S

Dual 8 inch Coaxial Loudspeaker



Overview

The Prophile™ S coaxial loudspeaker provides the output capability of a dual 8 inch loudspeaker in an enclosure size typically associated with a single 8 inch, 2-way system. The S's coaxial driver gives it the ability to provide a stable, high fidelity image at close range, and its dedicated low frequency transducer provides additional mid bass impact. Its horizontal orientation, small vertical dimension, and trapezoidal shape allow it to be positioned extremely close to ceilings and under balconies. The S's low profile also makes it very useful as a front fill system when placed on the edge of or installed into a stage apron.

Fulcrum Acoustic's **TQ**™ processing is an integral part of the S design. Sound, innovative acoustical design combined with state of the art digital processing leads to exceptional clarity and precise transient response, even at very high sound pressure levels. The required digital signal processing can be provided by one of many supported platforms.

The S is an excellent option any time limited space is available. Its high efficiency results in impressive levels, and its 100° x 100° coverage and coaxial design make it especially effective in close quarters. Low frequency extension to 80 Hz allows the S to provide impressive impact and enables it to integrate well with subwoofers. This makes it an ideal choice for small live reinforcement or dance club systems, high intensity DJ monitors, A/V screening rooms, high output fill systems, and more.

Performance Specifications[1]

Operating Mode
Single-amplified w/ DSP

Operating Range[2]
80 Hz to 20 kHz

Nominal Beamwidth
100° x 100°

Transducers
LF: 8.0" ceramic magnet woofer, 2.0" voice coil
HF/LF: Coaxial 1.7" titanium diaphragm compression driver; 8.0" woofer, 2.0" voice coil; single neodymium magnet

Power Handling @ Nominal Impedance[3]
63 V / 500 W @ 8 Ω

Nominal Sensitivity @ Input Voltage[4] (whole space)
98 dB @ 2.83 V

Nominal Maximum SPL (peak / continuous)
131 dB / 125 dB

Equalized Sensitivity @ Input Voltage[5]
96 dB @ 2.83 V

Equalized Maximum SPL[6] (peak / continuous)
129 dB / 123 dB

Recommended Power Amplifier
500 W to 1000 W @ 8 Ω

Physical Specifications

Connections
(2) Neutrik NL4 Speakon
Pin 1+/-: Full Range
Pin 2+/-: No Connection

Mounting / Suspension Points
(8) M6 x 1.0 eye bolt angle points, (2) M6 x 1.0 yoke points, (1) M6 x 1.0 pull back point

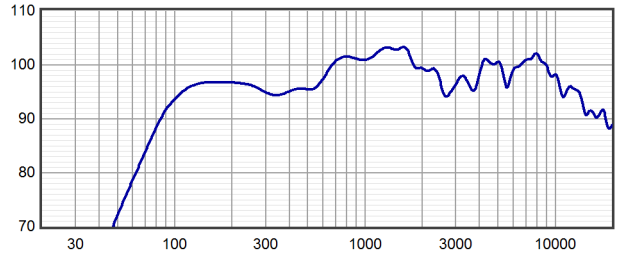
Dimensions / Weight
See pages 5 & 6

Finish
Black painted enclosure w/ matte black grille, or
White painted enclosure w/ matte white grille

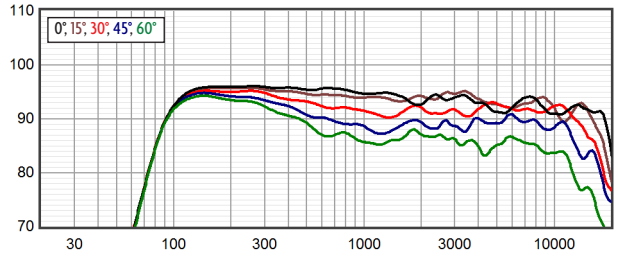
Options

YK-S yoke bracket, Terminal strip input, Custom color finish, Weather-resistant (WR) enclosure & hardware

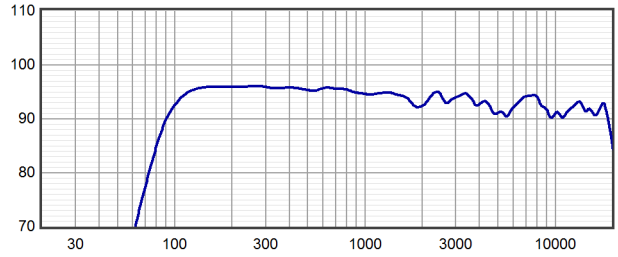
Axial Sensitivity (dB SPL, 2.83 V @ 1 m)[7, 8]



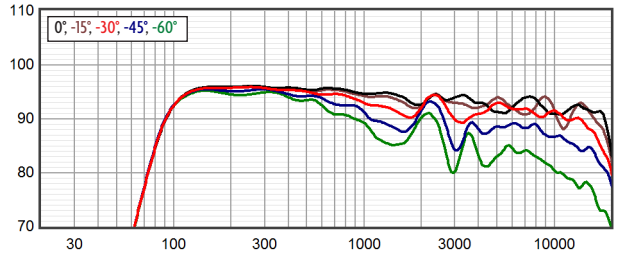
Horizontal Off Axis Response[7, 11]



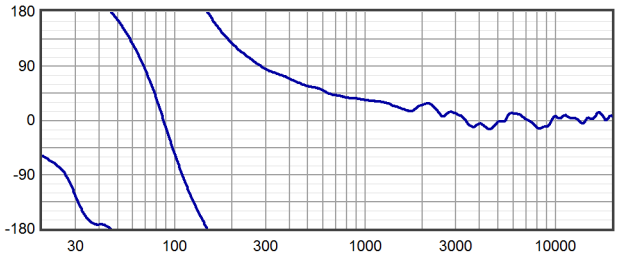
Axial Processed Response (dB)[7, 9]



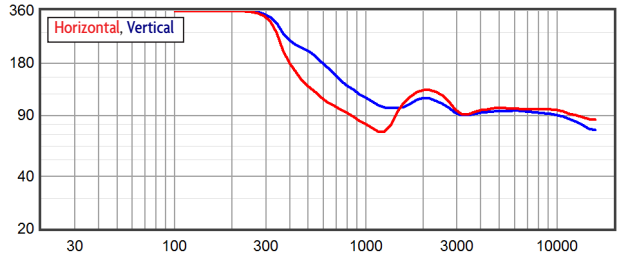
Vertical Off Axis Response[7, 11]



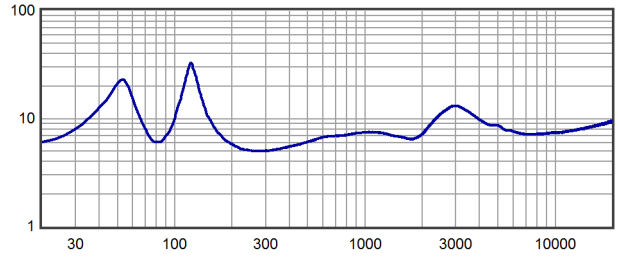
Axial Processed Phase Response (degrees)[7, 10]



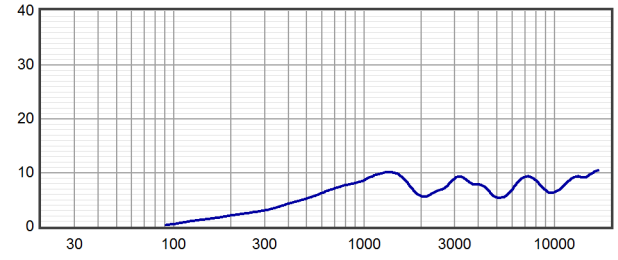
Beamwidth[7, 12]



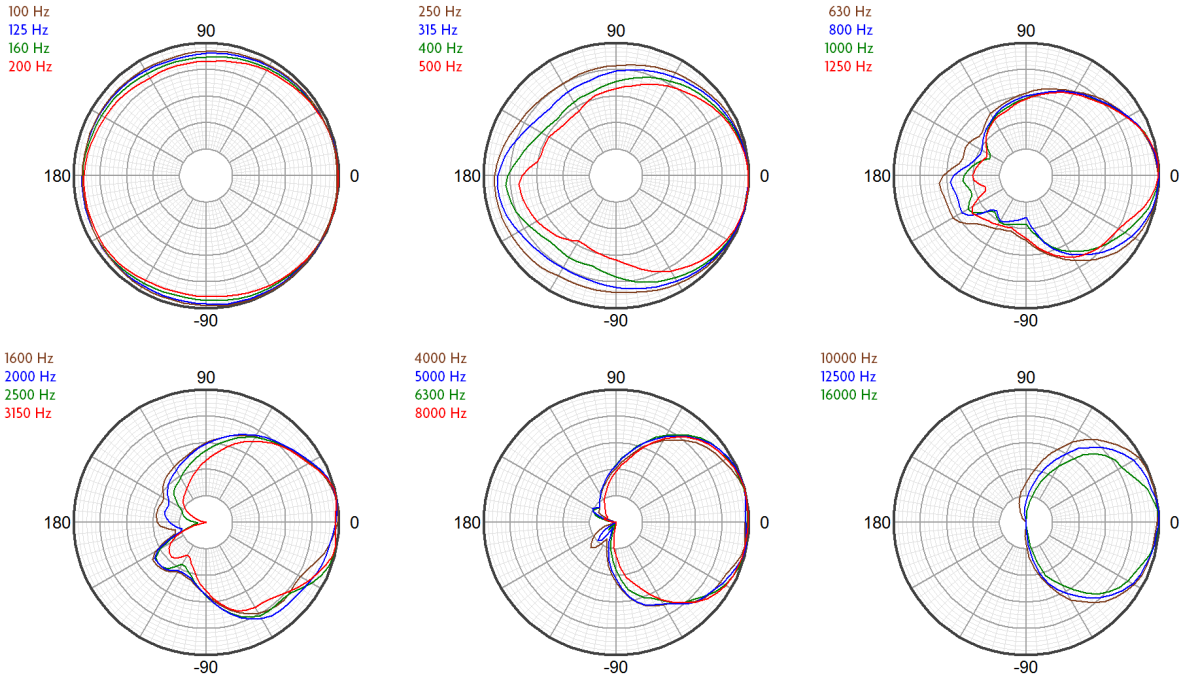
Impedance (ohms)



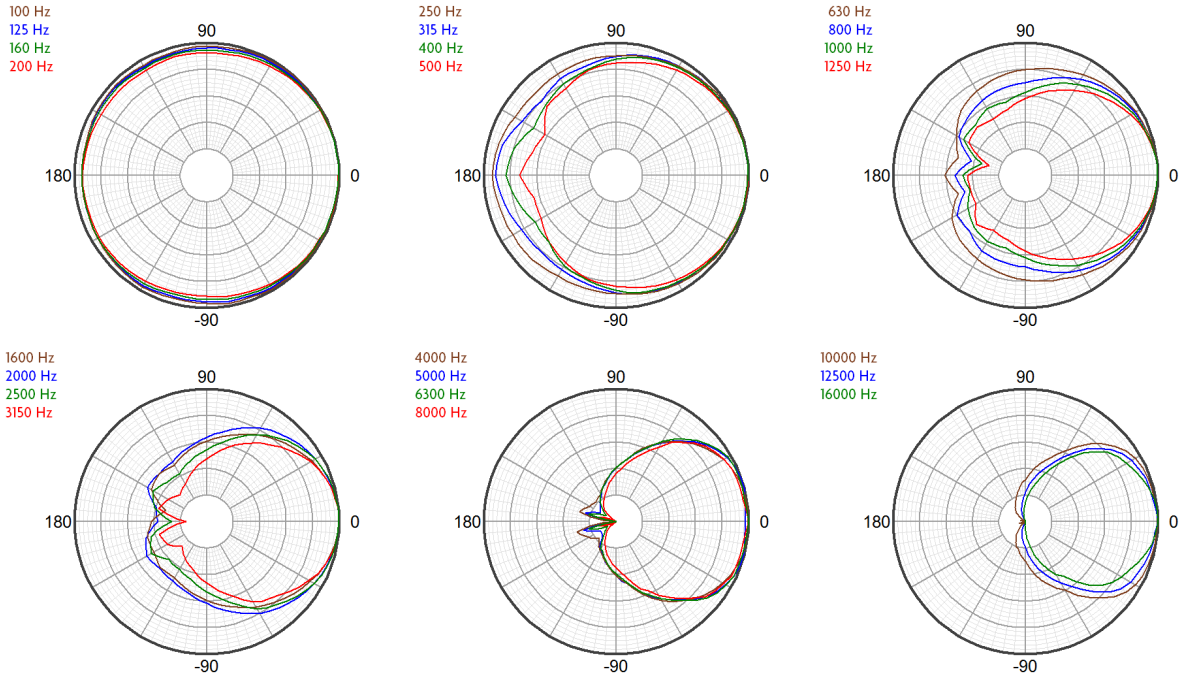
Directivity Index (dB)[13]



Horizontal Polar Response (30 dB Scale, 6 dB per Major Division)



Vertical Polar Response (30 dB Scale, 6 dB per Major Division)



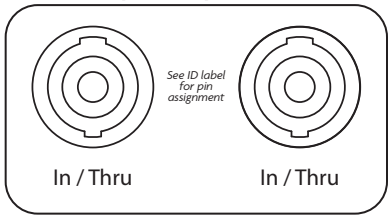
Technologies

The Prophile S includes a neodymium based coaxial driver, which allows the compression driver diaphragm to be positioned very close to the woofer voice coil. This allows the system to maintain coherent summation and consistent off axis response through a 3-way passive crossover, allowing it to be driven with a single amplifier channel.

The two low frequency devices both operate down to the lowest frequencies, resulting in mutual coupling that provides unusually high efficiency and impact in the critical 80 Hz to 500 Hz range.

Connections

Neutrik NL4 Speakon Input



Mechanical Specification Drawings

2D and 3D DWG dimensional drawings are available for download at www.fulcrum-acoustic.com/resources

Notes

[1] **Performance Specifications** *All acoustic specifications rounded to nearest whole number. External DSP with Fulcrum Acoustic-provided settings is required to achieve the specified performance.*

[2] **Operating Range** *The frequency range within which the processed response is within 10 dB of the average.*

[3] **Power Handling** *Based on the AES power handling of the transducers.*

[4] **Nominal Sensitivity** *The 1-meter-referenced SPL produced by a 1 watt band limited pink noise signal, with no processing applied.*

[5] **Equalized Sensitivity** *The 1-meter-referenced SPL produced when an EIA-426-B signal is applied to an equalized loudspeaker system, at a level which produces a total power of 1 watt, in sum, to the loudspeaker subsections.*

[6] **Equalized Maximum SPL** *The 1-meter-referenced SPL produced when an EIA-426-B signal is applied to an equalized loudspeaker system, at a level which drives at least one subsection to its rated power.*

[7] **Resolution** *All response graphs are subjected to 1/6 octave cepstral smoothing with a gaussian weighting function.*

[8] **Axial Sensitivity** *The SPL plotted against frequency for a 1 watt swept sine wave, referenced to 1 m with no signal processing.*

[9] **Axial Processed Response** *The axial magnitude response with recommended signal processing applied.*

[10] **Axial Processed Phase Response** *The axial phase response with recommended signal processing applied, and latency removed.*

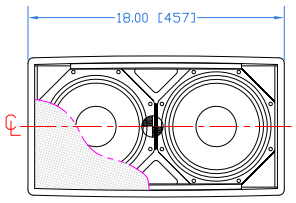
[11] **Horizontal / Vertical Off Axis Responses** *The magnitude response at various angles off axis, with recommended signal proceessing applied.*

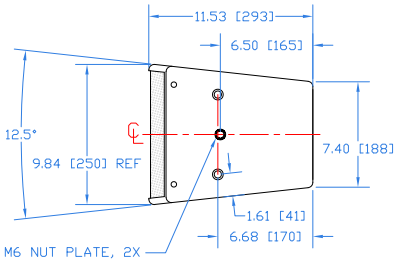
[12] **Beamwidth** *The angle between the -6 dB points in a loudspeaker's polar response.*

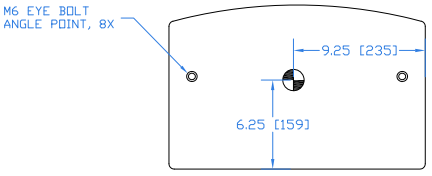
[13] **Directivity Index (Di)** *The ratio of the on-axis sound pressure squared to the spherical average of the sound pressure squared at a particular frequency expressed in dB. To convert the directivity index to directivity factor (Q) use the formula* $10^{Di/10}$.

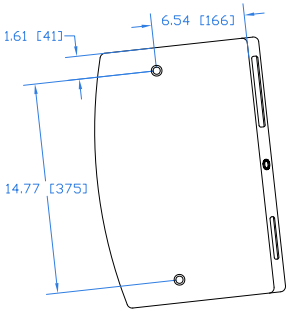
Notes:
1. Net Weight = Approx. 34.0 lb / 15.4 kg
2. Symbol ◎ = M6 eye bolt angle point
3. Symbol ○ = M6 nut plate
4. Symbol ◔ = CoG

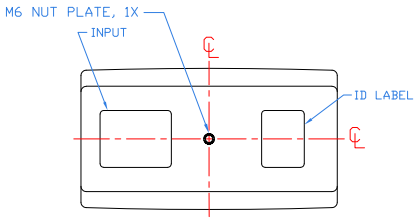
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3	REDESIGN ENCLOSURE TO MATCH OTHER PROPHILE SERIES LOUDSPEAKERS	RAF 5/25/10
4	CORRECT REAR HEIGHT DIMENSION	RAF 6/14/10
5	ADD SHIPPING WEIGHT	RAF 6/14/10
6	OMNIMOUNT TO 'THIRD PARTY' IN NOTE 5	RAF 1/13/12
7	REMOVE PAN/TILT MOUNT POINTS	RAF 7/28/16
8	UPDATE NOTES	RAF 1/12/26









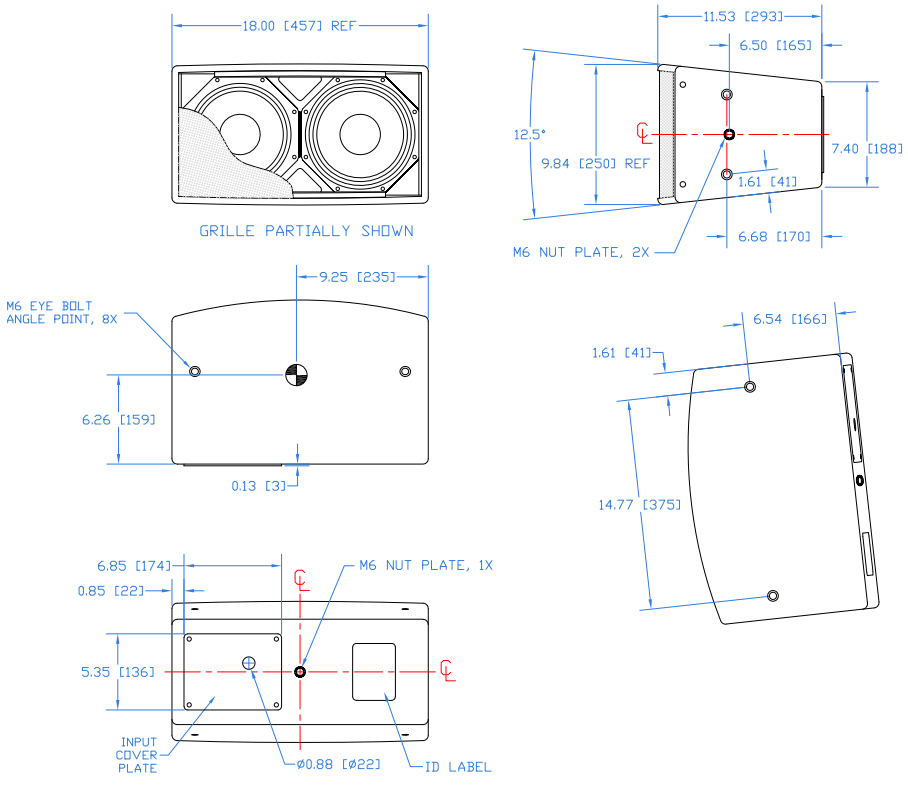


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		APPROVALS / DATE	
		DRAWN: DWG 4/29/09	TITLE: Mechanical Spec, S
		CHECKED: RAF 1/08/10	
		DES ENG:	B SHEET 1 OF 1 SCALE: 1:12
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Notes:
1. Net Weight = Approx. 34.0 lb / 15.4 kg
2. Symbol ◎ = M6x1.0 eye bolt angle point
3. Symbol ○ = M6x1.0 nut plate
4. Symbol ◓ = CoG
5. Enclosure material: PVC

REV	DESCRIPTION	APPR / DATE
1	WR VERSION OF PROPHILE S	DWG 7/23/11
2	GENERAL DRAWING UPDATES	RAF 1/14/16
3	REMOVE PAN/TILT MOUNT POINTS	RAF 7/28/16
4	CHANGE COVER PLATE, ADD ID LABEL	RAF 1/21/21
5	UPDATE NOTES, INPUT COVER PLATE	RAF 1/12/26

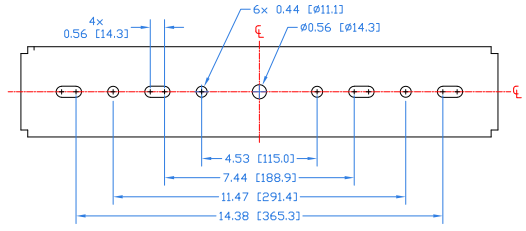


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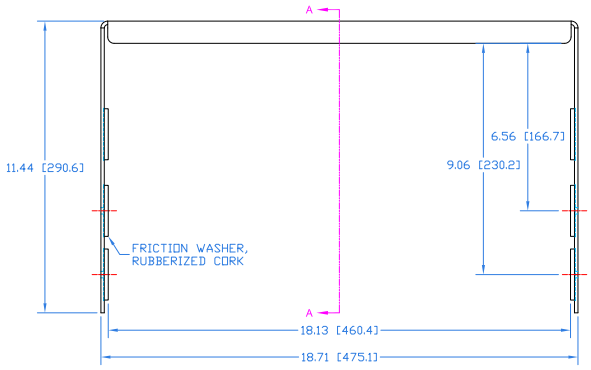
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Notes:
1. Fits: Prophile S
2. Net Weight: Approx. 5.6 lb / 2.5 kg
3. Material: 10 GA ASTM A36 steel
4. Includes 2x each M10 socket head cap screws, split washers, and flat washers

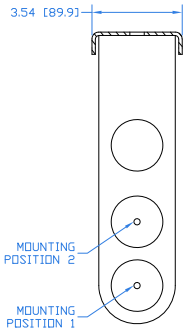
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2	UPDATE WASHERS	08/05/25



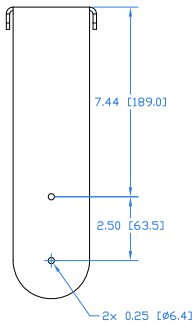
TOP



FRONT



SECTION A-A



RIGHT SIDE

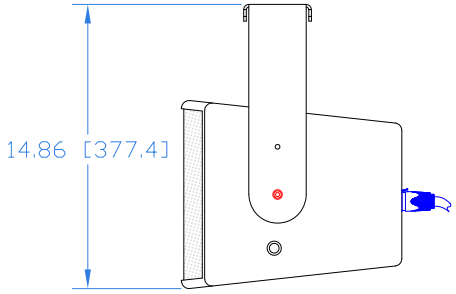
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		CHECKED:	
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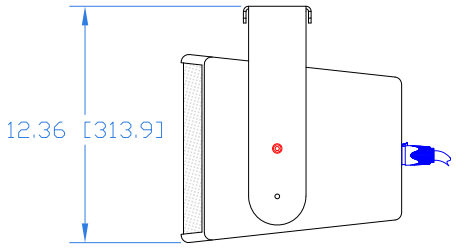
Notes:
The YK-S yoke bracket is designed to mount the Prophile S loudspeaker in a horizontal orientation. It is fitted with two mounting holes which allow the installer to vary the distance between the loudspeaker enclosure and the mounting surface.

Note that the range of motion is restricted when the enclosure is mounted closer to the yoke. The maximum range of motion is achieved when the enclosure is mounted to the holes nearest the end of the bracket arms.

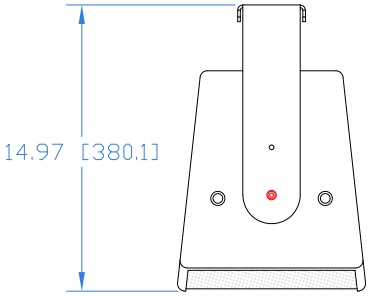
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2	CHANGE DRAWING ORIENTATION	RAF 8/5/25

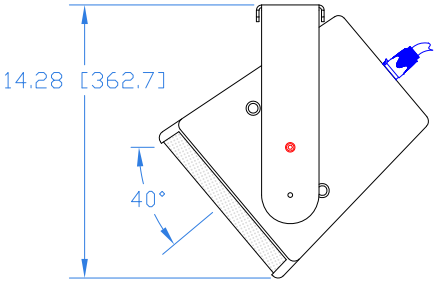


MOUNTING POSTION 1



MOUNTING POSTION 2





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		APPROVALS / DATE	
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		MFG ENG:	DWG. NO. 820-300-043 REV 2

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