SIERRA AUTOMATED SYSTEMS

HPA-1
HeadPhone Amp

Fig 1. Under-counter mount, with Volume.

The SAS Headphone amp comes in four basic flavors, with and without a volume control and turret or under-counter mounted.

A unit ordered without a volume control is generally used for the control room operator's headphone output where the volume control is on the console, or a talent position where the talent has a TP-R6 controller for source selection and level control. Units with volume controls can be used anywhere you need a headphone amp, like guest positions and many host or co-host positions.

Both types use very high quality components and rugged construction for long life. 1/4" and 1/8" jacks are present so you don't have to deal with adaptors for consumer headphones.

In applications where you are feeding the same audio source to numerous headphone amps, you can wire audio and power to the first unit and simply daisy-chain the remaining amps using generic, straight-through CAT5 patch cables.

RJ-45 Jacks CN3 and CN4			"Phoenix" Connectors CN1 - Power In	CN2 – Remote Headphone Jack and Volume Control
Two connected in parallel				
for "daisy-chaining" audio			1 Ground	1 Left Out +
and power to multiple HP amps			2 +12V reg.	2 Ground
			3 Ground	3 Right Out +
Pin	Function	568B color		4 Ground
1	L+	white/orange		
2	L-	orange		5 CCW
3	Ground	white/green		6 Wiper
4	V+	blue		7 CW
5	V+	white/blue		
6	Ground	green		
7	R+	white/brown		
8	R-	brown		

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Installation

Fig 2. The back-panel connections

Connect audio feed to one of the RJ45 connectors. Connect power to the same RJ-45 OR feed power to the power jack CN1 (typical for first unit in a chain). CN2 is for remote mounting a headphone jack and/or volume control (not used in most applications - remote volume control requires 5k or 10k linear taper potentiometer - internal control must be disconnected). On units without a volume control, maximum HP volume can be set with VR1 (accessible from the back panel) using a small, flat-blade screwdriver; a “greenie” works well.

If you choose to “daisy-chain” headphone amps, connect audio and power to one unit via CN1 and/or one of the RJ-45 connectors (CN3 or CN4), leaving one RJ-45 unused. The unused RJ-45 connects with a standard “straight-thru” patch cable (the wiring table above shows color coding for a standard 568B pinout) to the next HP amp in the chain. Up to eight headphone amps can be daisy-chained from one audio connection (assuming a 600ohm audio source) and one SAS 12V regulated power supply. The two RJ-45 connectors, CN3 and CN4 are hard-wired in parallel. Internally, power is connected from the 3-pin phoenix connector to the RJ-45s by Jumper JP3.

If you are feeding power to CN1 on the first HP amp of several that you plan to daisy-chain, jumper JP3on the circuit board should be jumpered. This is normally done at the factory by default on all units, but if you don’t get power on subsequent units in the chain, the jumper may have come off during shipping. This jumper is only necessary on the first unit in the chain, and only of you apply power using the 3-pin Phoenix connector CN1.

JP3 should be un-jumpered only if your application required a very remotely mounted unit and you want to use multiple power supplies. In that case, you could still feed audio to the second unit via RJ45 since the audio is balanced and presumably low-impedance. Power could then be fed to the remote unit via CN. With JP3 removed you prevent a power supply conflict between the two supplies.

NOTE: When mounting an SAS HP amp with an under-counter mounting bracket, make sure your screws will not go all the way through the counter-top.