

electric shock to persons.

alert the user to the presgerous voltage" within the

# CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN



tended to alert the user to the presence of and maintenance (servicing) instr tions in the literature accompanying

#### IMPORTANT! FOR YOUR PROTECTION, PLEASE READ THE FOLLOWING: WATER AND MOISTURE: Appliance should not be used near water (near a bathtub, washbow kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc). Care should be taker so that objects do not fall and liquids are not spilled into the enclosure through openings.

POWER SOURCES: The product should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

GROUNDING OR POLARIZATION: Precautions should be taken so that the grounding or polarization is not defeated

POWER CORD PROTECTION: Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

SERVICING: The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel

FUSING: If your unit is equipped with a fuse receptacle, replace only with the same type fuse, Refer to replacement text on the unit for correct fuse type.

#### SAFETY INSTRUCTIONS (EUROPEAN)

The conductors in the AC power cord are colored in accordance with the following code. GREEN & YELLOW—Earth BLUE—Neutral

U.K. MAIN PLUG WARNING: A molded main plug that has been cut off from the cord is unsafe. NEVER UNDER ANY CIRCUMSTANCES SHOULD YOU INSERT A DAMAGED OR CUT MAIN PLUG INTO A POWER SOCKET.

#### LIMITED WARRANTY

Your Carvin product is guaranteed against failure for ONE YEAR unless otherwise stated. Carvin will service and supply all parts at no charge to the customer providing the unit is under warranty. Shipping costs are the responsibility of the customer. CARVIN DOES NOT PAY FOR PARTS OR SER-VICING OTHER THAN OUR OWN. A COPY OF THE ORIGINAL INVOICE IS REQUIRED TO VERIFY YOUR WARRANTY. Carvin assumes no responsibility for horn drivers or speakers damaged by this unit. This warranty does not cover, and no liability is assumed, for damage due to: natural disasters, accidents, abuse, loss of parts, lack of reasonable care, incorrect use, or failure to follow instructions. This warranty is in lieu of all other warranties, expressed or implied. No representative or person is authorized to represent or assume for Carvin any liability in connection with the sale or servicing of Carvin products. CARVIN SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES When RETURNING merchandise to the factory, you may call for a return authorization number Describe in writing each problem. If your unit is out of warranty, you will be charged the current FLAT RATE for parts and labor to bring your unit up to factory specifications.

#### HELP SECTION

#### 1) WILL NOT TURN ON

Check the power to the unit. Check for tripped main circuit breakers, unplugged extension cords or power-strip switches that may be turned off. Check the amps circuit breaker on the rear panel. If the black curved center button is in the out position, push it in to reset. If the breaker continues to trip, check your speaker cables and total speaker impedance. If the amps circuit breaker will not reset, then the amp will require servicing

#### 2) MAINTAINING YOUR EQUIPMENT

CAUTION

1/4W Resistor 470K .35" prep. 5% Carbon 1/4W Resistor 1K .35" prep. 5% Carbon

1/4W Resistor 470\Omega .35" prep. 5% Carbon

1/4W Resistor 1,5K 35" prep. 5% Carbon 1/4W Resistor 1,5K 35" prep. 5% Carbon 1/4W Resistor 10K 35" prep. 5% Carbon 1/4W Resistor 10K 35" prep. 5% Carbon 1/4W Resistor 2,2K 35" prep. 5% Carbon 1/4W Resistor 47K 35" prep. 5% Carbon 1/4W Resistor 1/4W Resistor

1/4W Resistor 4.7K .35" prep. 5% Carbon

1/4W Resistor 680\(\Omega\) .35" prep. 5% Carbon

1/4W Resistor 150Ω .35" prep. 5% Carbon

1/2W Resistor 4.7Q 0.5 prep. 5% Carbon

1/4W Resistor 1K .35" prep. 5% Carbon 1/4W Resistor 10K .35" prep. 5% Carbon

5W Resistor 0.22Ω Vert 5% Sand Bar 5W Resistor 0.22Ω Vert 5% Sand Bar

1/4W Resistor 2.2K .35" prep. 5 1/2W Resistor 4.7Ω 0.5 prep. 5%

.35" prep. 5% Carbon

1/4W Resistor 1K

Avoid spilling liquids or allowing any other foreign matter inside the unit. The panel of your unit can be wiped from time to time with a dry or slightly damp cloth in order to remove dust and bring back the new look. As with all pro gear, avoid prolonged use in caustic environments (salt air). When used in such an environment, be sure the amplifier is adequately protected by rack, covers, etc..

REFER SERVICING TO QUALIFIED SER-

25-02201 25-02201 25-02201

25-02201 60-78150

Switch DPDT Push Vert Small PCR MTG Switch DPDT Push, Vert Small PCB MTG Switch DPDT Push, Vert Small PCB MTG Switch DPDT Push, Vert Small PCB MTG

Switch DPDT Push, Vert Small PCB MTG

Voltage Regulator 7815 +15V 2A

VICE PERSONNEL! THIS UNIT CON-

# REPLACEMENT PARTS LIST

rts list fo	or HT760M Power Amplif st, 2-way, Red/Black	ier	Carvin P/N	Ref. Des.		iption 1N4003	Rect Gen 1A 200V	Carvin P/N 60-40030	
war Blac	k 18GA Steel		10.92006	D2		1N4003	Rect Gen 1A 200V	60-40030	Q200 Q202
	k Tour Steel					1N4003	Rect Gen 1A 200V	60-40030	0202
	3 80mm					1N4003	Rect Gen 1A 200V	60-40030	0203
	80x80mm					1N4003	Rect Gen 1A 200V	60-40030	0205
	space rack			D6		1N4003	Rect Gen 1A 200V	60-40030	0206
	k, 1.25" DIA			D7		1N4003	Rect Gen 1A 200V	60-40030	0207
and-off,	Al, 1.5" Hex, 6-32		03-63315	D8	LED R	ed small	#204HD 3mm T-1.0	60-75320	Q208
	lator pad 3.8" OD			D9	LED Y	ellow small	#204YD 3mm T-1.0	60-75340	Q209
				D10		1N4003	Rect Gen 1A 200V	60-40030	0210
				D11		1N4003	Rect Gen 1A 200V	60-40030	R1
wer cord	i (120V)		05-01603	D12		1N4003	Rect Gen 1A 200V	60-40030	R2
wer cord	I (230V)		05-01903	D13		1N4003	Rect Gen 1A 200V	60-40030	R3
Amp Cire	cuit breaker (120V)uit breaker (230V)		70 20100	D100		1N4003 1N4003	Rect Gen 1A 200V Rect Gen 1A 200V	60-40030	R4 R5
	IV)						#204GD 3mm T-1.0	60-40030 60-75330	R6
	)V)					ed small	#204HD 3mm T-1.0	60-75320	B7
	tor 10KµF 63V, Poly 20%.			D104		ed small	#204HD 3mm T-1.0	60-75320	R8
	itor 10KµF 63V, Poly 20%			D106		1N4003	Rect Gen 1A 200V	60-40030	R9
	Resistor 47K, .35" prep.			D107		1N4003	Rect Gen 1A 200V	60-40030	R10
rts list f	or Printed Cicuit Card			D108	Diode	1N4003	Rect Gen 1A 200V	60-40030	B11
	Description		Carvin P/N	D109		1N4003	Rect Gen 1A 200V	60-40030	R12
	IC Op Amp NE5532	Linear Output	60-55320	D200		1N4003	Rect Gen 1A 200V	60-40030	R13
)	IC Op Amp MC4558	CP1 Dual HFREQ	60-45580	D201		1N4003	Rect Gen 1A 200V	60-40030	R14
l .	IC Op Amp NE5532	Linear Output	60-55320	D202		reen small	#204GD 3mm T-1.0	60-75330	R15
	IC Op Amp NE5532	Linear Output	60-55320	D203 D204		ed small ed small	#204HD 3mm T-1.0 #204HD 3mm T-1.0	60-75320 60-75320	R16
	IC Op Amp MC4558	CP1 Dual HFREQ	60-45580	D204 D205		1N4003	Rect Gen 1A 200V	60-40030	R17 R18
	IC Op Amp MC4558	CP1 Dual HFREQ	60-45580	D206		1N4003	Rect Gen 1A 200V	60-40030	R19
	IC Op Amp MC4558	CP1 Dual HFREQ	60-45580	D207		1114003	Rect Gen 1A 200V	60-40030	R20
5 21	IC Op Amp NE5532 Binding Post Red/Black	Linear Output	60-55320 03-10400	D208		1N4003	Rect Gen 1A 200V	60-40030	R22
2	Binding Post Red/Black		03-10400	D209		1N4003	Rect Gen 1A 200V	60-40030	R23
R1	Diode Bridge AC/DC PCB		60-35041	H1-A			9A 600V PCB MTG	23-08604	R24
	Capacitor 1000µF 35V	Electrolytic 20%	47-10235	H1-B			P 9A 600V PCB MTG	23-08604	R25
	Capacitor 1000µF 35V	Electrolytic 20%	47-10235	H2			Panduit PCB MTG	23-10002	R26
5	Capacitor 0.047µF 100V	Poly 10%	46-47312	H2-A			SHS 2.5mm PCB MTG	23-11004	R28
5	Capacitor 0.047µF 100V	Poly 10%	46-47312	H2-B	Heade	r 4 Pin Vert	SHS 2.5mm PCB MTG	23-11004	R31
	Capacitor 220µF 50V	Electrolytic 20%	47-22151	H3-A			rt SHS 2.5mm PCB MTG	23-11010	R100
3	Capacitor 10µF 50V	Electrolytic 20%	47-10051	H3-B H4-A			rt SHS 2.5mm PCB MTG rt SHS 2.5mm PCB MTG	23-11010 23-11010	R101 R102
}	Capacitor 0.047µF 100V	Poly 10%	46-47312	H4-B			rt SHS 2 5mm PCB MTG	23-11010	R103
10 11	Capacitor 0.047µF 100V	Poly 10%	46-47312	H5			Panduit PCB MTG	23-10002	R104
15	Capacitor 0.047µF 100V Capacitor 0.047µF 100V	Poly 10% Poly 10%	46-47312 46-47312	H6-A			P 9A 600V PCB MTG	23-08604	R105
16	Capacitor 0.047µF 100V	Poly 10%	46-47312	H6-B			P 9A 600V PCB MTG	23-08604	R106
17	Capacitor 0.047µF 100V	Poly 10%	46-47312	H7	Heade	r 9 Pin AMI	P 9A 600V PCB MTG	23-08609	R107
18	Capacitor 470µF 25V	Electrolytic 20%	47-47125	J100			Neutrik Vert PCB MTG	21-40000	R108
100	Capacitor 27PF 500V	Ceramic 5%	45-27052	J101			7 Pin Plastic, 24mm Tall	21-06457	R109
101	Capacitor 27PF 500V	Ceramic 5%	45-27052	J102			3 Pin Plastic, 24mm Tall	21-06453	R110
102	Capacitor 22µF 50V	Electrolytic 20%	47-22051	J200 J201			Neutrik Vert PCB MTG 7 Pin Plastic, 24mm Tall	21-40000 21-06457	R111
104	Capacitor 27PF 500V	Ceramic 5%	45-27052	J201 J202			3 Pin Plastic, 24mm Tall	21-06457	R112 R115
105	Capacitor 0.047µF 100V	Poly 10%	46-47312	K100			DT SIEMENS PCB MGT	70-05712	R116
110	Capacitor 0.001µF 100V	Poly 10%	46-10212	K200			DT SIEMENS PCB MGT	70-05712	R117
111 115	Capacitor 22µF 50V Capacitor 27PF 500V	Electrolytic 20% Ceramic 5%	47-22051 45-27052	L100			Air Core Spool	15-00165	R118
116	Capacitor 56PF 500V	Ceramic 5%	45-56052	L200			Air CoreSpool	15-00165	R119
117	Capacitor 120PF 500V	Ceramic 5%	45-12052	OP1	Opto I	solator VT	L5C2	60-50253	R120
118	Capacitor 10µF 63V	Electrolytic 20%	47-10061	OP2		solator VT		60-50253	R121
119	Capacitor 0.047µF 100V	Poly 10%	46-47312	P100			lik Brkt Rot Knurled 90°	71-10301	R122
120	Capacitor 0.001µF 100V	Poly 10%	46-10212	P101			Vert PCB MTG	71-25000	R123
121	Capacitor 0.068µF 100V	Poly 10%	46-68312	P200			Ik Brkt Rot Knurled 90°	71-10301	R124
200	Capacitor 27PF 500V	Ceramic 5%	45-27052	P201			Vert PCB MTG	71-25000	R125
201	Capacitor 27PF 500V	Ceramic 5%	45-27052	Q1 Q2			gton NPN MPSA14	60-00014	R126
202	Capacitor 22µF 50V	Electrolytic 20%	47-22051	Q100			00 PNP AMP TO-92 gton NPN MPSA14	60-54000 60-00014	R127 R128
204	Capacitor 27PF 500V	Ceramic 5%	45-27052	Q101			C 3A 100V NPN TO-220	60-31000	R129
205	Capacitor 0.047µF 100V	Poly 10%	46-47312	Q102			V42 HV 1.0W NPN T0-237	60-00042	R130
210 211	Capacitor 0.001µF 100V Capacitor 22µF 50V	Poly 10% Electrolytic 20%	46-10212 47-22051	Q103			92 HV PNP 1.0W TO-92	60-00092	R131
215	Capacitor 27PF 500V	Ceramic 5%	45-27052	Q104			C 3A 100V PNP TO-220	60-32000	R132
216	Capacitor 56PF 500V	Ceramic 5%	45-56052	Q105	Transi	stor TIP31	C 3A 100V NPN TO-220	60-31000	R133

Ceramic 5% Poly 10% Poly 10% Poly 10%

Capacitor 120PF 500V Capacitor 0.047µF 100V

Capacitor 0.047µF 100V

Capacitor 0.068uF 100V

Transistor MJL21194 NPN 16A 250V 200W

Transistor MJL21194 NPN 16A 250V 200W

á		RISK	OF EL	ECTRIC	SHOCK	TAINS	HIGH VOLT	AGE INSIDE!	
s.	Description	1			Carvin P/N	Ref. Des.	Description		Carvin P/N
	Transistor	Darlington	NPN MPS	SA14	60-00014	R139	1/4W Resistor 10	OK .35" prep. 5% Carbon	50-10055
				NPN T0-237	60-00042		1/4W Resistor 33		50-33045
	Transistor	CENW92 F	IV PNP 1.0	W TO-92	60-00092		2W Resistor 10Ω	0.8 prep. 5% Metal	54-10015
	Transistor	TIP32C 3A	100V PNF	TO-220	60-32000	R150	2W Resistor 10Ω	0.8 prep. 5% Metal	54-10015
	Transistor				60-31000		1/4W Resistor 10		50-10045
	Transistor	TIP31C 3A	100V NPI	V TO-220	60-31000	R201	1/4W Resistor 10	K .35" prep. 5% Carbon	50-10045
	Transistor	MJL21194	NPN 16A	250V 200W	60-21194	R202	1/4W Resistor 22	K .35" prep. 5% Carbon	50-22045
	Transistor	MJL21194	NPN 16A	250V 200W	60-21194	R203	1/4W Resistor 22	K .35" prep. 5% Carbon	50-22045
	Transistor	MJL21193	PNP 16A	250V 200W	60-21193	R204	1/4W Resistor 2.2	2K .35" prep. 5% Carbon	50-22035
	Transistor	MJL21193		250V 200W	60-21193	R205	1/4W Resistor 22	0Ω .35" prep. 5% Carbon	50-22025
	1/4W Resis	tor 2.2K		. 5% Carbon	50-22035	R206	1/4W Resistor 47	OK .35" prep. 5% Carbon	50-47055
	1/4W Resis	tor 3.3K	.35" prep	. 5% Carbon	50-33035	R207	1/4W Resistor 47	OK .35" prep. 5% Carbon	50-47055
	1/4W Resis	tor 100K	.35" prep	. 5% Carbon	50-10055	R208	1/4W Resistor 1K	.35" prep. 5% Carbon	50-10035
	1/4W Resis	tor 150Ω		. 5% Carbon	50-15025	R209	Not Used		
	1/4W Resis	tor 39K	.35" prep	5% Carbon	50-39045		1/4W Resistor 47	OK .35" prep. 5% Carbon	50-47055
	1/4W Resis	tor 39K	.35" prep	5% Carbon	50-39045	R212	1/4W Resistor 47	0Ω .35" prep. 5% Carbon	50-47025
	1/4W Resis	tor 470K		5% Carbon	50-47055	R215	1/4W Resistor 10	K .35" prep. 5% Carbon	50-10045
	1/4W Resis			5% Carbon	50-47055		1/4W Resistor 10	K .35" prep. 5% Carbon	50-10045
	1/4W Resis	tor 22K	.35" prep	5% Carbon	50-22045		1/4W Resistor 2.2	2K .35" prep. 5% Carbon	50-22035
	1/4W Resis	tor 22K	.35" prep	5% Carbon	50-22045	R218	1/4W Resistor 47	K .35" prep. 5% Carbon	50-47045
	1/4W Resis	tor 20K	.35" prep	5% Carbon	50-20045	R219	1/4W Resistor 4.7	7K .35" prep. 5% Carbon	50-47035
	1/4W Resis	tor 6.8K	.35" prep	5% Carbon	50-68035	R220		0Ω .35" prep. 5% Carbon	50-10025
	1/4W Resis	tor 2.2M	.35" prep	5% Carbon	50-22065		1/4W Resistor 10	0Ω 35" prep. 5% Carbon	50-10025
	1/4W Resis	tor 20K	.35" prep	5% Carbon	50-20045	R222	1/4W Resistor 4.7	7K .35" prep. 5% Carbon	50-47035
	1/4W Resis	tor 10K	.35" prep	5% Carbon	50-10045		1/4W Resistor 68	0Ω .35" prep. 5% Carbon	50-68025
	Not Used					R224	1/4W Resistor 4.7	7K .35" prep. 5% Carbon	50-47035
	1/4W Resis	tor 22K	.35" prep	5% Carbon	50-22045	R225	1/4W Resistor 2.2	2K .35" prep. 5% Carbon	50-22035
	1/4W Resis	tor 1K	.35" prep	5% Carbon	50-10035	R226	1/4W Resistor 1K	.35" prep. 5% Carbon	50-10035
	1/4W Resis	tor 10K	.35" prep	5. 5% Carbon	50-10045	R227	1/4W Resistor 68	0Ω .35" prep. 5% Carbon	50-68025
	1/4W Resis	stor 10K	.35" prep	5% Carbon	50-10045	R228	1/4W Resistor 2.2	2K .35" prep. 5% Carbon	50-22035
	1/4W Resis	tor 5.6K	.35" prep	5% Carbon	50-56035	R229	1/2W Resistor 4.7	7Ω 0.5 prep. 5% Carbon	52-47005
	1/4W Resis	tor 470K		5% Carbon	50-47055		1/4W Resistor 15	0Ω .35" prep. 5% Carbon	50-15025
	1/4W Resis	stor 10K	.35" prep	5% Carbon	50-10045	R231	1/2W Resistor 4.7	7Ω 0.5 prep. 5% Carbon	52-47005
	1/4W Resis	stor 1K	.35" prep	5% Carbon	50-10035	R232	5W Resistor 0.22	Ω Vert 5% Sand Bar	55-02205
	1/4W Resis	stor 4.7K	.35" prep	5% Carbon	50-47035		5W Resistor 0.22	Ω Vert 5% Sand Bar	55-02205
	1/4W Resis			5% Carbon	50-22025	R234	5W Resistor 0.22	Ω Vert 5% Sand Bar	55-02205
	1/4W Resis	stor 100K	.35" prep	o. 5% Carbon	50-10055	R235	5W Resistor 0.22	Ω Vert 5% Sand Bar	55-02205
	1/4W Resis	stor 10K	.35" prep	5% Carbon	50-10045	R236	1/4W Resistor 1K	.35" prep. 5% Carbon	50-10035
	1/4W Resis	stor 10K	.35" prep	5% Carbon	50-10045	R237	1/4W Resistor 10	K .35" prep. 5% Carbon	50-10045
	1/4W Resis	stor 22K	.35" prep	5% Carbon	50-22045	R238	1/4W Resistor 10		50-10055
	1/4W Resis	stor 22K	.35" prep	o. 5% Carbon	50-22045	R239	1/4W Resistor 10	OK .35" prep. 5% Carbon	50-10055
	1/4W Resis	stor 2.2K	.35" preg	5% Carbon	50-22035	R240	1/4W Resistor 33		50-33045
	1/4W Resis	tor 220Ω	.35" prep	5% Carbon	50-22025	R244	2W Resistor 10Ω		54-10015
	1/4W Resis			5% Carbon	50-47055		2W Resistor 10Ω		54-10015
	47418/ Danie	tor 470V		EO Carbon	E0 470EE	04	Coultab DDDT Dool	Wast Comell DOD MTC	05 00004

50-47055 S

50-47025 VR

50-15035 VR

50-47045

50-47035

50-68025

52-47005

# CARVIN ENGINEERING DATA HT760M EQUALIZED MONITOR POWER AMP OPERATING MANUAL



The HT760M professional Dual Graphic Monitor amps were designed utilizing Carvin's 33 years of experience in power amp & equalizer technology. The HT760M is Ideal for monitor set-ups because its small size, light weight, high power, and EQ capabilities allow you to use only one piece of gear in place of two or three. This saves you work, rack space, and money. Their thick brushed anodized aluminum face plates, large recessed knobs, quality metal sliders with rubber boots. and heavy-duty steel chassis reflect the manufacturing quality within. All models carry the CE approval for world-wide use.

#### PURE-TRANSPARENT SOUND

Carvin considers the sound of an amp equally important as its reliability. To insure pure, uncolored sound, we designed one of the fastest responding power amps on the market today. High slew rates greater than 45v/µs deliver superb transient response. High frequencies are transparent and open—even at extreme levels. Linear feedback circuits reduce distortion to near the theoretical zero limit, preventing any type of harshness which would lead to ear fatigue. The HT Series amps deliver flat, transparent, unaltered sound—especially important to the studio user. And you can drive any type of reactive loads, including 70V transformer distribution systems. These amps are designed to deliver non-stop, continuous power and are completely protected from heat and short circuits.

#### **ULTRA RUGGED FOR TOURING**

Every chassis is made from heavy-duty 16 gauge steel that is galvanized before being painted to prevent rust. All internal cabling is neatly tied and harnessed. Every circuit card is MIL SPEC, double-sided, through-hole plated, fire retardant FR-4 glass epoxy. This insures that the solder flows on the top, bottom and through each hole of every component, preventing components from shaking loose even through constant tour use. Neutrik<sup>TM</sup> XLR connectors, heavy-duty power switches, recessed knobs, machined aluminum front panels and extruded handles all give the HT amps a "tank-like" ability to handle rough, touring transport.

#### **TOTALLY MODULAR**

With the HT Series, Carvin brings you totally modular construction. If you ever need an I/O (input/output) connector card because a connector wore-out, just unplug it and re-install the replacement card in minutes. You don't have to desolder anything. This applies to every aspect of the HT Series amps including the power supply, power cards, heat sinks and fans. Everything is connected by heavy-duty AMP™ and MOLEX™ type connectors for easy replacement—even the Toroid transformer is a total plug-in.

## **HEAVY-DUTY COOLING**

Carvin offers up to 30% more cooling than comparable amps rated at the same wattage. This means that the HT Series are thermally "over-engineered" to be sure heat will never be a concern. Even outdoor concerts in direct sunlight will not cause thermal shut down. Carvin uses precision 6063 T-5 aluminum high ratio heat sinks that are extruded for massive amounts of cooling. High efficiency, multi-speed fans cool your amp quietly.

# LOSE THE WEIGHT...NOT THE PERFORMANCE

For some companies weight reduction means cost reduction. Carvin however, uses expensive TOROID transformers to reduce weight. Toroids deliver massive amounts of "on demand" current for continuous 2 ohm operation. This gives the power supply a solid foundation, yielding more headroom for the largest subwoofer application. Not only do toroids deliver high current, but they are known for reducing stray magnetic fields eliminating hum & noise. This is especially important for the recording industry.

For your records, you may wish to record the following information. Serial No. Invoice Date

76-00760 797

# **RECEIVING INSPECTION—read before getting started**

INSPECT YOUR UNIT FOR ANY DAMAGE which may have occurred during shipping. If any damage is found, please notify the shipping company and CARVIN immediately.

SAVE THE CARTON & ALL PACKING MATERIALS. In the event you have to re-ship your unit, always use the original carton and packing material. This will provide the best possible protection during shipment. CARVIN and the shipping company are not liable for any damage caused by improper packing.

SAVE YOUR INVOICE. It will be required for warranty service if needed in the future. SHIPMENT SHORTAGE. If you find items missing, they may have been shipped separately.

Please allow several days for the rest of your order to arrive before inquiring.

RECORD THE SERIAL NUMBER on the enclosed warranty card or below on this manual for your records. Keep your portion of the card and return the portion with your name and comments to us.

#### DISTORTION-FREE LIMITERS

While most amps do not offer built-in limiters, this is an important feature to look for. The purpose of a limiter is to hold down peaks so the amp won't distort even with extra hot input signals (this protects your expensive speakers). In addition, a well designed limiter can increase your amp's average output as much as 3 db. Part of Carvin's design uses the more expensive, distortion-free linear "opto isolators". Unlike amps that use FET controlled limiters which can inject small amounts of distortion, the HT Series limiters keep your sound pure and uncolored!

# FRONT PANEL & CONNECTING UP

The HT760M features front panel signal, peak and protect LEDs which let you monitor the status of the amp easily. Also, both channels use precision 41 detent level controls allowing you to see your settings at a glance. The main features are the two 9-Band graphic equalizers that easily allow fine tuning of your sound or balancing out and elimitaing feedback on a monitor system. Balanced 1/4 phone & XLR input jacks are used to eliminate hum & noise. Speaker outputs feature 1/4" jacks & heavyduty binding posts that accept up to 50 amp #7 speaker wires.

The rear professional accessory group offers a GROUND switch to remove the chassis ground from the XLR input, a Parallel input switch connects the inputs of both channels together eliminating Y connectors and allowing amp patching in multiple amp systems. The accessory group also features a bridge mode switch for delivering full power into a 70V distribution system and a limiter ON/OFF switch that gives you the choice of using the internal limiter circuitry.

#### HT760M POWER AMP SPECIFICATIONS:

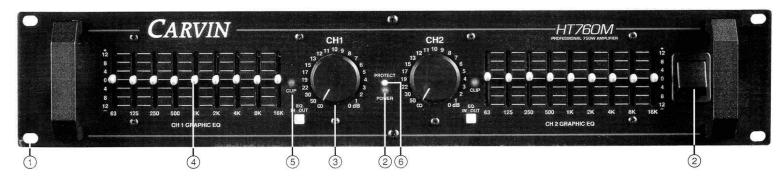
MODEL	111700W
Bridged RMS Continuous	
4Ω, (20-20k Hz, <0.4%)	750w
Both Channels RMS Continuous	
2Ω (20-20k Hz, <0.2%)	375/375w
4Ω (20-20k Hz, <0.2%)	250/250w
8Ω (20-20k Hz, <0.2%)	175/175w
THD (Typical):	0.03%
Damping Factor:	>350
Slew Rate: bridged mode	>45v/µs
Sensitivity: $(4\Omega, Vms)$	0.75 V
Signal to Noise Ratio:	103 dB
Frequency Response:	±0.5 dB, 20 Hz to 20kHz (±1.5 dB, 10 Hz & 40 kHz)
Input Impedance:	>20K $\Omega$ , balanced
Protection Circuits:	Short Circuit    No Load Protection
	<ul> <li>SpeakerGuard™</li> <li>Thermal Shut-Off</li> <li>Mute On/OFF</li> </ul>
Control and Indicators:	
Front:	<ul> <li>Dual 9-Band Graphic Equalizers</li> <li>Power switch</li> </ul>
	Recessed 41 detent attenuators
	Signal LED       Clip LED       Protect LED
20	Power Indicator
Rear:	Ground Lift (each channel) • Parallel Input Switch
	Speaker Output Bridge Switch    Limiters IN/OUT Sw
	<ul> <li>Input Connectors: Two each; Balanced XLR &amp; 1/4"</li> </ul>
	<ul> <li>Speaker Output Connectors: Dual heavy-duty</li> </ul>
_value of the control	binding posts and two 1/4" phone jacks
Dimensions: 3 1/2" High v 19" Wide	v 1()" Henth (2-snare)

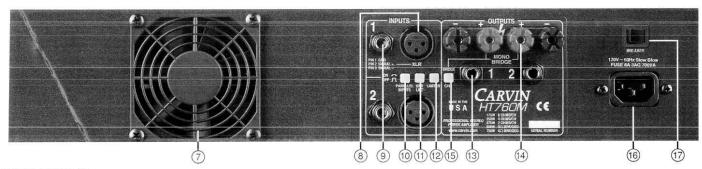
Dimensions: 3 1/2" High x 19" Wide x 10" Depth (2-space) Net Weight: 22 lbs.

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# FRONT & REAR PANEL CONTROLS





## **FRONT PANEL**

## 1. MOUNTING

Sturdy one piece aluminum handles make for easy transporting along with facilitating rack installation. The rack mounting holes are designed on ISO standard spacing. Four 10-32 x .5" phillip machine screws are normally used to secure the amp. Rear support brackets are not required.

#### 2. POWER SWITCH

Check the power amp connections and verify the AC line power source before engaging the POWER switch. The red LED unmistakably indicates that all circuits are properly powered up. Yellow was chosen so the operator could see the other indicators from a distance.

#### 3. CHANNEL LEVEL CONTROL

A precision 41 step input LEVEL attenuate is used to adjust the volume levels. To deliver the amps full power without reducing the headroom of the signal source, the level controls should be turned up approximately 1/3 (15 on the dial).

# 4. DUAL 9-BAND GRAPHIC EQUALIZERS

Controling feed-back in a monitor system and fine tuning your sound are easy with the HT760M's two on-board EQ's. For feed-back, find the offending frequency (usually in the upper bands) and push the slider down to cut the level of that frequency, thus allowing more gain (volume) before feed-back. For tone control, move the sliders up or down from their center detent positions to suit your taste. The sliders are designed to move hard so adjustments will stay in place.

#### 5. CHANNEL CLIP INDICATOR

The red CLIP LED indicators will start to flash when each channel has reached its maximum output. Occasional flashing caused by lower bass frequencies is OK. However, consistent flashing caused from higher frequencies may damage high frequency drivers (excessive distortion). This does not cause damage to the amp.

#### 6. PROTECT LED INDICATOR

The red PROTECT LED provides the operator with information about the status of the amplifier. The PROTECT LED can come on under 3 different conditions (when this happens both channels are muted by disconnecting the output speaker relays);

- During power-up, the amplifier stays in a muted state for approx. 3 sec until it determines that everything is functioning normally (no output shorts or over temp conditions).
- 2) When the output load draws excessive current or a direct short is detected caused by a shorted speaker cable or speaker system. Reset this condition by turning the amp off for two seconds and then on again. Check for shorted cables and the total speaker system impedance connected to each channel (2 ohms minimum per ch or 4 ohms BRIDGED).
- 3) Overheating is usually determined when the amp stops in the middle of a performance and the PROTECT LED is on. If this is the cause, leave the amp on for the fan to cool the amp down. The amp will automatically reset within 1 to 3 minutes. The PROTECT LED will turn off when ready. Check for the following conditions; a) The rear intake air is restricted, b) Intake air is extremely warm, c) Front exhaust vents restricted, or d) Excessive speaker load (try other speakers or remove speakers if you have more than one connected to each channel). Again, the minimum impedance is 2 ohms per ch or 4 ohms BRIDGED)

# REAR PANEL

# 7. COOLING FAN

The fan is designed to pull air in to the amplifier. Do not restrict or block its intake or the amp will go into protect mode. Hot air entering the amp may also cause the amp to go into protect mode.

#### 8. XLR CHANNEL INPUTS

For most professional applications, use the XLR balanced inputs. This will help to reduce hum and allow for longer cable runs from your signal source (mixer, etc). Because this is a balanced input, the gain will be 6 dB higher than using the 1/4" input jack with non balanced lines. XLR pin configuration: Pin 1: Grounded through the GROUND LIFT switch, Pin 2: positive Bal. signal and Pin 3: negative Bal. signal.

# 9. CHANNEL 1/4" PHONE JACK INPUT

This stereo phone jack is designed to receive either balanced or unbalanced input signals. Balanced signals coming into this jack should be wired with the connector's tip going to signal + and the connector's ring to signal -. The connector's sleeve is then tied internally to ground through the GROUND LIFT switch.

## 10. PARALLEL OR "Y" INPUTS

The rear PARALLEL switch allows you to drive both channels from either input. All signals entering any input will be available on both channels. This eliminates Y adapter cables. This feature is used to "daisy chain" one piece of equipment to another. Just plug into the unused INPUT (1/4" or XLR) and it will become an output for other equipment.

#### 11. INPUT GROUND LIFT

Many times sound systems are connected in such a manner to cause a grounded loop with the inputs that result in audible hum. The input (1/4" & XLR) GROUND LIFT switch on the rear panel will help eliminate this problem. If not, another way to eliminate ground loops is to install a "line matching" transformer between the amplifier input and the signal source.

#### 12. LIMITERS

To activate the LIMITERS, engage the rear limiter switch. The built-in high quality limiters are recommended to hold down peaks that could cause early distortion. Limiters will help to rise the average power so that you can get more output from each channel. To check the effectiveness of the limiters when the channel starts to distort (under the amps full output), engage the limiters and hear the reduction of the distortion. If the distortion stops, you can turn the channel up for more power. The lower bass frequencies are most affected. WARNING: Do not check in an environment where the sound level could damage your ears!

# 13. SPEAKER OUTPUTS

The standard 1/4" SPEAKER jacks are used for most applications. Turn the amp off before connecting your speakers.

#### 14. SPEAKER BINDING POSTS

For heavy-duty speaker connections, use the rear BINDING POSTS to connect your speakers. Wire sizes up to 7 gauge (50 amps) can be inserted into the binding post "side holes". Larger cable can be used with "banana" plugs which plug into the end of the binding posts (remove colored caps). Binding posts are spaced on ISO standards. Use the two center RED binding posts for BRIDGE speaker connections (see 15 BRIDGE MODE).

# 15. BRIDGE MODE—25V/70V DISTRIBUTION SYSTEMS

The "DCM" Series can be operated in bridge mode if you require a 25V / 70V distribution speaker system or a high powered mono (single channel) amp. With your amp off, push in the rear (recessed) BRIDGE switch after you have made your speaker connections to the rear center RED binding posts (ch 1 is + and ch 2 is - ). No other speaker connectors or binding posts can to be used at the same time!" INPUT and LEVEL is handled by channel 1. Channel 2 is non-operational. The minimum speaker impedance is 4 ohms or a 25V distribution line. CAUTION: The power developed by bridging your amp can destroy most speaker systems!

# 16. AC POWER

Your amp is designed to run on either 120V 60 Hz or 230V 50Hz depending on the model purchased. The voltage range for 120V model is 95V to 132V and for 230V model it is 195V to 253V. The rear heavy-duty AC receptacle will accept a standard grounded AC cord that is designed your country. Be sure to check your power source before plugging into a grounded (3 prong) outlet. Never defeat the grounded connection or electrocution may result! Firmly push the AC cord all the way into its recepticle.

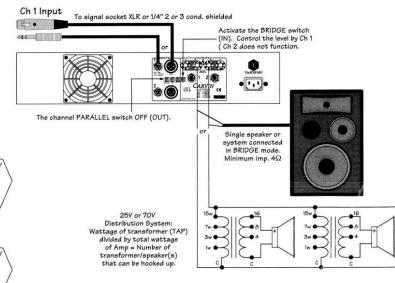
#### 17. AC CIRCUIT BREAKER

We have provided you with the convenience of a circuit breaker so that you will never have to replace a fuse. Occasionally the circuit breaker on your amp may have to be reset if high AC voltage surges are present or if the amp is used with excessive loads.

# TYPICAL SINGLE MONITOR MIX SETUP

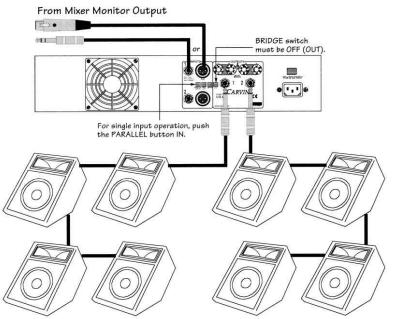
# For single input operation, push the PARALLEL button IN.

# 25V OR 70V DISTRIBUTION SYSTEM



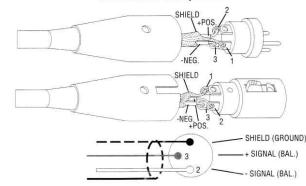
# TYPICAL DUAL MONITOR MIX SETUP

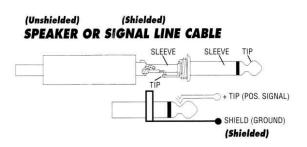
Up to four monitors per side using 8 ohm systems or two monitors per side with 4 ohm systems.



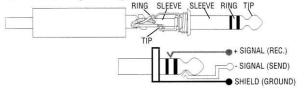
# Up to four monitors per side using 8 ohm systems or two monitors per side with 4 ohm systems.

# (Shielded) BALANCED MIC/LINE





# INTERRUPT (PATCH)/STEREO OR BALANCED SIGNAL LINE



<sup>\*</sup> For monural (mono) systems, depress the PARALLEL button (IN) and use only CHANNEL 1 input (speaker hookup identical to stereo). Mono is normally recommended for live stage applications. Live stereo sounds great in the center of the audience, however, the audience on one side will not hear the program material presented on the other side.

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