

The DCM1001 professional Dual Graphic amp was designed utilizing Carvin's 37 years of experience in power amp \& equalizer technology. The DCM1001 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. The thick steel face plates, large recessed knobs, 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 $45 \mathrm{v} / \mu \mathrm{s}$ deliver superb transient response. High frequencies aretransparent and open-even at extremelevels. Linear feedback circuits reduce distortion to near the theoretical zero limit, preventing any type of harshness which would lead to ear fatigue. The DOM Series amps deliver flat, transparent, unaltered sound-especially important to the studio user. And you can drive any type of reactive loads, including 70 V 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 PR-4 glass epoxy. This insures that the solder flows on thetop, bottom and through each hole of every component, preventing components from shaking looseeven through constant tour use. Heavy-duty XLR connectors, power switches, recessed knobs, steel front panels all give the DOM amps a "tank-like" ability to handle rough, touring transport.

## TOTALLY MODULAR

With the DCM 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 de-solder anything. This applies to every aspect of the DCM Series amps including the power supply, power cards, heat sinks and fans. Everything is connected by heavy-duty AMPTM and MOLEX ${ }^{\text {TM }}$ 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 DCM 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, multispeed 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 areknown for reducing stray magnetic fields eliminating hum \& noise. This is especially important for the recording industry.

> RECEIVING INSPECTION-read before getting started
> INSPECT YOURUNIT FORANYDAMAGEwhich may haveoccurred during shipping. If any damageis found, pleasenotify theshipping company and CARVNNimmediately. SAVE THE CARTON \& ALL PACKNGMAIARIALS. In the event you have to reship your unit, always usetheoriginal carton and packing material. This will providethebest possible protection during shipment. CARVINand the shipping company are not liable for any damage caused by improper packing.
> SAVE YOURINVOCE It will be required for warranty service if needed in the future. SHIPMENT SHORTAGE If you find items missing, they may havebeen shipped separately. Pleaseallow several days for the rest of your order to arrive before inquiring. RECORD THE SERIIL NNMMBER 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

## DISTORTION-FREE LIM ITERS

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 ÆT controlled limiters which can inject small amounts of distortion, the DAM Series limiters keep your sound pure and uncolored!

## FRONT PANEL \& CONNECTING UP

The DAM Series feature front panel signal, peak and protect LEDs which let you monitor the status of the amp. Both channels use precision level controls allowing you to see your settings at aglance. Balanced $1 / 4$ phone \& XLRinput jacks are used to eliminate hum \& noise. Speaker outputs feature $1 / 4^{\prime \prime}$ jacks, high current TwistLock \& heavy-duty binding posts that accept up to a $50 \mathrm{amp} \# 7$ speaker wire.
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 70 V distribution system and a limiter ONOF switch that gives you the choice of using the internal limiter circuitry.

## DCM1001 POWER AMP SPECIFICATIONS:

## MODEL

Bridged RMS Continuous
$4 \Omega,(20-20 \mathrm{kHz},<0.4 \%)$
DCM1001

Both Channels RMS
1000w
Both Channels RMS Continuous
$2 \Omega(20-20 \mathrm{k} \mathrm{Hz},<0.2 \%) \quad 500 / 500 \mathrm{w}$
$4 \Omega(20-20 \mathrm{k} \mathrm{Hz},<0.2 \%)$
350/350w
$8 \Omega$ ( $20-20 \mathrm{k} \mathrm{Hz},<0.2 \%$ )
THD (Typical):
Damping Factor:
Slew Rate: bridged mode
Sensitivity: $(4 \Omega$, Vms$)$
Signal to Noise Ratio:
Frequency Response:
Input Impedance:
Dual 9 band EQ's
Protection Circuits:
Control and Indicators:
Front:

Rear:

Dimensions:
Net Weight:

225/225w
0.03\%
$>400$
>45v/ $/ \mathrm{s}$
1.0 V

Above 100 dB
$\pm 0.5 \mathrm{~dB}, 20 \mathrm{~Hz}$ to 20 kHz
$( \pm 1.5 \mathrm{~dB}, 10 \mathrm{~Hz} \& 40 \mathrm{kHz}$ )
$>20 \mathrm{~K} \Omega$, balanced
$\pm 12 \mathrm{~dB} @ 63,125,250,0001 \mathrm{k}, 2 \mathrm{k}, 4 \mathrm{k}, 8 \mathrm{k}$ \& 16kHz

- Short Circuit • No Load Protection • SpeakerGuard ${ }^{\text {TM }}$ • Thermal Shut-Off • Mute On/OFF
- Power switch • Recessed detent attenuators • Signal LED - Clip LED - Protect LED • Power Indicator
- Ground Lift • Parallel Input Switch - Speaker Output Bridge Switch • Limiters IN/OUT Sw • Input Connectors: Two each; Balanced XLR \& $1 / 4^{\prime \prime}$ - Speaker Output Connectors: Dual heavy-duty binding posts, four $1 / 4^{\prime \prime}$ phone jacks, and three Twist-Lock connectors.

3 1/2" High x 10" Depth x 19" Wide (2-space)
25 lbs .

## FRONT \& REAR PANEL CONTROLS



## FRONT PANEL

## 1. MOUNTNG

A sturdy one piece 12 gauge steel face plate accommodates easy transporting along with facilitating rack installation. The rack mounting holes are designed on ISOstandard spacing. Four 10-32 x .5 " phillips machine screws are normally used to secure the amp. Rear support brackets are not required.

## 2. POWER SWITCH/ INDICATOR/ FUSE

Check the power amp connections and verify the AC line power source before engaging the POWER switch. The yellow LED unmistakably indicates that all circuits are properly powered up. Yellow is used so the operator can see the red indicators (clipping or protect) from a distance. If the yellow power LED does not light up, remove the lid and replace the fuse located in the back corner where the AC cord connects to the circuit board. (DCM1001: 25AMP slow blow)

## 3. CHANNEL LEVEL CONTROL

A precision input LEVE attenuate is used to adjust the volumelevels. To deliver the amps maximum power without reducing the headroom of the signal source, the level controls should be turned full on.

## 4. CHANNEL SIG NAL INDICATOR

The green SIGNAL LED indicators will start to flash when there is asignal passing to your speakers (-30dBM). This lets you know when the amp is passing a signal to your rear speaker connectors.

## 5. CHANNEL CLIP INDICATOR

Thered OLIPLED 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. DUAL 9-BAND GRAPHIC EQUALIZERS

Controlling feed-back in a monitor system and fine tuning your sound are easy with the DCM1001's two on-board EQs. For feed-back, find the offending frequency 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. USETHEINOUTSMTC-ESTOBYPASSTHEEGs.

## 7. 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 protecting your speakers);

1) 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) Both channels are muted 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 is the 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 comes 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 and the PROTECT LED will turn off when ready. Check for the following conditions; a) The rear intake air is restricted, b) The intake air is extremely warm, c) The front exhaust vents are 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

## 8. XLR CHANNEL INPUTS

For most professional applications, use the XLR balanced inputs. This will help to reduce hum and allow of 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. XLRpin configuration: Pin 1: Grounded through the GROUND LIFT switch, Pin 2: positive Balanced signal and Pin 3: negative Balanced signal.

## 9. 1/4" CHANNEL INPUTS

These $1 / 4^{\prime \prime}$ TRS phonejacks are designed to receiveeither balanced or unbalanced input signals. Balanced signals coming into this jacks should be wired with the connector's tip going to signal + and the connector's ring to signal -. The connector sleeve is then tied to ground through the GROUND LIFT switch.

## 10. PARALLEL OR "Y" INPUTS

The rear PARALLE 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 ( $1 / 4^{\prime \prime}$ 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 GND LIFT ( $1 / 4^{\prime \prime}$ \& XLR) 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 and cut the ground wire to PIN 1.

## 12. LIMITERS

To activatethe LIMITERS, engagethe rear limiter switch. The built-in professional limiters are recommended to hold down peaks that could cause early distortion. Limiters will help to raise 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 turnthechannel up for more power. The lower bass frequencies aremost 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 lower power applications. The Twist-Lok connections are used for higher power and bridged applications. 12 Gauge Twist-Lok speaker cables are an industry standard for high powered connections. Turn the amp off before connecting your speakers.

## 14. TWIST-LOCK \& BINDING POSTS SPEAKER OUTPUTS

Use the rear BINDINGPOSTS or TWST-LOOKS as an alternate high powered connection. 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 red caps). Binding posts are spaced on ISOstandards. Use the two center RED binding posts for BRIDGEspeaker connections (see 15 BRIDGEMODE). Use 12 GA cable for Twist-Lock connection. Insert cable and twist to lock into place. Use center Twist-Lock connector for BRIDGNGspeaker connections. NOTE: REMEMBERTO PUSH IN "BRIDGE"BUTTONWHEN BRIDGING.

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

The "DCM" Series can be operated in bridge mode if you require a $25 \mathrm{~V} / 70 \mathrm{~V}$ distribution speaker system or ahigh powered mono (single channel) amp. With your amp off, push in therear (recessed) BRIDGEswitch. Use the center Twist-Lok speaker output or make your speaker connections to the center R⿴囗 binding posts (ch 1 is + and ch 2 is -). No other speaker connectors or binding posts can to be used at the same time!". The INPUT and LEVE is handled by channel 1 . Channel 2 is non-operational. The minimum speaker impedance is 4 ohms or a 25 V distribution line. CAUTION: The power developed by bridging your amp can destroy most speaker systems! Make sure your speaker(s) are of the proper impedance and power handling.

## 16. AC POWER

Your amp is designed to run on either 120 V 60 Hz or 240 V 50 Hz depending on the model purchased. The voltage range for 120 V model is 95 V to 132 V and for 240 V model it is 195 V to 253 V . The rear heavyduty ACreceptacle will accept a standard grounded AC cord that is designed for your country. Be sure to check your power source before plugging into agrounded (3 prong) outlet. Never defeat thegrounded connection or electrocution may result! Firmly push the AC cord all the way into its receptacle.

AThis symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the ficient magnitude to constitute a risk of electric shock to persons.

CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN

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.
POWERSOURCES: Theproduct should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
GROUNDINGOR POLARIZATION: Precautions should be taken so that the grounding or polarization is not defeated.
POWER OORD 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. CARVINDOESNOT PAYFORPARTSORSGRVIING OTHE THAN OUR OWN. A COPY OFTHEORIGINAL INVOCEIS REQUIRED TOVERIFY 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. CARVINSHALL NOTBELIABLEFORINCDENTAL OROONSEQUENTAL 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 RATEfor 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

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

| Pa | DCM1001 Power Am |  | Carvin P/N | Ref. Des. | Description |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Binding Post | ost, 2-way, Red/Black... |  | ..03-10450 | D1 | Diode 1 N4003 | Rect Gen 1A 200 V |
| Cover, Black | ck 18GA Steel |  | 10-82005 | D2 | Diode 1 N4003 | Reet Gen 1A 200 V |
| Chassis |  |  | 10-07509 | D3 | Diode 1N4003 | Rect Gen 1A 200V |
| Fan, 24V10 | C80m |  | 70-02408 | D4 | Diode 1N4003 | Rect Gen 1A 200V |
| Fan Guard | , $80 \times 80 \mathrm{~mm}$ |  | 03-90080 | D5 | Diode 1 N4003 | Rect Gen 1A 200V |
| Handle, 2- | space rack |  | 10-11120 | D6 | Diode 1 N4003 | Rect Gen 1A 200V |
| Knob, Black | ck, 1.25" DIA. |  | 07-09001 | D7 | Diode 1 N4003 | Rect Gen 1A 200 V |
| Stand-off, | A, 1.5" Hex, 6-32. |  | 03-63315 | D8 | LED Red small | \#204HD 3mm T-1.0 |
| Toroid ins | ulator pad 3.8" OD |  | 03-15004 | D9 | LED Yellow small | \#204YD 3mm T-1.0 |
| Front cove |  |  | 10-07501-2 | D10 | Diode 1 N4003 | Rect Gen 1A 200V |
| Rear label |  |  | 77-07508 | D11 | Diode 1 N4003 | Rect Gen 1A 200V |
| Power cor | d (120V) |  | 05-01603 | D12 | Diode 1 N4003 | Rect Gen 1A 200 V |
| Power cor | d (230V) |  | 05-01903 | D13 | Diode 1N4003 | Rect Gen 1A 200 V |
| 10 Amp | ircuit breaker (120V) |  | 70-28110 | D100 | Diode 1 N4003 | Rect Gen 1A 200 V |
| 6 Amp Oir | cuit breaker (230V) |  | 70-28106 | D101 | Diode 1 N4003 | Rect Gen 1A 200 V |
| Toroid (12 | 2V) |  | 15-75160 | D102 | LED Green small | \#204GD 3mm T-1.0 |
| Toroid (23 | OV) |  | 15-75260 | D103 | LED Red small | \#204HD 3mm T-1.0 |
| C1, Capac | itor 10K4F63V, Poly $20 \%$ |  | 42-10363 | D104 | LED Red small | \#204HD 3mm T-1.0 |
| C2B, Capa | citor 10K 4 F63V, Poly $20 \%$ |  | 42-10363 | D106 | Diode 1 N4003 | Rect Gen 1A 200 V |
| R30, 1/4W | Resistor 47K, 35 " prep. | 5\% Carbon. | .50-47045 | D107 | Diode 1 N4003 | Rect Gen 1A 200V |
| Parts list | for Printed Circuit Card |  |  | D108 | Diode 1N4003 | Rect Gen 1A 200 V |
| Ref. Des. | Description |  | Carvin P/N | D10 | Diode 1N4003 | Rect Gen 1A 200 V |
|  | IC Op Amp NE5532 | Linear Output | 60-55320 | D20 | Diode 1N4003 | Rect Gen 1A 200 V |
| A2 | IC Op Amp MC4558 | CP1 Dual HfREQ | 60-45580 | D201 | Diode 1N4003 | Rect Gen 1A 200 V |
| A3 | IC Op Amp NE5532 | Linear Output | 60-55320 | D202 | LDD Green small | \#204GD 3mm T-1.0 |
| A4 | IC Op Amp NE5532 | Linear Output | 60-55320 | D203 | LED Red small | \#204HD 3mm T-1.0 |
| A5 | IC Op Amp MC4558 | CP1 Dual HIREQ | 60-45580 | D204 | LED Red small | \#204HD 3mm T-1.0 |
| A6 | IC Op Amp MC4558 | CP1 Dual HfREQ | 60-45580 | D205 | Diode 1N4003 | Rect Gen 1A 200 V |
| A7 | IC Op Amp MC4558 | CP1 Dual HfREQ | 60-45580 | D206 | Diode 1N4003 | Rect Gen 1A 200 V |
| A8 | IC Op Amp NE5532 | Linear Output | 60-55320 | D207 | Diode 1N4003 | Rect Gen 1A 200 V |
| BP1 | Binding Post Red/Black | Combo | 03-10400 | D208 | Diode 1N4003 | Rect Gen 1A 200 V |
| BP2 | Binding Post Red/Black | Combo | 03-10400 | D209 | Diode 1N4003 | Rect Gen 1A 200 V |
| BR1 | Diode Bridge ACDC PCB | MTG | 60-35041 |  | Header 4 Pin AM | A 600 V PCBMT |
| C3 | Capacitor $1000 \mu \mathrm{~F} 35 \mathrm{~V}$ | Eectrolytic 20\% | 47-10235 | ${ }^{\text {H1-B }}$ | Header 4 Pin A | A 600V PCBMT |
| C4 | Capacitor $1000 \mu \mathrm{~F} 35 \mathrm{~V}$ | Eectrolytic 20\% | 47-10235 | H2 | Header 2 Pin Ver | Panduit PCBMTG |
| C5 | Capacitor $0.047 \mu \mathrm{~F} 100 \mathrm{~V}$ | Poly 10\% | 46-47312 | H2-A | Header 4 Pin Vert | SHS 2.5 mm PGBMTG |
| $\bigcirc$ | Capacitor 0.047 $\mu \mathrm{F} 100 \mathrm{~V}$ | Poly 10\% | 46-47312 | H2-B | Header 4 Pin Ver | SHS 2.5 mm PCBMTG |
| C7 | Capacitor $220 \mu \mathrm{~F} 50 \mathrm{~V}$ | Eectrolytic 20\% | 47-22151 | H3-A | Header 10 Pin Ver | SHS 2.5 mm PCBMTG |
| C8 | Capacitor $10 \mu \mathrm{~F} 50 \mathrm{~V}$ | Eectrolytic 20\% | 47-10051 | H3-B | Header 10 Pin Ver | SHS 2.5 mm PCBMTG |
| c9 | Capacitor $0.047 \mu \mathrm{~F} 100 \mathrm{~V}$ | Poly 10\% | 46-47312 | H4-A | Header 10 Pin Ver | t SHS 2.5 mm PCBMTG |
| C10 | Capacitor $0.047 \mu \mathrm{~F} 100 \mathrm{~V}$ | Poly 10\% | 46-47312 | H4-B | Header 10 Pin V | HS 2.5mm PCBMTG |
| $\mathrm{Cl1}$ | Capacitor $0.047 \mu \mathrm{~F} 100 \mathrm{~V}$ | Poly 10\% | 46-47312 | H5 | Header 2 Pi | PO8 |
| C15 | Capacitor $0.047 \mu \mathrm{~F} 100 \mathrm{~V}$ | Poly 10\% | 46-47312 | H6-A | Header 4 Pin A | A 600 V PCB MTG |
| C16 | Capacitor $0.047 \mu \mathrm{~F} 100 \mathrm{~V}$ | Poly 10\% | 46-47312 | H6-B | Header 4 Pin A | 9A 600V PCB MTG |
| C17 | Capacitor $0.047 \mu \mathrm{~F} 100 \mathrm{~V}$ | Poly 10\% | 46-47312 | H7 | Header 9 Pin AM | 9A 600V PCBMTG |
| C18 | Capacitor $470 \mu \mathrm{~F} 25 \mathrm{~V}$ | Bectrolytic 20\% | 47-47125 |  | XLR Jack Female | itrik Vert PCBM |
| C100 | Capacitor 27PF500V | Ceramic 5\% | 45-27052 | J101 | Phone Jack, $1 / 4^{\prime \prime}$ | 7 Pin Plastic, 24mm Tall |
| C101 | Capacitor 27PF500V | Ceramic 5\% | 45-27052 | J102 | Phone Jack, $1 / 4$ | 3 Pin Plastic, 24 mm Tal |
| C102 | Capacitor $22 \mu \mathrm{~F} 50 \mathrm{~V}$ | Eectrolytic 20\% | 47-22051 | J200 | XLR Jack Female | Neutrik Vert PCBMTG |
| C104 | Capacitor 27PF500V | Ceramic 5\% | 45-27052 | J201 | Phone Jack, $1 / 4^{\prime \prime}$ | 7 Pin Plastic, 24mm Tall |
| C105 | Capacitor $0.047 \mu \mathrm{~F} 100 \mathrm{~V}$ | Poly 10\% | 46-47312 | J202 | Phone Jack, $1 / 4$ | 3 Pin Plastic, 24mm Tall |
| C110 | Capacitor $0.001 \mu \mathrm{~F} 100 \mathrm{~V}$ | Poly 10\% | 46-10212 | K100 | Relay 24V12A SP | ST SIEMENS PCBMGT |
| C111 | Capacitor $22 \mu \mathrm{~F} 50 \mathrm{~V}$ | Eectrolytic 20\% | 47-22051 | K200 | Relay 24V12A S | DT SIEMENS PCBMGT |
| C115 | Capacitor 27PF500V | Ceramic 5\% | 45-27052 | L100 | Inductor $3.3 \mu \mathrm{H}$ | Core Spool |
| C116 | Capacitor 56PF500V | Ceramic 5\% | 45-56052 | L200 | Inductor $3.3 \mu \mathrm{H}$ | CoreSpool |
| C117 | Capacitor 120PF500V | Ceramic 5\% | 45-12052 | OP1 | Opto Isolator V |  |
| C118 | Capacitor $10 \mu \mathrm{~F} 63 \mathrm{~V}$ | Bectrolytic 20\% | 47-10061 | OP2 | Opto Isolator V |  |
| C119 | Capacitor $0.047 \mu \mathrm{~F} 100 \mathrm{~V}$ | Poly $10 \%$ | 46-47312 | P100 | Pot. B10Kx2 41 |  |
| C120 | Capacitor $0.001 \mu \mathrm{~F} 100 \mathrm{~V}$ | Poly 10\% | 46-10212 | P20 | Pot. Trimmer 5K |  |
| C121 | Capacitor $0.068 \mu \mathrm{~F} 100 \mathrm{~V}$ | Poly 10\% | 46-68312 | P200 |  | ke Brkt Rot Knurled |
| C200 | Capacitor 27PF500V | Ceramic 5\% | 45-27052 | P201 | Pot. Trimmer 5K | Vert PCBMTG |
| C201 | Capacitor 27PF500V | Ceramic 5\% | 45-27052 | Q | Transistor Darling | (en AMP TO-92 |
| C202 | Capacitor $22 \mu \mathrm{~F} 50 \mathrm{~V}$ | Eectrolytic 20\% | 47-22051 | c | Transistor 2 N5400 | ONP AMP TO-92 |
| C204 | Capacitor 27PF500V | Ceramic 5\% | 45-27052 | Q100 | Transistor Darling | 隹ton NPNMPSA14 |
| C205 | Capacitor $0.047 \mu \mathrm{~F} 100 \mathrm{~V}$ | Poly 10\% | 46-47312 | Q101 | Transistor IIP31C3 | C3A 100V NPN TO-220 |
| C210 | Capacitor $0.001 \mu \mathrm{~F} 100 \mathrm{~V}$ | Poly 10\% | 46-10212 | Q102 | Transistor MPSW | 42 HV 1.OW NPN T0-237 |
| C211 | Capacitor $22 \mu \mathrm{~F} 50 \mathrm{~V}$ | Bectrolytic 20\% | 47-22051 | Q103 | Transistor CEN | 92 HV PNP 1.0W TO-92 |
| C215 | Capacitor 27PF500V | Ceramic 5\% | 45-27052 | Q104 | Transistor TP3 | C3A 100V PNP TO-220 |
| C216 | Capacitor 56PF500V | Ceramic 5\% | 45-56052 | Q105 | Transistor TP31 | 3A 100V NPN TO-220 |
| C217 | Capacitor 120PF500V | Ceramic 5\% | 45-12052 | Q106 | Transistor TIP31C | 3A 100V NPN TO-220 |
| C218 | Capacitor $0.047 \mu \mathrm{~F} 100 \mathrm{~V}$ | Poly 10\% | 46-47312 | Q107 | Transistor MJL21 | 194 NPN 16A 250V 200W |
| C219 | Capacitor $0.047 \mu \mathrm{~F} 100 \mathrm{~V}$ | Poly 10\% | 46-47312 | Q108 | Transistor MJL21 | 194 NPN 16A 250V 200W |
| С२20 | Capacitor $0.001 \mu \mathrm{~F} 100 \mathrm{~V}$ | Poly 10\% | 46-10212 | Q109 | Transistor MJL21 | 193 PNP 16A 250V 200W |
| C221 | Capacitor $0.068 \mu \mathrm{~F} 100 \mathrm{~V}$ | Poly 10\% | 46-68312 | Q10 | Transistor MJL21 | 193 PNP 16A 250V 200W |


| Carvin P/N | Ref. Des. | Description | Carvin P/N | Ref. Des. | Description |  | Carvin P/N |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 60-40030 | ®00 | Transistor Darlington NPNMPSA14 | 60-00014 | R139 | 1/4W Resistor 100K | K . $35^{\prime \prime}$ prep. $5 \%$ Carbon | 50-10055 |
| 60-40030 | Q02 | Transistor MPSW42 HV 1.0W NPN T0-237 | 60-00042 | R140 | 1/4W Resistor 33K | . $35^{\prime \prime}$ prep. $5 \%$ Carbon | 50-33045 |
| 60-40030 | ¢03 | Transistor CENW92 HV PNP 1.0W TO-92 | 60-00092 | R144 | 2W Resistor $10 \Omega$ | 0.8 prep. $5 \%$ Metal | 54-10015 |
| 60-40030 | ®04 | Transistor TIP32C3A 100V PNP TO-220 | 60-32000 | R150 | 2W Resistor $10 \Omega$ | 0.8 prep. 5\% Metal | 54-10015 |
| 60-40030 | @05 | Transistor TIP31C3A 100V NPN TO-220 | 60-31000 | R200 | 1/4W Resistor 10K | . 35 " prep. 5\% Carbon | 50-10045 |
| 60-40030 | ๕06 | Transistor TIP31C3A 100V NPN TO-220 | 60-31000 | R201 | 1/4W Resistor 10K | . 35 " prep. 5\% Carbon | 50-10045 |
| 60-40030 | Q07 | Transistor MJL21194 NPN 16A 250V 200W | 60-21194 | R202 | 1/4W Resistor 22 K | . 35 " prep. $5 \%$ Carbon | 50-22045 |
| 60-75320 | @08 | Transistor MJL21194 NPN 16A 250V 200W | 60-21194 | R203 | 1/4W Resistor 22 K | . $35^{\prime \prime}$ prep. 5\% Carbon | 50-22045 |
| 60-75340 | ¢09 | Transistor MJL21193 PNP 16A 250V 200W | 60-21193 | R204 | 1/4W Resistor 2.2K | . $35^{\prime \prime}$ prep. 5\% Carbon | 50-22035 |
| 60-40030 | ®10 | Transistor MJL21193 PNP 16A 250V 200W | 60-21193 | R205 | 1/4W Resistor $220 \Omega$ | . $35^{\prime \prime}$ prep. $5 \%$ Carbon | 50-22025 |
| 60-40030 | R1 | 1/4W Resistor 2.2K . 35 " prep. 5\% Carbon | 50-22035 | R206 | 1/4W Resistor 470K | K. $35^{\prime \prime}$ prep. $5 \%$ Carbon | 50-47055 |
| 60-40030 | R2 | 1/4W Resistor 3.3K . 35 " prep. 5\% Carbon | 50-33035 | R207 | 1/4W Resistor 470K | K $.35^{\prime \prime}$ prep. $5 \%$ Carbon | 50-47055 |
| 60-40030 | R3 | 1/4W Resistor 100K . 35 " prep. 5\% Carbon | 50-10055 | R208 | 1/4W Resistor 1K | $.35 "$ prep. $5 \%$ Carbon | 50-10035 |
| 60-40030 | R4 | 1/4W Resistor $150 \Omega .35$ " prep. 5\% Carbon | 50-15025 | R209 | Not Used |  |  |
| 60-40030 | R5 | 1/4W Resistor 39K . 35 " prep. 5\% Carbon | 50-39045 | R210 | 1/4W Resistor 470K | K. $35^{\prime \prime}$ prep. $5 \%$ Carbon | 50-47055 |
| 60-75330 | R6 | 1/4W Resistor 39K . 35 " prep. 5\% Carbon | 50-39045 | R212 | 1/4W Resistor 470 | . $35^{\prime \prime}$ prep. $5 \%$ Carbon | 50-47025 |
| 60-75320 | R7 | 1/4W Resistor 470K .35 " prep. $5 \%$ Carbon | 50-47055 | R215 | 1/4W Resistor 10K | . $35^{\prime \prime}$ prep. 5\% Carbon | 50-10045 |
| 60-75320 | R8 | 1/4W Resistor 470K . $35^{\prime \prime}$ prep. $5 \%$ Carbon | 50-47055 | R216 | 1/4W Resistor 10K | .35 " prep. 5\% Carbon | 50-10045 |
| 60-40030 | R9 | 1/4W Resistor 22K . 35 " prep. 5\% Carbon | 50-22045 | R217 | 1/4W Resistor 2.2K | . $35^{\prime \prime}$ prep. $5 \%$ Carbon | 50-22035 |
| 60-40030 | R10 | 1/4W Resistor 22K .35" prep. 5\% Carbon | 50-22045 | R218 | 1/4W Resistor 47K | . $355^{\prime \prime}$ prep. 5\% Carbon | 50-47045 |
| 60-40030 | R11 | 1/4W Resistor 20K . ${ }^{\prime \prime}$ " prep. 5\% Carbon | 50-20045 | R219 | 1/4W Resistor 4.7K | . $35^{\prime \prime}$ prep. $5 \%$ Carbon | 50-47035 |
| 60-40030 | R12 | 1/4W Resistor 6.8K . 35 " prep. 5\% Carbon | 50-68035 | R220 | 1/4W Resistor $100 \Omega$ | . $35^{\prime \prime}$ prep. $5 \%$ Carbon | 50-10025 |
| 60-40030 | R13 | 1/4W Resistor 2.2M . $35^{\prime \prime}$ prep. 5\% Carbon | 50-22065 | R221 | 1/4W Resistor $100 \Omega$ | . $35^{\prime \prime}$ prep. $5 \%$ Carbon | 50-10025 |
| 60-40030 | R14 | 1/4W Resistor 20K . 35 " prep. 5\% Carbon | 50-20045 | R222 | 1/4W Resistor 4.7K | . $35^{\prime \prime}$ prep. $5 \%$ Carbon | 50-47035 |
| 60-75330 | R15 | 1/4W Resistor 10K .35" prep. 5\% Carbon | 50-10045 | R223 | 1/4W Resistor $680 \Omega$ | R $35^{\prime \prime}$ prep. $5 \%$ Carbon | 50-68025 |
| 60-75320 | R16 | Not Used |  | R224 | 1/4W Resistor 4.7K | . $35^{\prime \prime}$ prep. $5 \%$ Carbon | 50-47035 |
| 60-75320 | R17 | 1/4W Resistor 22K .35" prep. 5\% Carbon | 50-22045 | R225 | 1/4W Resistor 2.2 K | . $35^{\prime \prime}$ prep. $5 \%$ Carbon | 50-22035 |
| 60-40030 | R18 | 1/4W Resistor 1K . $35^{\prime \prime}$ prep. 5\% Carbon | 50-10035 | R226 | 1/4W Resistor 1K | .35 " prep. $5 \%$ Carbon | 50-10035 |
| 60-40030 | R19 | 1/4W Resistor 10K . 35 " prep. 5\% Carbon | 50-10045 | R227 | 1/4W Resistor $680 \Omega$ | . $35^{\prime \prime}$ prep. $5 \%$ Carbon | 50-68025 |
| 60-40030 | R20 | 1/4W Resistor 10K . $35^{\prime \prime}$ prep. 5\% Carbon | 50-10045 | R228 | 1/4W Resistor 2.2 K | . $35^{\prime \prime}$ prep. $5 \%$ Carbon | 50-22035 |
| 60-40030 | R22 | 1/4W Resistor 5.6K . $35^{\prime \prime}$ prep. 5\% Carbon | 50-56035 | R229 | 1/2W Resistor $4.7 \Omega$ | 0.5 prep. 5\% Carbon | 52-47005 |
| 60-40030 | R23 | 1/4W Resistor 470K . 35 " prep. 5\% Carbon | 50-47055 | R230 | 1/4W Resistor $150 \Omega$ | . $35^{\prime \prime}$ prep. $5 \%$ Carbon | 50-15025 |
| 23-08604 | R24 | 1/4W Resistor 10K . 35 " prep. 5\% Carbon | 50-10045 | R231 | 1/2W Resistor $4.7 \Omega$ | 0.5 prep. 5\% Carbon | 52-47005 |
| 23-08604 | R25 | 1/4W Resistor 1K . $35^{\prime \prime}$ prep. 5\% Carbon | 50-10035 | R232 | 5 W Resistor $0.22 \Omega$ | Vert 5\% Sand Bar | 55-02205 |
| 23-10002 | R26 | 1/4W Resistor 4.7K . 35 " prep. 5\% Carbon | 50-47035 | R233 | 5WResistor $0.22 \Omega$ | Vert 5\% Sand Bar | 55-02205 |
| 23-11004 | R28 | 1/4W Resistor $220 \Omega .35$ " prep. 5\% Carbon | 50-22025 | R234 | 5WResistor $0.22 \Omega$ | Vert 5\% Sand Bar | 55-02205 |
| 23-11004 | R31 | 1/4W Resistor 100 K .35 " prep. $5 \%$ Carbon | 50-10055 | R235 | 5W Resistor $0.22 \Omega$ | Vert 5\% Sand Bar | 55-02205 |
| 23-11010 | R100 | 1/4W Resistor 10K . $35^{\prime \prime}$ prep. 5\% Carbon | 50-10045 | R236 | 1/4W Resistor 1K | .35 " prep. 5\% Carbon | 50-10035 |
| 23-11010 | R101 | 1/4W Resistor 10K . $35^{\prime \prime}$ prep. 5\% Carbon | 50-10045 | R237 | 1/4W Resistor 10K | . $35{ }^{\prime \prime}$ prep. $5 \%$ Carbon | 50-10045 |
| 23-11010 | R102 | 1/4W Resistor 22K . 35 " prep. 5\% Carbon | 50-22045 | R238 | 1/4W Resistor 100K | K. $35^{\prime \prime}$ prep. $5 \%$ Carbon | 50-10055 |
| 23-11010 | R103 | 1/4W Resistor 22K . 35 " prep. 5\% Carbon | 50-22045 | R239 | 1/4W Resistor 100K | K. $35^{\prime \prime}$ prep. $5 \%$ Carbon | 50-10055 |
| 23-10002 | R104 | 1/4W Resistor 2.2K . 35 " prep. 5\% Carbon | 50-22035 | R240 | 1/4W Resistor 33K | .35 " prep. $5 \%$ Carbon | 50-33045 |
| 23-08604 | R105 | 1/4W Resistor $220 \Omega .35^{\prime \prime}$ prep. 5\% Carbon | 50-22025 | R244 | 2W Resistor $10 \Omega$ | 0.8 prep. $5 \%$ Metal | 54-10015 |
| 23-08604 | R106 | 1/4W Resistor 470K $.35^{\prime \prime}$ prep. $5 \%$ Carbon | 50-47055 | R250 | 2W Resistor $10 \Omega$ | 0.8 prep. $5 \%$ Metal | 54-10015 |
| 23-08609 | R107 | 1/4W Resistor 470K .35 " prep. $5 \%$ Carbon | 50-47055 | S1 | Switch DPDT Push, Ve | Vert Small PCB MTG | 25-02201 |
| 21-40000 | R108 | 1/4W Resistor 1K . $35^{\prime \prime}$ prep. 5\% Carbon | 50-10035 | S2 | Switch DPDT Push, Ve | Vert Small PCBMTG | 25-02201 |
| 21-06457 | R109 | Not Used |  | S3 | Switch DPDT Push, Vers | Vert Small PCBMTG | 25-02201 |
| 21-06453 | R110 | 1/4W Resistor 470K . 35 " prep. 5\% Carbon | 50-47055 | S4 | Switch DPDT Push, Versis | Vert Small PCBMTG | 25-02201 |
| 21-40000 | R111 | 1/4W Resistor 470 . $35^{\prime \prime}$ prep. 5\% Carbon | 50-47025 | VR1 | Voltage Regulator 78 | $7815+15 \mathrm{~V} 2 \mathrm{~A}$ | 60-78150 |
| 21-06457 | R112 | 1/4W Resistor 1.5K . 35 " prep. 5\% Carbon | 50-15035 | VR2 | Voltage Regulator 79 | 7915-15V 2A | 60-79150 |
| 21-06453 | R115 | 1/4W Resistor 10K . $35^{\prime \prime}$ prep. 5\% Carbon | 50-10045 | VR3 | Voltage Regulator 79 | 7915-15V 2A | 60-79150 |
| 70-05712 | R116 | 1/4W Resistor 10K .35" prep. 5\% Carbon | 50-10045 |  |  |  |  |
| 70-05712 | R117 | 1/4W Resistor 2.2 K .35 " prep. 5\% Carbon | 50-22035 |  |  |  |  |
| 15-00165 | R118 | 1/4W Resistor 47K . 35 " prep. 5\% Carbon | 50-47045 |  |  |  |  |
| 15-00165 | R119 | 1/4W Resistor 4.7K . 35 " prep. 5\% Carbon | 50-47035 |  |  |  |  |
| 60-50253 | R120 | 1/4W Resistor $100 \Omega .35^{\prime \prime}$ prep. $5 \%$ Carbon | 50-10025 |  |  |  |  |
| 60-50253 | R121 | 1/4W Resistor $100 \Omega .35$ " prep. 5\% Carbon | 50-10025 |  |  |  |  |
| 71-10301 | R122 | 1/4W Resistor $4.7 \mathrm{~K} \quad .35$ " prep. $5 \%$ Carbon | 50-47035 |  |  |  |  |
| 71-25000 | R123 | 1/4W Resistor $680 \Omega .35$ " prep. 5\% Carbon | 50-68025 |  |  |  |  |
| 71-10301 | R124 | 1/4W Resistor $4.7 \mathrm{~K} \quad .35$ " prep. $5 \%$ Carbon | 50-47035 |  |  |  |  |
| 71-25000 | R125 | 1/4W Resistor $2.2 \mathrm{~K} .35^{\prime \prime}$ prep. 5\% Carbon | 50-22035 |  |  |  |  |
| 60-00014 | R126 | 1/4W Resistor 1K . $35^{\prime \prime}$ prep. 5\% Carbon | 50-10035 |  |  |  |  |
| 60-54000 | R127 | 1/4W Resistor $680 \Omega .35$ " prep. 5\% Carbon | 50-68025 |  |  |  |  |
| 60-00014 | R128 | 1/4W Resistor 2.2 K .35 " prep. 5\% Carbon | 50-22035 |  |  |  |  |
| 60-31000 | R129 | $1 / 2 \mathrm{~W}$ Resistor 4.7S 0.5 prep. 5\% Carbon | 52-47005 |  |  |  |  |
| 60-00042 | R130 | 1/4W Resistor $150 \Omega .35$ " prep. 5\% Carbon | 50-15025 |  |  |  |  |
| 60-00092 | R131 | 1/2W Resistor 4.7s 0.5 prep. 5\% Carbon | 52-47005 |  |  |  |  |
| 60-32000 | R132 | $5 W$ Resistor 0.22 ${ }^{\text {a }}$ Vert $5 \%$ Sand Bar | 55-02205 |  |  |  |  |
| 60-31000 | R133 | 5 W Resistor $0.22 \Omega$ Vert $5 \%$ Sand Bar | 55-02205 |  |  |  |  |
| 60-31000 | R134 | 5 W Resistor $0.22 \Omega$ Vert $5 \%$ Sand Bar | 55-02205 |  |  |  |  |
| 60-21194 | R135 | 5 W Resistor $0.22 \Omega$ Vert 5\% Sand Bar | 55-02205 |  |  |  |  |
| 60-21194 | R136 | 1/4W Resistor 1K . $35^{\prime \prime}$ prep. 5\% Carbon | 50-10035 |  |  |  |  |
| 60-21193 | R137 | 1/4W Resistor 10K . 35 " prep. 5\% Carbon | 50-10045 |  |  |  |  |
| 60-21193 | R138 | 1/4W Resistor 100K . 35 " prep. 5\% Carbon | 50-10055 |  |  |  |  |

CAUTION
RISK OF ELECTRIC SHOCK
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL! THIS UNIT CONTAINS HIGH VOLTAGE INSIDE!

Carvin P/N 50-10055
$50-33045$ 4-10015 -10015 50-10045 50-10045 $50-22045$
$50-22045$ $50-22045$
$50-22035$ $50-22025$
$50-47055$ 50-47055 50-47055 50-47025 5-10045
0-10045 50-22035 $50-47045$
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25-02201
$60-78150$
$60-79150$
60-79150

Ch IInput
To signal socket XLR or 1/4" 2 or $\mathbf{3}$ cond. shielded


MONO MAINS \& MONITORS
TYPICAL DUAL MONITOR MIX SETUP


