HD280	@ 64Z	0.71V	7.9mW
HD555	@ 120Z	2.24V	50.1mW
K501	@ 120Z	2.18V	39.8mW
HD650	@ 300Z	2.24V	19.95mW

These results are not claimed to be accurate but as a guide to indicate variations in both power and impedance to reach the required level. To adjust for max level, change gain only, and not a series resistor as this will degrade damping.

*Measured @ 6.4v True RMS Load 100ohm
No measurable cross-over distortion @ 1 mW

**All Volume Controls @ maximum level
with 13M Cable Length (1mm sq. 3 core solid or stranded)



Specification updated 01-09-14

Damping Ratio 600. Source Impedance 0.2 ohms.
Maximum Power Output various H.P. Ohms. See above

Power Response -0.5dB 5Hz - 30kHz based on
AKG K501 120Z Impedance

*Distortion @ 40Hz-10kHz < -86dBm (0.005%) inc. Noise

Output Noise 0dBm in/out V.C.A unity -91dBm

**Cross-Talk @ 40Hz to 10kHz -65dBm 120Z HP Load
Summing Amplifier Limiter to V.C.A Port -90dBm Max.

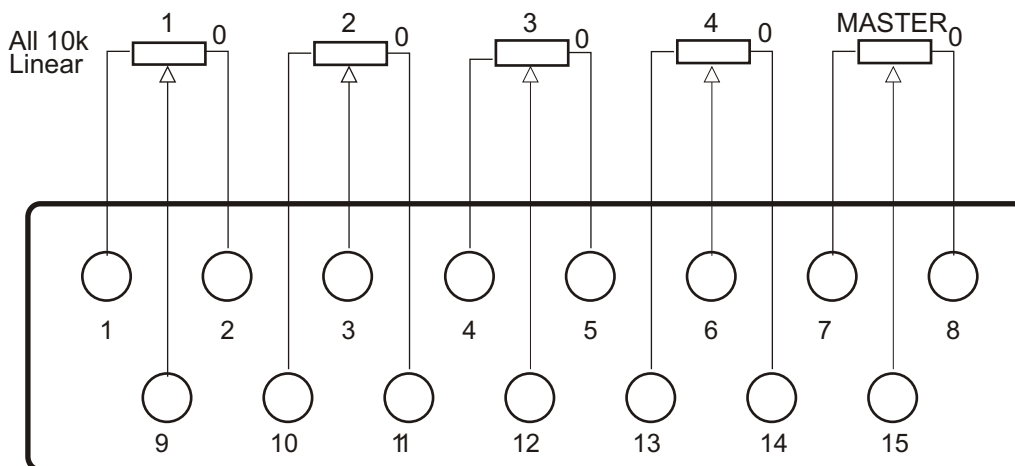
Separate Regulated Power Supply +/- 12-15VDC adjustable.
Allows sustained output of 110SPL on all 8 channels, and
Peak power of 115SPL (This level can damage hearing)

Power input 230v 50Hz AC as standard. Fused 500mA SP.
Can be supplied 115v 60Hz AC on requested.

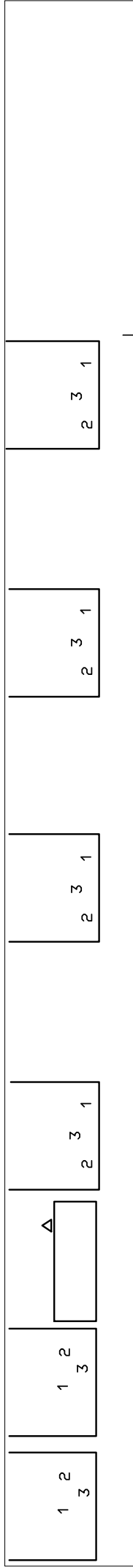
CHILTON VCA HEADPHONE AMPLIFIER

REMOTE PORT 15 WAY 'D' CONNECTOR

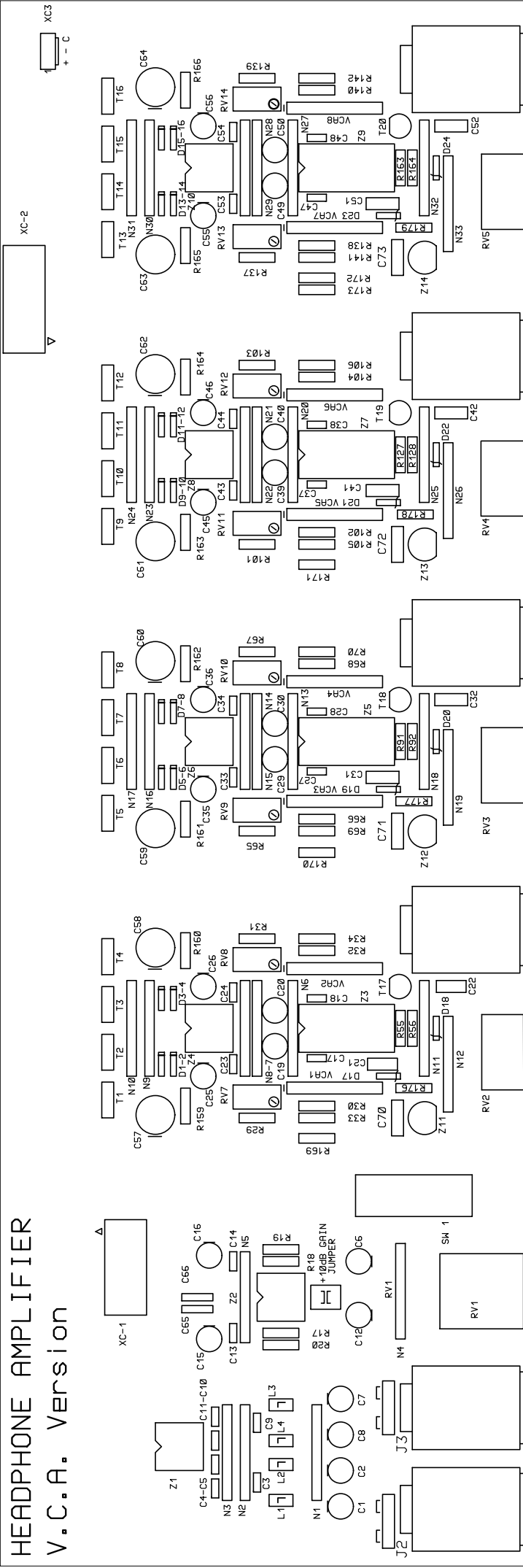
PIN 1	COMMON-PORT 1
PIN 9	WIPER-PORT 1
PIN 2	TOP OF LINEAR CONTROL-PORT 1 (off)
PIN 10	COMMON-PORT 2
PIN 3	WIPER-PORT 2
PIN 11	TOP OF LINEAR CONTROL-PORT 2 (off)
PIN 4	COMMON-PORT 3
PIN 12	WIPER-PORT 3
PIN 5	TOP OF LINEAR CONTROL-PORT 3 (off)
PIN 13	COMMON-PORT 4
PIN 6	WIPER-PORT 4
PIN 14	TOP OF LINEAR CONTROL-PORT 4 (off)
PIN 7	COMMON-MASTER VOLUME (off)
PIN 15	WIPER-MASTER VOLUME
PIN 8	TOP OF LINEAR CONTROL-MASTER VOLUME



REMOTE PORT SOCKET VIEW



HEADPHONE AMPLIFIER
V.C.A. Version



Component Layout