

Congratulations on your purchase of the **KB1000** series amp. The **KB1000** combines a 7-channel stereo line mixer, 4-band EQ, Direct Out box and a stereo / bi-ampable power amp with crossover into one compact package. Your new amp inherits Carvin's rugged DCM power amp technology with features including power amp limiters, high current Speakon 7M speaker connectors, 1' Titanium Drivers for the **KB1010** and the **KB1015** combos, and thermal/short circuit protection. This manual covers the **KB1000** head the **KB1010** and **KB1015** combo amplifiers.

GETTING STARTED QUICKLY

If you are like most players, you probably want to plug in your new amp and get started playing right away. However, with a full-featured amp like the **KB1000**, it is important to set it up correctly for optimum results. Before you start, be sure your amp is plugged into the correct AC voltage.

- With the amp turned off, set the POWER AMP 1 & 2 levels to "5" and set the MAIN level to "0" to start. Adjust volume with the MAIN level.
- 2. Set the X-OVER switch to the "OUT" position. "IN" if you are using the KB1015 cabinet.
- 3. Make sure the **BRIDGE** switch (rear) is set to the "OUT" position.
- 4. Set the LOW, LOW MID, HI MID and HIGH tone controls to their center "O" position. Adjust later after you are more familiar with the amp.
- 5. Plug your keyboard stereo outputs into one of the INPUT jack pairs 1 thru 7. Mono signals should be plugged into the right (R) input jack which will be fed to both LEFT and RIGHT outputs of the amp. Start with the INPUT LEVEL controls at about "3".
- 6. Now, turn the amp ON.
- 7. With your keyboard output set to 5, start playing. Check to be sure the red PK LED next to the INPUT LEVEL CONTROL is not flashing (very dim flashing is OK) or unwanted distortion will result. Turn down your keyboard's output level if your instrument causes input clipping or turn down the AMP I or AMP 2 levels on the amp. If you hear no sound and the green SIG LED does not light, turn up your keyboard's output level or check your connection.
- 8. Gradually raise the MAIN POWER AMP level. Re-adjust according to the desired volume. Never try to get full power by pushing the INPUT LEVEL controls to maximum while keeping the AMP 1 & 2 and MAIN levels below 5, they should be set to 10.
- 9. Biamping the KB1015 combo or any large stack requires careful balancing of the AMP 1 & 2 controls. These controls power the woofer and 1" Titanium HF Driver independently. Double check to see that the speakers are plugged into the correct amp outputs. If the cables are reversed your amp will not perform correctly.
- 10. Need more output? The KB1000 is a powerful 1000w amp. Adding more speakers is the best way to substantially increase output. Every time you double your speakers, your acoustic output goes up by a factor of four. This is far more efficient than trying to add 4 times the power because speakers become less efficient when driven hard. Bridging your amp into 4 ohms gives you maximum output. However, the high power of this amp can damage your speakers. The amp will go into "protect" if loaded below 4 ohms in the bridged mode. Hopefully, this will help you get started. Have fun exploring the features and sounds of the KB1000.

DESIGNED FOR TOURING

Every **KB1000** 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. Toroid transformers are used as they are the engineer's choice for greater power supply current while reducing weight and magnetic "hum" fields. Every KB model is made in the USA.

Invoice Date

CARVIN KB1015

RECEIVING INSPECTION

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 reship 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. You may register your warranty online @carvin.com/registration

USA customers register online at: www.carvin.com/registration
All other countries register online at: www.carvinworld.com/registration

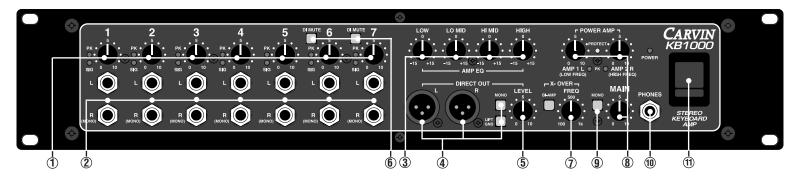
KB1000 SPECIFICATIONS:

Output Power			
8Ω΄	THD < 1%	225/225w	
4Ω	THD < 1%	350/350w	
2Ω Po Dridged	THD < 1%	500/500w	
8Ω Bridged 4Ω Bridged	THD < 1% THD < 1%	700w 1000w	
THD	Less than .5% at 1k Hz		
Frequency Response	20 Hz to 2	20k Hz	
Channels 1 - 7	Level controls, signal and peak LEDs, stereo/mono auto input switching, DI mute on channel 6 and 7.		
Input Impedance		>10kΩ	
Amp EQ.	LOW ±15dB @ 50Hz		
	LO MID±15dB @ 300Hz		
		HI MID±15dB @	
		HIGH ±15dB @	10kHz
Crossover	12dB p	er Octave Sweepab	le100Hz to 1kHz

Stereo XLR direct output with level control and ground lift switch
 Front panel master volume and independent power amp columes with protection and peak indicators
 Front panel headphone jack
 Two 1/4", one Speakon Mand binding post speaker outputs for each channel, plus a bridge out Speakon Mjack
 Rear panel 1/4" balance line output jacks

AC Requirements	120VAC 60 Hz or 230VAC 50 Hz optional model		
Power Requirements	1200VA		
Dimensions:	KB1000: 19"W x 10"D x 3.5"H KB1010: 23.5"W x 18"D x 21.5"H KB1015: 21.75"W x 15.25"D x 31.25"H		
Weight:	KB1000 Head: 30 Lbs, KB1010: 72 Lbs, KB1015: 97 Lbs.		
Warranty	One year parts and labor		





FRONT PANEL FEATURES 1. INPUT LEVELS AND MIXING 1-7

The **KB1000** has 7 inputs which are combined to produce a single stereo or mono output. The **INPUT LEVEL** control is used to set the input level and how much signal is mixed. To make sure you have plenty of headroom for mixing, the keyboard output levels should be set so that turning the **INPUT LEVEL** to at least "7", preferably "10" will not cause clipping. The red **CLIP** LED indicates when the input is close to clipping. To avoid clipping, reduce the keyboard level first, then turn down the **INPUT LEVEL** knob if the clipping persists. The green **SIG** LED indicates a signal is present at the input ONLY when the **INPUT LEVEL** is turned up.

2. INPUT JACKS

Two 1/4" phone jacks are provided on each of the 7 channels to accommodate both stereo and mono instruments. Plugging mono sources into the "R" jack of an **INPUT** will send signal to both **LEFT** and **RIGHT** outputs. You can double the amount of inputs by choosing to run in "**MONO**" mode and plugging into all **14** (**1-7**, **L&R**) input jacks, without regard to stereo assignment. Adjust keyboard output levels to mix L&R inputs accordingly.

3. AMP EQ CONTROLS

The AMP EQ tone controls consist of a LOW, LO MID, HI MID and HIGH controls. These controls DO NOT affect the DIRECT OUT XLRs. Since most of the tone shaping is done within the keyboard itself, the AMP EQ controls are designed to accomodate for differences in speakers and acoustic environments. The LOW control affects the lowest frequencies. Excessive "BOOMI-NESS" can be reduced by turning the LOW control down while turning it up can add fullness to your sound. The LO MID control adjusts frequencies in the 300Hz range adding extra punch when needed. The HI MID control adjusts frequencies in the 2.5kHz range allowing you to "cut through" on a crowded sound stage. The HIGH control knob is designed to cut or boost the highest frequencies. Usually a "dead" room will will require a boost from the HIGH control while a "live" room with a lot of reflective surfaces will invite you to reduce the HIGH control. Note: boosting the high frequencies can result in increased hiss. This is normal. The AMP EQ is a sound shaping tool which may require some practice to get the best results. Listen to the results and experiment with different settings.

4. DIRECT OUT XLRs

These outputs are very useful when connecting to the main mixing board for live performances or recording. Use the **DIRECT OUT LEVEL** control to set the output. The **MONO** switch is used to combine the **LEFT** and **RIGHT** INPUTS so that both **L-R DIRECT OUT XLR** jacks receive the same mono signal. **NOTE: THE DIRECT OUT MONO SWITCH DOES NOT AFFECT THE STEREO OR MONO OUTPUT OF THE POWER AMP**. A **LIFT GND** switch is also available on the **DIRECT OUT XLR** jacks. Set this switch for the lowest hum/noise when using this output. When the **LIFT GND** switch is depressed, the signal ground is lifted from these jacks thus eliminating any ground loops between the **KB1000** and the gear it's feeding. **NOTE: THE AMP EQ, POWER AMP 1&2 AND MAIN LEVEL CONTROLS DO NOT AFFECT THE DIRECT OUT SIGNAL.**

5. DIRECT OUT LEVEL

The **DIRECT OUT LEVEL** control sets the output for the **DIRECT OUT XLRs <u>ONLY</u>**. It will not affect the volume coming out of the amp speakers or the rear line outs. Communicate with the mixing engineer to set the proper level.

6. DI MUTE SWITCHES (ON INPUTS 6&7)

Inputs 6 and 7 feature **DI MUTE** switches. When pressed "IN", signals from inputs 6 and 7 will be REMOVED from the **DIRECT OUT XLRs**, but will still be heard through the **AMP 1&2** speaker outputs, **PHONES** jack and rear **LINE OUT** jacks. This is useful for listening to "click" tracks, monitor feeds or other sources WITHOUT sending these signals to the **DIRECT OUT XLRs** and to the house system.

7. ELECTRONIC X-OVER (BI-AMPING)

When the **BI-AMP** switch is pressed "**IN**", the amp is in the bi-amp mode. This means all frequencies BELOW the **X-OVER FREQ** are sent to the **POWER AMP 1 OUTPUT**, while frequencies ABOVE the **X-OVER FREQ** are sent to the **POWER AMP 2 OUTPUT**. To select the crossover frequency, rotate the **FREQ** control knob until the desired frequency is obtained. Try **800Hz**. A bi-amped system gives the user greater control over the tone. This allows speakers designed

for specific frequencies to be utilized to their fullest potential. Subwoofers will be more efficient at reproducing low frequencies with less distortion. Full range enclosures will not have to work as hard reproducing the lowest frequencies which consume the most power. Stereo (L-R) separation from the power amps is no longer possible, but is retained at the DIRECT OUT XLRs and PHONES jack. NOTE: BI-AMPING DOES NOT NECESSARILY DELIVER THE MOST VOLUME FROM YOUR SYSTEM.

8. OUTPUT CONTROL GROUP-MAIN, AMP 1L, AMP 2R

The output group controls the volume and amp output levels. The **POWER AMP 1 & 2 CONTROLS** adjust the volume to the individual amps. The **MAIN** control sets the overall volume. Try setting the **MAIN** control to 5 as a starting point.

FULL RANGE MONO (KB1010) AND STEREO: For KB1010 operation push the MONO (MAIN) switch IN. Turn up the AMP 1L knob on the KB1010 until the desired volume level is reached. If your are connecting a pair of speakers for stereo use, be sure to release the MONO (MAIN) switch. Turn up the AMP 1L & AMP 2R knobs until the desired volume level and left and right balance is reached.

BIAMP CONTROL(combos): To set the balance, bring up the **AMP 1L (LOW FREQ)** knob until the desired volume level is reached. Now bring up the **AMP 2R (HIGH FREQ)** knob until the desired balance has been achieved.

BRIDGE mode, use only the **AMP 1L** control, as the **AMP 2R** control becomes ineffective. If either of the red **PK** LEDs flash for **AMP1 or AMP2**, reduce the **POWER AMP 1 or 2** volume or, engage the **LIMITER** switch on the rear panel.

9. MONO (MAIN) SWITCH

With the MONO switch in the "OUT" position, the KB1000 will preserve stereo imaging from the INPUT JACKS to the POWER AMP 1(L) & 2(R) outputs. Setting the MONO switch to the "IN" position will send the combination of both LEFT and RIGHT signals to both POWER AMP OUTPUTS. Helpful if only one speaker cabinet is used, or if stereo imaging is not important. NOTE: THE MONO (MAIN) SWITCH DOES NOT AFFECT THE STEREO OR MONO OUTPUT OF XLR DIRECT OUTS.

10. PHONES JACK

A **PHONES** jack is provided for practicing or monitoring. The **MAIN** knob controls the volume. The phones jack does not interrupt the amplifier output. To listen to the **PHONES** output without sound from the speakers, turn down the **POWER AMP 1&2** controls. A high-current headphone amp drives this output for any pair of headphones.

REAR PANEL FEATURES

11. POWER / (RESET)

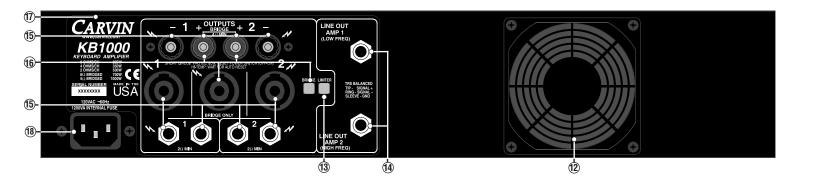
Push the upper portion of the POWER SWITCH to turn the amplifier on. If the **POWER** LED is on but no sound is coming out of the speakers, the amp may have gone into one of its protection modes with the **PROTECT** LED ON. To reset the amp, turn the power off for one minute and then turn the amp back on. If the problem persists, check for; **a**) The speaker impedance is too low for the bridge output (4 ohm min.) or normal outputs (2 ohms min. per amp) **b**) bad speaker cable, **c**) damaged speaker or **d**) blocked rear fan cooling vents.

12. COOLING VENTS

The rear vents cool the internal power amps. Provide a minimum of 3" clearance for adequate ventilation. Blocking the air flow to these vents will cause the amp to thermally protect and turn the speaker relays off. The **PROTECT** LED on the front panel will light. If this happens, clear the obstruction first, keep the power on, allowing the amp to cool. The amp will engage the speaker relays when cooling conditions return to normal.

13. LIMITER SWITCH

The **KB1000** features distortion-free, optoislator power amp limiters. Limiters help prevent power amp clipping by reducing peaks before they reach the amp. To use this feature, press "IN" the **LIMITER** switch.



14. LINE OUT AMP 1&2 JACKS (LOW FREQ & HIGH FREQ)

The **LINE OUT AMP** jacks receive the same signals that drive the internal power amps. These jacks are TRS (Tip-Ring-Sleeve) for balanced or unbalanced connections. Using a standard instrument cable or TRS (Tip-Ring-Sleeve) cable, the amp signal can be sent to the external power amp(s). Use the front **AMP1 & AMP2** controls for level adjustments. When the **X-OVER** switch is set to "IN", **AMP1** receives the low frequency signals and **AMP2** receives the high frequency signals as set by the front panel crossover.

15. SPEAKER OUTPUTS

The KB1000 amp contains four 1/4" jacks (2 per amp), 2 sets of BINDING POSTS (1 per amp), and two SPEAKON™ speaker output connectors, (1 per amp). The third SPEAKON™ is for BRIDGE setup only. The AMP 1 (LOW FREQ) outputs correspond to the AMP 1 (LOW FREQ) knob and the AMP 2 (HIGH FREQ) outputs correspond to the AMP 2 (HIGH FREQ) knob on the front panel. Multiple speakers can be attached to either the 1/4" or SPEAKON™ jacks so long as the total impedance is not below 2 ohms per amp.

16. BRIDGE SPEAKER OUTPUTS

The **KB1000** produces 1000 watts (bridged mono) into a 4Ω load or 700 watts into an 8Ω load. To activate, push the rear recessed **BRIDGE** switch "**IN**" with a pencil and set the front **BI-AMP** switch to the "OUT" position. In **BRIDGE** mode, the **AMP 2R** knob is not effective. Plug the speakers into the **BRIDGE ONLY-SPEAKON**TM jack or connect across the inner two RED **BIND-ING POSTS**. Pins 1+ and 1- are used on the SpeakonTM connector. The minimum total impedance is **4 ohms**.

17. INTERNAL FUSE

If there are high AC voltage surges or if the amp is used with excessive loads, the internal fuse will protect your amp from damage. If the fuse fails, use the proper replacement fuse: 120 VAC models use a **25 AMP** 250VAC slow blow.

240 VAC models use a 15 AMP 250 VAC slow blow.

18. AC LINE CORD

All **KB1000** amplifiers are supplied with detachable three conductor AC line cords. Make sure the cord is securely inserted into the back of the unit. Never defeat the ground of the AC line cord as it is there for your protection. If you must plug into a two prong outlet, use a quality 3 to 2 prong grounded adapter and properly ground it.

SPEAKER CONNECTIONS

SPEAKON™ cables are recommended for your system because of their high current capacity. While the standard 16 GA 1/4" cables will work OK with your system, the CARVIN 12 GA SPEAKON™ cables will allow you to gain as much as 20% more power at high power levels extracting every watt from your KB1000 amp. The very short 1/4" cables will work fine for the KB1010 and KB1015 combo amps.

FULL RANGE MODE:

The **FULL RANGE MODE** of your **KB1000** amp works well with separate bass and full-range speaker systems. Instead of using the **BI-AMP** mode, you can simply run **AMP 1** into your bass speakers and **AMP 2** into your full-range speakers using the natural crossover frequencies of each speaker system. If you need deeper bass or more highs, just turn up amp 1 or amp 2 for a balanced sound. Set the front panel **X-OVER** switch to the "**OUT**" position, and the **MONO** switch to the "**IN**" position for **FULL-RANGE MODE**. If using only **ONE** speaker, as with the **KB1015 combo**, turn the unused **POWER AMP** control to "O".

BI-AMP MODE:

To BI-AMP your speakers, connect your BASS speaker(s) into AMP 1 and your FULL-RANGE speaker(s) into AMP 2. Set the front panel X-OVER switch to the "IN" position for BI-AMPING. Try setting the X-OVER FREQ control to 800 Hz, this is a common crossover point for many speaker systems. Now adjust the AMP 1L and AMP 2R power amp controls to get a bal-

anced sound. If you have the **KB1015 combo** and you are in the BI-AMP MODE. Be sure the LOW **FREQ INPUT** is plugged into **AMP 1** and the **HI FREQ INPUT** is plugged into **AMP 2**.

STEREO MODE:

The STEREO mode of your **KB1000** amp takes advantage of the lush stereo imaging available from modern keyboards. Simply run **AMP 1** into your main speaker and **AMP 2** into an extension speaker. The front panel **MON0** and **X-OVER** switches must be left in the "OUT" position for STEREO MODE.

BRIDGE MODE:

To get high output from your **KB1000** amp with two 8 ohm speakers or one 4 ohm speaker, use the **BRIDGE MODE**. Set the front panel **X-0VER** switch to the "**0UT**" position. On the rear of the amp, push the **BRIDGE** switch "**IN**". In **BRIDGE** mode, the **AMP 2R** control is not used, use only the **AMP 1L** control. Plug one **SPEAKON™** cable into the rear amp **BRIDGE ONLY** connector and daisy-chain another Speakon™ from speaker to speaker. Two 8 ohm speakers will give you a total impedance of 4 ohms, which is the maximum power from your amp. If you use two 4 ohms speakers on the BRIDGE output, your amp will shut off and go into the "protect" mode. To reset, turn your amp off and connect only two 8 ohm speakers (or one 4 ohm) speaker to your amp when you are in BRIDGE MODE.

FOR MAXIMUM OUTPUT:

To get your loudest output, use multiple speakers or enclosures. Every time you double your speakers, your acoustic output goes up by a factor of four. Load the amplifier down to its lowest minimum impedance for maximum RMS power.

EXTENSION SPEAKERS:

The extension speaker for the **KB1010** is the **1010E** and for the **KB1015**, the model number is **1015E**. Please contact Carvin sales at **800-854-2235** or **carvin.com**.

HELPFUL HINTS

- 1) POOR BIAMP SOUND: The speaker cables from AMP 1 (woofers) and AMP 2 (1" titanium hf drivers) have been reversed, AMP 1 and 2 level controls are not balanced or the X-OVER has been set at an incorrect frequency. (start at 800 Hz). WARNING: Incorrect BIAMP connections may damage mid/high frequency drivers.
- 2) NO SOUND FROM AMPS 1 & 2: The rear BRIDGE switch has been inadvertently pushed in, or speakers plugged into wrong jacks.
- 3) NO HIGH FREQUENCIES: 1" Titanium HF Drivers have been damaged from to much power or low frequencies. Be sure to make the correct speaker connections when BIAMPING.
- 4) WEAK BASS: The speaker systems are wired out of phase to each other. To correct, reverse the wires on one speaker connector.
- 5) DIRECT OUT XLR HUM: Try switching the GND LIFT switch IN or OUT. If the hum is not eliminated, use Carvin's **MTF55** ground lift adaptor which cuts the input ground on the connectors.
- 6) KEYBOARD PATCHES SOUND "HOLLOW" or HAVE LOW VOLUME:
- Try disconnecting one of the stereo inputs from the keyboard. Some keyboard or effects settings depend on stereo imaging to get their full-sound. This commonly means putting the left and right signals out-of-phase. If these out-of-phase signals are mixed in either the MONO or BIAMP MODES, cancellation of signal will occur. Panning or "leslie" effects within a patch may cause similar results.
- 7) HEADPHONE VOLUME IS TOO LOW OR YOU NEED TO SHUT OFF SPEAKERS: Turn down the POWER AMP 1 &2 controls and increase the MAIN level control.

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

IMPORTANT! FOR YOUR PROTECTION, PLEASE READ THE FOLLOWING:

WATER AND MOISTURE: Appliance should not be used near water (near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc). Care should be taken 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 BROWN—Live

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 1 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 SERVICING OTHER THAN OUR OWN. A COPY OF THE ORIG-INAL 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.

21-45000

In the USA, please call 800-235-2235 for a RMA # (return authorization number). Write this number on the box and enclose a description of the problem. Prepay to Carvin 12340 World Trade Drive, SD, CA 92128.

Outside the USA, contact your dealer or go to http://www.carvinworld.com for your nearest service center. Include a written description of the problem with serial number and date of purchase.

MAINTAINING YOUR EQUIPMENT

3 FACH SPEAKON 4-POLE PCMTG #NI 4MD-V

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..

REPLACEMENT PARTS LIST FOR KB1000

80-72001A 03-00560 03-50135	PCB ASSY MAIN KB1000 SMT "6 EACH STANDOFF W/ANTI SPIN .56X.25""" 17 EACH STANDOFF LED .500 X .135 T1	58-10065	R116," "R117,", "R118, R129, R130, R131, R132, R133," "R134," "R151, R152, R153, R154" 8 EACH 1M SMT .25W 1206 1%
05-64410	ALL LEDs "1 EACH CABLE RIBBON 24A 4P/4"" W/HDR"	50 45045	"R60, R90, R91, R92," "R93, R97, R98, R99"
05-68415	H7-H8 "3 EACH CABLE RIBBON 24A 8P/6"" W/HDR"	58-15045	4 EACH 15K SMT .25W 1206 1% "R75, R76, R85, R102"
06-40060	"H1-H2, H3-H4, H5-H6" 1 EACH TERMINAL 90dg MALE PC MTG .250 QC1	58-22045	13 EACH 22K SMT .25W 1206 1% "R19, R20," "P05, P36, P61, R62, R01, R92,"
21-40001	2 EACH XLR MALE CONNECTOR "J21, J22"	58-33035	"R35, R36, R61, R62, R81, R82," "R45, R46, R47, R48, R55," 8 EACH 3.3K SMT.25W 1206 1% "R141," "R311,
21-52345	14 EACH JACK .250 PHONE MONO STEEL "J1, J2, J3, J4, J5, J6, J7,"	58-47005	R312, R313, R314, R315, R316," R317 2 EACH 4.7 SMT .25W 1206 1%
21-52545	"J8, J9, J10, J11, J12, J13, J14" 1 EACH JACK .250 PHONE STEREO STEEL	58-47015	"R139, R140" 2 EACH 47.5 SMT .25W 1206 1%
23-11004	J15 3 EACH CONNECT HEADER 4 PIN STRAIGHT	58-47025	"R125, R135" 8 EACH 470.5 SMT .25W 1206 1%
23-11008	"H7, H8, H13" 6 EACH CONNECT HEADER 8 PIN STRAIGHT		"R41, R42, R43, R44," "R51, R52, R53, R54"
23-11010	"H1, H2, H3, H4, H5, H6" 1 EACH CONNECT HEADER 10 PIN STRAIGHT H11	58-47035	10 EACH 4.7K SMT .25W 1206 1% "R69, R70, R79, R80, R83, R84, R100," "R101," "R120, R121"
25-02201- AND CAP	1 * STD 6 EACH ASSEMBLED SWITCH	58-47045	26 EACH 47K SMT .25W 1206 1% "R65, R66, R67, R68,"
30-72001B 49-10212	"\$1, \$3, \$4, \$5, \$6, \$7" 1 EACH PCB MAIN KB1000 2 EACH 0.001UF SMT 10% FILM 0805 50V "C46, C50"		"R58, R59, R96, R105," "R56, R106, R108, R109, R110, R119, R""122," "R127, R137, R128, R138," "R211, R212, R213, R214, R215, R216,"R217
49-10412	12 EACH 0.1UF SMT +80-20% CERAMIC 0805 "C81, C82, C83, C84, C85, C86, C87," "C88, C89, C90, C91, C35"	60-75320	9 EACH LED RED DIFFUSED 3MM T-1.00 "D1, D3, D5, D7, D9, D11, D13," "D103, D203"
49-12152	7 EACH 120PF SMT 5% CERAMIC 0805 "C211, C212, C213, C214, C215, C216, "C217	60-75330	8 EACH LED GREEN DIFFUSED 3MM T-1.00 "D2, D4, D6, D8, D10, D12, D14, D16"
49-22212	2 EACH 0.0022UF SMT 10% FILM 0805 50V "C45, C49"	60-75340 62-04739	1 EACH LED YELLOW DIFFUSED 3MM T-1.00 D15 7 EACH SMT DIODE ZENER 4739
49-22035	24 EACH SMT CAP 22uF 35v ELECTROLITIC "C1, C2, C3, C4, C5, C6, C7," "C8, C9, C10, C11, C12, C13, C14,"	62-20430	"Z11, Z12, Z3, Z4, Z5, Z6, Z7" 7 EACH NJM2043SMT(TESTED) DUAL HFREQ "A1, A2, A3, A4, A5, A6, A7"
49-27052	"C15, C16, C51, C52, C53," "C54, C60, C66, C79, C80" 27 EACH 27 PF SMT 5% CERAMIC 0805 "C21, C22, C23, C24, C25, C26, C27,"	62-45650	17 ÉACH NJM4565 SMT DUAL HI FREQ "A8, A9, A10, A11, A12, A13, A14," "A15, A16, A17, A18, A19, A20," "A21, A22, A23, A25"
	"C28, C29, C30, C31, C32, C33, C34," "C19, C20, C41, C42, C61, C62," "C67, C77, C74, C88, C89, C90, C91"	62-54001 62-55500	2 EÁCH MMBŤ5401LT1 PNP SOT-23 SMT "Q1, Q3" 2 EACH MMBT5550 NPN SOT-23
49-33312	4 EACH 0.033UF SMT 10% FILM 0805 50V	71-09253B	"Q2, Q4" "2 EACH POT 9 ""D-P"" 25F B50K WHITE"
49-47212	"C58, C59, C75, C76" 4 EACH 0.0047uf SMT FILM 0805 50V	72-12515	"P11, P12" "1 EACH POT 12 ""D-P"" 25F 15C50Kx2 BLK" P9
49-47312	"C63, C68, C71, C73" 2 EACH 0.047UF SMT 10% FILM 0805 50V	72-12552	"4 EACH POT 12 ""D-P"" 25F 1B50Kx2-C BLK" "P13, P14, P15, P16"
	"C36, C48"	72-12553	"9 EACH POT 12 ""D-P"" 25F 1B50Kx2 BLACK" "P1, P2, P3, P4, P5," "P6, P7, P8, P10"
49-56152	4 EACH 560PF SMT 5% CERAMIC 0805 "C64, C69, C65, C70"	77-10005 80-01002A 03-00450C	"1 EACH LABEL PCB ASSY TRACK ""R-S-T""" PCB ASSY PWR AMP KB1000 SMT
49-82052	11 EACH 82PF SMT 5% CERAMIC 0805 "C17, C18, C37, C38, C39, C40," "C43, C44, C55, C56, C57"	03-00451B 03-00475	1 EACH INSLTR HTSNK 12-01200 SNGL ADH 1 EACH INSLTR HTSNK 12-01200 DBL ADHV 2 EACH SPACER PAD 1.4X 7.75 W/ADHSV "under PL1, 0106, 0206"
58-10025	4 EACH 100.5 SMT .25W 1206 1% "R15, R16, R57, R123"	03-00503 03-44049	"4 EACH INSULATOR .36X .36X .20"" 85deg" On top of each TO-220 package Mount on fan 4 EACH WASHER NYLON #6x.30x.049
58-10035	3 EACH 1K SMT .25W 1206 1% "R107, R126, R136"	03-82061 06-10028	"1 EACH CABLE TIE 14.5Lx.19Wx 2"" BNDL" 12 EACH MS PPH 4-40X .500 ZINC TYPE F PCB to HEATSINK
58-10045	50 EACH 10K SMT .25W 1206 1%	06-10032	4 EACH MS PPH 4-40X 1.500 TYPE F ZINC Fan Mount
	"R1, R2, R3, R4, R5, R6, R7," "R8, R9, R10, R11, R12, R13, R14,", "R17,	06-40050	2 EACH TERMINAL VERT MALE PC MTG .250 "QC3, GND"
	R18,""R21, R22, R23, R24, R25, R26, R27," "R28, R29, R30, R31, R32, R33, R34," "R37, R38, R39, R40, R49, R50,", "R63, R64,	07-01603 12-01200C	"1 EACH KNOB ""6L"" 6x6x17.4mm GREY CAP" "Secondary, S2" 2 EACH HEATSINK 225.6MM SMT 1200W 12
	R86, R87, R88, R89," "R71, R72, R73, R74," "R94, R95, R103, R104"	12-57462	2 EACH HEATSINK VERT W/TABS TO-220 "VR1, VR2"
58-10055	20 EACH 100K SMT .25W 1206 1% "R77, R78,", "R111, R112, R113, R114, R115,	15-00105	2 EACH COIL AIR 1.5uH 14AWG "L100, L200"

REFER SERVICING TO QUALIFIED SERVICE CAUTION PERSONNEL! THIS UNIT CONTAINS HIGH RISK OF ELECTRIC SHOCK **VOLTAGE INSIDE!** EACH RECEPTACLE AC W/FAST-ON CHASS, PL1 58-18035 1 EACH 1.8K SMT .25W 1206 1% R315

1 FACH 220.5 SMT 25W 1206.1% R210

58-22025

21-45000	3 EACH SPEAKON 4-POLE PCMTG #NL4MD-V "J6, J7, J8,"	58-22025 58-22035	1 EACH 220.5 SMT .25W 1206 1% R210 4 EACH 2.2K SMT .25W 1206 1%
21-52345	4 EACH JACK .250 PHONE MONO STEEL	30-22033	"R100, R101, R133, R233"
	"J9, J11, J102, J202"	58-22045	2 EACH 22K SMT .25W 1206 1%
21-51545	"2 EACH JACK .250""PHONE STEREO PLASTIC" "J1, J2"	58-22055	"R317, R327," 2 EACH 220K SMT .25W 1206 1% "R227, R228"
23-03529	2 EACH FUSEHOLDER CLIPS 3AG VERT MTG F1	58-27045	1 EACH 27K SMT .25W 1206 1% R323
23-08604	"5 EACH CONNECT HEADER .086"" 4 PIN"	58-33035	3 EACH 3.3K SMT .25W 1206 1%
	"H1A, H1B, H6A, H6B, H10"	50.00045	"R59, R209, R329"
23-08609 23-10002	"1 EACH CONNECT HEADER .086"" 9 PIN H7 "3 EACH CONNECT HEADER .100"" 2 PIN"	58-33045	3 EACH 33K SMT .25W 1206 1% "R319, R176, R276"
23-10002	"H8, H9, H12"	58-47015	1 EACH 47.5 SMT .25W 1206 1% R226
23-11004	3 EACH CONNECT HEADER 4 PIN STRAIGHT	58-47025	2 EACH 470.5 SMT .25W 1206 1%
00 11010	"H2A, H2B, H13A"	E0 4700E	"R140, R240"
23-11010	3 EACH CONNECT HEADER 10 PIN STRAIGHT "H3A, H3B, H11B"	58-47035	7 EACH 4.7K SMT .25W 1206 1% "R134, R139, R141, R234, R239, R241, R326"
25-02201	1 EACH SWITCH DPDT PUSH PC MTG LOCKNG S2	58-47045	6 EACH 47K SMT .25W 1206 1%
25-02201-	1 * STD 1 EACH ASSEMBLED SWITCH AND CA S1	E0 470EE	"R4, R97, R138, R238, R311, R314"
30-01500D 42-10381	1 EACH PCB DCM600/1000 "2 EACH CAP ELEC 10.000 MFD 80V 20%"	58-47055	5 EACH 470K SMT .25W 1206 1% "R1, R8, R12, R13, R322"
42 10001	"C501, C502"	58-56035	1 EACH 5.6K SMT .25W 1206 1% R321
47-10235	"3 EACH CAP ELEC 1,000 MFD 35V 20%"	58-68025	1 EACH 5.6K SMT 25W 1206 1% R321 2 EACH 680 SMT .25W 1206 1%"R147, R247" 2 EACH 6.8K SMT .25W 1206 1%"R177, R277"
47-47125	"C503, C504, C507" 1 EACH CAP ELEC 470 MFD 25VOLT 20% C71	58-68035 58-68045	2 EACH 6.8K SMT .25W 1206 1%"R177, R277" 1 EACH 68K SMT .25W 1206 1% R330
49-10212	1 EACH 0.001UF SMT 10% FILM 0805 50V C403	58-92201	12 EACH 22 SMT 1W 2512 20%
49-10312	3 EACH 0.01UF SMT 10% FILM 080550V		"R136, R150, R151, R182, R332, R333"
49-10451	"C181, C281, C317" 12 EACH 0.1 uF SMT 10% FILM 1206 50V	60-31000	"R334, R335, R250, R251, R419, R420" 2 EACH BIPOLAR PWR TIP31C NPN 3A 100V
49-10401	"C2, C3, C6, C10, C62, C63, C121"	00-31000	Use 60-03400 for Rev C PCB's "Q106, Q206"
	"C221, C270, C310, C505, C506"	60-21193	6 EACH TRNS BIPOLAR MJL21193 PNP T03
49-22035	12 EACH SMT CAP 22uF 35v ELECTROLITIC	00.04404	"Q112, Q113, Q114, Q212, Q213, Q214"
	"C64, C70, C82, C103, C104, C105, C186" "C313, C318, C410, C12, C106"	60-21194	6 EACH TRNS BIPOLAR MJL21194 NPN T03 "Q108, Q109, Q110, Q208, Q209, Q210"
49-27052	8 EACH 27 PF SMT 5% CERAMIC 0805	60-15032	2 EACH TRANS MJE15032 NPN TO-220
	"C1, C5, C84, C88, C93, C94, C175, C275"		"Q107, Q207"
49-39052	6 EACH 39PF SMT 5% CERAMIC 0805 "C176, C276, C73, C74, C78, C79"	60-15033	2 EACH TRANS MJE15033 PNP T0-220 "Q111, Q211"
49-47312	2 EACH 0.047UF SMT 10% FILM 0805 50V	60-35041	1 EACH RECTIFIER BRIDGE 35AMP/400V PC BR1
	"C180, C280"	60-50253	2 EACH OPTO ISOLATOR VACTROL AXIAL
49-56152	8 EACH 560PF SMT 5% CERAMIC 0805	00 70450	"0P3, 0P4"
	"C182, C283, C284, C285" "C282, C283, C284, C285"	60-78150- 60-79120-	1 * ST 1 EACH REG VOLT 15+V 1A (PREPPED) VR1 1 * STD 1 EACH REGULATOR VOLTAGE 12 (PREPPED)
49-82052	2 EACH 82PF SMT 5% CERAMIC 0805	00 / 0120	07
E4 4700E	"C177, C277"	60-79150-	1 * STD 1 EACH REG VOLT 15-V 1A (PREPPED)
54-47025	1 EACH RES 470.00 OHM 2.00W 5% CARBON R156	62-06001	VR2 11 EACH DIODE ULTRA FAST 600V 1A SMA
55-03300	12 EACH RES .33 OHM 5W 5% SB VERT	02 00001	"D18B, D108B, D109B, D208B, D209B, D501B,"D502B
	"R153, R155, R161, R163, R169, R171"		"D503B, D504B, D505B, D506B"
55-05025	"R253, R255, R261, R263, R269, R271" 2 EACH RES 5.00 OHM 5W 5% SB VERT	62-00014	2 EACH MMBTA14 SOT-23 SMT "Q100, Q200"
00-00020	"R186, R286"	62-19140	27 EACH 1N914 HI SPD SMT 250mW DIODE
55-30035	2 EACH RES 3.00KOHM 5W 5% SB WIRE		"D1, D2, D3, D7, D8, D9, D10, D12, D13, D1""4, D15"
EC 0700E	"R103, R187"		"D16, D17, D100, D106, D107, D111, D206, D"207
56-27025 58-00035	1 EACH RES 270.00 OHM 10W 10% SB SD0F R105 1 EACH 0.0 SMT JUMPER 1206 R15	62-03400	"D310, D311, D312, D25, D26, D27, D28, D29" 6 EACH TRANSISTOR SMT MJD340
58-10025	7 EACH 100.5 SMT .25W 1206 1%	02 00 100	"Q1, Q102, Q105, Q202, Q205, Q301"
E0 4000E	"R7, R11, R23, R135, R167, R235, R405"	62-03500	4 EACH TRANSISTOR SMT PNP MJD350
58-10035	16 EACH 1K SMT .25W 1206 1% "R3, R6, R9, R21, R120, R137, R142"	62-20430	"Q103, Q104, Q203, Q204" 2 EACH NJM2043SMT(TESTED) DUAL HFREQ
	"R143, R144, R145, R237, R242, R243, R244,"R245	02 20100	"A17, A18"
	"R318, R325"	62-45650	5 EACH NJM4565 SMT DUAL HI FREQ
58-10045	30 EACH 10K SMT .25W 1206 1% "R131, R130, R205, R206, R230, R231, R207,"R208	62-54001	"A8, A16, A20, A21, A23" 4 EACH MMBT5401LT1 PNP SOT-23 SMT
	"R2, R102, R168, R170, R172"	02-34001	"Q14, Q117, Q217, Q303"
	"R173, R174, R180, R181, R320, R324"	62-55500	5 EACH MMBT5550 NPN SOT-23
58-10055	"R417, R421, R422, R424, R425," 5 EACH 100K SMT .25W 1206 1%	70-02408	"Q2, Q15, Q10, Q9, Q302" 1 EACH FAN DC24V 80x80x25mm 42cfm SUN
30-10033	"R178, R179, R278, R279, R331"	70-02400	3 EACH RELAY SPDT 12A@120VAC/24V COIL
58-10065	2 EACH 1M SMT .25W 1206 1% "R5, R22"		"K1, K100, K200"
58-15025	16 EACH 1500hm SMT .50W 1206 1%	70-22125	1 EACH FUSE MDA 25.00A SLOW 6.35X32MM
	"R132, R148, R248, R211" "R146, R149, R216, R217, R219, R220"	71-24500	2 EACH POT VERT TRIMMER 500ohm PHILL "P101, P201"
	"R222, R223, R224, R225, R246, R249"	77-00011	1 EACH LABEL PATENT PENDING PWR MOD
58-15035	1 EACH 1.5K SMT .25W 1206 1% R312	77-10005	"1 EACH LABEL PCB ASSY TRACK ""R-S-T"""
58-15055	4 EACH 150K SMT .25W 1206 1% "R189, R289, R229, R232"		
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