



AG100D

Congratulations on your purchase of the AG100D Series III amplifier. We've included all of the great features a solo performer needs, such as three independent channels with separate volume and EQ, MID sweep control, phantom mic power and 5 band Graphic EQ. Then we added our dual 24 Bit Digital Effects Processor. Additional features include, mid & HI Contour switches on channel 1, Bass and Mid Contour switches on channel 2.

Channels 1's voicing is designed for standard electric or acoustic guitars while channels 2 and 3 will also accommodate line level signals from keyboards, tape decks, drum machines and a balanced microphone, making the AG100D well suited for a "One-Man-Band" stage set-up.

We haven't neglected the bass player with the bass tuned enclosure and "1" Titanium HF Driver, combined with 100 watts RMS of power—ideal for acoustic or electric basses. You can play bass and guitar simultaneously without degrading the guitar signal. Just plug the bass into channel 2 and start thump'n!

RECEIVING INSPECTION—read before getting started

INSPECT YOUR AMP 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.

USA customers register online at: www.carvin.com/registration

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

For your records, you may wish to record the following information.

Serial No. _____ Invoice Date _____

CONNECTING AC POWER TO YOUR AG100D

- Use only a grounded (3 prong) power outlet to prevent a shock hazard. This also gives the quietest grounding for the amplifier

CONNECTING INPUTS TO YOUR AG100D

- Channel one is specially designed for acoustic and electric guitars using a 1/4" phone shielded cable.
- Channel two is an instrument/line input. Any unbalanced device such as another guitar, tape recorders, drum machine, or keyboard can be plugged in using a 1/4" phone plug shielded cable.
- Channel three is a microphone & line input. Plug a microphone or line level device into the balanced XLR MIC input using an XLR shielded microphone cable and a 1/4" shielded cable from your tape machine. Both can be used at the same time.

TURNING ON YOUR AG100D

- Adjust all three channel volume controls to their off position (full counter clockwise).
- Turn the Gain control to "0" on Channel 1
- Adjust all "EQ" tone controls to their center detent position.
- Adjust all channel effects sends return to their off "center" position.
- Turn the AG100D on by the power switch on the front panel and watch for the power LED to come on.
- Plug in your instruments and microphone into the appropriate channels, and adjust the volume controls to the desired playing level. (For detail on the individual channel tone controls and the graphic equalizer, see the appropriate sections in this manual.)

AG100D SERIES III ACOUSTIC AMP SPECIFICATIONS:

Frequency Response:	Mic or Line Inputs: 20Hz-20KHz ±2dB
Total Harmonic Distortion:	Less than 1%
Output Power:	100 Watts RMS @ 8ohms
Phantom Power:	Channel 3 only for use with condenser mics
Channel 1:	3 band active LOW: 80Hz ±12dB Acoustic Sweep: 300-3KHz ±12dB HI: 10KHz ±12dB
Channel 2&3:	2 band active, LOW: 80Hz ±12dB HI: 10kHz ±12dB
Graphic EQ.:	5 Band: 100Hz, 250Hz, 800Hz, 6kHz, and 12kHz ±10dB
Input ch. 1&2:	1/4" Phone Jack
Mic/Line Input ch. 3:	Balanced XLR input with phantom power, 1/4" Phone Jack
Power Consumption:	150VA @ 120/240VAC
Power Requirement:	100 to 240 VAC, 50-60Hz
Size:	17.5W x 12D x 22H, 35 lbs.
SPEAKER SPECS:	12" PS12 or 15" PS15 woofer (depending on model purchased) 1" Titanium HF Driver with adjustable L-Pad on crossover.
12" Cabinet Response:	63Hz to 16.5kHz

112AG EXTENSION 2-WAY SPECIFICATIONS:

Output Power:	300w
Impedance:	8Ω
Size:	17W x 12D x 19H, 35 lbs.
SPEAKER SPECS:	12" PS12 woofer 1" Titanium HF Driver with adjustable L-Pad on crossover.
12" Cabinet Response:	63Hz to 16.5kHz



12340 World Trade Drive, San Diego, CA 92128
(800) 854-2235
www.carvin.com

AG100D FRONT & REAR PANEL CONTROLS

CHANNEL 1 FEATURES

1. INPUT 1 JACK & CONTOUR SWITCHES

The INPUT jack is designed for instruments such as acoustic or electric guitars. The MID switch cuts the mid range frequency 10dB at 400Hz which results in an enhancement of the bass and treble response. This can be an ideal setting with acoustic guitars. Use the HI switch to enhance the high frequencies (10dB boost at 10kHz) perfect for brightening up an acoustic guitar.

2. VOLUME CONTROL

The VOLUME control adjusts the volume of the channel heard in the speaker, the line out jack and the headphone jack.

3. EFFECTS CONTROL FOR CH 1,2 & 3

Each channel features an EFF control. The EFFECTS control adjusts the volume of the channel going to the one of the internal DSP processors. Turning counter-clockwise to the left will send the channel's signal to EFF 1 and turning clockwise to the right will send the channel's signal to EFF2. The effects control is post (or after) the volume control. Watch the PK (peak) LED on EFF 1 and 2 in the master section. Turn down the channel EFF level if the LED starts to flash.

4. LO AND HIGH TONE CONTROLS

The LO and HI tone controls are used to shape the bass and treble sound of the input signal. Start out with the tone controls in their center positions where they do not effect the signal. Then, as needed, turn the tone controls (turn to the right to boost, or to the left to cut) to change the sound.

5. ACOUSTIC SWEEP TONE CONTROLS (FREQ. AND GAIN)

The FREQ and GAIN controls make up the MID sweep control. The way to get familiar with these controls is to set the GAIN control to near full clockwise, and turn the FREQ control through its full rotation while playing chords or notes on an instrument. Then try it again with the gain control to near full counter clockwise to hear the difference. A suggested setting for electric guitars is to place the GAIN control at +6 and set the FREQ control at 800Hz. This setting will remove the mid frequencies for a crisper sound.

CHANNEL 2 FEATURES

6. INPUT 2 JACK & LO/MID CONTOUR SWITCHES

The INPUT phone jack is designed for instrument or line level inputs such as a drum machine, tape deck, another guitar or bass guitar, a keyboard, an unbalanced mic, etc.. The LO switch is a 10dB low freq. boost at 60Hz & the MID switch is a 10dB mid cut at 400Hz. These "pre-shape" filters can help eliminate the guess work when dialing in the tone of your instrument. You can then fine tune your sound with the EQ knobs.

7. VOLUME CONTROL

The VOLUME control adjusts the level of the channel heard in the speaker, the line out jack, and the headphone jack. The gain structure of this channel is designed to handle both instrument and line level inputs. The result is some instruments, such as a single coil electric guitar, may need the VOLUME control turned up to 7 or higher to match the other channels. Also, for the same

reason some line level inputs, such as a CD player may need the VOLUME control less than 1 to match the other channels.

8. LO AND HI TONE CONTROLS

The LO and HI tone controls are used to shape the bass and treble sound of the input signal. It is suggested that the tone control settings start in their center positions where they do not effect the signal. Then, as needed, turn the turn to the right to boost, or to the left to cut to change the sound.

CHANNEL 3 FEATURES

9. XLR MICROPHONE & 1/4" INPUT JACKS

The MIC input is designed for balanced low impedance (microphone) input signals. The Balanced input will reduce the common noise picked up on the microphone cables. The XLR connector is wired as per the industry standard; pin 1 is ground, pin 2 is positive and pin 3 is negative. Phantom power is available on the XLR input jack. This allows condenser microphones to be run directly without the need for batteries or other external phantom power supplies. The 1/4" jack is designed for unbalanced high impedance signals (guitar, tape deck, drum machine, etc.). Both of these inputs can be used at the same time.

10. VOLUME CONTROL

The VOLUME control adjusts the volume of the channel heard in the speaker, the line out jack, and the headphone jack.

11. LO AND HI TONE CONTROLS

The LO and HI tone controls are used to shape the bass and treble sound of the input signal. It is suggested that the tone control settings start in their center positions where they do not effect the signal. Then, as needed, turn the turn to the right to boost, or turn to the left to cut to change the sound.

12. DIGITAL SIGNAL PROCESSING

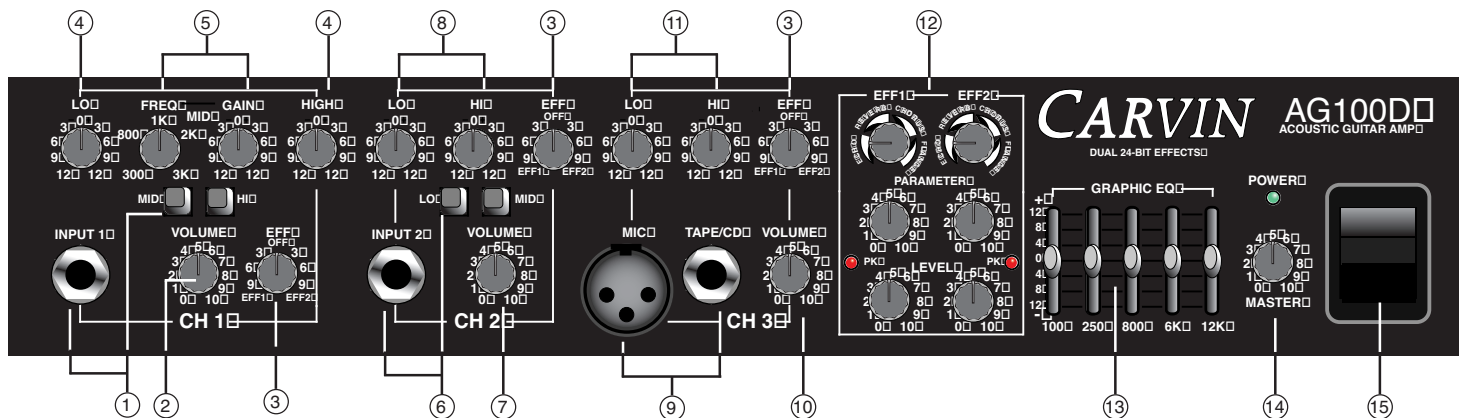
The 24 bit processor will provide a host of awesome sounding effects that include: **Flange, Reverb, Echo, & Chorus**. The master **EFFECT 1 & 2** control will adjust the volume level of the selected effect. Remember each channel has its own **EFFECT** send level that will adjust the amount of signal sent to the effects processor. The red **PK LED** will indicate when the effects signal is clipping. Lower the channel **EFFECT** control until the **PK LED** stops flashing. (Note: When adjusting the effects on either channel, an audible noise may be heard).

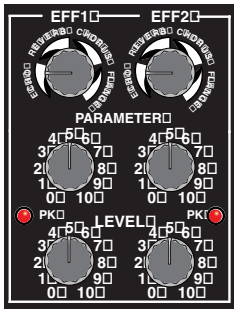
EFFECT PARAMETERS

Each of the four effects has a variable parameter that can be easily adjusted.

ECHO: When the top **SELECT** control is at the "7 O'clock" position, it is selected to the first **ECHO** setting where you get a single repeat echo (minimal regeneration). Turning the **PARAMETER** control to 1 will provide the shortest delay time between the original signal and the echo. Increasing the **PARAMETER** control to the right will increase the time delay between the original signal and the echo. You can get a maximum of .5 second delay. To increase the number of echoes, turn the **SELECT** control clockwise to "9 O'clock" (maximum regeneration).

REVERB: When the **SELECT** control is at the "10 O'clock" position, it is selected





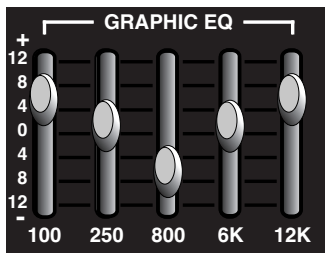
to the first **REVERB** setting. Turning the **SELECT** control clockwise will increase the amount of high frequencies in the reverb. Turning the **PARAMETER** control to 1 will provide minimal decay time of the reverb. Increasing the **PARAMETER** to the right will increase the reverb decay time.

CHORUS: When the **SELECT** control is at the “1 O-clock” position it is selected to the first **CHORUS** setting. Turning the **SELECT** control clockwise will increase the amount reverb in the chorus. Turning the **PARAMETER** control to 1 will provide a minimal chorus depth setting. Increasing the **PARAMETER** to the right will increase the chorus depth.

FLANGE: When the **SELECT** control is at the “3 O-clock” position it is selected to the first **FLANGE** setting. Turning the **SELECT** control clockwise will increase the flanger’s speed. Turning the **PARAMETER** control to 1 will provide minimal flanging depth. Increasing the **PARAMETER** to the right will increase the flanger’s depth.

13. THE 5 BAND GRAPHIC EQUALIZER

The 5 band graphic EQ is an excellent tool to fine tune the overall mix from your AG100D. To use the 5 band Graphic EQ, set all sliders to their center detent position. When the sliders are in this position, they do not effect the audio signal. When a slider is raised or lowered it boosts and cuts the listed frequency, respectively. One setting that can be used to enhance your sound is to cut the mid range (800 Hz slider set to -8) and raise the high and low frequencies as shown. This is a common “smile” curve that gives a tight punchy sound with plenty of highs to cut through a crowd.



14. MASTER VOLUME

The overall volume is controlled by the master volume. The position of this control should always be higher than the individual channel volume. Never turn a channel volume louder than the master volume or distortion could result.

15. POWER SWITCH

The power switch is to be utilized as the master ON/OFF switch. If the LED does not turn on check the power cable and make sure it is properly connected at the back of the amp. Also verify there is power at the wall receptical. If the amp does not power up after this is verified, contact customer service.

REAR PANEL CONTROLS

16. STEREO LINE OUT JACK (HEADPHONES)

The LINE OUT jack is a post EQ output jack for pre amp signal access. Use only a stereo 1/4” plug in this jack. This output is the same signal that is being fed to the internal power amplifier that drives the speaker. Use this jack for a direct to mixer feed or as a recording output to a tape deck. The DSP effects will be heard in stereo through this output. This jack will also function as a

stereo headphone output.

17. EFF 1 & 2 FOOTSWITCH JACK

You can remotely turn the two effects on and off by plugging in the optional FS22 footswitch. Each effect red clip LED will light up continuously when the effect is shut off by the footswitch.

18. EFFECTS SEND & RETURN JACKS

The EFFECTS SEND jack is the output send jack to your external effects unit. The EFFECTS RETURN jack is the input return jack that completes the effects loop. Plug the output of your external effects unit into this jack.

19. EXTERNAL SPEAKER JACK (CHASSIS)

The EXTERNAL SPEAKER jack is for connecting additional speaker cabinets. The jack is configured so an external speaker cabinet can be connected in series with the AG100D’s internal speaker. Recommended external speaker impedances are 4 to 8 ohms. Carvin recommends the matching 112AG extension speaker.



20. AC POWER

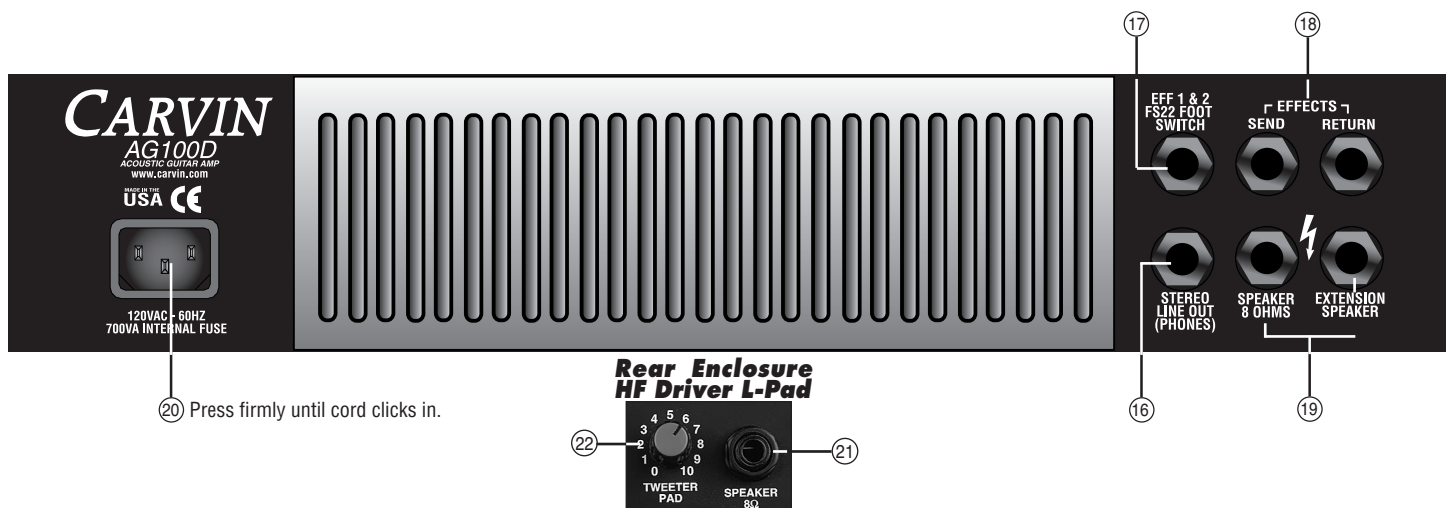
The detachable AC POWER CORD supplied is designed to operate with one type of voltage (the European 230V export model uses a CEE-7 plug cord set). Make sure the cord is securely inserted into the back of the unit. Plug the cord into a grounded “3” prong” power source. No attempt should ever be made to defeat or use the amp without the ground connected. The internal switching power supply will “auto-switch” from 100 VAC to 250 VAC, 50 to 60 Hz. This allows the AG100D to be used in various countries without the need for modifications or external transformers.

21. 1/4” SPEAKER INPUT (ENCLOSURE)

A 1/4” jack is used for connecting the amp to the speaker cabinet.


22. TWEETER L-PAD (ENCLOSURE)

The rear 1” Titanium HF Driver L-PAD adjusts the level of the HF Driver to give crisp clear highs. If distortion is heard when playing excessively loud, turn the HF Driver down as it can amplify distortion created by a guitar or mic.




20 Press firmly until cord clicks in.



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

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN


 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 appliance 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 means of an appliance 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 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 SERVICING 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) AMP WILL NOT TURN ON

Check the power to the amp. Check for tripped circuit breakers, unplugged extension cords or power-strip switches that may be turned off. After you have verified there is AC power and the amp still doesn't work, your unit will require servicing.

2) MAINTENANCE

To bring back the new look, your AG100D cabinet can be wiped with mild detergent and/or a warm damp soft cloth. This will remove normal dust and oil from the cabinet. Never spray cleaners or detergents directly at the electronic controls. The AG100D is virtually sealed from outside dust and dirt, but it is recommended to keep the unit free from excessive dust, dirt, and moisture as much as possible.

REPLACEMENT PARTS LIST (for circuit cards)

 **CAUTION**
RISK OF ELECTRIC SHOCK

REFER SERVICING TO QUALIFIED SERVICE PERSONNEL! THIS UNIT CONTAINS HIGH VOLTAGE INSIDE!

80-01019	H (CURRENT) EACH PCB ASSY SYS MSTR AG100D SMT	C85, C88, C89, C94, C121, C123, C15, C134, C135, C136	58-15035	4 EACH 1.5K SMT .25W 1206 1% R58, R59, R304, R305	60-75320	2 EACH LED RED DIFFUSED 3MM T-100 D7, D8	
COMPONENT	QTY/BILL U/M DESCRIPTION						
03-00475	1 EACH SPACER PAD .1X .4X .75 W/ADHSV SPACER UNDER PL1	49-10451	17 EACH 0.1 uF SMT 10% FILM 1206 50V C8, C11, C17, C21, C23, C26, C29, C32, C56, C70, C72, C116, C201, C210, C313, C110, C125	58-15045	2 EACH .15K SMT .25W 1206 1% R125, R34	60-75330	1 EACH LED GREEN DIFFUSED 3MM T-100 D1
03-50135	3 EACH STANDOFF LED .500 X .135 T1 STANDOFF FOR D1, D7, D8	49-18152	3 EACH 180PF SMT 5% CERAMIC 0805 C51, C87, C126	58-15055	3 EACH 150K SMT .25W 1206 1% R71, R75, R147	60-78050	1 EACH REGULATOR VOLTAGE 5 +V 1 AMP Q15
06-40050	3 EACH TERMINAL VERT MALE PC MTG .250 QC1, QC2, QC3	49-22035	33 EACH SMT CAP 22uF 35v ELECTROLITIC C1, C2, C4, C20, C22, C25, C34, C35, C47, C48, C53, C54, C62, C64, C66, C67, C68, C91, C96, C100, C102, C107, C108, C111, C120, C202, C203, C205, C302, C303, C304, C307, C310	58-22035	14 EACH 2.2K SMT .25W 1206 1% R70, R72, R74, R76, R78, R106, R109, R110, R306, R307, R315, R316, R116, R123	60-78150	1 EACH REGULATOR VOLTAGE 15 +V 1 AMP Q16
06-40060	3 EACH TERMINAL 90deg MALE PC MTG .250 QC4, QC5, QC6	49-22035	33 EACH SMT CAP 22uF 35v ELECTROLITIC C1, C2, C4, C20, C22, C25, C34, C35, C47, C48, C53, C54, C62, C64, C66, C67, C68, C91, C96, C100, C102, C107, C108, C111, C120, C202, C203, C205, C302, C303, C304, C307, C310	58-22045	13 EACH 22K SMT .25W 1206 1% R5, R39, R18, R100, R105, R126, R201, R202, R35, R140, R146, R163, R115	60-79150	1 EACH REGULATOR VOLTAGE 15 -V 1 AMP Q17
15-00300	2 EACH INDUCTOR .3 mH DRUM CORE L7, L8	49-22212	5 EACH 0.0022UF SMT 10% FILM 0805 50V C75, C78, C105, C204, C106	58-22055	2 EACH 220K SMT .25W 1206 1% R9, R63	60-80200	2 EACH DIODE 8A 200V TO-220 D22, D23
15-27430	5 EACH BEAD W/LEAD .138dx .35Lx 22AWG L1, L2, L4, L5, L6	49-22312	1 EACH 0.022UF SMT 10% FILM 0805 50V C6	58-27025	1 EACH 270.5 SMT .25W 1206 1% R50	61-04737	1 EACH DIODE REG GEN 1N4737A 7.5V 1W Z4
15-05001	1 EACH LINE FILTER/INDUCTOR 5mH 3A L3	49-25152	3 EACH 220PF SMT 5% CERAMIC 0805 C79, C92, C137	58-33025	6 EACH 330.5 SMT .25W 1206 1% R142, R143, R161, R162, R97, R157	62-04739	5 EACH SMT DIODE ZENER 4739 Z6, Z7, Z8, Z9, Z10
15-900326	1 EACH TRANSFORMER SWITCHING 100W T1	49-27052	5 EACH 27 PF SMT 5% CERAMIC 0805 C83, C84, C128, C130, C132	58-33045	3 EACH 33K SMT .25W 1206 1% R66, R48, R132	62-06001	4 EACH DIODE ULTRA FAST 600V 1A SMA D4, D18, D19, D21
21-31100	1 EACH RECEPTACLE AC W/FAST-ON CHASS PL1	49-33212	1 EACH 0.0033UF SMT 10% FILM 0805 50V C5	58-36055	1 EACH 365K SMT .25W 1206 1% R73	62-07712	1 EACH IC DSP W/CODEC AKM7712 U1
21-40000	1 EACH XLR FEML CON #NC3FAV-0 J5	49-33312	3 EACH 0.033UF SMT 10% FILM 0805 50V C9, C71, C109	58-39035	2 EACH 3.9K SMT .25W 1206 1% R40, R43	62-16400	1 EACH CRYSTAL CERAMIC SMT 16.4MHz Y1
21-50345	6 EACH JACK .250" PHONE MONO PCB MTG J1, J100, J11, J2, J200, J6	49-39052	15 EACH 39PF SMT 5% CERAMIC 0805 C10, C24, C49, C50, C55, C58, C69, C97, C98, C99, C101, C119, C309, C403, C52	58-47015	2 EACH 47.5 SMT .25W 1206 1% R85, R151	62-19140	6 EACH 1N914 HI SPD SMT 250mV DIODE D5, D6, D10, D11, D13, D20
21-50545	3 EACH JACK .250" PHONE STEREO PCB MT J300, J3, J7	49-47212	5 EACH 0.0047uF SMT FILM 0805 50V C18, C30, C73, C76, C14	58-47025	6 EACH 470.5 SMT .25W 1206 1% R27, R28, R302, R104, R158, R53	62-20430	1 EACH NJM2043SMT DUAL HFREQ A11
23-03529	2 EACH FUSEHOLDER CLIPS 3AG VERT MTG F1	49-47312	7 EACH 0.047uF SMT 10% FILM 0805 50V C12, C13, C74, C118, C112, C124, C311	58-47035	14 EACH 4.7K SMT .25W 1206 1% R29, R30, R33, R62, R91, R108, R137, R145, R215, R216, R217, R218, R317, R318	62-45650	14 EACH NJM4565 SMT DUAL HI FREQ A1, A2, A3, A4, A5, A6, A7, A8, A10, A12, A13, A14, A16, A17
23-11004	4 EACH CONNECT HEADER 4 PIN STRAIGHT H4A, H4B, H8A, H8B	49-56152	3 EACH 560PF SMT 5% CERAMIC 0805 C77, C305, C306	58-47045	17 EACH 47K SMT .25W 1206 1% R15, R20, R21, R22, R64, R65, R68, R103, R107, R139, R80, R81, R10, R117, R118, R124, R129	62-54001	8 EACH MMBT5401LTI PNP SOT-23 SMT Q3, Q4, Q5, Q6, Q9, Q10, Q12, Q14
23-11010	4 EACH CONNECT HEADER 10 PIN STRAIGHT H1A, H1B, H3A, H3B	49-82052	7 EACH 82PF SMT 5% CERAMIC 0805 C103, C127, C129, C131, C133, C300, C301	58-47055	1 EACH 470K SMT .25W 1206 1% R6	62-55500	4 EACH MMBT5550 NPN SOT-23 Q1, Q7, Q8, Q13
23-40008	1 EACH CONNECT HEADER .400 IN 8 PIN H2	51-00050	2 EACH RES .00 OHM .50X.20" JUMPER B1, B4	58-56035	3 EACH 5.6K SMT .25W 1206 1% R1, R300, R301	62-87764	1 EACH MICRO CONTROLLER SOIC PACKAGE U2
23-92995	2 EACH SHUNT JUMPER UNPLATED PLACE ON 2 CENTER PIN PAIRS OF H2	53-47045	1 EACH RES 47.0KOHM 1.00W 5% CARBON R42	58-68025	3 EACH 680 SMT .25W 1206 1% R49, R99, R130	70-05713	1 EACH RELAY SPDT 12A@120VAC/24V COIL K1
25-02201-1	4 EACH ASSEMBLED SWITCH AND CAP S100, S101, S200, S201	55-03300	2 EACH RES .33 OHM 5W 5% SB VERT R113, R114	58-68035	2 EACH 6.8K SMT .25W 1206 1% R25, R122	70-21050	1 EACH FUSE ABC 5.00A FAST 6.35X32MM F1
30-01019	1 EACH PCB CARD SYS MSTR AG100D DGLT	58-00035	5 EACH 0.0 SMT JUMPER 1206 B3, R51, R8, R54, R131	58-91025	2 EACH 910.5 SMT .25W 1206 1% R45, R46	71-09252	7 EACH POT 9 "D-P" 25F B50K-CC P100, P102, P103, P200, P201, P300, P301
41-27322	3 EACH CAP POLY FILM .027uF 250V C113, C114, C115	58-10015	3 EACH 10.5 SMT .25W 1206 1% R127, R128, R41	60-00142	1 EACH TRANS NPN TIP142 TO-218 Q1	71-09253	8 EACH POT 9 "D-P" 25F B50K-CC P2, P3, P5, P6, P101, P105, P203, P303
41-47322	1 EACH CAP MYLR .0470UF 250VAC C41	58-10025	6 EACH 100.5 SMT .25W 1206 1% R31, R47, R67, R92, R112, R164	60-00147	1 EACH TRANS PNP TIP147 TO-218 Q12	71-10320	5 EACH FADER 20MM SL20V3-B10K-L15D(G) P1, P7, P9, P10, P11
41-47422	1 EACH CAP MYLR .47uF 250VAC C122	58-10035	11 EACH 1K SMT .25W 1206 1% R16, R52, R69, R84, R98, R101, R102, R111, R133, R150, R3	60-20060	1 EACH TRANSIENT VOLT SUPP 200V 600W Z1	72-12553	3 EACH POT 12 "D-P" 25F 1B50Kx2 NOB P8, P15, P16
42-12142	1 EACH CAP ELEC 120MFD 400VOLT 20% C27	58-10045	37 EACH 10K SMT .25W 1206 1% R2, R11, R12, R13, R23, R24, R26, R32, R37, R55, R60, R82, R83, R86, R87, R88, R89, R90, R94, R95, R96, R120, R121, R135, R136, R138, R155, R141, R144, R148, R149, R152, R153, R159, R160, R165, R312	60-22100	1 EACH IC PRIMARY VIPER 100 VP1	72-12554	1 EACH POT 12 "D-P" 25F 1B50K-C TAP P106, P202, P302
45-18152	1 EACH CAP CERM 180PF 500VOLT 5% C90			60-25011	1 EACH IC OPTO COUPLER ISOLATOR OP2	07-17012	1 EACH KNOB W/RED CAP PB200 PAD CNTRL
45-25152	1 EACH CAP CERM 250PF 500VOLT 5% ACROSS R109			60-40002-1	1 EACH THERMISTOR 400hm 2amp 20% TR1	10-41010	1 EACH PANEL JACK PLATE AG100D/PB200
45-33113	1 EACH CAP CERM 330PF 1000VOLT 10% C40			61-47430	1 EACH DIODE ZNR REG 1N4743A 13V 1W Z2	21-01806	1 EACH JACK 250 90deg STEREO W/BLK NUT J2
46-22412	1 EACH CAP POLY .2200UF 100VOLT 10% ACROSS PINS 6 AND 8 OF H2			60-50200	4 EACH DIODE GEN REC 1N5402 3A 200V D14, D15, D16, D17	30-41010	1 EACH PCB CARD L-PAD PB100/PB200
47-10225-1	3 EACH CAP ELEC 1.000 MFD 25V 20% C38, C39, C46			60-55500	2 EACH TRANS 2N5550 HV NPN 250V TO-92 Q2, Q11	52-22025	1 EACH RES 220.00 OHM .50W 5% CARBON R1
47-22151	1 EACH CAP ELEC 220 MFD 50VOLT 10% C31			60-71024	1 EACH CMOS STATIC RAM 1MEG 20NS U3	71-00031	1 EACH POT WVR 24mm WIRE WOUND B1K 3W P1
47-47151	4 EACH CAP ELEC 470 MFD 50 VOLT 20% C42, C43, C44, C45					77-41010	1 EACH LABEL JACK PLATE PB200
49-10212	4 EACH 0.001UF SMT 10% FILM 0805 50V C3, C59, C117, C308						
49-10312	7 EACH 0.01UF SMT 10% FILM 080550V C7, C16, C19, C33, C93, C95, C104						
49-10412	17 EACH 0.1UF SMT 5% CERAMIC 0805 C60, C61, C63, C65, C80, C81, C82,						