
AMPEG SERVICE MANUAL

V4/VT22 AMPLIFIER

V-4 AMPLIFIER/VT22 SPECIFICATIONS

Power Output:

100 watts RMS minimum continuous at less than 3% total harmonic distortion (T.H.D.) into a 2, 4, or 8 ohm load over 20 to 20,000 Hertz bandwidth.

Front Panel:

Two inputs
Two volume controls
Bass, midrange and treble controls
Two-position ultra-hi switch
Reverb control
Power switch
Standby switch
Red pilot light
Amber standby light

Rear Panel:

Impedance selector switch (2, 4, 8 ohms)
Two speaker output jacks
Patching jacks
Hum-balance control

Tone Control Range:

Treble ± 12 dB @ 4,000 Hertz
Bass ± 12 dB @ 40 Hertz
Midrange ± 20 dB @ 300, 800 or 3,000 Hertz
Ultra-Hi ± 12 dB @ 8,000 Hertz (dependent on volume control position)

Signal to Noise Ratio (S/N):

-80 dB below full power

Frequency Response (1 watt):

± 1 dB 20 to 20,000 Hertz

Sensitivity:

Channel 1 and 2 input sensitivity is .011 volts for full power.

Patching Facilities:

Power amplifier input jack is high impedance (.25 volts for 100 watts).

Power Supply Requirements:

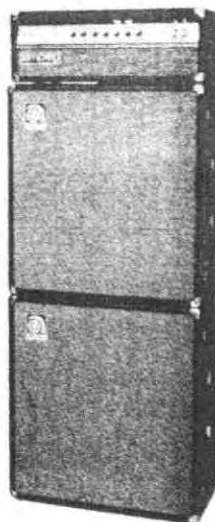
Power consumption 280 watts at rated output.

VT22 Speaker Complement:

Two 12" speakers.

VT22 Enclosure Design:

Front mounted speakers in open back enclosure.



V4

V4 Weight:

64 pounds (29 Kg.)

VT22 Weight:

88 pounds (40 Kg.)

V4 Dimensions:

26.6" W x 9.7" H x 11.1" D
67.6 cm. x 24.7 cm x 28.3 cm

VT22 Dimensions:

26.6" W x 23" H x 11.1" D
67.6 cm x 58.4 cm x 28.3 cm



VT22

V-4 SPEAKER ENCLOSURE SPECIFICATIONS

Power Handling:

130 watts RMS per enclosure.

Impedance:

8 ohms.

Enclosure Design:

Totally sealed air suspension.

Speaker Complement:

Four 12" speakers.

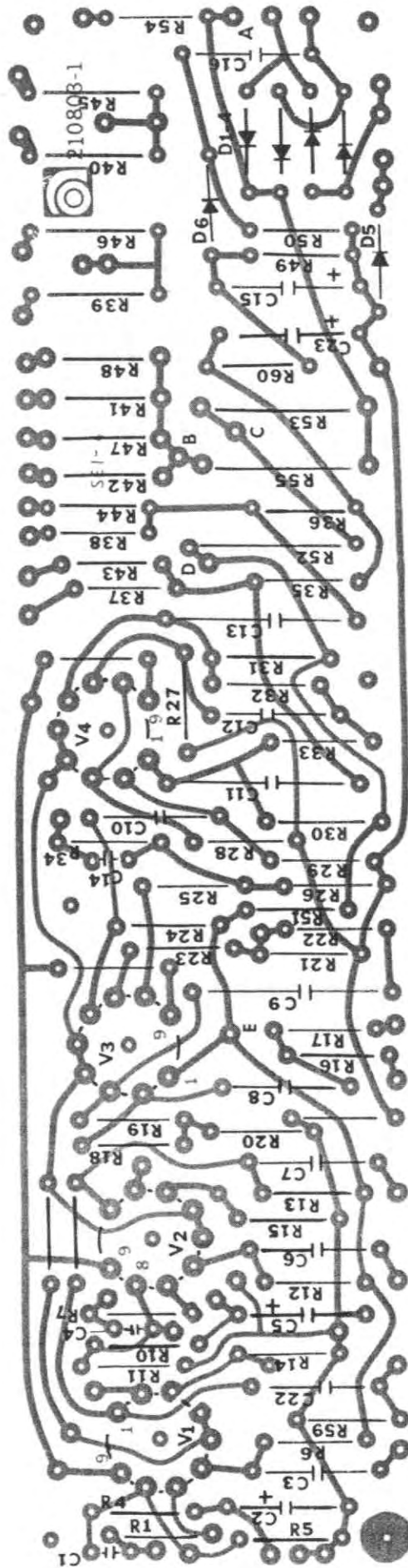
Weight:

90 pounds (40.8 Kg.)

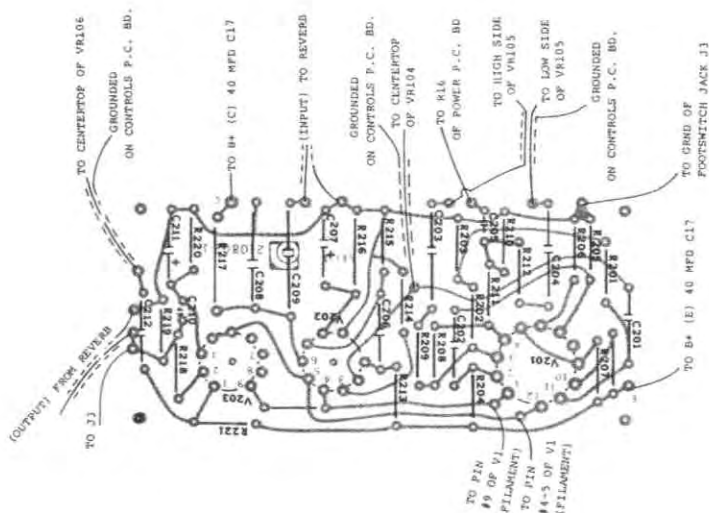
Dimensions:

27" W x 30" H x 14" D
69 cm. x 76 cm. x 36 cm.

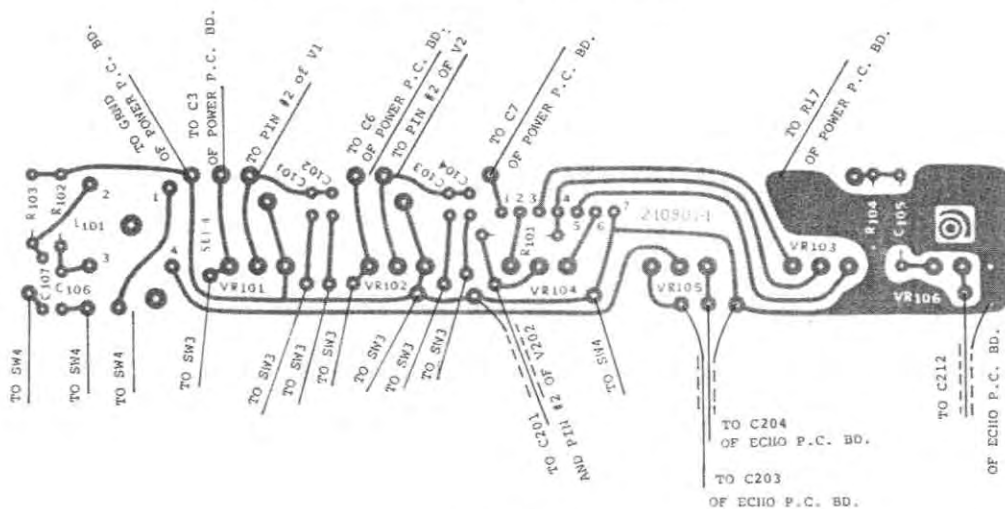
V4/V22 POWER P.C. BOARD
(VIEWED FROM COPPER SIDE)



V4/VT22 ECHO P.C. BOARD
(VIEWED FROM COPPER SIDE)



V4/VT22 TONE P.C. BOARD
(VIEWED FROM COPPER SIDE)



AC VOLTAGES

Note: Readings taken with a 10MEG input impedance VTVM and treble, bass, mid-range, and reverb controls at mid-position.

INPUT: 0.3v A.C. at 400 Hz

OUTPUT: 12.25v at 2 Ohms $\frac{3}{4}$ Power Output
17.3v at 4 Ohms $\frac{3}{4}$ Power Output
24.5v at 8 Ohms $\frac{3}{4}$ Power Output

REF.	TUBE	PIN NO.											
		1	2	3	4	5	6	7	8	9	10	11	12
V1	12AX7	5.8	.5		Fil	Fil	10.	.3		Fil			
V2	12AX7	5.8	.5		Fil	Fil	10.	.3		Fil			
V3	12DW7		.32	.3	Fil	Fil	3.5	.28		Fil			
V4	12AU7	38.	3.4		Fil	Fil	38.	3.4		Fil			
V5	7027A		Fil	250		38.		Fil					
V6	7027A		Fil	250		38.		Fil					
V7	7027A		Fil	250		38.		Fil					
V8	7027A		Fil	250		38.		Fil					
V201	6K11	Fil	.1	.5	5.	5.2		.1		5.2		.47	Fil
V202	6CG7	4.2	.48		Fil	Fil	2.3	2.					
V203	12AX7				Fil	Fil							

MODEL V4/VT22 AMPLIFIER REPLACEMENT PARTS LIST

Note: Replacement parts may differ in part number or value from the factory installed part. In either event the replacement part has been chosen to provide equal or improved performance.

REF.	DESCRIPTION	PART NO.
SWITCHES		
SW1	Sensitivity	160805-1
SW2	Sensitivity	160805-1
SW3	Ultra Hi	160805-1
SW4	Mid Range	160805-1
SW5	Standby	160804-8
SW6	Polarity	160804-9
SW7	Power	160804-8
SW8	Impedance	160807-1
FUSES		
	6 Amp	181574-1
	10 Amp	181574-6
	Fuse Holder	181576-1
JACKS		
J1	Input	181573-1
J2	Input	181573-1
J3	Footswitch	181573-3
J4	Ext. Amp.	181573-3
J5	Ext. Amp.	181573-3
J6	Speaker	181573-2
J7	Ext. Speaker	181573-3
CONTROLS		
VR1	Hum	220664-1
VR101	Volume	220663-3
VR102	Volume	220663-3
VR103	Bass	220663-4
VR104	Treble	220663-4
VR105	Midrange	220663-1
VR106	Reverb	220663-2
WIREWOUND RESISTORS		
R39	3.6 Ohm 5W	240080-15
R40	3.6 Ohm 5W	240080-15
R45	3.6 Ohm 5W	240080-15
R46	3.6 Ohm 5W	240080-15
R53	3K Ohm 5W	240607-2
R55	470 Ohm 7W	240081-65
R217	10K Ohm 5W	240606-1
ELECTROLYTIC CAPACITORS		
C2	10MFD 25V	270560-1
C5	10MFD 25V	270560-1
C15	10MFD 100V	270560-2
C17	40x40x40MFD 500V	270561-2
C18	100x40MFD 450V	270561-8
C19	40MFD 450V	270562-7
C20	100x40MFD 450V	270561-8
C23	10MFD 100V	270560-2
C207	10MFD 35V	270117-1135
C211	10MFD 35V	270117-1135
TRANSFORMERS		
	Power	300705-1
	Output	320822-1

REF.	DESCRIPTION	PART NO.
SEMICONDUCTORS		
D1	1 Amp 1000PIV	530555-2
D2	1 Amp 1000PIV	530555-2
D3	1 Amp 1000PIV	530555-2
D4	1 Amp 1000PIV	530555-2
D5	1 Amp 1000PIV	530555-2
D6	1 Amp 1000PIV	530555-2
D7	1 Amp 1400PIV	530148-1003
D8	1 Amp 1400PIV	530148-1003
D9	1 Amp 1400PIV	530148-1003
D10	1 Amp 1400PIV	530148-1003
TUBES		
V1	12AX7	610256-2
V2	12AX7	610256-2
V3	12DW7	610256-3
V4	12AU7	610256-9
V5	7027A	610257-3
V6	7027A	610257-3
V7	7027A	610257-3
V8	7027A	610257-3
V201	6K11	610256-10
V202	6CG7	610256-7
V203	12AX7	610256-2
SPEAKERS		
	12" 16 Ohm (VT22)	580166-1
MISCELLANEOUS		
	Grill Fastener	103471-3
	2 Tab Corner	121462-1
	3 Tab Corner	121463-1
	Glide	121465-1
	Handle	121467-3
	Knob	142902-1
	Logo (V4)	142910-2
	Logo (VT22)	142911-2
	9 Pin Socket	181570-1
	12 Pin Socket	181571-1
	Red Pilot Light	181572-1
	Amber Pilot Light	181572-2
	8 Pin Socket	181580-1
	AC Outlet	181581-2
	PEC	250762-1
	Toroidal Inductor	320821-1
	Reverb	361601-1
	Grill Cloth	400826-1
	Shock Mount	643404-1
	Rubber Foot	643409-2
L101		

MODEL V4 SPEAKER ENCLOSURE REPLACEMENT PARTS

Grill Fastener	103471-3
2 Tab Corner	121462-1
3 Tab Corner	121463-1
Glide	121465-1
Foot Cup	121466-1
Handle	121467-2
Logo	142911-2
Jack	181573-3
Grill Cloth	400826-1
12" 8 Ohm Speaker	580151-1