hs·28

VUE audiotechnik

DUAL 18-INCH HIGH OUTPUT ACM SUBWOOFER

DATA SHEET

APPLICATIONS

- Portable and installed live performance venues
- High-impact audio/visual presentations
- Theatrical sound design
- World class dance clubs
- Sound reinforcement rental companies
- Performing arts centers
- Themed entertainment facilities

FEATURES

- Active Compliance Management: Patent-pending hybrid design combines both band-pass and vented alignments into a single, compact footprint for more output and definition.
- Tons of horsepower: Dual amplifier modules supplies 830W pure sine wave power (2000W "burst" power) to each woofer (4000W 'burst' total.)
- Purpose-designed transducers: Dual spider long-excursion woofers features large, 4-inch voice coils for increased power handling and reduce power compression.
- Standard IP for easy networking onboard: .Simply plug in, and the system automatically connects to virtually any kind of IP configuration.
- SystemVUE software: Mac, iOS and Windows compatible software provides access to networks and device-level parameters such as speaker protection, input/output levels, volume, mute, delay and input sources.
- Built for the road: Premium birch plywood enclosure with extensive internal bracing and a highly-durable Dura Coat finish.
- Impressive output-to-size ratio: Ideal for building extremely high-output and compact subwoofer arrays.

DESCRIPTION

Our workhorse sub, the dual 18-inch hs-28 deploys our patent-pending ACM (Active Compliance Management) technology, which combines both band-pass and vented alignments into a single enclosure. The hs-28 places two premium, 18-inch transducers into this configuration, with both woofers sharing a common vented chamber. One woofer's frontal radiation is direct, while the second woofer's frontal radiation drives the band-pass chamber.

From there we add active onboard electronics including dual monaural powerful amplifiers that send 830W of pure sine wave power (2000W "peak") to each woofer. Sophisticated DSP precisely aligns the phase arrivals of the front facing woofer and both vents.

The unique ACM configuration requires a highly-capable transducer. The precision-engineered, long excursion 18-inch woofer developed for the hs-28 features large, 4-inch voice coil for increased power handling and decreased power compression.

The combination of ACM, purpose-designed transducers, and precision electronics allows the hs-28 to deliver much higher output throughout its operating bandwidth from a footprint that's smaller than most dual 18-inch vented designs.

What's more, the small frontal area and footprint of the hs-28 makes it incredibly easy to assemble compact subwoofer arrays. For example, a stack of six hs-28's is only slightly more than 6 feet wide by 5 feet high and produces more than 142 dB SPL at one meter maximum output. The hs-28's very linear and consistent response makes it an ideal component in directional subwoofer arrays including cardioid stacks and end-fire arrays.

Like all h-Class systems, the hs-28 ships with networking capabilities already onboard. There's no need for additional cards or retrofitting. SystemVUE uses standard IP protocols to simplify the networking process. Simply plug in and the hs-28 will automatically connect to virtually any kind of IP configuration. Users can then access and monitor network and device-level parameters through our SystemVUE software.

We've housed all this rich, subwoofery-goodness in a rugged enclosure that's manufactured from premium-grade, birch plywood with extensive internal bracing for resonant free operation. A highly-durable, 6-step Dura Coat finish looks great and protects the hs-28 through many years on the road.

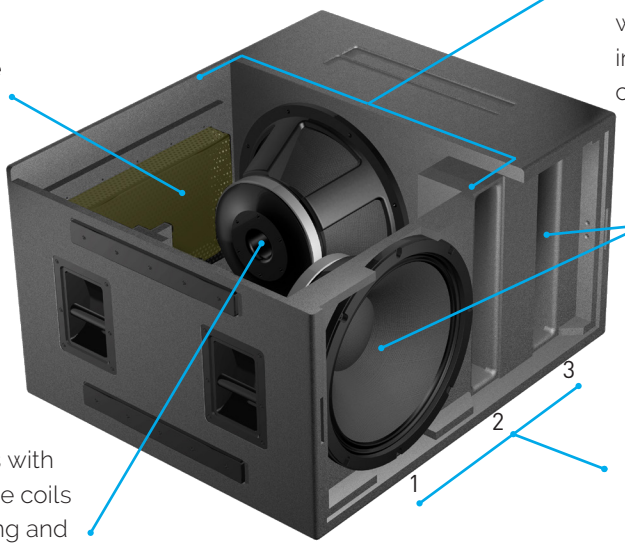
ACTIVE COMPLIANCE MANAGEMENT (ACM)

ACM is a unique hybrid design that places two 18-inch drivers into a vented enclosure while combining direct radiating and band-pass configurations to reduce box size, maintain low frequency bandwidth, and increases output.

Driver-specific amplification and DSP are optimized for this unique combination of enclosure and transducers.

Both woofers share a common vented chamber. The DSP-modified signal to each woofer changes the compliance of air, thereby increasing the effective volume within that chamber.

One woofer's frontal radiation is direct, while the second woofer's frontal radiation drives a band-pass vented chamber.



Proprietary 18-inch woofers with large, 100 mm / 4-inch voice coils for increased power handling and decreased power compression

Sophisticated DSP synchronizes all three acoustic outputs:
1. Direct radiation
2. Common chamber vent
3. Band-pass chamber vent

1 DSP/AMPLIFIER ASSEMBLY

h-Class internal VUEDrive DSP/amplifier assemblies are built on a massive machined aluminum panel that acts as a heat sink to keep the amplifiers cool without the need for noisy fans and their related complexity. The heat sink features machined fins and VUE logo.

2 MAINS POWER INPUT

The hs-28 uses a Neutrik PowerCON 32 connector.

3 AES EBU DIGITAL INPUT

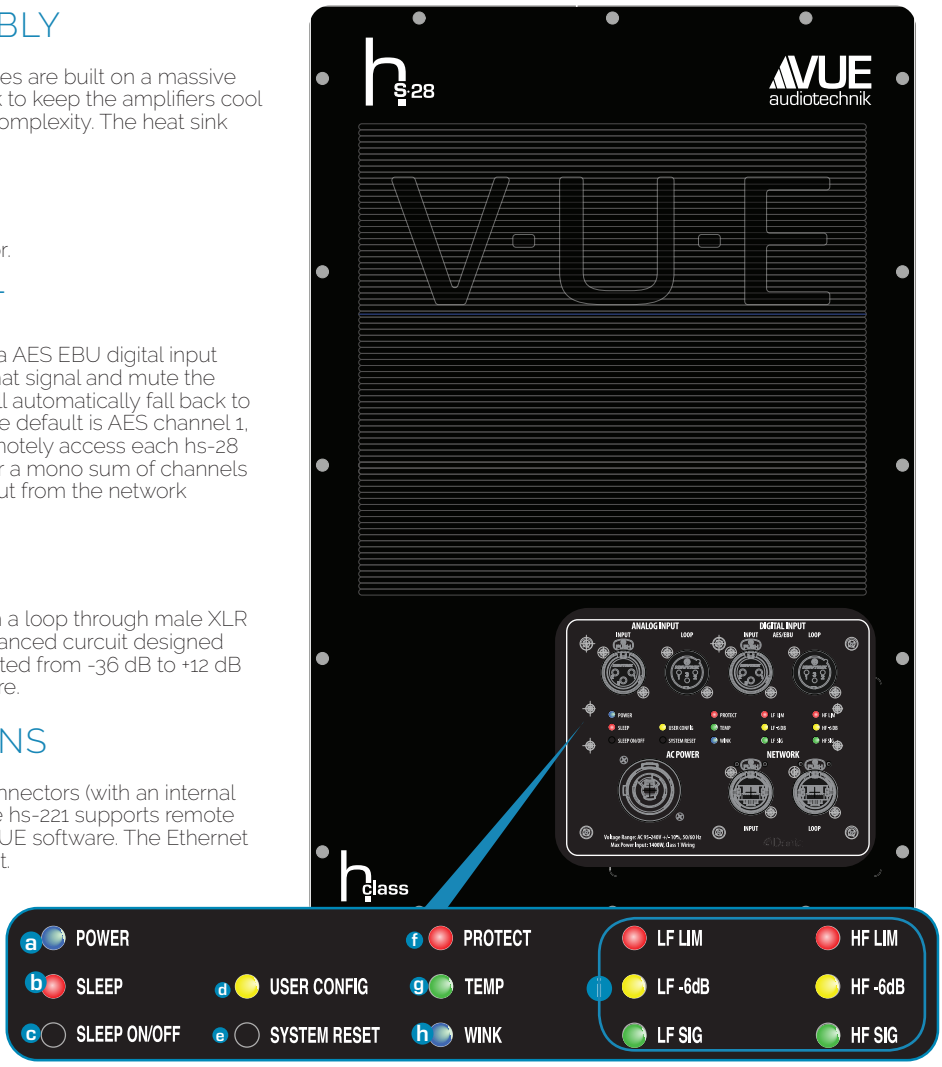
If the hs-28's DSP detects a viable digital signal (via AES EBU digital input and loop through via XLR connectors) it will use that signal and mute the analog input. If the digital signal is lost, the DSP will automatically fall back to the analog input in order to avoid interruptions. The default is AES channel 1, however SystemVUE software allows users to remotely access each hs-28 on the network and select AES digital channel 2 or a mono sum of channels 1 and 2. SystemVUE can also select the Dante input from the network connection.

4 ANALOG INPUT

The analog input is via female XLR connector with a loop through male XLR provided as well. The input is an electronically balanced curcuit designed for noise and RF rejection. Input gain can be adjusted from -36 dB to +12 dB remotely over the network via SystemVUE software.

5 NETWORK CONNECTIONS

hs-221's are equipped with two RJ-45 Ethernet connectors (with an internal switch for loop through network connections). The hs-221 supports remote control and monitoring over ethernet via SystemVUE software. The Ethernet connection also can be used for Dante audio input.



LEDS & BUTTONS

a Indicates of the units is powered on

b Indicates the unit has been put into low power sleep mode

c Recessed button (requires pin or paperclip) toggles sleep mode

d Lit if any changes were made to the unit via remote software taking the system out of the default operating state.

e Recessed button (requires pin or paperclip) when pressed clears all user settings and restores default operating state.

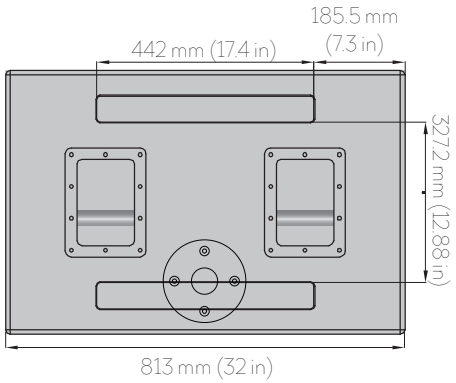
f Indicates that the system is in protect mode due to a fault detected in the amplifier the system may continue to work at reduced output level or be shut down depending on the type of fault. SystemVUE allows for reporting of fault conditions.

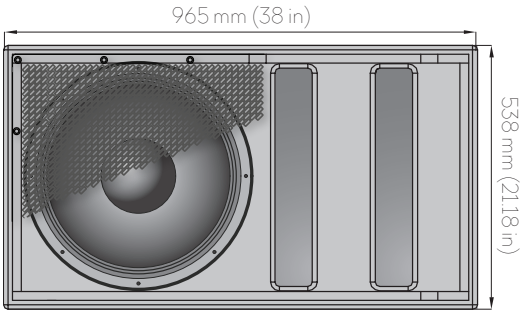
g Indicates that the system has detected excessive heat in the amplifier, over temp condition may cause the amplifier to reduce power or shut down. SystemVUE can remotely monitor temp status.

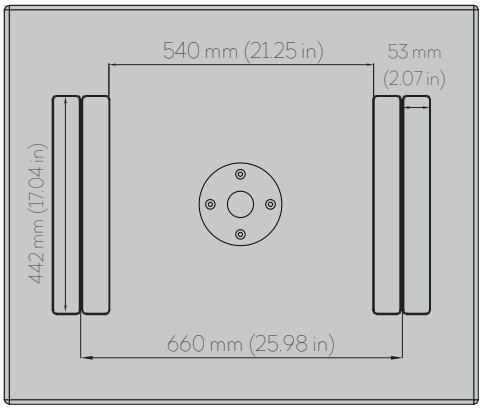
h This LED (along with a front Blue LED) will flash briefly to identify the system when the wink button is pushed in SystemVUE software. This is used to identify specific units so they can be labeled in the software.

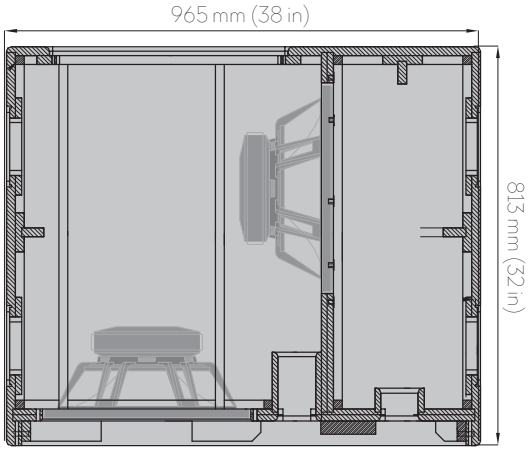
i Output LEDS: Each Amplifier Channel has three LEDs to indicate output levels: The green LED indicates signal presence, the yellow LED indicates -6 dB level and the red LED indicates that the amplifier has reached maximum peak level.

hs-28 DIMENSIONAL DRAWING









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X.0	XX.0	XXX.0	0.X		hs-28 MECHANICAL SPECIFICATION	Yuanmingqiang 2017.02.18	
±0.2	±0.5	±1.0	±0.05				
					Q/SPK04GC-2000.04		Chenhong 2017.02.18

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SPECIFICATIONS

DUAL 18-INCH HIGH OUTPUT ACM SUBWOOFER

DESCRIPTION	Powered dual 18 inch ACM™ subwoofer system
ACOUSTIC DATA	
Frequency Response -3dB (+- 1.5 dB)	35 – 80 Hz
Efficiency (1W/1m)	99 dB SPL
Max Peak SPL (band limited pink noise 6 dB crest factor	133 dB SPL half space peak
Max SPL Long Term (SPL @ 1 M before protection Sine Wave)	127 dB SPL Free Field
Coverage Horizontal & Vertical	360 degrees - 6 dB
AMPLIFIER DATA	
Amplifier Power (Long Term Sine Wave before protection)	LF 1: 830 watts LF 2: 830 watts
Peak Amplifier Power (@ 1% THD+N)	LF 1: 2000 watts LF 2: 2000 watts
Amplifier Protection	Input limiter, short circuit protection, DC protection of output, intelligent mains fuse protection, power stage overload protection, temperature protection of transformers and heat-sinks
Operational Voltage	Universal Mains, 85-268V (dual voltage auto selection). UREC™ power supply provides true universal worldwide mains operation for 120V and 230V, eliminating the need for market specific self-powered loudspeakers and related reliability issues.
THD+N (typical)	< 0,05 % (20 Hz - 20 kHz, 3 dB below rated power)
DSP	96k Hz sample rate, mixed-mode 64-bit digital processing, 120 dB dynamic range, less than 600 microseconds latency
Control Network	Ethernet / TCP/IP, Fixed IP or DHCP remote monitoring and control
TRANSDUCER DATA	
LF Description	Dual 18", paper cone, cloth surround, 4" (100 mm) voice coil, ferrite, 8 Ohm
PHYSICAL DATA	
Inputs	Female XLR input with male XLR loop output for both Analogue input and AES EBU digital input (default digital AES channel 1, channel 2 selectable remotely via software). If clock is present system uses AES digital input. System will fall back on analog input if clock is not present. Dante audio over ethernet.
Cabinet Material	Multi-ply birch hardwood
Cabinet Finish	Black 6-layer coating
Dimensions (H x W x D)	21.18 x 38 x 32.01 in (538 x 965 x 813 mm)
Weight	Net: 228.1 lbs (103.46 kg) / Shipped: 259 lbs (117.48v kg)

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