

PLATE REVERB UNIT

Thomas Parker Williams AUDIO DESIGNS

www.thomasparkerwilliams.com

This document describes and contains all drawings to build a plate reverb similar to the classic 1970's EMT units.

The original EMT plate size was 1 meter by 2 meters. This unit plate size is 24" x 48" or around 2/3 size of the EMT plate.

The rigid frame is structural steel bolted together. The drawings list all of the hardware and mechanical parts required.

The mechanical parts are available from McMaster Carr. The plate is available from Online Metals.

The electrical parts, the driver and small drivers used as dynamic pickups, are available from Parts Express.

Many different drivers may be used, most are around 2 to 3 inches in diameter and handle from 10 to 40 watts of power.

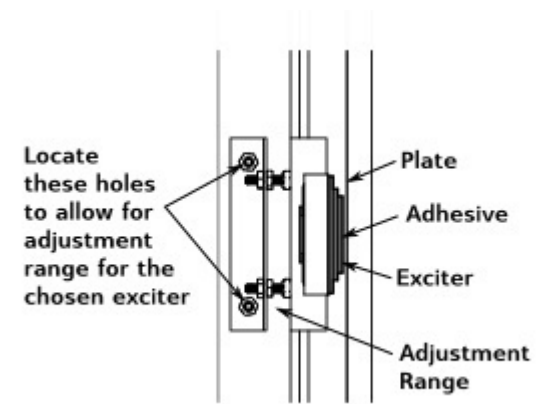
The drivers are intended to stick on a surface without support. This will not work for driving a plate. The driver needs to be held securely.

See the driver adjustment detail. Driver selection will effect frequency response. The plate can be miced directly. See the frequency response chart.

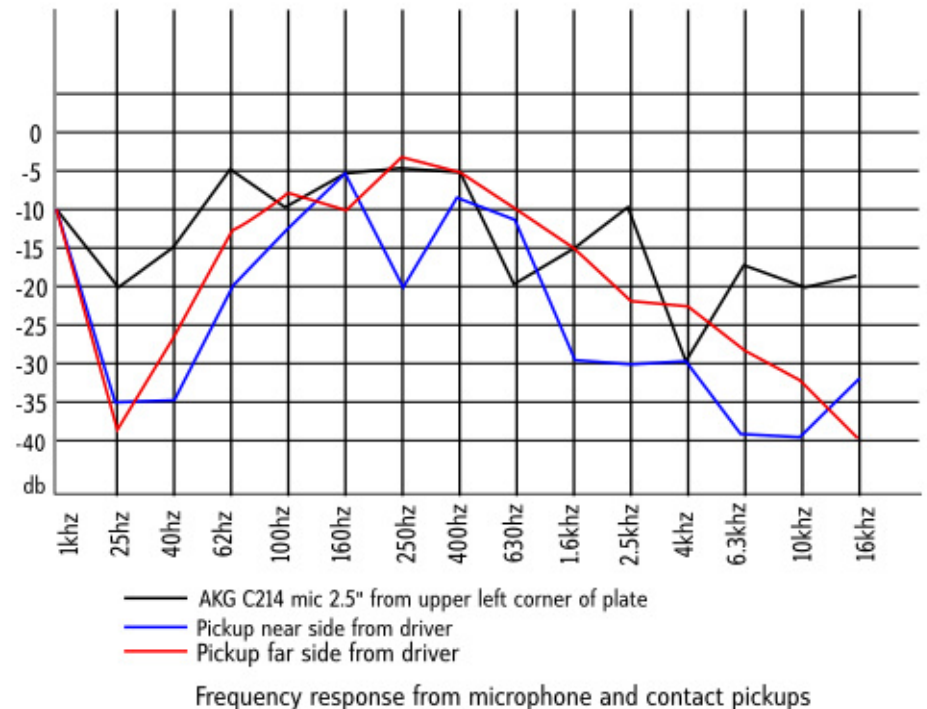
After assembly the plate will be tuned by tightening the nuts on the four Clevis Rod Ends. This tuning will effect performance. Too tight will give shorter delays. Too loose will rattle and cause noise.

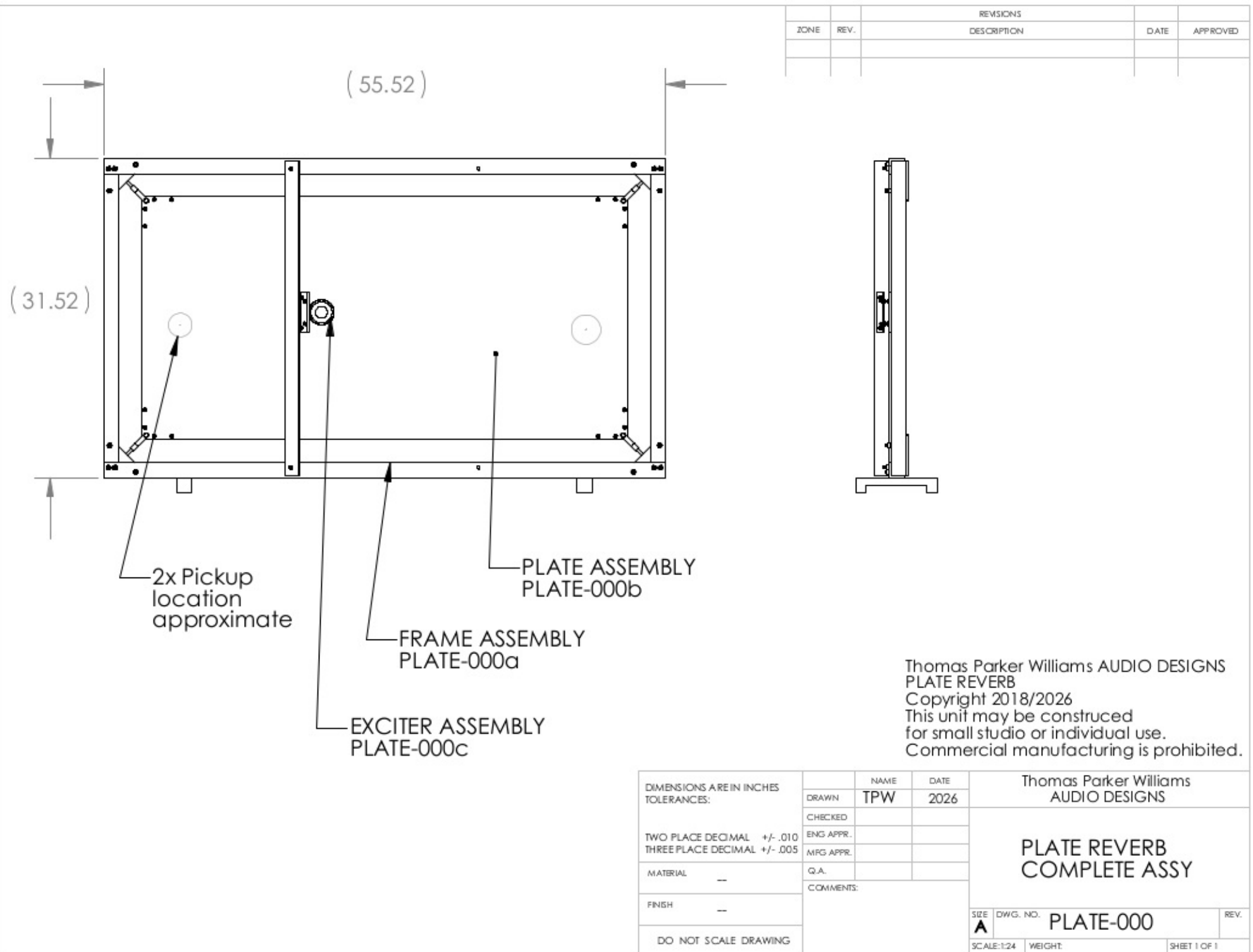
This design is made available by Thomas Parker Williams for small studios and individual use. Three of these units are now in operation.

This design is copyrighted 2018-2026 by Thomas Parker Williams and is not intended to be commercially manufactured.

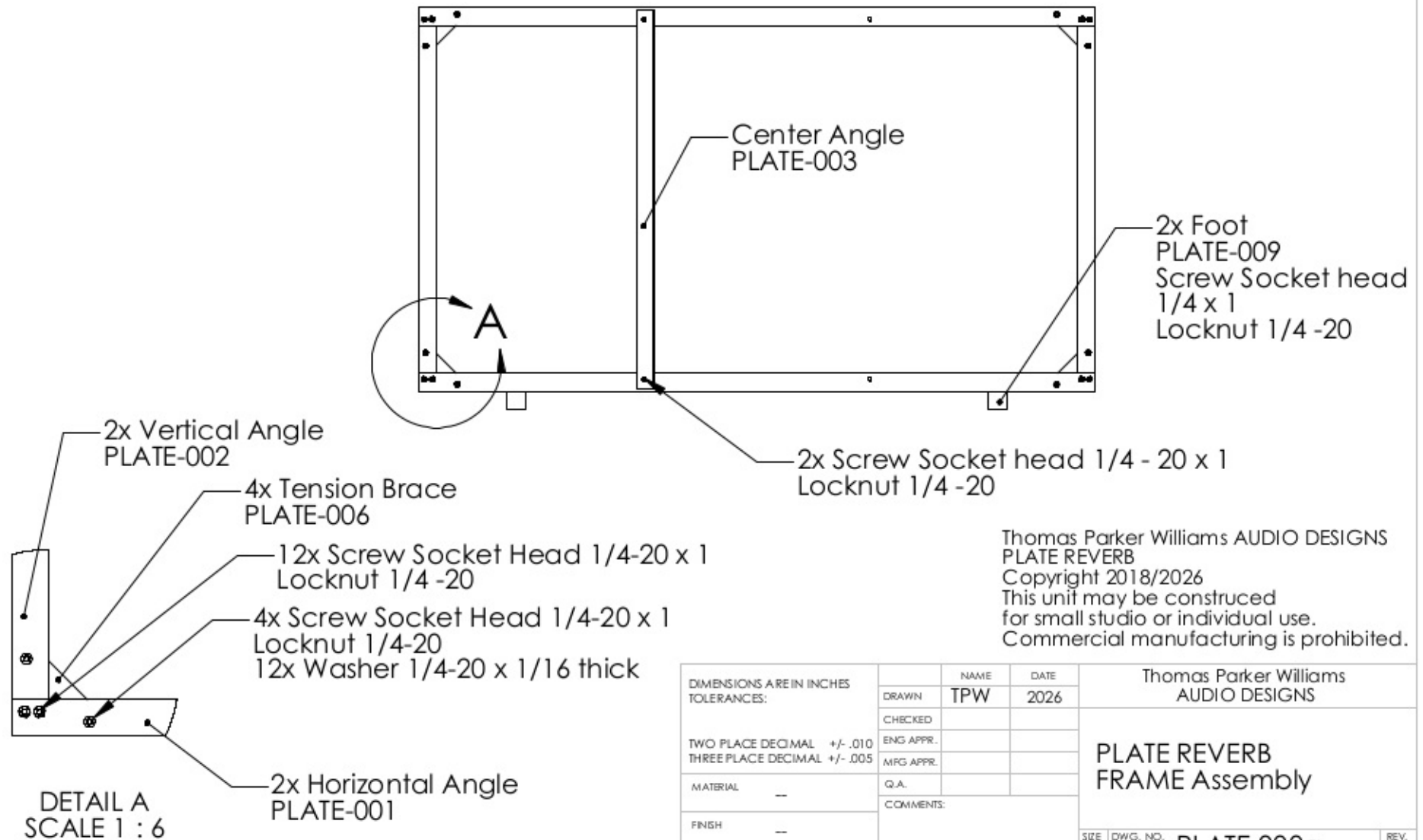


Driver adjustment detail



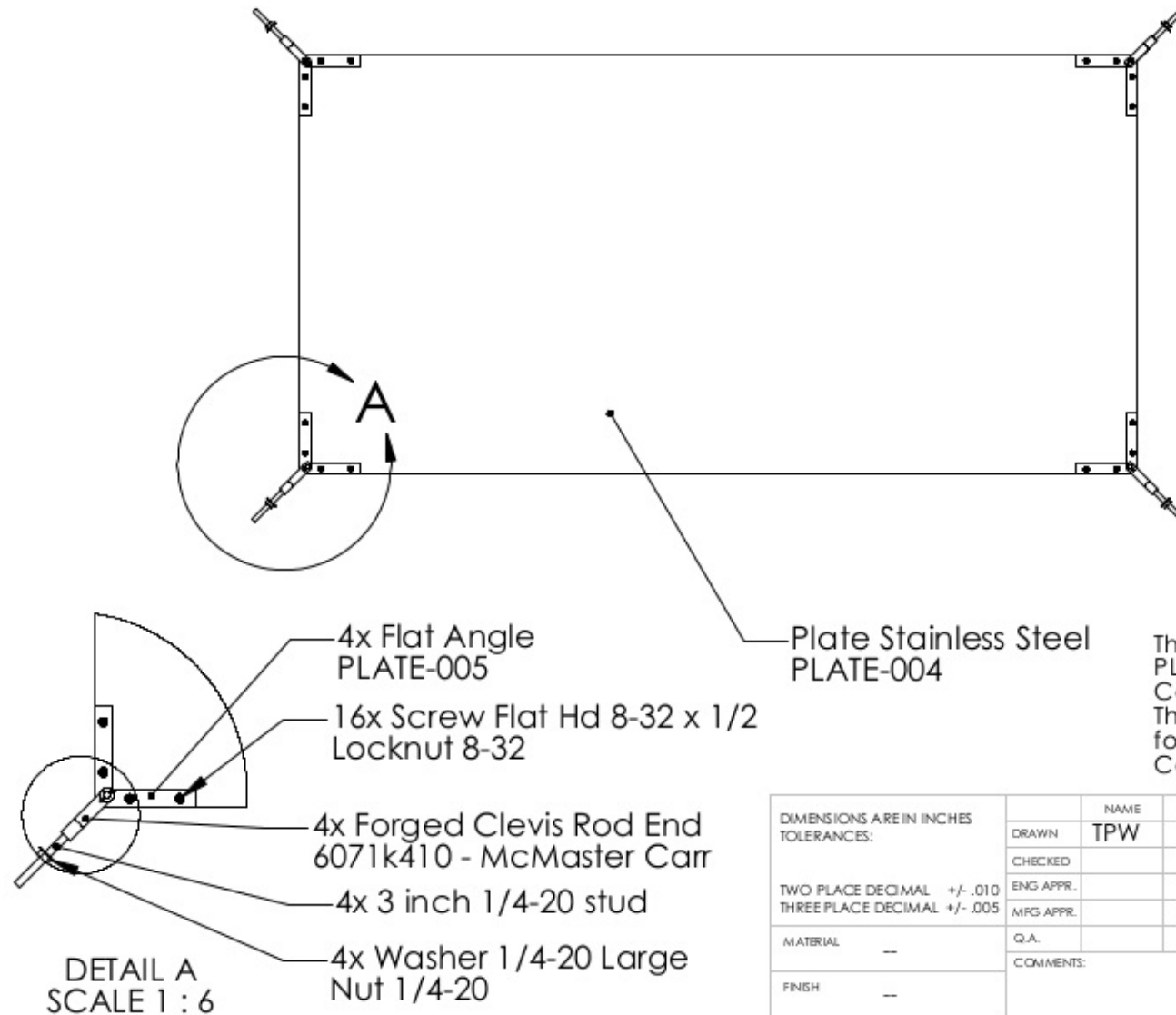


		REVISIONS			
ZONE	REV.	DESCRIPTION		DATE	APPROVED



DIMENSIONS ARE IN INCHES TOLERANCES: TWO PLACE DECIMAL +/- .010 THREE PLACE DECIMAL +/- .005 MATERIAL — FINISH — DO NOT SCALE DRAWING		NAME	DATE	Thomas Parker Williams AUDIO DESIGNS		
	DRAWN	TPW	2026	PLATE REVERB FRAME Assembly		
	CHECKED					
	ENG APPR.					
	MFG APPR.					
Q.A.						
	COMMENTS:			SIZE A	DWG. NO. PLATE-000a	REV.
				SCALE:1:24	WEIGHT:	SHEET 1 OF 1

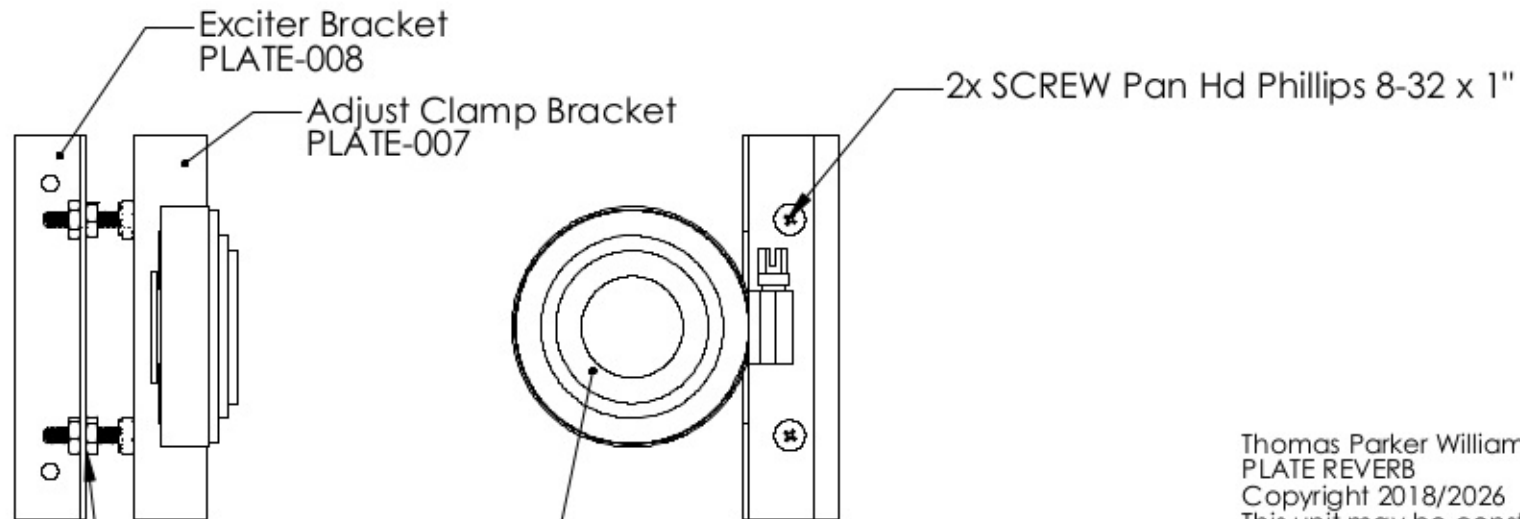
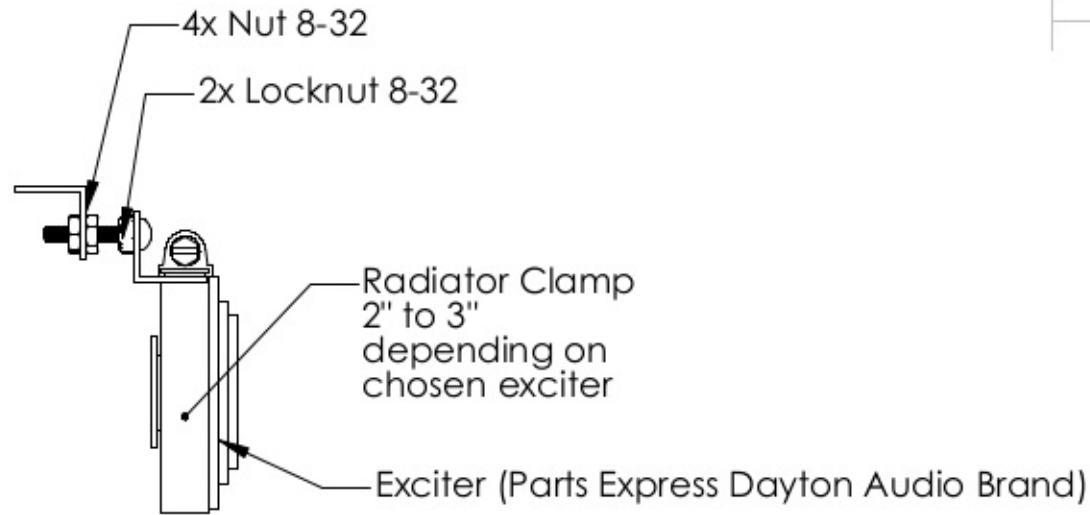
		REVISIONS			
ZONE	REV.	DESCRIPTION		DATE	APPROVED



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PLATE REVERB
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DIMENSIONS ARE IN INCHES TOLERANCES: TWO PLACE DECIMAL +/- .010 THREE PLACE DECIMAL +/- .005 MATERIAL -- FINISH -- DO NOT SCALE DRAWING		NAME	DATE	Thomas Parker Williams AUDIO DESIGNS		
	DRAWN	TPW	2026	PLATE REVERB Plate Assembly		
	CHECKED					
	ENG APPR.					
	MFG APPR.					
Q.A.						
	COMMENTS:			SIZE A DWG. NO. PLATE-000b REV.		
				SCALE: 1:16 WEIGHT:		SHEET 1 OF 1

		REVISIONS			
ZONE	REV.	DESCRIPTION		DATE	APPROVED



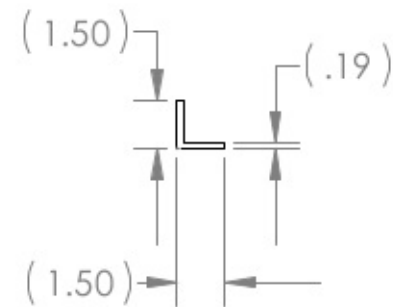
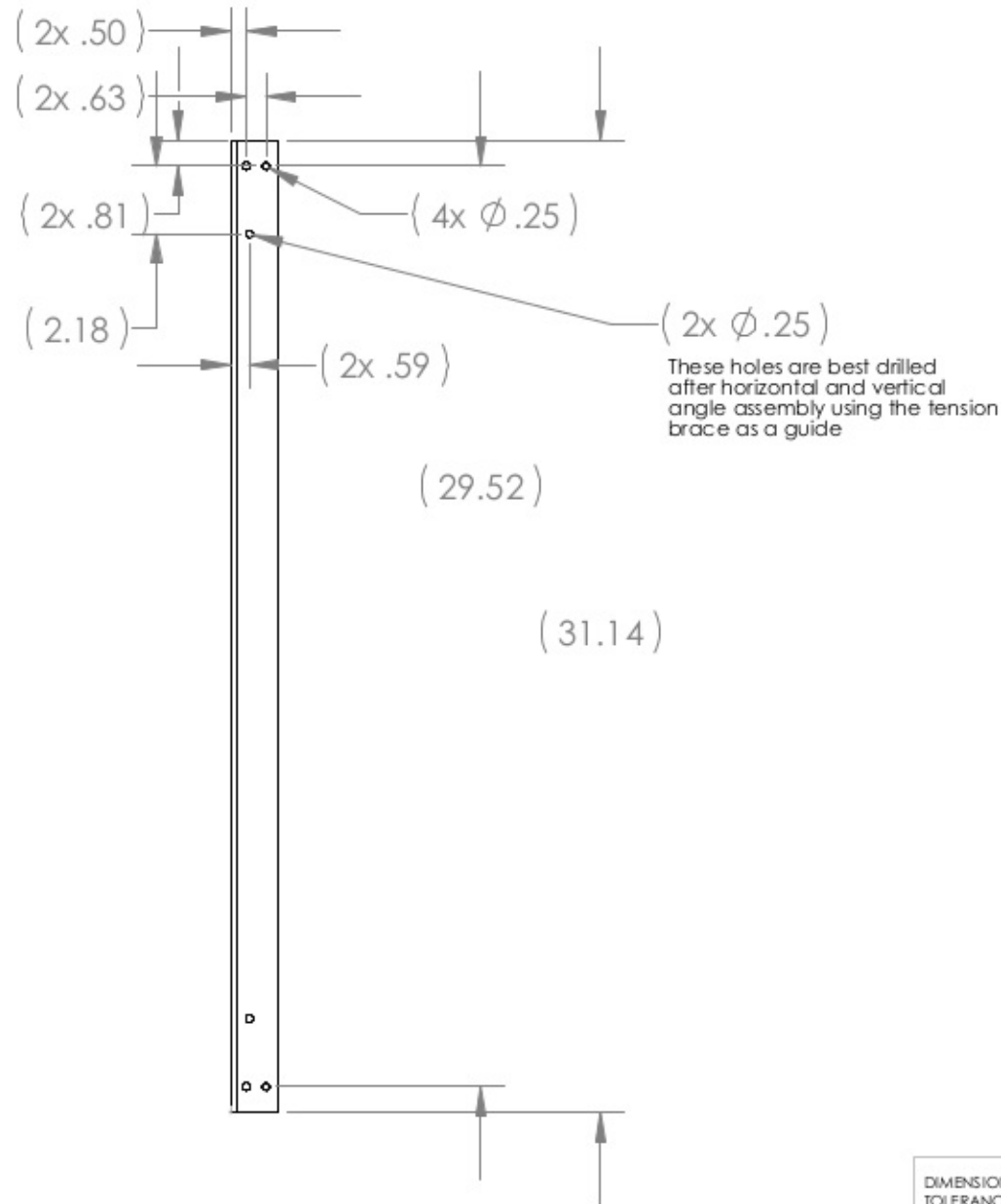
Nuts allow
adjustment for
exciter plate
contact

Exciter face
has a strong
adhesive for
attachment to
the plate

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DIMENSIONS ARE IN INCHES TOLERANCES: TWO PLACE DECIMAL +/- .010 THREE PLACE DECIMAL +/- .005 MATERIAL -- FINISH -- DO NOT SCALE DRAWING		NAME	DATE	Thomas Parker Williams AUDIO DESIGNS		
	DRAWN	TPW	2026	PLATE REVERB Exciter Assembly		
	CHECKED					
	ENG APPR.					
	MFG APPR.					
Q.A.						
	COMMENTS:			SIZE A	DWG. NO. PLATE-000c	REV.
				SCALE:1:2	WEIGHT:	SHEET 1 OF 1

REVISIONS			
ZONE	REV.	DESCRIPTION	DATE



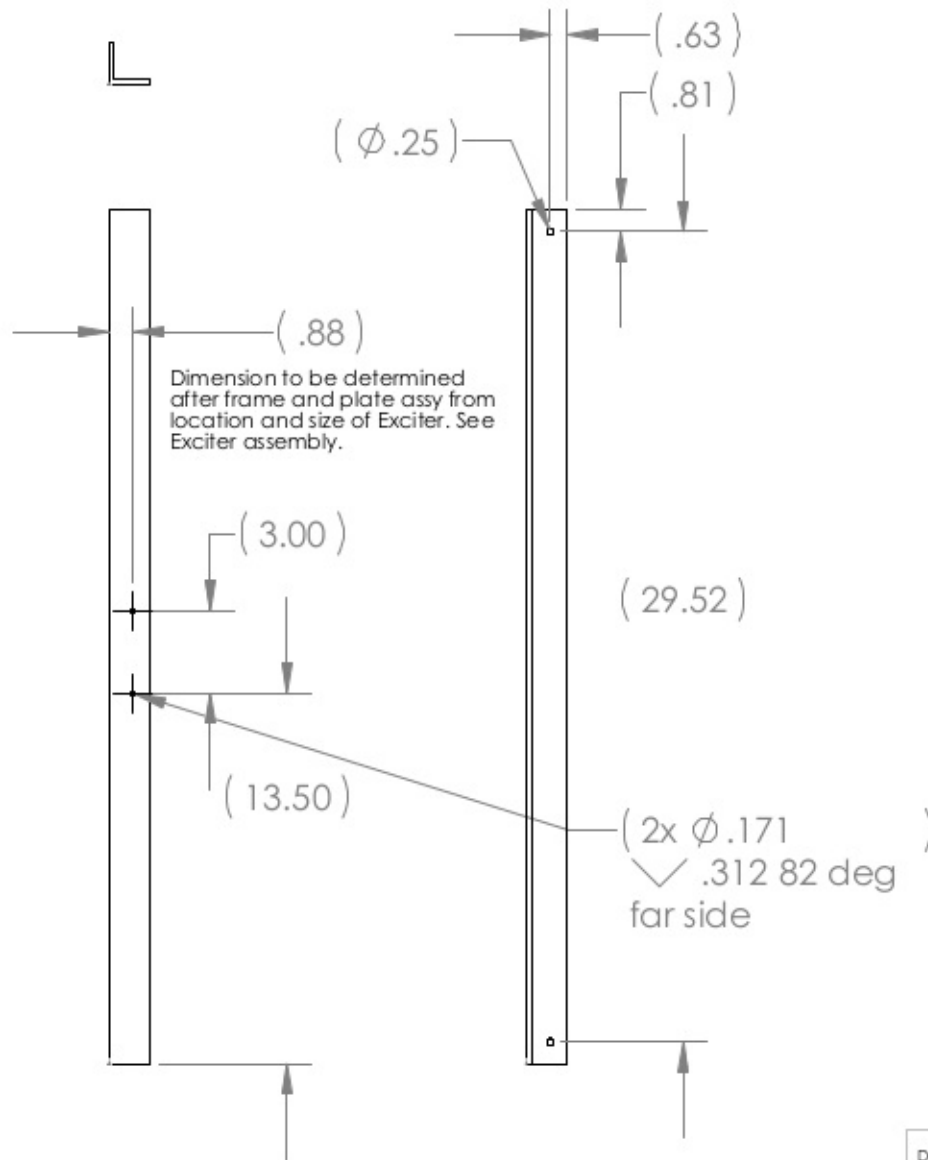
Material:
Low Carbon Steel 90 degree angle
1-1/2 x 1-1/2 x 3/16 angle

McMaster Carr 9017K594

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DIMENSIONS ARE IN INCHES TOLERANCES:		NAME	DATE	Thomas Parker Williams AUDIO DESIGNS	
DRAWN		TPW	2026	PLATE REVERB Vertical Angle	
CHECKED					
ENG APPR.					
MFG APPR.					
MATERIAL		SEE NOTE		SIZE DWG. NO. PLATE-002 REV.	
FINISH		--			
DO NOT SCALE DRAWING		COMMENTS:		SCALE:1:12	WEIGHT:
				SHEET 1 OF 1	

		REVISIONS			
ZONE	REV.	DESCRIPTION		DATE	APPROVED



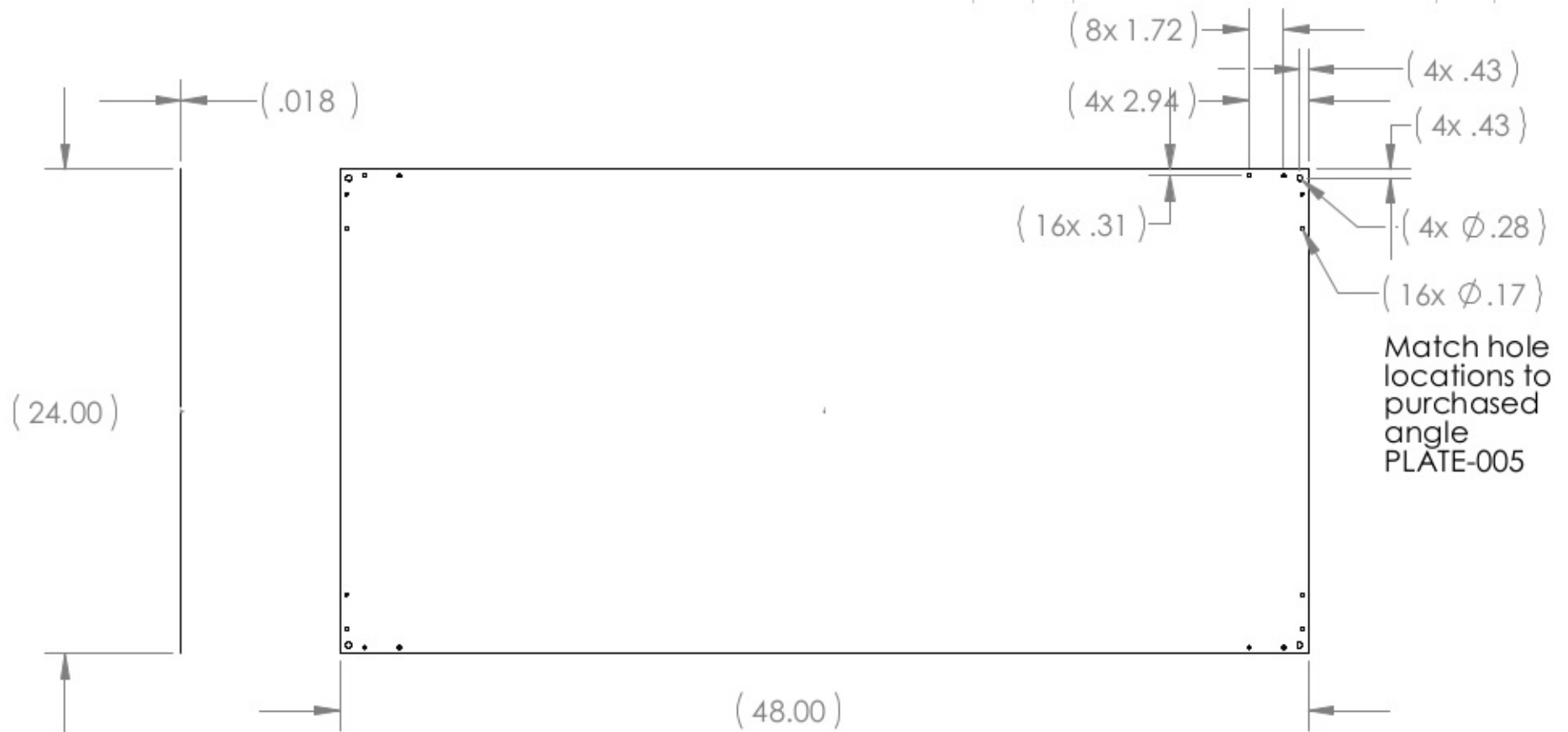
Material:
Low Carbon Steel 90 degree angle
1-1/2 x 1-1/2 x 3/16 angle

McMaster Carr 9017K594

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DIMENSIONS ARE IN INCHES TOLERANCES:		NAME	DATE	Thomas Parker Williams AUDIO DESIGNS		
	DRAWN	TPW	2026	PLATE REVERB Center Angle		
	CHECKED					
	ENG APPR.					
	MFG APPR.					
TWO PLACE DECIMAL +/- .010 THREE PLACE DECIMAL +/- .005				PLATE REVERB Center Angle		
MATERIAL SEE NOTE	Q.A.					
FINISH --	COMMENTS:					
DO NOT SCALE DRAWING						
				SIZE A	DWG. NO. PLATE-003	REV.
				SCALE:1:12	WEIGHT:	SHEET 1 OF 1

REVISIONS		DATE	APPROVED
ZONE	REV.		



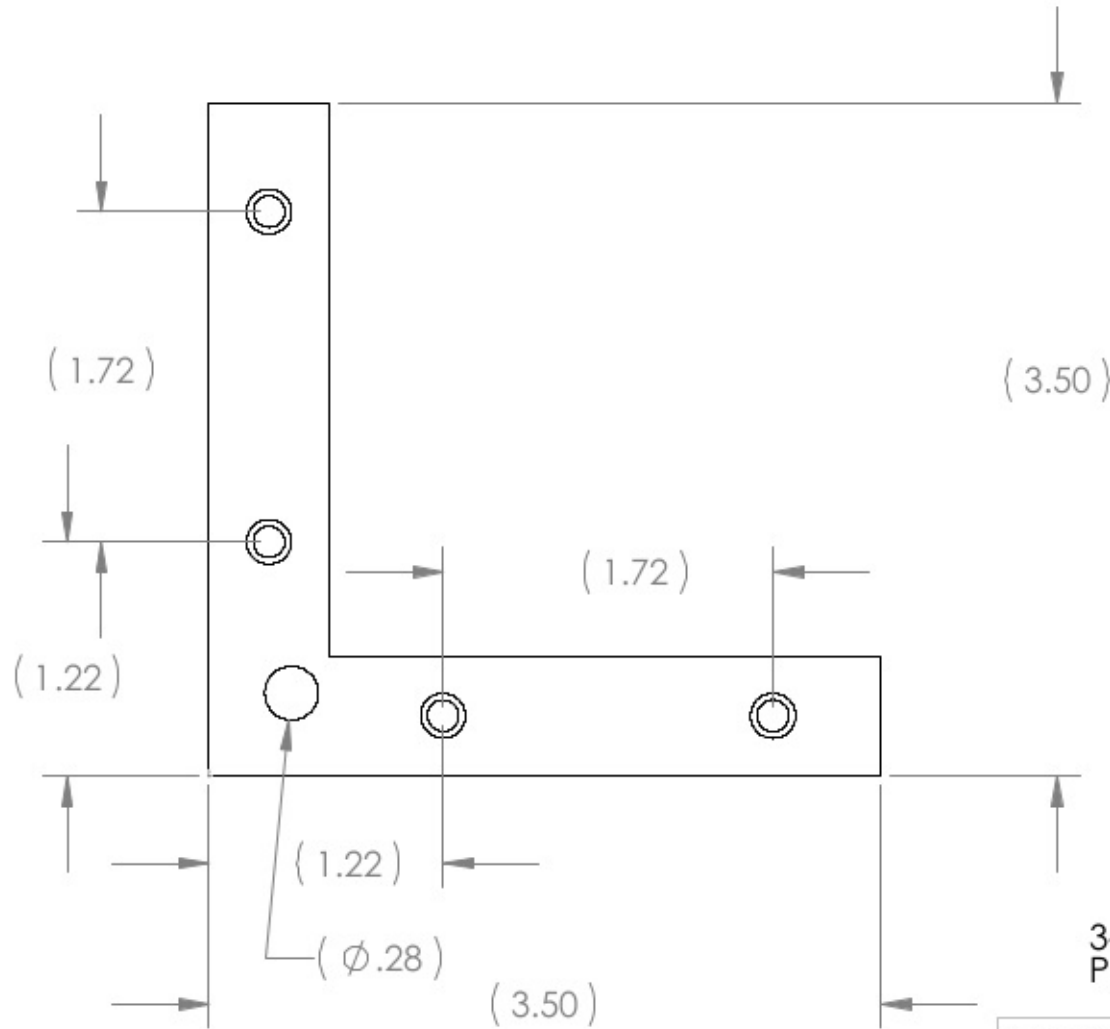
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Material
 0.018 (26 ga) Stainless Steel 2B finish
 T-304 Annealed

Online Metals.com

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		DRAWN	TPW	2026	
TWO PLACE DECIMAL +/- .010		CHECKED			
THREE PLACE DECIMAL +/- .005		ENG APPR.			
MATERIAL SEE NOTE		MFG APPR.			
FINISH --		Q.A.			
DO NOT SCALE DRAWING		COMMENTS:		PLATE REVERB Plate SS	
		SIZE	DWG. NO.	PLATE 004	REV.
		SCALE:1:16	WEIGHT:	SHEET 1 OF 1	

REVISIONS			
ZONE	REV.	DESCRIPTION	DATE

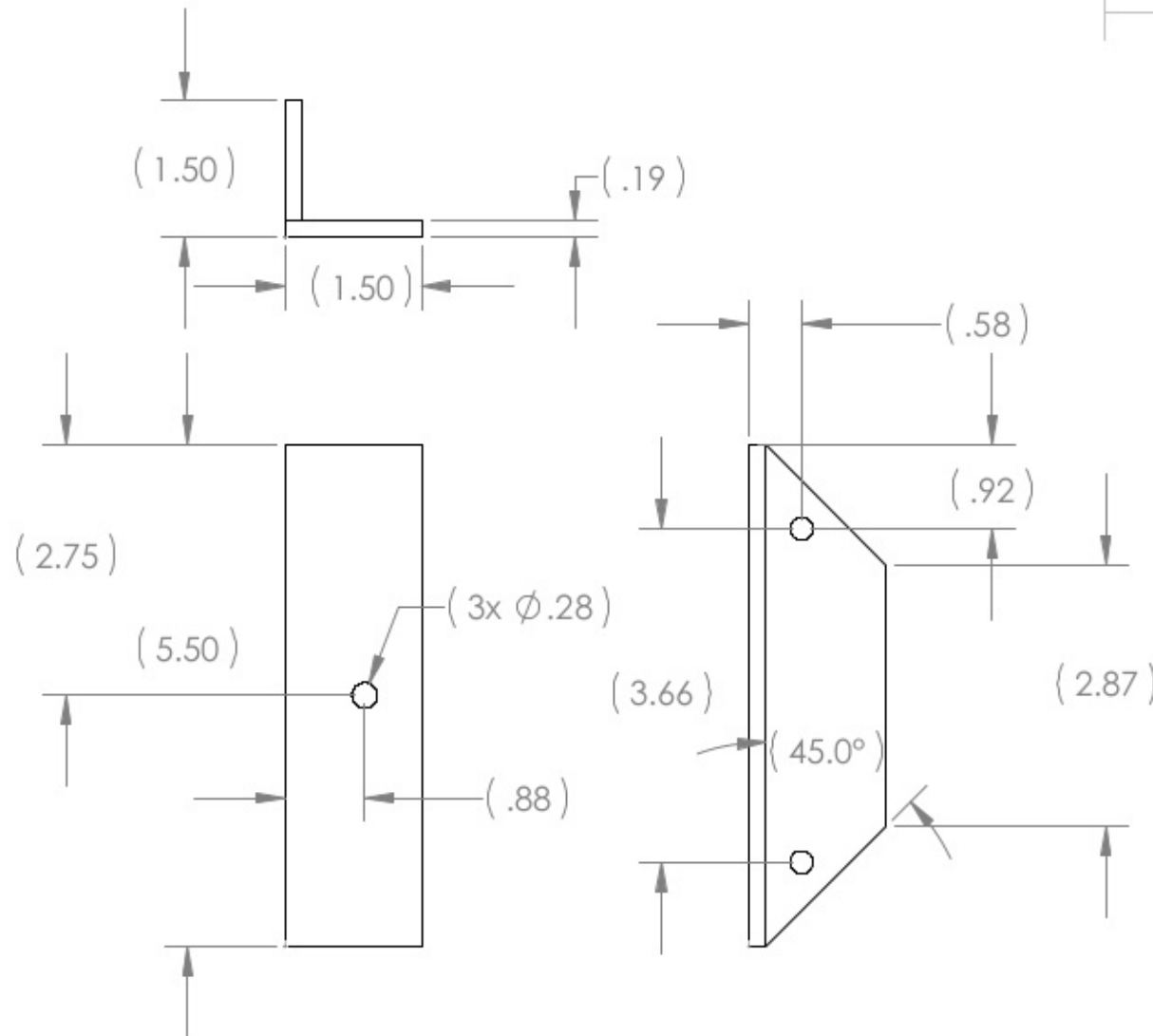


3-1/2 Flat Angle
Purchased Part

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		DRAWN	TPW	2026			
TWO PLACE DECIMAL +/- .010 THREE PLACE DECIMAL +/- .005		CHECKED				PLATE REVERB Flat Plate Corner Angle	
		ENG APPR.					
		MFG APPR.					
MATERIAL		Steel		SIZE A			
FINISH		—					
DO NOT SCALE DRAWING		Q.A.				REV.	
		COMMENTS:				SCALE:1:1 WEIGHT: SHEET 1 OF 1	

		REVISIONS		
ZONE	REV.	DESCRIPTION	DATE	APPROVED



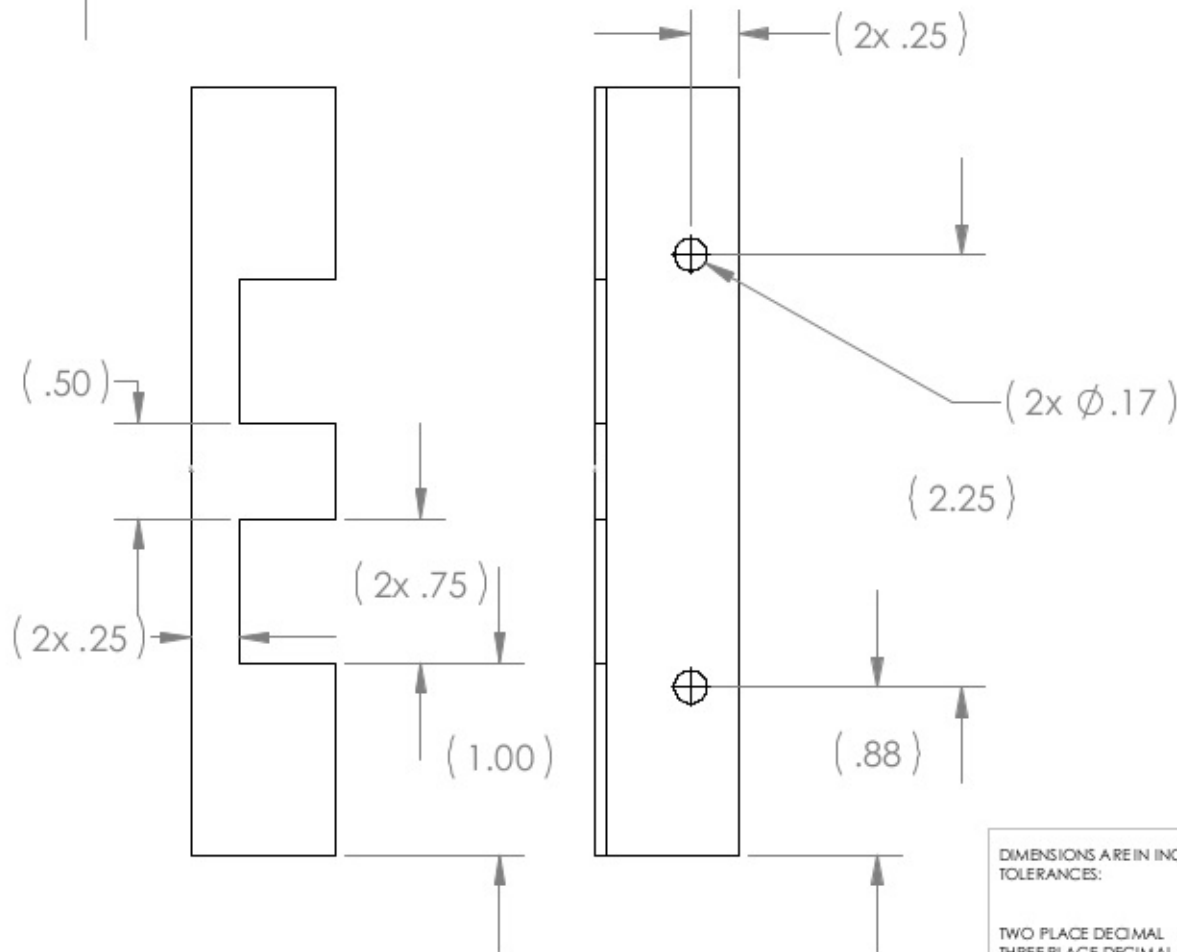
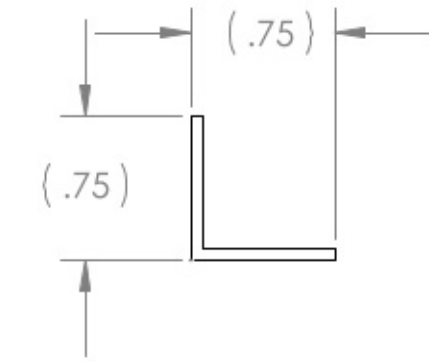
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Material:
 Low Carbon Steel 90 degree angle
 1-1/2 x 1-1/2 x 3/16 angle

McMaster Carr 9017K594

DIMENSIONS ARE IN INCHES TOLERANCES:		NAME	DATE	Thomas Parker Williams AUDIO DESIGNS	
		DRAWN	TPW	2026	PLATE REVERB Tension Brace
		CHECKED			
TWO PLACE DECIMAL +/- .010		ENG APPR.			
THREE PLACE DECIMAL +/- .005		MFG APPR.			
MATERIAL		Q.A.			
SEE NOTE		COMMENTS:		SIZE A DWG. NO. PLATE-006 REV.	
FINISH					
DO NOT SCALE DRAWING		SCALE:1:2			

REVISIONS		DATE	APPROVED
ZONE	REV.		

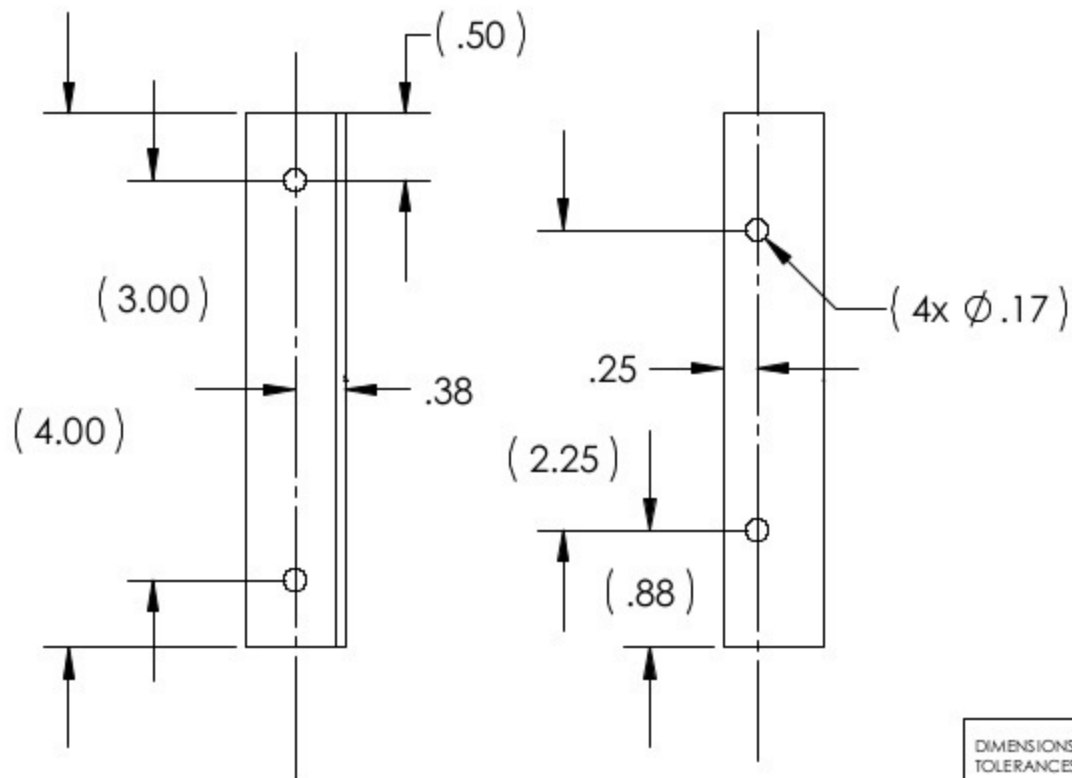
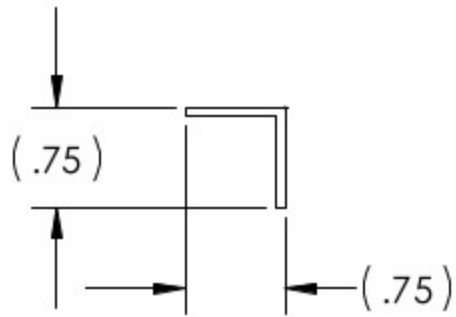


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DIMENSIONS ARE IN INCHES TOLERANCES: TWO PLACE DECIMAL +/- .010 THREE PLACE DECIMAL +/- .005 MATERIAL Aluminum Angle 3/4 x 3/4 x 1/16 FINISH — DO NOT SCALE DRAWING	NAME		DATE		Thomas Parker Williams AUDIO DESIGNS				
	DRAWN	TPW	2026		PLATE REVERB Adjust Clamp Bracket				
	CHECKED								
	ENG APPR.								
	MFG APPR.								
	Q.A.								
COMMENTS:					SIZE				
					A		DWG. NO.	PLATE-007	REV.
					SCALE: 1:2		WEIGHT:		SHEET 1 OF 1

SIZE	DWG. NO.	REV.
A	PLATE-007	

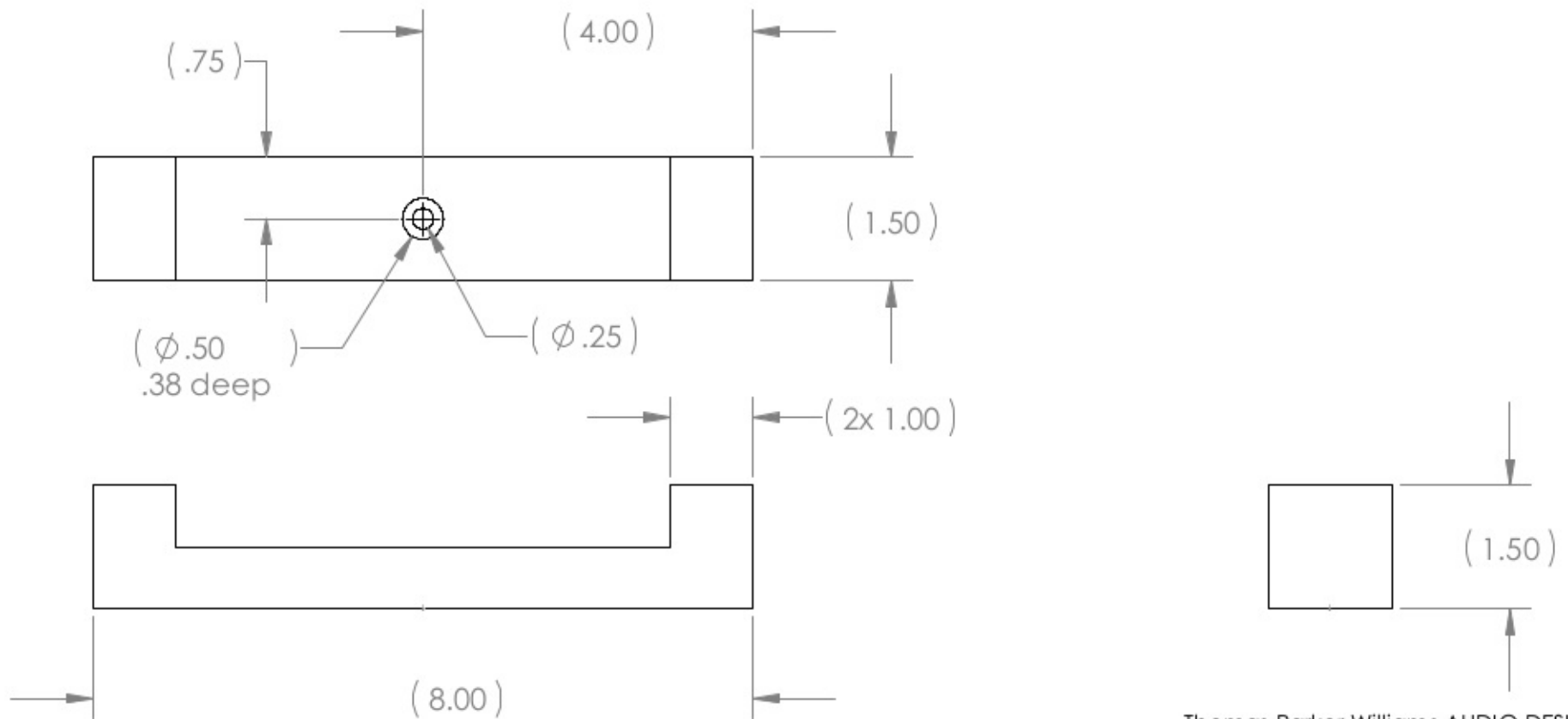
		REVISIONS			
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	DRAWN	TPW	2026		
	CHECKED			PLATE REVERB Exciter Bracket	
	ENG APPR.				
	MFG APPR.				
	Q.A.				
COMMENTS:			SIZE DWG. NO. PLATE-008 REV.		
			SCALE: 1:2	WEIGHT:	SHEET 1 OF 1

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ZONE	REV.	DESCRIPTION		DATE	APPROVED



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DIMENSIONS ARE IN INCHES TOLERANCES: TWO PLACE DECIMAL +/- .010 THREE PLACE DECIMAL +/- .005 MATERIAL Wood 1x2 FINISH — DO NOT SCALE DRAWING		NAME	DATE	Thomas Parker Williams AUDIO DESIGNS		
	DRAWN	TPW	2026	PLATE REVERB Foot		
	CHECKED					
	ENG APPR.					
	MFG APPR.					
Q.A.						
		COMMENTS:				
		SIZE A		DWG. NO. PLATE-009		REV.
		SCALE:1:2		WEIGHT:		SHEET 1 OF 1