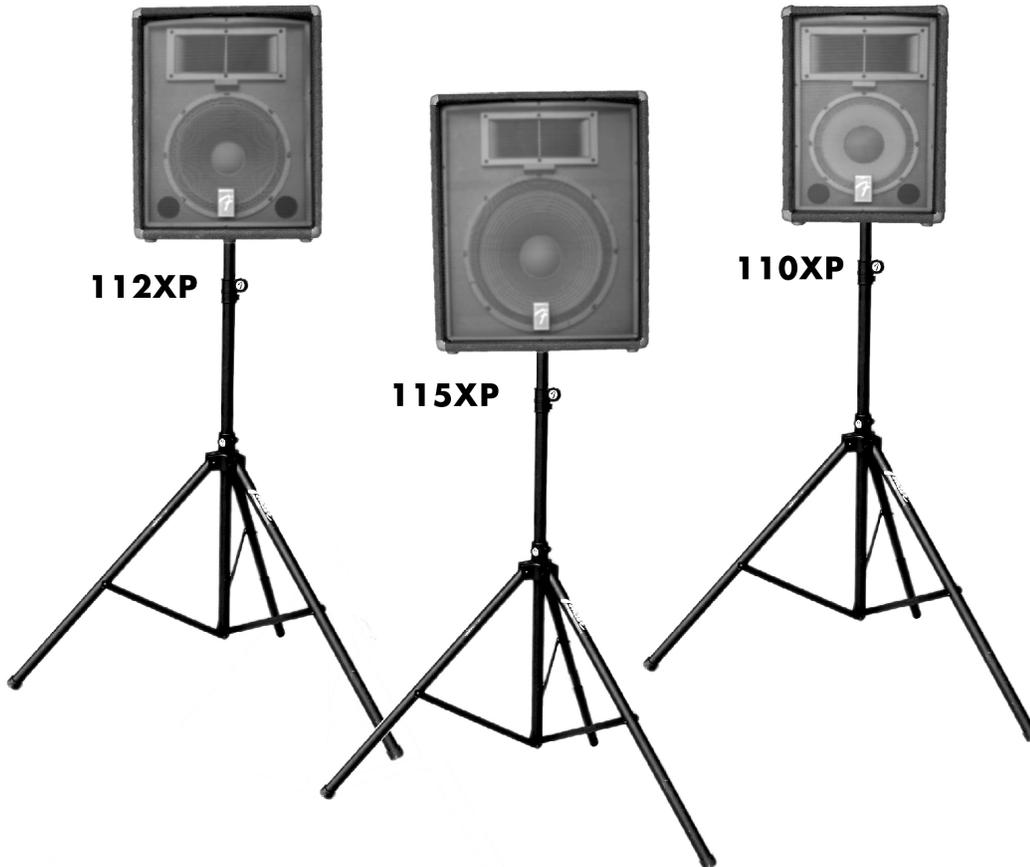


# XP SERIES (110/112/115) LOUDSPEAKERS

p/n 071-1500-100  
071-1200-100  
071-1100-100

## SERVICE MANUAL



### CONTENTS:

- Notices
- Specifications
- Service diagram
- Drawings

XP 10, 12, 15 LOUDSPEAKERS

# SERVICE MANUAL

MARCH 2001

## IMPORTANT NOTICE:

The information contained herein is CONFIDENTIAL and PROPRIETARY to Fender Musical Instruments Corp. It is disclosed solely for use by qualified technicians for purposes of equipment maintenance and service. It is not to be disclosed to others without the expressed permission of Fender Musical Instruments Co. All specifications subject to change without notice.

For warranty repair service, only Fender specified part numbers are to be used. It is recommended they also be used for post-warranty maintenance and repair.

Parts marked with an asterisk (\*) indicate the required use of that specific part. This is necessary for RELIABILITY and SAFETY requirements. **DO NOT USE A SUBSTITUTE!**

A coded naming convention is used in the description of certain parts. The codes and what they mean are as follows:

### CAPACITOR CODES

CAP AE = Aluminum Electrolytic  
CAP CA = Ceramic Axial  
CAP CD = Ceramic Disk  
CAP MPF = Metalized Polyester Film  
CAP MY = Mylar  
CAP PFF = Polyester Film/Foil

### RESISTOR CODES

RES CC = Carbon Comp  
RES CF = Carbon Film  
RES FP = Flame Proof  
RES MF = Metal Film  
RES WW = Wire Wound

### HARDWARE CODES

BLX = Black Oxide  
CR = Chrome Plated  
HWH = Hex Washer Head  
M = Machine Screw  
NI = Nickel Plated  
OHP = Oval Head Phillips  
PB = Particle Board  
PHP = Pan Head Phillips  
PHPS = Pan Head Phillips Sems  
SMA = Sheet Metal "A" Point  
SMB = Sheet Metal "B" Point  
SS = Stainless Steel  
TF = Thread Forming  
ZI = Zinc Plated

# XP 10, 12, 15 LOUDSPEAKERS

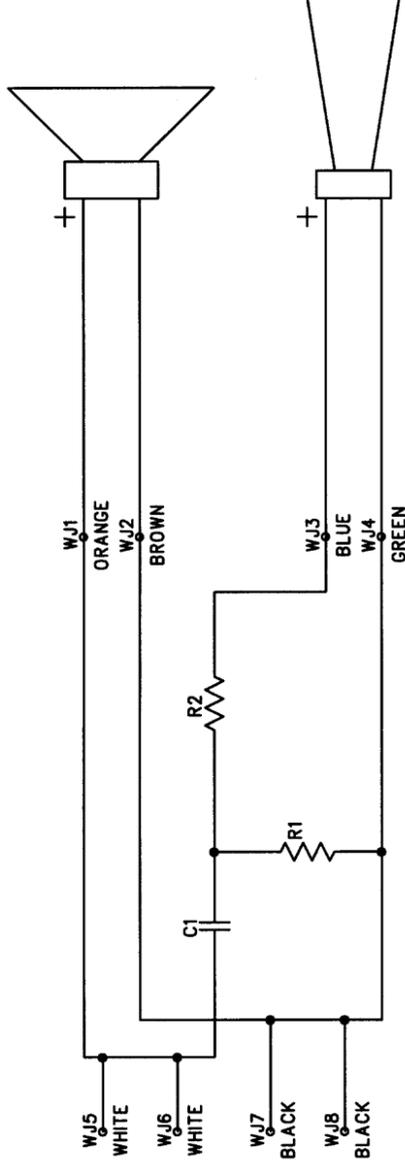
## SPECIFICATIONS

	110	112	115
<b>PART NUMBER:</b>	071-1100-100	071-1200-100	071-1500-100
<b>FREQUENCY RESPONSE:</b>	65Hz – 20kHz	60Hz – 20kHz	60Hz – 20kHz
<b>POWER HANDLING:</b>	100W (RS-426B) 200W (Program) 400W (Peak)	100W (RS-426B) 200W (Program) 400W (Peak)	150W (RS-426B) 300W (Program) 600W (Peak)
<b>IMPEDANCE:</b>	8Ω	8Ω	8Ω
<b>SENSITIVITY:</b>	97dB, 1W – 1m	98dB, 1W – 1m	98dB, 1W – 1m
<b>LOW FREQ. DRIVER:</b>	10 in. (25.4 cm) woofer 2 in. (5.1 cm) voice coil	12 in. (30.5 cm) woofer 2 in. (5.1 cm) voice coil	15 in. (38.1 cm) woofer 2.5 in. (6.4 cm) voice coil
<b>HIGH FREQ. DRIVER:</b>	Dual piezoelectric compression drivers, 1 ½ in. (3.8 cm) diaphragms	Dual piezoelectric compression drivers, 1 ½ in. (3.8 cm) diaphragms	Dual piezoelectric compression Drivers, 1 ½ in. (3.8 cm) Diaphragms
<b>MAX OUTPUT AT 1 METER:</b>	117dB continuous, 123dB peak	118dB continuous, 124dB peak	120dB continuous, 126dB peak
<b>CROSSOVER FREQUENCY:</b>	3.5 kHz	3.5kHz	3.5kHz
<b>CONNECTIONS:</b>	(2) ¼ in. (0.64 cm) phone jack	(2) ¼ in. (0.64 cm) phone jack	(2) ¼ in. (0.64 cm) phone jack
<b>DIMENSIONS:</b>	Height: 20.3 in. (51.6 cm) Width (front): 14.6 in. (37.1 cm) Width (rear): 6.4 in. (16.3 cm) Depth: 15.6 in. (39.6 cm)	Height: 21.3 in. (54.1 cm) Width (front): 18 in. (45.7 cm) Width (rear): 6.4 in. (16.3 cm) Depth: 18.4 in. (46.7 cm)	Height: 23.9 in. (60.7 cm) Width (front): 21 in. (53.3 cm) Width (rear): 8.4 in. (21.3 cm) Depth: 19.6 in. (49.8 cm)
<b>WEIGHT:</b>	37 lbs. (16.8 kg)	50 lbs. (22.7 kg)	58 lbs. (26.4 kg)

*Product specifications are subject to change without notice*

**R E V I S I O N S**

REV.	DESCRIPTION	DATE	APPROVED
A	EC2499/PR45409-JUN-00		J K H



MODEL	PCB ASSY	R1	R2	C1
110XP	0056959000	24 OHM 10W	22 OHM 2W	0.68 uF 250V
112XP/115XP	0056965000	24 OHM 10W	22 OHM 2W	1.0 uF 250V

5. THIS SCHEMATIC IS FOR PCB FABRICATION P/N 0056960000 AND PCB ASSEMBLIES P/N 0056959000 & 0056965000.
3. ALL POLARIZED CAPACITORS IN uF, 20% OR BETTER; 50V MINIMUM.
2. ALL UNPOLARIZED CAPACITORS IN uF, 10% OR BETTER; 50V MINIMUM. (POWER SUPPLY BYPASS CAPACITORS ARE 20%).
1. ALL RESISTORS IN OHMS, 5% OR BETTER; 1/4W.

NOTES: (UNLESS OTHERWISE NOTED)

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CHECKED BY: B. Best  
DATE: 21 JUN 00

APPROVED BY: J. HUBBARD  
DATE: 21 JUN 2000

DRAWN: A. Barnai ENGR: J. Hubbard  
DATABASE FILE: Z454S.SCH

**Fender**  
**MUSICAL INSTRUMENTS**  
Corona, CA U.S.A.

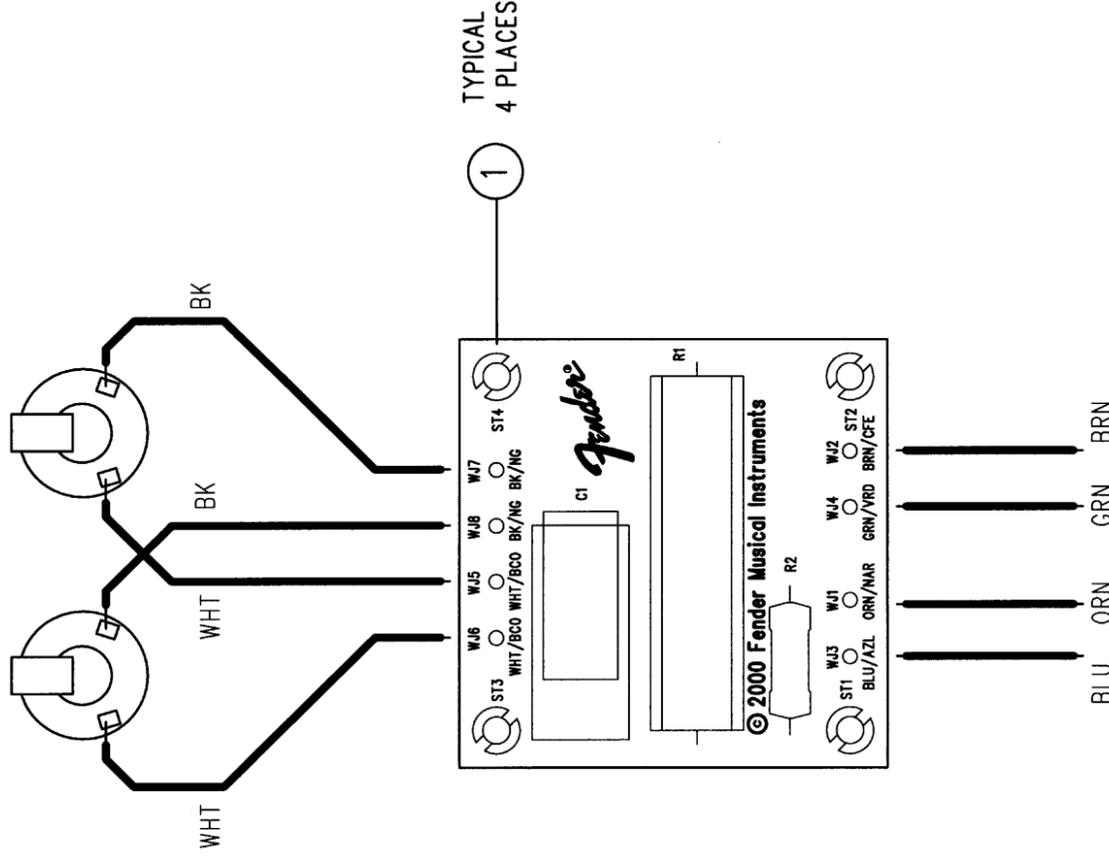
TITLE: SERVICE DIAGRAM, COMBINED (schematic)  
XP

SPEAKER CROSSOVER  
SIZE **B** DRAWING NUMBER **0056953000** REV. **A**

RELEASE DATE: 09-JUN-00 SHEET: 1 OF 1

REVISIONS

REV.	DESCRIPTION	DATE	APPROVED
A	EC2499/PR454	09-JUN-00	J K H



**BOM FOR PCB ASSY P/N 0056965000 (112XP/115XP)**

ITEM QTY.	PART NO.	DESCRIPTION	REFERENCES
1	REF 0025936000	STANDOFF NYL PCB SNAP 3/8" NAT	ST1-4
2	1 0056960000	PCB FAB XP SPKRS	
3	1 0056957000	WIRE SET 110/12/15XP SPEAKERS	
4	1 0055745000	RES WW BT 10W 10% 24 OHM	R1
5	1 005147001	RES MOX 2W 22 OHM LL 5%	R2
6	1 0024880000	CAP MPF 1uF 250V LL	C1

**BOM FOR PCB ASSY P/N 0056959000 (110XP)**

ITEM QTY.	PART NO.	DESCRIPTION	REFERENCES
1	REF 0025936000	STANDOFF NYL PCB SNAP 3/8" NAT	ST1-4
2	1 0056960000	PCB FAB XP SPKRS	
3	1 0056957000	WIRE SET 110/12/15XP SPEAKERS	
4	1 0055745000	RES WW BT 10W 10% 24 OHM	R1
5	1 005147001	RES MOX 2W 22 OHM LL 5%	R2
6	1 0024876000	CAP MPF .68uF 250V 10%	C1

FILM/DWG:	PCB ASSEMBLY DRAWING
DATABASE:	Z454P.PCB DATE: 09-JUN-00

0056965000	PCB ASSY 112XP/115XP
0056959000	PCB ASSY 110XP
PART NUMBER	DESCRIPTION

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**Fender**  
MUSICAL INSTRUMENTS  
Corona, CA U.S.A.

CHECKED BY: B. Lesi  
DATE: 21-JUN-00  
APPROVED BY: J. HUBBARD  
DATE: 21 JUN 2000  
DRAWN: A. Barnal ENGR: J. Hubbard  
DATABASE FILE: Z454P.PCB

TITLE: PCB ASSEMBLY, MASTER DWG  
SPEAKER CROSSOVER  
SIZE: **B** DRAWING NUMBER: **0056959000** REV. **A**  
RELEASE DATE: 09-JUN-00 SHEET 1 OF 1

1. USE RTV SILICONE COMPOUND TO ADHERE R1, R2 AND C1 TO PCB.

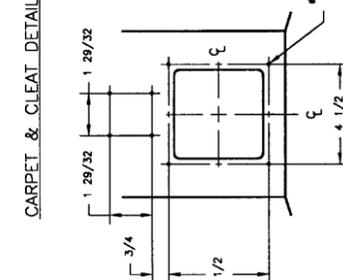
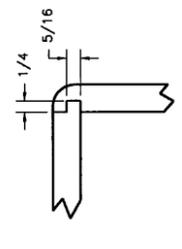
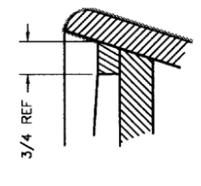
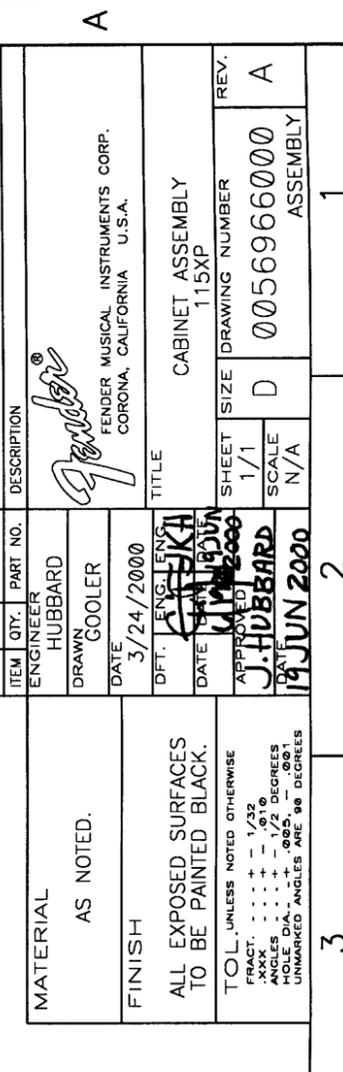
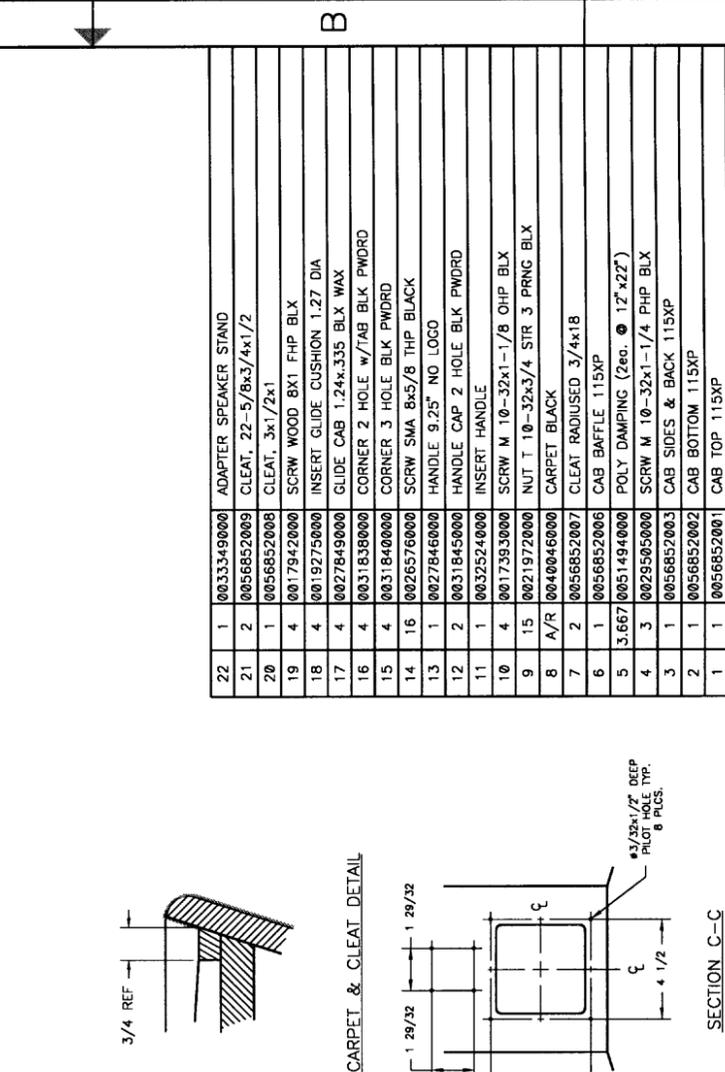
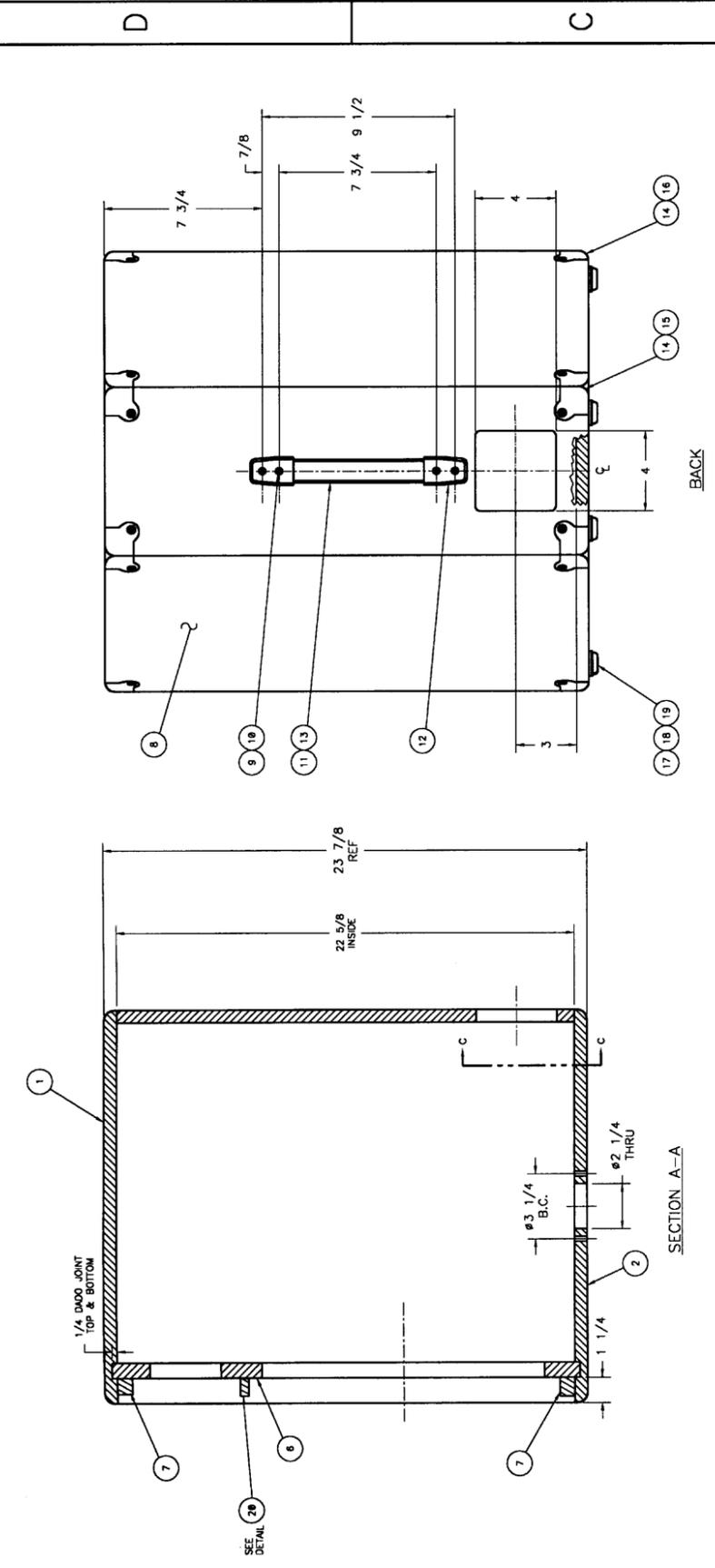
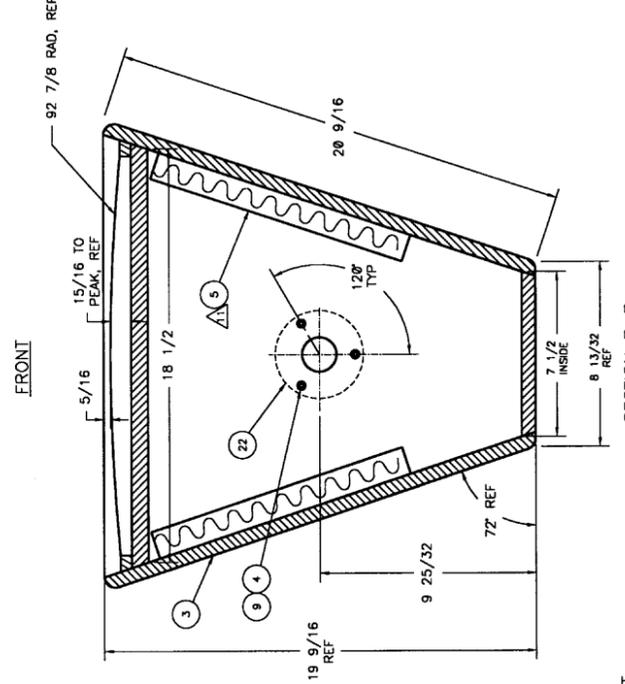
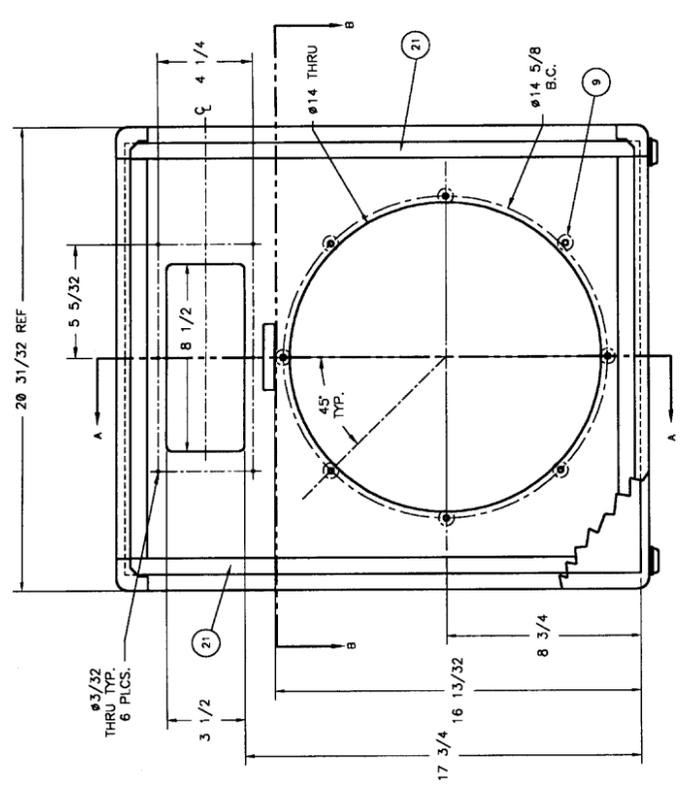
NOTES: (UNLESS OTHERWISE NOTED)





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REV	EC NUMBER	CHG	DATE
A	EC 2499		6/19/2000



ITEM	QTY.	PART NO.	DESCRIPTION
22	1	0033349000	ADAPTER SPEAKER STAND
21	2	0056852008	CLEAT, 22-5/8x3/4x1/2
20	1	0056852008	CLEAT, 3x1/2x1
19	4	0017942000	SCRW WOOD BX1 FHP BLX
18	4	0019275000	INSERT GLIDE CUSHION 1.27 DIA
17	4	0027849000	GLIDE CAB 1.24x.335 BLX WAX
16	4	0031838000	CORNER 2 HOLE w/7/8 BLK PWDRO
15	4	0031840000	CORNER 3 HOLE BLK PWDRO
14	16	0026376000	SCRW SMA 8x5/8 THP BLACK
13	1	0027846000	HANDLE 9.25" NO LOGO
12	2	0031845000	HANDLE CAP 2 HOLE BLK PWDRO
11	1	0032524000	INSERT HANDLE
10	4	0017393000	SCRW M 10-32x1-1/8 OHP BLX
9	15	0021972000	NUT T 10-32x3/4 STR 3 PRNG BLX
8	A/R	0040046000	CARPET BLACK
7	2	0056852007	CLEAT RADIUS 3/4x18
6	1	0056852006	CAB BAFFLE 115XP
5	3.667	0051494000	POLY DAMPING (2ec. 12"x27")
4	3	0029505000	SCRW M 10-32x1-1/4 PHP BLX
3	1	0056852003	CAB SIDES & BACK 115XP
2	1	0056852002	CAB BOTTOM 115XP
1	1	0056852001	CAB TOP 115XP

ENGINEER	HUBBARD	TITLE	CABINET ASSEMBLY
DRAWN	COOLER	DRAWING NUMBER	115XP
DATE	3/24/2000	SCALE	N/A
DFT. ENCL.	1	SHEET SIZE	D
DATE	19 JUN 2000	DRAWING NUMBER	0056966000
APPROVED	J. HUBBARD	SCALE	N/A
DATE	19 JUN 2000	ASSEMBLY	1

MATERIAL: AS NOTED.

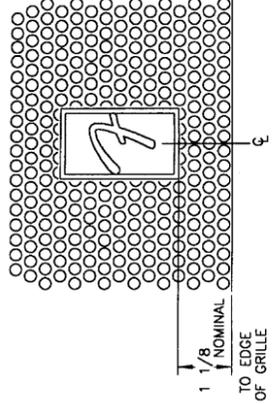
FINISH: ALL EXPOSED SURFACES TO BE PAINTED BLACK.

TOL. UNLESS NOTED OTHERWISE:  
 FRACT. . . . . ± 1/32  
 .XXX . . . . . ± .010  
 HOLE DIA. . . . . ± .005  
 UNMARKED ANGLES ARE 90 DEGREES

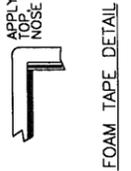
10. MATERIAL:  
 5/8 PARTICLE BOARD (0027504000); CABINET.  
 3/4 PARTICLE BOARD (0027502000); BAFFLE.  
 1/2 BALTIC BIRCH (0047933000); NOSE CLEAT AND BEVELED CLEATS.  
 3/4 PLYWOOD (0040677000); RAD. CLEATS.
9. ALL CUTOUT RADII TO BE 1/4".
8. TRIM CARPET AT 4x4 OPENING AT BACK.  
 STAIN EDGES BLACK.
7. WRAP CARPET AROUND SIDES AND EDGE.  
 TRIM CARPET FLUSH TO FRONT OF CLEATS.
6. ALL CORNER RADII TO BE 1/4".
5. ALL HOLES DRILLED BEFORE COVERING.
4. COPYRIGHT - 2000 - FENDER MUSICAL INSTRUMENTS CORP.
3. - 3 - SAMPLES OF FIRST PARTS MUST BE APPROVED BY FENDER R&D BEFORE STARTING PRODUCTION.
2. ALL DIMENSIONS ARE IN INCHES.  
 1. DO NOT SCALE DRAWING.
- NOTES: UNLESS OTHERWISE NOTED

11. LOCATE DAMPING AS CLOSE TO TOP AND FRONT OF CABINET AS POSSIBLE.

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LOGO DISH PLACEMENT DETAIL  
N.T.S.

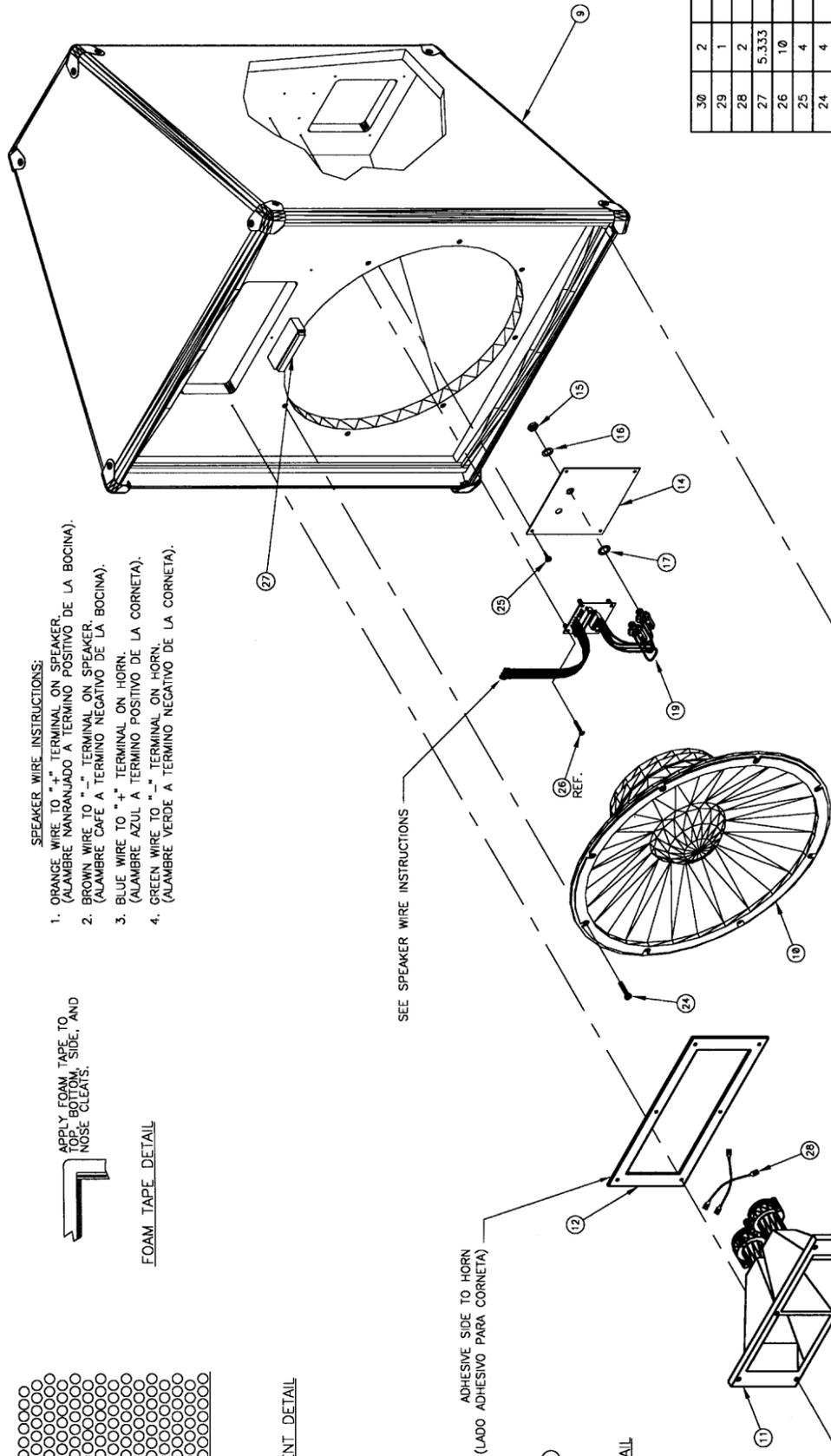
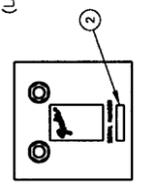


APPLY FOAM TAPE TO TOP, BOTTOM, SIDE, AND NOSE CLEATS.

- SPEAKER WIRE INSTRUCTIONS:
1. ORANGE WIRE TO "+" TERMINAL ON SPEAKER. (ALAMBRE NARANJADO A TERMINO POSITIVO DE LA BOCINA).
  2. BROWN WIRE TO "-" TERMINAL ON SPEAKER. (ALAMBRE CAFE A TERMINO NEGATIVO DE LA BOCINA).
  3. BLUE WIRE TO "+" TERMINAL ON HORN. (ALAMBRE AZUL A TERMINO POSITIVO DE LA CORNETA).
  4. GREEN WIRE TO "-" TERMINAL ON HORN. (ALAMBRE VERDE A TERMINO NEGATIVO DE LA CORNETA).

SEE SPEAKER INSTRUCTIONS

ADHESIVE SIDE TO HORN  
(LADO ADHESIVO PARA CORNETA)



(N.S.)= NOT SHOWN

ITEM	QTY.	MODEL	110XP	QTY.	MODEL	112XP	QTY.	MODEL	115XP	DESCRIPTION
30	2	0048443000	2	0048442000	2	0048442000	2	0048442000	2	INSERT CORRUGATED (N.S.)
29	1	0027881000	1	0027881000	1	0027881000	1	0027881000	1	FOAM EDGE PROTECTOR 1-1/2"x36" (N.S.)
28	2	0029424000	2	0029424000	2	0029424000	2	0029424000	2	WIRE SET HORN ENCL
27	5,333	0051098000	6,900	0051098000	8,000	0051098000	8,000	0051098000	8,000	TAPE VINYL NITRIE W/ ADHESIVE
26	10	0029677000	10	0029677000	10	0029677000	10	0029677000	10	SCREW SMA 6x1 THP BLX
25	4	9904101110	4	9904101110	4	9904101110	4	9904101110	4	SCREW PB 8x5/8 PHP BLX
24	4	0026577000	8	0026577000	8	0026577000	8	0026577000	8	SCREW M 10-32x1 PHP BLX
23	10	0024052000	10	0024052000	10	0024052000	12	0024052000	12	SCREW SMA 6-x5/8 PHP BLX
22	2	0056955000	2	0056955000	2	0056955000	2	0056955000	2	SCRW M4-40x5/16 PH ZI
21	2	0097360000	2	0097360000	2	0097360000	2	0097360000	2	NUT HEX 4-40 EX LOCK
20	1	0050042000	1	0050042000	1	0050042000	1	0050042000	1	LOGO DISH W/O BADGE
19	1	0056959000	1	0056959000	1	0056959000	1	0056959000	1	PCB ASSEMBLY
18	1	0056660000	1	0056660000	1	0056660000	1	0056660000	1	BADGE FENDER "F"
17	2	0016436000	2	0016436000	2	0016436000	2	0016436000	2	WSHR LCK INTL 3/8x.687x.035 NI
16	2	0031153000	2	0031153000	2	0031153000	2	0031153000	2	WSHR FLAT 3/8x.614 NI
15	2	0016352000	2	0016352000	2	0016352000	2	0016352000	2	NUT HEX 3/8-32x3/32 TK NI
14	1	0051486000	1	0051486000	1	0051486000	1	0051486000	1	INPUT PLATE
13	1	0051664000	1	0051664000	1	0051664000	1	0051664000	1	GRILLE
12	1	0028885000	1	0028885000	1	0028885000	1	0028885000	1	GASKET HORN DUAL PIEZO
11	1	0028813000	1	0028813000	1	0028813000	1	0028813000	1	HORN DUAL PIEZO (use w/028885)
10	1	0051338000	1	0026598000	1	0026598000	1	0026598000	1	SPEAKER
9	1	0056954000	1	0056954000	1	0056954000	1	0056954000	1	CABINET ASSEMBLY
8	1	0056953000	1	0056953000	1	0056953000	1	0056953000	1	SVC DIAG COMB XP SPKR XOVER (N.S.)
7	1	9903320000	1	9903320000	1	9903320000	1	9903320000	1	BAG POLY ZIP 10x13 2M (N.S.)
6	1	0056952000	1	0056952000	1	0056952000	1	0056952000	1	MANUAL OWNERS XP SPKRS (N.S.)
5	4	0027880000	4	0027880000	4	0027880000	4	0027880000	4	FOAM CORNER 1-1/2" THK (N.S.)
4	1	0047996000	1	0048316000	1	0048316000	1	0047996000	1	CARTON (N.S.)
3	1	0010032000	1	0029757000	1	0029757000	1	0029757000	1	BAG POLY (N.S.)
2	1	0029816000	1	0029816000	1	0029816000	1	0029816000	1	LABEL SERIAL MEXICO
1	1	0049118000	1	0049118000	1	0049118000	1	0049118000	1	ORDER FORM MAKING THE CONNECT (N.S.)

- SEE GRILLE SCREW PLACEMENT DETAIL ON DWG. 0051682000.
4. COPYRIGHT - 2000 - FENDER MUSICAL INSTRUMENTS CORP.
  3. - 3 - SAMPLES OF FIRST PARTS MUST BE APPROVED BY FENDER R&D BEFORE STARTING PRODUCTION.
  2. ALL DIMENSIONS ARE IN INCHES. 1. DO NOT SCALE DRAWING.
- NOTES: UNLESS OTHERWISE NOTED

TOL. UNLESS NOTED  
 FRACT. --- + 1/32  
 .X --- + 0.050  
 .XX --- + 0.010  
 .XXX --- + 0.010  
 ANGLES --- + 0.5 DEGREES  
 UNMARKED ANGLES ARE 90 DEGREES.

MATERIAL n/a  
 FINISH n/a

ENGINEER GIFFORD  
 DRAWN BOWIE  
 DATE 2/17/97

DFT. T. HUKH  
 DATE 19 JUN 2000  
 APPROVED J. HUBBARD  
 DATE 19 JUN 2000

ITEM QTY. MODEL 110XP QTY. MODEL 112XP QTY. MODEL 115XP

**Fender**  
 FENDER MUSICAL INSTRUMENTS CORP.  
 CORONA, CALIFORNIA U.S.A.

TITLE  
 END ITEM ASSEMBLY  
 110XP, 112XP, & 115XP

SHEET 1/1  
 SCALE N/A

REV. 0711200100  
 ASSEMBLY/MASTER