



EAW AC6 2-Way Full Range ADAPTive Column Loudspeaker Owner's Manual

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EAW AC6 2-Way Full Range ADAPTive Column Loudspeaker



Product Information

The AC6 is a 2-Way Full Range ADAPTive Column loudspeaker. It features Adaptive Performance™ which manages coverage and directivity via Resolution™ 2 software. The speaker is suitable for outdoor installation when input/output weather protection covers are used. It incorporates proven EAW acoustical design and DSP, including Focusing™ and DynOTM, to provide a pristine impulse response at all output levels. The AC6 also has integrated Dante™ redundant networking, including Analog redundancy capability, as well as on-board diagnostics and Adaptive Healing which continuously monitor and correct performance in real-time.

Technologies

- **Concentric Summation Array (CSA)™:** This method seamlessly integrates MF and HF components within a single horn, allowing multiple subsystems to sum coherently without interruption to either HF or MF wavefronts.
- **Beamwidth Matched Crossovers:** Introduced over a decade ago, EAW Engineers use carefully-designed HF horns and crossovers to eliminate polar irregularities through the crossover point.
- **Focusing™:** Utilizes advanced digital signal processing to perfect the impulse response of the loudspeaker in the time domain. This eliminates horn honk and splashiness, making the loudspeaker sound like a studio monitor instead of a PA speaker.
- **DynOTM:** Dynamic Optimization actively tracks input spectrum and power delivery, continually maximizing output and fidelity at any drive level.

Technical Specifications

- **Performance:**

- **Max SPL (Peak 1m), unadapted:** 143dB
- **Operating Range (-10dB):** 2
- **Nominal Beamwidth:** C O N F I G U R A T I O N
- **LF Transducer, Loading:** 6 x 6 in cone, 1.7 in voice coil vented (w/ CSA)
- **HF Transducer, Loading:** 30 x 19mm dome tweeter, horn-loaded
- **Operating Mode:** Amplifier Channels
- **Signal Processing:** DSP with EAW Focusing™ and Adaptive Performance™
- **ELECTRICAL:**
 - **Input Type:** Electronically Balanced
 - **Max Input Level:** 25dBu
 - **Impedance:** 20kOhm (balanced)
 - **Wiring:** 2x XLR, Pin 1 chassis, pin 2+, pin 3
 - **Dry Contact Interface Voltage:** 5V nominal, 12V maximum
 - **Power Draw:** 600W
 - **Input & Loop Type:** Separate loop through & 6x pass through pins
 - **Amplifier Type:** 600W
 - **Amplifier Max Output LF / HF (Peak):** 600W
 - **Driver Protection:** Input override, preset recall, fault status
 - **AC Mains (nominal):** Full, 1/3rd, 1/8th, Idle

Product Usage Instructions

To use the AC6 column loudspeaker, follow these steps:

1. Ensure the speaker is installed in a suitable outdoor location and that input/output weather protection covers are used.
2. Connect the AC6 to a compatible audio source using the provided input connections. Make sure the wiring is correct.
3. Power on the AC6 by connecting it to a power source with the appropriate AC mains voltage.
4. Adjust the input level using the Max Input Level control to achieve the desired volume.
5. If necessary, use the DSP controls and settings on the AC6 to further optimize the sound, such as using Focusing™ to improve the impulse response or DynO™ to maximize output and fidelity.
6. Monitor the performance of the AC6 using the onboard diagnostics and Adaptive Healing features. If any issues or faults are detected, refer to the user manual for troubleshooting steps.

Note: For more advanced usage and configuration options, refer to the Resolution™ 2 software user manual.

2-Way Full Range ADAPTive Column

- Adaptive Performance™ manages coverage and directivity via Resolution™ 2 software
- Suitable for outdoor installation when input/output weather protection are used Proven EAW acoustical design an DSP including Focusing™ and Dy provides a pristine impulse respo all output levels.
- Integrated Dante™ redundant networking including Analog redundancy capability.
- On-board diagnostics and Adaptive Healing continuously monitor and correct performance in real time

OVERVIEW

AC6 brings the highly sought-after ADAPTive tool kit to a column loudspeaker. In the same fashion as Anya and Anna speaker enclosures, AC6 offers all of the benefits of ADAPTive performance in a pillar enclosure. AC6's 120° horizontal dispersion further extends the capabilities of ADAPTive Systems offering a dramatically smaller product in the ADAPTive family. An infinite amount columns of AC can be flown as mains in a wide variety of applications or integrate AC with the larger Anya and Anna modules within the same venue for endless coverage possibilities.

TECHNOLOGIES

- **ADAPTive Performance™** Adaptive Performance integrates nearly every aspect of a loudspeaker – mechanical, electrical and acoustical design – to one end: ideal three-dimensional coverage of every venue, every time.
- **Concentric Summation Array (CSA)™** A method of seamlessly integrating MF and HF components within a single horn. With CSA, multiple subsystems sum coherently, without interruption to either HF or MF wavefronts.
- **Beamwidth Matched Crossovers** Introduced over a decade ago for our MK series loudspeakers, EAW Engineers use carefully-designed HF horns and crossovers to eliminate polar irregularities through the crossover point.
- **Focusing™** Use of advanced digital signal processing to perfect the impulse response of a loudspeaker in the time domain. Eliminating horn “honk” and splashiness, this makes the loudspeaker sound like a studio monitor instead of a “PA” speaker.
- **DynO™** Dynamic Optimization actively tracks input spectrum and power delivery, continually wicking maximizing output and fidelity at any drive level.



PHYSICAL	
Color	Black or White

Material	Aluminum Housing with Stainless Steel Grille
Dimensions (H ×W×D)*	38.7 x 9.4 x 10.4in (983 x 239 x 264mm)
Net Weight*	70lbs (32kg)
Shipping Weight*	85lbs (36kg)
ORDERING DATA	
Part Numbers:	Black
AC6	2070185-90
Accessories	
EAW AC6 WALL BRACKET BLACK	2071359-90
EAW AC6 WALL BRACKET WHITE	2071372-90
EAW AC6 FLUSH MOUNT BRACKET	2071383-90
EAW AC6 FLUSH MOUNT BRACKET	2071637-90
EAW AC6 CONNECTING PLATES	2072137-90
EAW AC6 SUBWOOFER STACK	2072137-90
EAW AC6 STINGER KIT	2072166-90
EAW AC6 MOHAWK KIT	2072165-90
EAW AC6 POLE CUP KIT	2072034-90
EAW AC6 2X HANDLE KIT	2072046-90

1. **Calculated max SPL at 1m with 4:** 1 (12dB) crest factor pink noise. Specified as whole space (free field) for full range loudspeakers, half space for subwoofers.
2. **Operating Range:** Range where the processed Frequency Response stays within -10 dB SPL of the power

averaged SPL within this range; measured on the geometric axis. Narrowband dips are excepted.

3. **Nominal Beamwidth:** Design angle for the -6 dB SPL points, referenced to 0 dB SPL as the highest level.

TECHNICAL SPECIFICATIONS

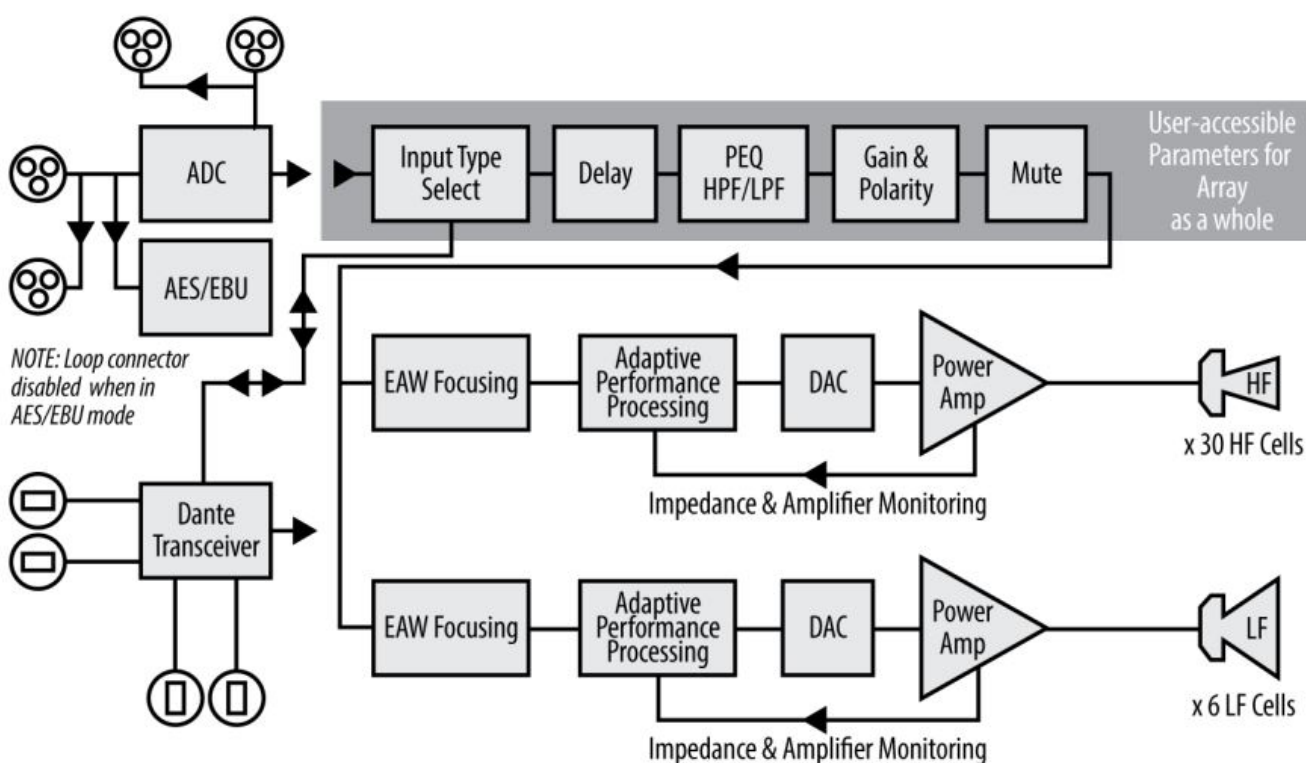
2-WAY FULL-RANGE ADAPTIVE COLUMN

PERFORMANCE	
Max SPL (Peak 1m), unadapted¹	143dB
Operating Range² (-10db)	65Hz – 20kHz
Nominal Beamwidth³	120 ° Horizontal x Adaptive Vertical
CONFIGURATION	
LF Transducer, Loading	6 x 6 in cone, 1.7 in voice coil vented (w/ CSA)
HF Transducer, Loading	30 x 19mm dome tweeter, horn loaded
Operating Mode	6 x LF, 30 x HF
<i>Amplifier Channels</i>	
<i>Signal Processing</i>	DSP with EAW Focusing™ and Adaptive Performance™
ELECTRICAL	
Input Type	Electronically Balanced
Max Input Level	25dBu
Impedance	20kOhm (balanced)
Wiring	2x XLRF, Pin 1 chassis, pin 2+, pin 3- 2x Separate Loop through XLRM (for analog signal only)
Dry Contact Interface	Input override, preset recall, fault status Separate loop through & 6x pass through pins
Voltage	5V nominal, 12V maximum
Power Draw	600W
Input & Loop Type	Analog/AES/Dante®
<i>Amplifier Type</i>	Class D

Amplifier	6 x 150W LF
Max Output LF / HF (Peak)	30 x 75W HF
Driver Protection	Integral DSP Limiting
AC Mains (nominal)	Connector Neutrik PowerCON® True1 Top Input 100V to 240V Frequency 50Hz to 60Hz
POWER CONSUMPTION	
Full	600W
1/3rd	
1/8th	
Idle	

SIGNAL DIAGRAM

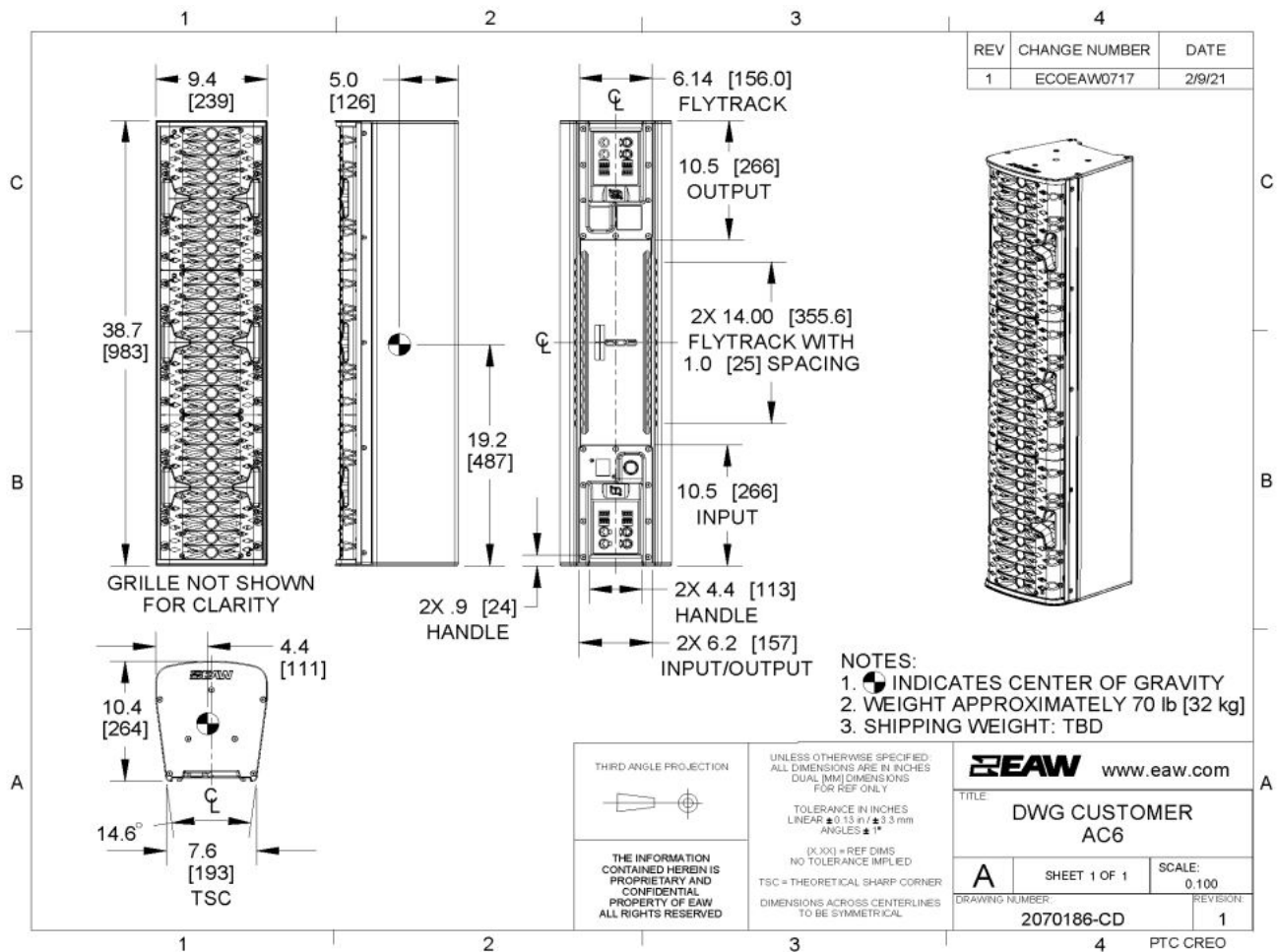
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LEGEND

- **HPF:** High Pass Filter for crossover -or- Recommended High Pass Filter.

- **LPF:** Low Pass Filter for crossover.
- **LF/MF/HF:** Low Frequency / Mid Frequency / High Frequency.
- **AMP:** User Supplied Power Amplifier -or- Integral Amplifier for NT products.
- **XVR:** Passive LPFs, HPFs, and EQ integral to the loudspeaker.
- **EAW Focusing:** Digital Signal Processor capable of implementing EAW Focusing

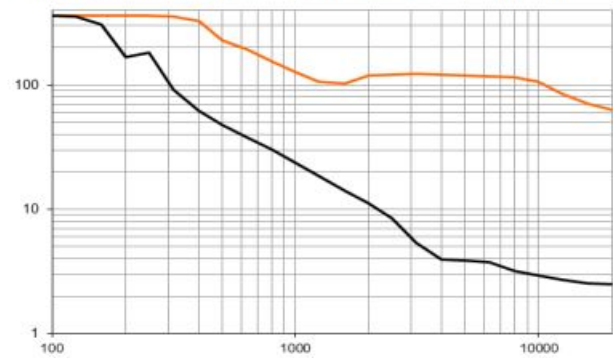


PERFORMANCE GRAPHS

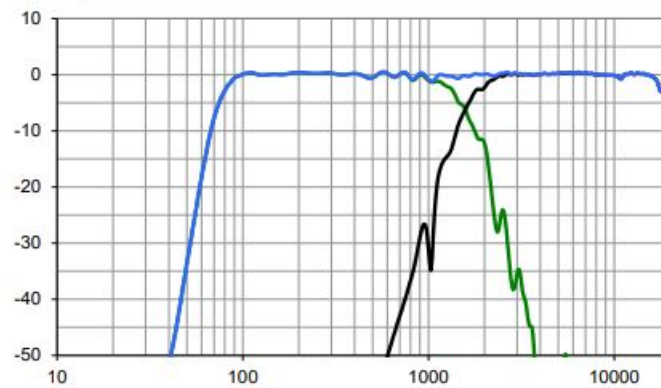
Phase Linearity



Beamwidth (Unadapted)¹ ■=Horizontal ■=Vertical



Frequency Response² ■=LF Processed ■=HF Processed ■=Overall Processed




1. Average angle for each 1/3 octave frequency band where, starting from the rear of the loudspeaker, the output first reaches -6 dB SPL referenced to 0 dB SPL as the highest level. This method means the output may drop below -6 dB SPL within the beamwidth angle.
2. Variation in acoustic output level with frequency for a constant input signal. Processed: normalized to 0 dB SPL. Unprocessed inputs: 2 V (4 ohm nominal impedance), 2.83 V (8 ohm nominal impedance), or 4 V (16 ohm nominal impedance) referenced to a distance of 1 m.

CONTACT

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- Tel 800 992 5013 / +1 508 234 6158
- www.eaw.com.



Documents / Resources

	<p>EAW AC6 2-Way Full Range ADAPTive Column Loudspeaker [pdf] Owner's Manual AC6, AC6 2-Way Full Range ADAPTive Column Loudspeaker, 2-Way Full Range ADAPTive Column Loudspeaker, Full Range ADAPTive Column Loudspeaker, ADAPTive Column Loudspeaker, Column Loudspeaker, Loudspeaker</p>
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References

- [EAW: Eastern Acoustic Works | High-performance, professional loudspeaker system design and manufacturer](#)