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You can read the recommendations in the user guide, the technical guide or the installation guide for RANE HC 6S. You'll find the answers to all your questions on the RANE HC 6S in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

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RANE DATA SHEET HC 6S HEADPHONE CONSOLE



General Description

The Rane HC 6S is one of the most indispensable products in today's audio industry. Featuring six stereo headphone amplifiers, the HC 6S performs a number of necessary tasks, not all of which are headphone related.

The HC 6S provides Master stereo Inputs which can be used to drive any or all of the 6 stereo headphone amplifiers. A Mono switch is provided on the front panel to drive both channels of all 6 amplifiers from a common mono source. Six individual unbalanced stereo Inputs are available to drive any individual amplifier from a separate stereo source. These Inputs can be converted to mono balanced Inputs through internal jumpers if required. Outputs for all six channels are provided on the

front panel and on the rear panel so that headphones may be connected on either side based on the requirements of a given installation. Two pairs of headphones may be driven from each channel, one pair connected to the front and one to the rear.

The HC 6S is capable of delivering up to 500 milliwatts to headphones with rated impedances between 32-600 ohms. The precise amount of power depends on the exact impedance of the headphone in use and the number of headphones connected to the unit. Under most conditions, the HC 6S produces sound pressure levels in excess of 120 dB. This level is more than adequate for most listeners.

Features

- Six Stereo Headphone Amplifiers
- Master Balanced/Unbalanced Stereo Inputs
- Six Unbalanced Stereo Inputs
- Six Output Level Controls
- Master Input Level Controls
- Stereo/Mono Switch
- Front and Rear Output Jacks
- Internal Universal Power Supply (100-240 VAC)

Data Sheet-1



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Manual abstract:

Featuring six stereo headphone amplifiers, the HC 6S performs a number of necessary tasks, not all of which are headphone related. The HC 6S provides Master stereo Inputs which can be used to drive any or all of the 6 stereo headphone amplifiers. @@@@Outputs for all six channels are provided on the front panel and on the rear panel so that headphones may be connected on either side based on the requirements of a given installation. Two pairs of headphones may be driven from each channel, one pair connected to the front and one to the rear. The HC 6S is capable of delivering up to 500 milliwatts into headphones with rated impedances between 32-600 ohms. The precise amount of power depends on the exact impedance of the headphone in use and the number of headphones connected to the unit. Under most conditions, the HC 6S produces sound pressure levels in excess of 120 dB. This level is more than adequate for most listeners. Features Six Stereo Headphone Amplifiers Master Balanced/Unbalanced Stereo Inputs Six Unbalanced Stereo Inputs Six Output Level Controls Master Input Level Controls Stereo/Mono Switch Front and Rear Output Jacks Internal Universal Power Supply (100-240 VAC) Data Sheet-1 HC 6S HEADPHONE CONSOLE HC 6S Specifications Parameter Power Output: Specification Limit Units Conditions/Comments 1 Channel Driven Max average rms power, 20-20 kHz 500 5% mW 50 headphones 500 5% mW 100 headphones 300 5% mW 200 headphones 200 5% mW 300 headphones 120 5% mW 600 headphones 6 Channels Driven 250 5% mW 32 headphones 250 5% mW 50 headphones 250 5% mW 100 headphones 200 5% mW 200 headphones 100 5% mW 300 headphones 120 5% mW 600 headphones (Note: Above values produce loudness levels of 120 dB in most headphones) 32-600 10% For best performance Active Balanced/Unbalanced 1/4" TRS 20k 1% +20 1 dBu (6) Stereo Amplifiers (6) Outs front + (6) Outs rear 1/4" TRS Tip = Left, Ring = Right 0.25 typ. Headphone Outputs Off to +20 1 dB -20 1 dBu Input Level 20 kHz, 6 dB/octave 5% Hz Linear phase 20-20 kHz +0/-3 dB 0.002 .002 % 150 mW / 200 1 kHz, 1 channel 0.02 .01 % 150 mW / 200 20-20 kHz, 1 channel 0.03 .01 % 60 Hz / 7 kHz, 4:1, 150 mW/200 -96 2 dB re 150 mW / 200 , A-weighted 20,500 Hrs Mil Hdbk-217D, Section V UL/cUL/CE 100-240 VAC, 50/60 Hz VAC 12W 12 W All Steel 1.75"H x 19"W x 5.3"D (1U) (4.4 cm x 48.3 cm x 13.5 cm) 5 lb (1.9 kg) 4.25" x 20.3" x 13.75" (11 cm x 52 cm x 35 cm) 9 lb (4.1 kg) Headphone Impedance Range Inputs: Type

.....Connectors

.....Impedance .

.....

...Maximum Level Outputs: Type

..Connectors

..Impedance Overall Gain Range LED Threshold: Signal Present Ultrasonic Filter Frequency Response THD+Noise IM Distortion (SMPTE) Signal-to-Noise Ratio Mean Time Between Failure Unit: Agency Listing Universal Line Voltage Maximum Power Unit: Construction

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SizeWeight Shipping: Size .

.....Weight Note: 0 dBu = 0.775 Vrms Data Sheet-2 HC 6S HEADPHONE CONSOLE LEFT MASTER INPUT 0 dB 0 dB MONO MASTER LEVEL Block Diagram RIGHT MASTER INPUT 0 dB 0 dB SIGNAL SENSE SIGNAL PRESENT STEREO* IN 1 +28 dB HEADPHONE LEVEL LEFT TIP RING FRONT HEADPHONE JACKS 1 * CONSULT MANUAL FOR MONO BALANCED SOURCES TO STAGES 2-6 +28 dB RIGHT TIP RING REAR Application Information At first glance the HC 6S looks like any other headphone distribution amplifier.

Indeed, it performs superbly all the basic functions of such an instrument. Two balanced Inputs provide a master stereo signal to six stereo headphone amplifiers, with individual stereo Level controls. The Master Level control allows adjustment of the main stereo Input level for proper matching to any source. In addition, a Stereo/Mono switch converts the stereo Inputs to mono operation when required. However, several unique features of the HC 6S allow performance well beyond the limits of standard headphone distribution amplifiers.

@@@@@@@@@@@@@The HC 6S provides Output jacks on both the front and rear panels. @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@Think about these sensitivity definitions a moment: headphone sensitivity is rated using 1/1000 of a watt; loudspeaker sensitivity is rated using 1 watt. So a quick rule-of-thumb is that you are going to need about 1/1000 as much power to drive your headphones as to drive your loudspeakers since both of their sensitivity ratings are similar (around 90-110 dB SPL). For example, if your hi-fi amp is rated at 65 watts, then you would need only 65 mW to drive comparable headphones. (Actually you need less than 65 mW since most people don't listen to their loudspeakers at 1 meter.

) And this is exactly what you find in hi-fi receivers--their headphone jacks typically provide only 10-20 mW of output power. Take another moment and think about all those portable MP3 players. They sound great, and loud. Why, you can even hear them ten feet away as the teenage skateboarder that ran over your foot escapes. Power output? About 12 mW. Architectural Specifications The headphone console shall have six (6) stereo inputs and two (2) master inputs driving six (6) stereo amplifiers wired to six (6) outputs on the front panel, in parallel with six (6) outputs on the rear chassis. Sufficient output power shall be provided to drive most stereo headphones to levels of 120 dB SPL. Automatic switching shall be included such that driving any of the separate inputs disconnects that one channel from the main stereo driving bus internally, allowing separate program material to be processed through the driven channel. Input level controls shall be provided on all inputs with a gain range from off to +28 dB. A stereo/mono switch shall be located on the front panel.

The master inputs shall be active balanced/unbalanced designs terminated with 1/4" TRS (tip-ring-sleeve) connectors. @@@@@@The unit shall be UL and cUL listed. The unit shall be entirely constructed from cold-rolled steel. The unit shall be a Rane Corporation Model HC 6S. ©Rane Corporation 10802 47th Ave. W., Mukilteo WA 98275-5098 USA TEL 425-355-6000 FAX 425-347-7757 WEB www.rane.com Data Sheet-4 All features & specifications subject to change without notice. .



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