EQ2015

EQ2030

The EQ2015 & EQ2030 are professional 2/3 and 1/3 octave graphic equalizers suitable for recording, sound reinforcement, guitar and bass rigs, or home audio applications. Both units feature pro sound performance from extended frequency response, wide dynamic range, and low noise operation. Both offer large precision sliders with "sure-grip" rubber boots, 15db of boost and cut per frequency, low interaction between frequencies, and dual Sweepable High and Low cut filters. The EQ2015 & EQ2030 are built to rugged specs for high reliability under continuous use providing years of professional service.

INTERFACE & OPERATION

The EQ2015 & EQ2030 can be inserted into the audio signal path at any convenient point where there is a nominal "line level" signal. Never connect the speaker output of an amplifier to the EQ2015 or EQ2030 as damage to both units may occur. Balanced low impedance XLR w/ground lift and balanced/unbalanced 1/4" connections are provided allowing the EQ2015 & EQ2030 to be interfaced with professional audio equipment (with the proper cables). See Fig. 1.

RECORDING STUDIO APPLICATIONS

The EQ2015 & EQ2030 have many uses in the studio environment. They can be used to balance and "flatten" the control room monitors, eliminate feedback in the studio mains, or to EQ individual recorded channels.

SOUND REINFORCEMENT

The EQ2015 & EQ2030 are the ideal tools for solving many live sound reinforcement problems. The most obvious use would be for eliminating feedback and fine tuning the main house speakers or the stage monitor speakers. Typically the EQ2030, with its fine 1/3 octave adjustments would be used for the monitors, although the EQ2015 could be used in situations where tone control, not feedback elimination, was the main objective. Both units are excellent for optimizing the house PA system. Typically the EQ2015 is sufficient for the PA mains, although in rooms with major EQ problems, the extra fine tuning abilities of the EQ2030 may be necessary.

GUITAR & BASS AMPS

Guitar and bass players can benefit from the EQ2015 & EQ2030 by integrating them into their rigs between the pre-amp and power amp interrupt jack for extra tone control. Utilizing A/B boxes, the EQ's can be used like extra channels for unlimited tonal flexibility.

RECEIVING INSPECTION—read before getting started

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

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

SAVE YOUR INVOICE. It will be required for warranty service if needed in the future.

SHIPMENT SHORTAGE. If you find items missing, they may have been shipped separately. Please allow several days for the rest of your order to arrive before inquiring.

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

HOME AUDIO

The EQ2015 & EQ2030 are excellent equalizers for home audio use. Their high-end professional features and specs allow them to integrate easily into top quality home set-ups. The units can be connected to an open tape monitor loop on an integrated pre-amp/amplifier or between the pre-amp and power amp in systems with separate components providing the ultimate control in your favorite listening room.

MICRO TOROID SUPPLY

Pure DC is generated from the built-in Micro Toroid power supply which features precision 7815 and 7915 voltage regulators. Now you can go anywhere and never have to worry about the EQ2015 & EQ2030 giving you their exact specifications because voltage tolerances are held to within .001%.. The big feature in this power supply is the precision wound Toroid transformer that gives unsurpassed rejection of noise and hum. You can place the EQ2015 & EQ2030 over sensitive gear and not be concerned about injecting hum or noise from a standard transformer. CARVIN has spared no expense to achieve studio quality performance.

MODEL EQ2015 SPECS:

Input Type:	Balanced and unbalanced via male and female XLR connector or 1/4" phone jack
Input Impedance:	20 KΩ balanced 10 KΩ unbalanced
Maximum Input Level:	+20 dBv balanced or unbalanced
Output Type:	Balanced and unbalanced via male XLR connector or 1/4" phone jack
Output Impedance:	600 Ω balanced
Maximum Output Level:	
Unbalanced:	+20 dBv (7.8 Vrms) into a 600 Ω load or greater
Balanced:	+26 dBv (15.6 Vrms) into a 600 Ω load or greater
Input Gain Control:	+6 dB to full attenuation
Boost Cut:	± 15 dB, +20 dBv into 600Ω
Center Frequencies:	25,40,63, 100, 160, 250, 400, 630, 1k,1.6k, 2.5k, 4k, 6.3k, 10k, and 16 kHz ± 5%
Filter Type:	Active bandpass filters (no inductors)
Frequency Accuracy:	±5% of nominal center frequency
Frequency Response (with all sliders centered):	±1 dB, 10 Hz to 45 kHz
Bandwidth (-3 dB points):	7 Hz -85 kHz
Harmonic Distortion:	<.01% THD, 20 Hz to 20 kHz
Noise (unweighted, 20 kHz bandwidth):	104 dB below full output
Slew Rate:	9 volts per microsecond
Power Requirements	
US Model:	120 VAC, 60 Hz, 1/4 A, 5x20 fuse
Export Model:	230 VAC, 50 Hz, .125 A, 5x20 fuse
Package:	2 rack spaces
Dimensions:	19"W x 6"D x 3 1/2"H
Net Weight:	10 lbs.

MODEL EQ2030 SPECS:

Input Type:	Balanced and unbalanced via male and female XLR connector or 1/4" phone jack
Input Impedance:	20 KΩ balanced 10 KΩ unbalanced
Maximum Input Level:	+20 dBv balanced or unbalanced
Output Type:	Balanced and unbalanced via male XLR connector or 1/4" phone jack
Output Impedance:	600 Ω balanced
Maximum Output Level:	
Unbalanced:	+20 dBv (7.8 Vrms) into a 600 Ω load or greater
Balanced:	+26 dBv (15.6 Vrms) into a 600 Ω load or greater
Input Gain Control:	+6 dB to full attenuation
Boost Cut:	± 15 dB, +20 dBv into 600Ω
Center Frequencies:	25,31.5, 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1k,1.25k, 1.6k, 2k, 2.5k, 3.15k, 4k, 5k, 6.3k, 8k, 10k, 12.5k, 16 k and 20k ± 5%
Filter Type:	Active bandpass filters (no inductors)
Frequency Accuracy:	±5% of nominal center frequency
Frequency Response (with all sliders centered):	±1 dB, 10 Hz to 45 kHz
Bandwidth (-3 dB points):	7 Hz -85 kHz
Harmonic Distortion:	<.01% THD, 20 Hz to 20 kHz
Noise (unweighted, 20 kHz bandwidth):	104 dB below full output
Slew Rate:	9 volts per microsecond
Power Requirements	
US Model:	120 VAC, 60 Hz, 1/4 A, 5x20 fuse
Export Model:	230 VAC, 50 Hz, .125 A, 5x20 fuse
Package:	3 rack spaces
Dimensions:	19"W x 6"D x 5 1/4"H
Net Weight:	13 lbs.

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

Serial No._____ Invoice Date_____

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

INTERFACE AND OPERATION

In general, the EQ2015 & EQ2030 graphic equalizers can be inserted into the audio signal path at any convenient point where there is a nominal "line level" signal. About the only signals with which it would not be appropriate to use the EQ2015 & EQ2030 would be very low level signals (i.e. microphone lines before the mic preamp) or very high level signals (i.e. loudspeaker lines). The EQ2015 & EQ2030 will provide excellent results when used with signals and input/output impedances normally found in recording studios, sound reinforcement systems, or home Hi-Fi. Further details on installation and operation are provided below for various applications. Please refer to the section that most closely matches your application.

RECORDING STUDIO APPLICATIONS

The EQ2015 & EQ2030 have a variety of applications in the recording studio. However, the primary application will likely be to precisely correct frequency response errors in the control room monitoring system. In order to create a well balanced product, it is essential that a professional recording studio utilize an audio monitoring system that is a "neutral" or "colorless" as possible. The EQ2015 & EQ2030 were specifically designed for the task of removing color, or "neutralizing" audio monitoring systems. An appropriate point at which to insert the EQ2015 & EQ2030 in the listening chain is between the mixer's control room outputs and the inputs of the stereo power amps. Input and output connections to the EQ2015 & EQ2030 can be made by way of either the balanced XLR connectors or the balanced/unbalanced 1/4" phone jacks.

If the EQ2015 or the EQ2030 is to be used for a variety of recording applications rather than as a dedicated monitor equalizer, then the best place to interface it is the central patch bay. By making the EQ's inputs and outputs available at the patch bay, the EQ can be patched into input or output channels of the mixer as desired. In addition to the infinite variety of audio frequency response contours that can be created using the unit's sliders, signals outside the audio band can be controlled by using in the low cut and high cut filters.

SOUND REINFORCEMENT APPLICATIONS

There are many applications for the EQ2015 & EQ2030 in professional sound reinforcement or "PA" systems. The most popular use of the EQ2015 & EQ2030 is to provide 2/3 & 1/3 octave equalization of the main or monitor speaker systems to correct response errors in the speakers compensate for room acoustics and control feedback. For feedback control, a good technique is to raise the level of the system to the threshold of the threshold of feedback (i.e. to the point where the systemjust begins to ring) and then locate the slider that controls the "ringing" frequency. Reduce the level of that slider until the ringing is eliminated. Again increase the overall monitor level until the system just begins to ring (at a new frequency) and repeat the sequence until 3 or 4 frequency are ringing together. At this point you have reached your lowest feedback setting.

An appropriate place to insert the EQ into the system is between the outputs of the mixer or monitor main and the inputs of the power amplifier. In addition to using the EQ2015 & EQ2030 to equalize loudspeaker frequency response, the units can be used as a program equalizer on individual channels or subgroups to establish optimum tonal balance. In the latter case the EQ would be patched into the appropriate channel or subgroup at the console.

The low cut sweepable filter constitutes an excellent sub-sonic filter and can provide a high degree of protection to the woofers in a sound system for unexpected sub-sonic transients (such as might result from a dropped microphone, intermittent connection, or other audio hazzards associated with live sound). The low-cut filter will also help conserve amplifier power and reduce woofer cone excursion so that higher sound pressure levels can be achieved before running out of amplifier headroom. A recommended setting is 35 Hz. The hi-cut filter can provide a degree of protection to high frequency horns or tweeters from inaudible ultrasonic oscillations in system components ahead of the EQ2015 & EQ2030. A recommended setting is 20k Hz.

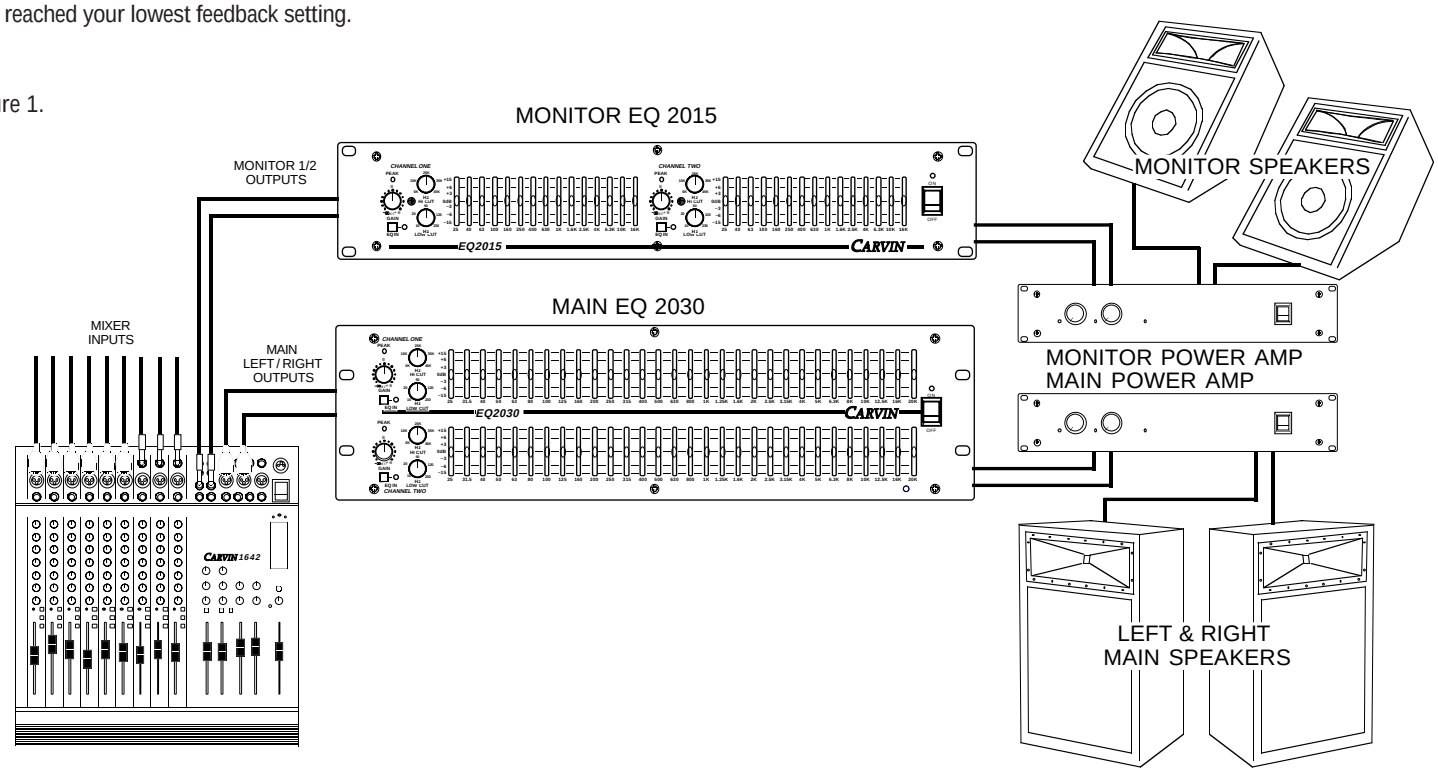
HOME HI-FI APPLICATION

The EQ2015 & EQ2030 are excellent equalizers for home Hi-Fi use. Those audiophyles who appreciate professional grade audio equipment will appreciate the value these equalizers represent in addition to the professional quality they provide.

The primary application of a 2/3 & 1/3 octave graphic equalizer in a home Hi-Fi system will likely be to establish a highly accurate frequency response in the listening room. In this case the equalizers can be interfaced at the tape monitor of the systems "receiver" or "pre-amp". The equalizer can also be inserted between the stereo pre-amp and stereo power amp of a system with separate pre and power amps. For the case of a typical Hi-Fi stereo receiver the left and right "tape outputs" would be connected (by way of an appropriate cable) to the inputs (most likely by way of the 1/4" phone jacks). The outputs of the units could then be connected back into the left and right "tape inputs" of the stereo receiver. Depressing the "tape" switch on the receiver would then connect the EQ into the system.

Other home Hi-Fi applications for the EQ2015 & EQ2030 are those relating to home recording. Connecting the EQ between the preamp output and the tape recorder input allows equalization of the material being recorded. This configuration could be used to make tape dubs of older recordings with equalization according to your own musical taste.

Figure 1.



USING THE EQ2015 & EQ2030

Comments on using 2/3 & 1/3 octave equalizers to establish a flat frequency response.

A 1/3 or 2/3 octave Equalizer provides the capability to make very fine corrections to the frequency response of an audio r system. There is no question about that. However, many users of such equalizers have only a vague idea of how to actually achieve an accurate frequency response using a 1/3 or 2/3 octave equalizer. A loudspeaker's worst problems can be corrected "by ear" to an extent depending on the skill of the individual. But in order to achieve the precise correction the EQ is capable of providing, it is necessary to see the actual frequency response of the system. This requires a spectrum analyzer.

An Audio Spectrum Analyzer is an electronic device which provides the user with a frequency response display of the signal provided to the input of the analyzer. In the case we are discussing, the input to the analyzer would be taken from a microphone placed in the room with the loudspeakers we wish to equalize. The sound energy in the room would then be displayed on the analyzer as a graph of amplitude (loudness) on the vertical axis versus frequency (pitch) on the horizontal axis. If a "1/3 octave" spectrum analyzer is used then there will be a display of about 30 columns with the height of each column indicating the loudness of the sound in that frequency band. The 30 columns cover the 10 octave audio frequency spectrum in 1/3 octave steps. Assuming that both the equalizer and the analyzer have their frequency bands centered on the standard (ISO) 1/3 octave frequency centers, then for each slider on the EQ there is a corresponding column in the analyzers display. If music is played through the system, then the analyzer displayed will dance about to indicate the sound energy in the room as it varies in frequency and loudness. The analyzer would not be expected to display a flat response curve under these conditions because music generally does not have equal energy in each frequency band but rather has energy at changing frequencies and with changing loudness. This brings up a question: If music played through the systemcannot be expected to produce a flat frequency response on the spectrum analyzer, then is there a signal that will? And the answer is yes; there is a special test signal that when played through an accurate system and picked up by an accurate microphone will result in a flat frequency response (each column at the same height) on the spectrum analyzer display. This test signal is called "pink noise".

Pink noise is simply a signal that contains all the audio frequencies at once with the frequencies in each octave band having the same energy (loudness) as the frequencies in each of the other bands. If the pink noise is fed directly into the spectrum analyzer then a perfectly flat display will result. If the pink noise is fed to the systemand the sound energy from the speakers picked up by the microphone and fed to the analyzer, then the combined response of the loudspeakers and room (and microphone) will be seen on the analyzer display. Now the appropriate sliders on the equalizer can be adjusted to provide a precisely flat frequency response. Because the microphone is included in the system response curve, it is important that the microphone have a flat frequency response itself. Otherwise you'll be equalizing your loudspeakers for the microphone response also. This would result in inaccurate response from the loudspeakers themselves.

The description of the equalization procedure may sound complex but the actual procedure can be performed with surprising ease. That's because the spectrum analyzer is doing all the work! It is simple to plug the output of the pink noise generator into an appropriate input of your audio system and play the pink noise over the loudspeakers at a level well above the background noise. An accurate microphone is placed near the usual listening position and the output of the speakers is displayed on the analyzer. From the display it can be seen which frequency bands need to be boosted or cut to achieve the same level in each band (flat response). Tweak the equalizer and note the display. Continue to adjust the equalizer until a satisfactorily accurate response is obtained. Because the response will vary with microphone location, it is a good idea to look at the response for several microphone locations around the listening position and equalize for the flattest average response.

One of the shortcomings of the pink noise equalization technique is the fact that the analyzer displays both the direct sound from the loudspeaker and the reverberant sound field set up in the room. Ideally we want to obtain a flat frequency response for the direct sound from the loudspeakers. The reverberant sound field cannot be expected to have a flat response and typically has a decreasing high frequency response. This means that if the net pink noise response has a flat high frequency response then the direct sound from the loudspeaker will tend to have a rising high frequency response (to compensate for the reverberant sound field). The net result is an overly bright sounding high frequency characteristic for loudspeaker systems which have been equalized to provide a flat pink noise response. The approach used to compensate for this is to tailor the pink noise response to start falling gently above about 2 kHz at a rate of 1 or 2 dB per octave.

There is another equalization method which avoids the high frequency errors encountered in the pink noise technique and this is the "impulse response" technique. In recent years impulse testing and equalization have become increasingly more popular with loudspeaker manufacturers due to the high accuracy and repeatability of this technique. As impulse analyzers become more readily available we hope to see them used more for 1/3 & 2/3 octave equalization of loudspeakers in the field. Until then don't be afraid to trust your ears.

Frequency response of the EQ2030 for various control settings (the EQ2015 will have a similar response).

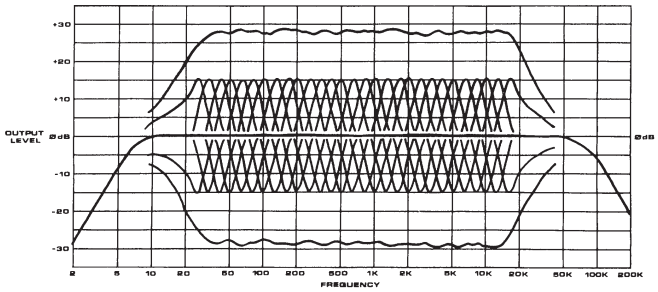


Figure 2:
—All bands at full boost/cut
—Individual bands boost/cut
—All bands centered

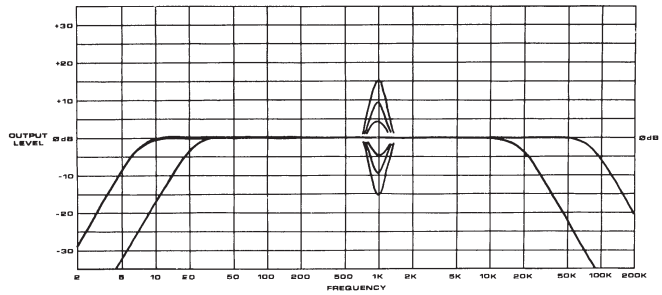
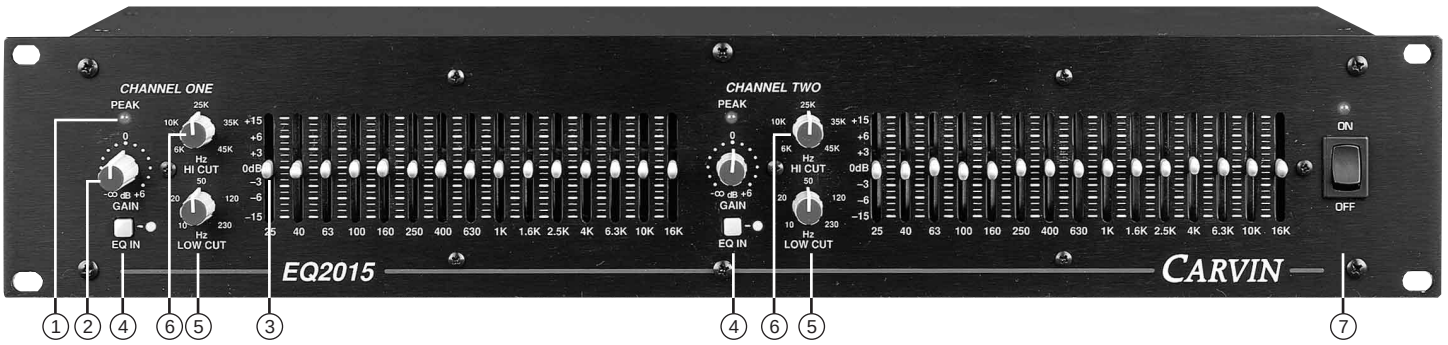
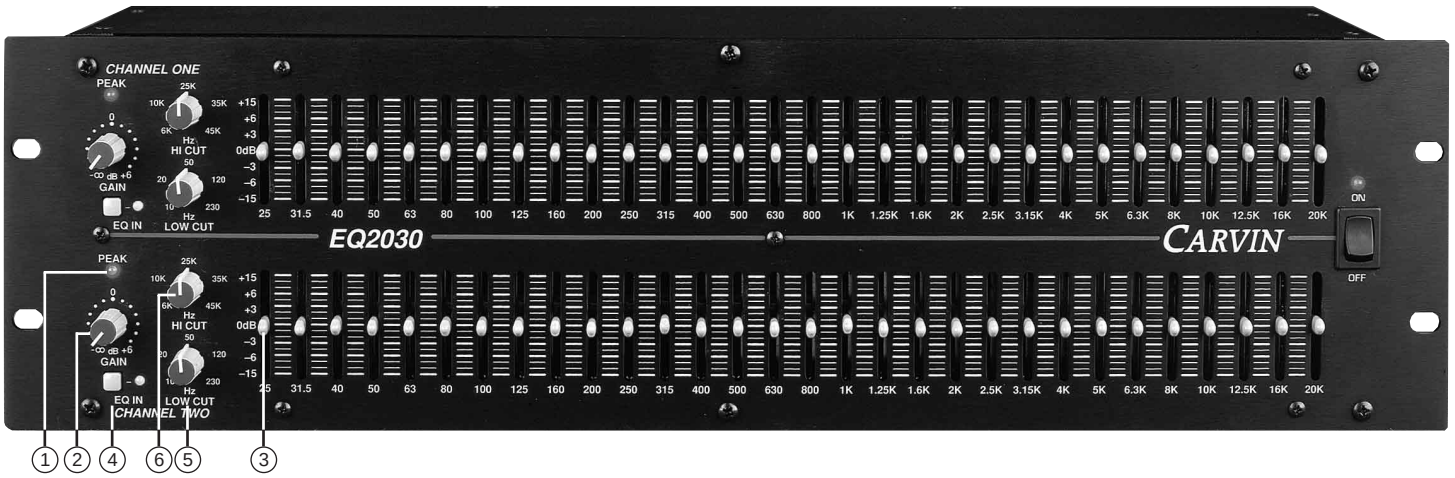
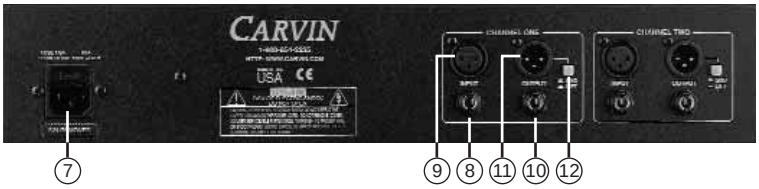


Figure 3:
—Response of one band for 3, 6, and 15 dB of boost/cut
—Response with the 20Hz and 20kHz filters in and out

FRONT & REAR PANEL CONTROLS







FRONT PANEL

1. PEAK OVERLOAD LED

The red PEAK LED lights any time the signal level at any stage (input/output) comes within 6db of clipping (distortion). It is okay for the LED to light briefly at musical peaks, however if it flashes frequently or stays lit, reduce the input gain until this stops.

2. GAIN CONTROL

The GAIN control is used to set up the optimum signal levels between the equalizer and any other equipment connected to it. This control allows adjustments from completely off (fully attenuated) to +6db of gain.

3. FREQUENCY BAND SLIDERS

Each of the EQ2015 & EQ2030's sliders provide a full 15db of boost or cut on frequency. Many other brands have only a 12db range. Carvin uses long throw sliders for precise adjustments. Each slider features a positive center detent for a true "flat" setting.

4. EQ BYPASS SWITCH

The EQ2015 and EQ2030 feature a BYPASS switch on each channel allowing you to compare the equalized signal with the original source. This A/B comparison lets you measure how effective your settings are in a particular environment.

5. SWEEPABLE LO CUT FILTER

With a range of 10 Hz to 230 Hz, this control can be used as a subsonic filter to protect power amps from unexpected low end transients such as a dropped microphone, a stage rumble/wind filter, or to reduce 60 cycle hum in environments with poor AC or ground loops. 35 Hz is a recommended setting.

6. SWEEPABLE HI CUT FILTER

This control has range of 6k to 45kHz. Use it to reduce hiss on recorded tracks with only low frequency content (such as kick drum or bass guitar), or as an ultrasonic filter (20K-up) to protect amps and drivers from damaging oscillations (20k Hz is the recommended setting when used as an ultra-sonic filter).

REAR PANEL

7. AC POWER CORD & MAIN POWER FUSE

Always use grounded (3 prong) outlets. Defeating the power cord's ground connection can result in electrocution.

Should the external fuse ever blow, replace only with same type and value:

120 VAC units: 1/4 amp, 5x20mm.

230 VAC units: .125A, 5x20mm.

8. CHANNEL 1 (2) 1/4" PHONE JACK INPUT

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

9. CHANNEL 1 (2) XLR INPUT CONNECTOR

Like the 1/4" phone jack, this input connector will accept either balanced or unbalanced signals. Pin 2 is signal +, pin 3 signal - and pin 1 is grounded.

10. CHANNEL 1 (2) 1/4" PHONE JACK OUTPUT

Like the 1/4" phone input jack, this output connector will accept either balanced or unbalanced signals. Pin 2 is signal +, pin 3 signal - and pin 1 is grounded.

11. CHANNEL 1 (2) XLR OUTPUT

Like the XLR input jack, this output connector will accept either balanced or unbalanced signals. Pin 2 is signal +, pin 3 signal - and pin 1 is grounded.

12. OUTPUT XLR GROUND LIFT SWITCH

This switch defeats the ground on pin 1 of the output XLR connector. Use this to help eliminate ground loops (AC hum).

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.

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 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 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) WILL NOT TURN ON

Check the power to the EQ. Check for tripped circuit breakers, unplugged extension cords or power-strip switches that may be turned off. Check the fuse. If a dark brownish color or no wire can be seen within the glass fuse, then replace. The EQ may be perfectly fine but occasionally the fuse may blow because of high AC voltage surges. After the fuse has been replaced with the proper value and if the fuse fails again, the product will require servicing (be sure to use a slow blow fuse if required).

2) KEEP YOUR EQUIPMENT LOOKING NEW

Use caution to 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. Be sure the unit is dried off and unplugged if a damp cloth is used.

REPLACEMENT PARTS LIST FOR EQ2015

CAUTION

RISK OF ELECTRIC SHOCK

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

EQ2015 Assembly: 80-20151 Rev (C) PCB: 30-20151 Rev (B)

Ref. Des.	Description	Carvin P/N
A1	Op Amp 4558 CP1 Dual HFREQ	60-45580
A2	Op Amp 4558 CP1 Dual HFREQ	60-45580
A3	Op Amp 4558 CP1 Dual HFREQ	60-45580
A4	Op Amp 4558 CP1 Dual HFREQ	60-45580
A5	Op Amp 4558 CP1 Dual HFREQ	60-45580
A6	Op Amp 4558 CP1 Dual HFREQ	60-45580
A7	Op Amp 4558 CP1 Dual HFREQ	60-45580
A8	Op Amp 5532 Low Noise	60-55320
A9	Op Amp 4558 CP1 Dual HFREQ	60-45580
A10	Op Amp 4558 CP1 Dual HFREQ	60-45580
A11	Op Amp 4558 CP1 Dual HFREQ	60-45580
A12	Op Amp 4558 CP1 Dual HFREQ	60-45580
A13	Op Amp 4558 CP1 Dual HFREQ	60-45580
A14	Op Amp 4558 CP1 Dual HFREQ	60-45580
A15	Op Amp 4558 CP1 Dual HFREQ	60-45580
A16	Op Amp 5532 Low Noise	60-55320
A17	Op Amp 5532 Low Noise	60-55320
A18	Op Amp 5532 Low Noise	60-55320
A19	Op Amp 5532 Low Noise	60-55320
A20	Op Amp 5532 Low Noise	60-55320
A21	Op Amp 5532 Low Noise	60-55320
A22	Op Amp 5532 Low Noise	60-55320
A23	Op Amp 5532 Low Noise	60-55320
B1	Jumper .35" 0.0Ω 0.35" prep.	50-00035
B2	Jumper .35" 0.0Ω 0.35" prep.	50-00035
B3	Jumper .35" 0.0Ω 0.35" prep.	50-00035
B4	Jumper .35" 0.0Ω 0.35" prep.	50-00035
B10	Jumper 0.35" Wire 22GA	44-13500
B11	Jumper 0.35" Wire 22GA	44-13500
B12	Jumper 0.35" Wire 22GA	44-13500
B13	Jumper 0.35" Wire 22GA	44-13500
B14	Jumper 0.35" Wire 22GA	44-13500
B15	Jumper 0.35" Wire 22GA	44-13500
B16	Jumper 0.35" Wire 22GA	4-13500
C1	Capacitor 10µF 50V Electrolytic 20%	47-10051
C2	Capacitor 10µF 50V Electrolytic 20%	47-10051
C3	Capacitor 0.22µF 100V Poly 10%	41-22412
C4	Capacitor 1µF 35V Tant 10%	48-01031
C5	Capacitor 1µF 35V Tant 10%	48-01031
C6	Capacitor 1µF 35V Tant 10%	48-01031
C7	Capacitor 1µF 35V Tant 10%	48-01031
C8	Capacitor 0.022µF 100V Poly 10%	46-22312
C9	Capacitor 1µF 35V Tant 10%	48-01031
C10	Capacitor 0.022µF 100V Poly 10%	46-22312
C11	Capacitor 1µF 35V Tant 10%	48-01031
C12	Capacitor 0.068µF 100V Poly 10%	46-68312
C13	Capacitor 0.47µF 100V Poly 10%	46-47412
C14	Capacitor 0.022µF 100V Poly 10%	46-22312
C15	Capacitor 0.22µF 100V Poly 10%	41-22412
C16	Capacitor 0.0033µF 100V Poly 10%	46-33212
C17	Capacitor 0.22µF 100V Poly 10%	41-22412
C18	Capacitor 0.0033µF 100V Poly 10%	46-33212
C19	Capacitor 0.1µF 100V Poly 10%	46-10412
C20	Capacitor 0.0068µF 100V Poly 10%	46-68212
C21	Capacitor 0.068µF 100V Poly 10%	46-68312
C22	Capacitor 0.001µF 100V Poly 10%	46-10212
C23	Capacitor 0.047µF 100V Poly 10%	46-47312
C24	Capacitor 0.0068µF 100V Poly 10%	46-68212
C25	Capacitor 0.022µF 100V Poly 10%	46-22312
C26	Capacitor 0.0047µF 100V Poly 10%	46-47212
C27	Capacitor 0.01µF 100V Poly 10%	46-10312
C28	Capacitor 0.0068µF 100V Poly 10%	46-68212
C29	Capacitor 0.01µF 100V Poly 10%	46-10312
C30	Capacitor 250PF 500V Ceramic 5%	45-25152
C31	Capacitor 0.0068µF 100V Poly 10%	46-68212
C32	Capacitor 120PF 500V Ceramic 10%	45-12152
C33	Capacitor 10µF 50V Electrolytic 20%	47-10051
C34	Capacitor 10µF 50V Electrolytic 20%	47-10051
C35	Capacitor 0.22µF 100V Poly 10%	41-22412
C36	Capacitor 1µF 35V Tant 10%	48-01031
C37	Capacitor 1µF 35V Tant 10%	48-01031
C38	Capacitor 0.068µF 100V Poly 10%	46-68312
C39	Capacitor 1µF 35V Tant 10%	48-01031
C40	Capacitor 1µF 35V Tant 10%	48-01031
C41	Capacitor 0.022µF 100V Poly 10%	46-22312
C42	Capacitor 1µF 35V Tant 10%	48-01031
C43	Capacitor 0.022µF 100V Poly 10%	46-22312
C44	Capacitor 1µF 35V Tant 10%	48-01031
C45	Capacitor 0.068µF 100V Poly 10%	46-68312
C46	Capacitor 0.47µF 100V Poly 10%	46-47412
C47	Capacitor 0.022µF 100V Poly 10%	46-22312
C48	Capacitor 0.22µF 100V Poly 10%	41-22412
C49	Capacitor 0.0033µF 100V Poly 10%	46-33212
C50	Capacitor 0.22µF 100V Poly 10%	41-22412
C51	Capacitor 0.0033µF 100V Poly 10%	46-33212
C52	Capacitor 0.1µF 100V Poly 10%	46-10412
C53	Capacitor 0.0068µF 100V Poly 10%	46-68212
C54	Capacitor 0.068µF 100V Poly 10%	46-68312
C55	Capacitor 0.001µF 100V Poly 10%	46-10212
C56	Capacitor 0.047µF 100V Poly 10%	46-47312
C57	Capacitor 0.0068µF 100V Poly 10%	46-68212
C58	Capacitor 0.022µF 100V Poly 10%	46-22312
C59	Capacitor 0.0047µF 100V Poly 10%	46-47212
C60	Capacitor 0.01µF 100V Poly 10%	46-10312
C61	Capacitor 0.0068µF 100V Poly 10%	46-68212
C62	Capacitor 0.01µF 100V Poly 10%	46-10312
C63	Capacitor 250PF 500V Ceramic 5%	45-25152
C64	Capacitor 0.0068µF 100V Poly 10%	46-68212
C65	Capacitor 120PF 500V Ceramic 10%	45-12152
C66	Capacitor 39PF 500V Ceramic 5%	45-39052
C67	Capacitor 10µF 50V Electrolytic 20%	47-10051
C68	Capacitor 39PF 500V Ceramic 5%	45-39052
C69	Capacitor 10µF 50V Electrolytic 20%	47-10051
C70	Capacitor 39PF 500V Ceramic 5%	45-39052
C71	Capacitor 10µF 50V Electrolytic 20%	47-10051
C72	Capacitor 39PF 500V Ceramic 5%	45-39052
C73	Capacitor 10µF 50V Electrolytic 20%	47-10051
C74	Capacitor 330PF 1000V Ceramic 10%	45-33113
C75	Capacitor 680PF 500V Ceramic 5%	45-68152
C76	Capacitor 330PF 1000V Ceramic 10%	45-33113
C77	Capacitor 10µF 50V Electrolytic 20%	47-10051
C78	Capacitor 0.47µF 100V Poly 10%	46-47412
C79	Capacitor 0.47µF 100V Poly 10%	46-47412
C80	Capacitor 27PF 500V Ceramic 5%	45-27052
C81	Capacitor 10µF 50V Electrolytic 20%	47-10051
C82	Capacitor 27PF 500V Ceramic 5%	45-27052
C83	Capacitor 10µF 50V Electrolytic 20%	47-10051
C84	Capacitor 27PF 500V Ceramic 5%	45-27052
C85	Capacitor 10µF 50V Electrolytic 20%	47-10051
C86	Capacitor 330PF 1000V Ceramic 10%	45-33113
C87	Capacitor 680PF 500V Ceramic 5%	45-68152
C88	Capacitor 330PF 1000V Ceramic 10%	45-33113
C89	Capacitor 10µF 50V Electrolytic 20%	47-10051
C90	Capacitor 0.47µF 100V Poly 10%	46-47412
C91	Capacitor 0.47µF 100V Poly 10%	46-47412
C92	Capacitor 27PF 500V Ceramic 5%	45-27052
C93	Capacitor 10µF 50V Electrolytic 20%	47-10051
C94	Capacitor 27PF 500V Ceramic 5%	45-27052
C95	Capacitor 10µF 50V Electrolytic 20%	47-10051
C96	Capacitor 27PF 500V Ceramic 5%	45-27052
C97	Capacitor 10µF 50V Electrolytic 20%	47-10051
C98	Capacitor 1000µF 25V Electrolytic 20%	47-10225
C99	Capacitor 330PF 1000V Ceramic 10%	45-33113
C100	Capacitor 330PF 1000V Ceramic 10%	45-33113
C101	Capacitor 10µF 50V Electrolytic 20%	47-10051
C102	Capacitor 1000µF 25V Electrolytic 20%	47-10225
C103	Capacitor 0.068µF 100V Poly 10%	46-68312
C104	Capacitor 10µF 50V Electrolytic 20%	47-10051
C105	Capacitor 10µF 50V Electrolytic 20%	47-10051
C106	Capacitor 10µF 50V Electrolytic 20%	47-10051
C107	Capacitor N/U	
C108	Capacitor 0.1µF 100V Poly 10%	46-10412
C109	Capacitor 0.1µF 100V Poly 10%	46-10412
D1	Diode 1N4003 Rect Gen 1A 200V	60-40030
D2	Diode 1N4003 Rect Gen 1A 200V	60-40030
D3	Diode 1N4003 Rect Gen 1A 200V	60-40030
D4	Diode 1N4003 Rect Gen 1A 200V	60-40030
D5	LED Green small #204GD 3mm T-1.0	60-75330
D6	LED Red small #204HD 3mm T-1.0	60-75320
D7	LED Green small #204GD 3mm T-1.0	60-75330
D8	Diode 1N4003 Rect Gen 1A 200V	60-40030
D9	Diode 1N4003 Rect Gen 1A 200V	60-40030
D10	LED Red small #204HD 3mm T-1.0	60-75320
D11	LED Red small #204HD 3mm T-1.0	60-75320
H1	Header 8 Pin Vert SHS 2.5mm PCB MTG	23-11008
H2	Header 8 Pin Vert SHS 2.5mm PCB MTG	23-11008
J1	1/4" Phone 7 Pin Plastic 0.25" 24mm	21-06457
J2	XLR Jack XLRF Neutrik Vert PCB MTG	21-40000
J3	Stereo Phone Jack, 1/4" 7 Pin Plastic 0.25" 24mm	21-06457
J4	XLR Jack XLRM Neutrik Vert PCB MTG	21-40001
J5	1/4" Phone 7 Pin Plastic 0.25" 24mm	21-06457
J6	XLR Jack XLRF Neutrik Vert PCB MTG	21-40000
J7	Stereo Phone Jack, 1/4" 7 Pin Plastic 0.25" 24mm	21-06457
J8	XLR Jack XLRM Neutrik Vert PCB MTG	21-40001
P101	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P102	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P103	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P104	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P105	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P106	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P107	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P108	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P109	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P110	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P111	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P112	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P113	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P114	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P115	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P201	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P202	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P203	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P204	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P205	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P206	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P207	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P208	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P209	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P210	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P211	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P212	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P213	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P214	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P215	Fader B10K C 30mT H=.24 C1 25mm Shaft	71-10332
P301	Pot 15C50Kx2 D Vert D Shaft Pot 14 30F	71-13070
P302	Pot B50K D Vrt 9m 35mm Shaft Pot 9 35F	71-09053
P303	Pot 15C50Kx2 D Vert D Shaft Pot 14 30F	71-13070
P304	Pot 15C50Kx2 D Vert D Shaft Pot 14 30F	71-13070
P305	Pot 15C50Kx2 D Vert D Shaft Pot 14 30F	71-13070
P306	Pot B50K D Vrt 9m 35 35mm Shaft Pot 9 35F	71-09053
PL1	Receptacle AC Jack AC W/ Fuse Non-Rvrbl	21-02804
Q2	Transistor 2N5550 NPN 250V TO-92	60-55500
Q3	Transistor 2N5550 NPN 250V TO-92	60-55500
QC1	QC 90° Horizontal PCB MTG 0.25	06-40060
QC2	QC 90° Horizontal PCB MTG 0.25	06-40060
QC3	QC 90° Horizontal PCB MTG 0.25	06-40060
QC4	Spade Terminal QC 90° Horizontal PCB MTG 0.25	06-40060
R1	1/4W Resistor 10K .35" prep. 5% Carbon	50-10045
R2	1/4W Resistor 47K .35" prep. 5% Carbon	50-47045
R3	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R4	1/4W Resistor 150K .35" prep. 5% Carbon	50-15055
R5	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R6	1/4W Resistor 220K .35" prep. 5% Carbon	50-22055
R7	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R8	1/4W Resistor 180K .35" prep. 5% Carbon	50-18055
R9	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R10	1/4W Resistor 20K .35" prep. 5% Carbon	50-20045
R11	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R12	1/4W Resistor 56K .35" prep. 5% Carbon	50-56045
R13	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R14	1/4W Resistor 300K .35" prep. 5% Carbon	50-30055
R15	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R16	1/4W Resistor 130K .35" prep. 5% Carbon	50-13055
R17	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R18	1/4W Resistor 56K .35" prep. 5% Carbon	50-56045
R19	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R20	1/4W Resistor 220K .35" prep. 5% Carbon	50-22055
R21	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R22	1/4W Resistor 18K .35" prep. 5% Carbon	50-18045
R23	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R24	1/4W Resistor 22K .35" prep. 5% Carbon	50-22045
R25	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R26	1/4W Resistor 15K .35" prep. 5% Carbon	50-15045
R27	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R28	1/4W Resistor 150K .35" prep. 5% Carbon	50-15055
R29	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R30	1/4W Resistor 180K .35" prep. 5% Carbon	50-18055
R31	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R32	1/4W Resistor 47K .35" prep. 5% Carbon	50-47045
R33	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R34	1/4W Resistor 150K .35" prep. 5% Carbon	50-15055
R35	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R36	1/4W Resistor 220K .35" prep. 5% Carbon	50-22055
R37	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R38	1/4W Resistor 180K .35" prep. 5% Carbon	50-18055
R39	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R40	1/4W Resistor 20K .35" prep. 5% Carbon	50-20045
R41	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R42	1/4W Resistor 56K .35" prep. 5% Carbon	50-56045
R43	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R44	1/4W Resistor 300K .35" prep. 5% Carbon	50-30055
R45	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R46	1/4W Resistor 130K .35" prep. 5% Carbon	50-13055
R47	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R48	1/4W Resistor 56K .35" prep. 5% Carbon	50-56045
R49	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R50	1/4W Resistor 220K .35" prep. 5% Carbon	50-22055
R51	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R52	1/4W Resistor 18K .35" prep. 5% Carbon	50-18045
R53	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R54	1/4W Resistor 22K .35" prep. 5% Carbon	50-22045
R55	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R56	1/4W Resistor 15K .35" prep. 5% Carbon	50-15045
R57	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R58	1/4W Resistor 150K .35" prep. 5% Carbon	50-15055
R59	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R60	1/4W Resistor 180K .35" prep. 5% Carbon	50-18055
R61	1/4W Resistor 680Ω .35" prep. 5% Carbon	50-68025
R62	1/4W Resistor 10K .35" prep. 5% Carbon	50-10045
R63	1/4W Resistor 10K .35" prep. 5% Carbon	50-10045
R64	1/4W Resistor 10K .35" prep. 5% Carbon	50-10045
R65	1/4W Resistor 10K .35" prep. 5% Carbon	50-10045
R66	1/4W Resistor 10K .35" prep. 5% Carbon	50-10045
R67	1/4W Resistor 10K .35" prep. 5% Carbon	50-10045
R68	1/4W Resistor 10K .35" prep. 5% Carbon	50-10045
R69	1/4W Resistor 10K .35" prep. 5% Carbon	50-10045
R70	1/4W Resistor 6.8K .35" prep. 5% Carbon	50-68035
R71	1/4W Resistor 6.8K .35" prep. 5% Carbon	50-68035
R72	1/4W Resistor 1.0M .35" prep. 5% Carbon	50-10065
R73	1/4W Resistor 10K .35" prep. 5% Carbon	50-10045
R74	1/4W Resistor 1.0M .35" prep. 5% Carbon	50-10065
R75	1/4W Resistor 2.2K .35" prep. 5% Carbon	50-22035
R76	1/4W Resistor 10K .35" prep. 5% Carbon	50-10045
R77	1/4W Resistor 2.2K .35" prep. 5% Carbon	50-22035
R78	1/4W Resistor 24K .35" prep. 5% Carbon	50-24045
R79	1/4W Resistor 470Ω .35" prep. 5% Carbon	50-47025
R80	1/4W Resistor 10K .35" prep. 5% Carbon	50-10045
R81	1/4W Resistor 1K .35" prep. 5% Carbon	50-10035
R82	1/4W Resistor 22K .35" prep. 5% Carbon	50-22045
R83	1/4W Resistor 22K .35" prep. 5% Carbon	50-22045
R84	1/4W Resistor 22K .35" prep. 5% Carbon	50-22045
R85	1/4W Resistor 22K .35" prep. 5% Carbon	50-22045
R86	1/4W Resistor 150Ω .35" prep. 5% Carbon	50-15025
R87	1/4W Resistor 10K .35" prep. 5% Carbon	50-10045
R88	1/4W Resistor 10K .35" prep. 5% Carbon	50-10045
R89	1/4W Resistor 150Ω .35" prep. 5% Carbon	50-15025
R90	1/4W Resistor 1.5K .35" prep. 5% Carbon	50-15035
R91	1/4W Resistor 6.8K .35" prep. 5% Carbon	50-68035
R92	1/4W Resistor 6.8K .35" prep. 5% Carbon	50-68035
R93	1/4W Resistor 10K .35" prep. 5% Carbon	50-10045
R95	1/4W Resistor 24K .35" prep. 5% Carbon	50-24045
R96	1/4W Resistor 22K .35" prep. 5% Carbon	50-22045
R97	1/4W Resistor 22K .35" prep. 5% Carbon	50-22045
R98	1/4W Resistor 22K .35" prep. 5% Carbon	50-22045
R99	1/4W Resistor 22K .35" prep. 5% Carbon	50-22045
R100	1/4W Resistor 470Ω .35" prep. 5% Carbon	50-47025
R101	1/4W Resistor 10K .35" prep. 5% Carbon	50-10045
R102	1/4W Resistor 1K .35" prep. 5% Carbon	50-10035
R103	1/4W Resistor 1.0M .35" prep. 5% Carbon	50-10065
R104	1/4W Resistor 10K .35" prep. 5% Carbon	50-10045
R106	1/4W Resistor 1.0M .35" prep. 5% Carbon	50-10065
R107	1/4W Resistor 150Ω .35" prep. 5% Carbon	50-15025
R108	1/4W Resistor 10K .35" prep. 5% Carbon	50-10045
R109	1/4W Resistor 10K .35" prep. 5% Carbon	50-10045
R110	1/4W Resistor 150Ω .35" prep. 5% Carbon	50-15025
R111	1/4W Resistor 1.5K .35" prep. 5% Carbon	50-15035
R112	1/4W Resistor 10Ω .35" prep. 5% Carbon	50-10015
R113	1/4W Resistor 3K .35" prep. 5% Carbon	50-30035
R114	1/4W Resistor 2.2K .35" prep. 5% Carbon	50-22035
R115	1/4W Resistor 2.2K .35" prep. 5% Carbon	50-22035
R163	1/4W Resistor 10K .35" prep. 5% Carbon	50-10045
S1	Switch DPDT Push Vert	Small Body 25-02201
S2	Switch DPDT Push Vert	Small Body 25-02201
S3	Switch DPDT Push Vert	Small Body 25-02201
S4	Switch DPDT Push Vert	Small Body 25-02201
T1A	Transformer Toroid 7VA 7.5VA-15V 466mA	
U1	Regulator 7815 +15V & Sink 2A	60-78150
U2	Regulator 7915 -15V & Sink 2A	60-79150

Replacement parts for EQ2015 chassis

Carvin P/N	Description	Qty.
02-18103	FSTON RNG RED 22-18A .250 DIAM	2
02-18206	FSTON FEM RED 22-18A .205X.020	2
02-18250	FSTON FEM RED 22-18A .250X.032	4
03-08600	BUSHING .240X .304X .150	6
04-18007	WIRE 18AWG BLK 7"L UL1061	2
04-18504	WIRE 18AWG GRN 4"L UL1061	2
05-01803	PWR AC 10A 3/18AWG 8'2" W/PLUG	1
05-68430	CABLE RIBBON 24A 90°/12" W/HDR	1
06-10025	SMS PPH #4X .375 TYPE AB BLACK	4
06-10035	SMS PPH #4X 1.25 TYPE A BLACK	7
06-10045	SMS PPH #6X .375 TYPE AB BLACK	6
06-10060	MS PPH 6-32X .375 BLACK	6
06-10061	SMS PPH #6 X .375 TYPE A BLACK	3
06-10062	MS PPH 6-32X .375 TYPE F BLACK	2
06-11120	NUT METRIC 12MM KUNMING BLACK	4
06-50030	NUT KEP #6-32 BLACK	6
07-01603	KNOB 6L SWITCH EXTENDED	4
07-12214	KNOB "10" ROTARY BLUE	6
07-70183	CAP EQ GREY .093X .250	30
10-20151	PANEL FRONT EQ2015	1
10-20159	CHASSIS EQ2015	1
10-30005	PANEL TOP EQ2015/2030 XC3000	1
25-62116	SWITCH SPST ON/OFF 4A/250VAC	1
80-20151	* STD PCB ASSY MAIN EQ2015	1
99-30014	BOX 200# SW OPF EQ2015/2029	1
99-91509	BAG SM 15X 9X 31.5X 2ML 250/BX	1
99-99000	TAGS SERIAL NUMBER FINAL 1=2PC	1

REPLACEMENT PARTS LIST FOR EQ2030

EQ2030 Assembly: 80-20300 Rev (B) PCB: 30-20300 Rev (A)

Ref. Des.	Description				Carvin P/N
A1	Op Amp 4558	CP1	Dual HFREQ		60-45580
A2	Op Amp 4558	CP1	Dual HFREQ		60-45580
A3	Op Amp 4558	CP1	Dual HFREQ		60-45580
A4	Op Amp 4558	CP1	Dual HFREQ		60-45580
A5	Op Amp 4558	CP1	Dual HFREQ		60-45580
A6	Op Amp 4558	CP1	Dual HFREQ		60-45580
A7	Op Amp 4558	CP1	Dual HFREQ		60-45580
A8	Op Amp 4558	CP1	Dual HFREQ		60-45580
A9	Op Amp 4558	CP1	Dual HFREQ		60-45580
A10	Op Amp 4558	CP1	Dual HFREQ		60-45580
A11	Op Amp 4558	CP1	Dual HFREQ		60-45580
A12	Op Amp 4558	CP1	Dual HFREQ		60-45580
A13	Op Amp 4558	CP1	Dual HFREQ		60-45580
A14	Op Amp 4558	CP1	Dual HFREQ		60-45580
A15	Op Amp 4558	CP1	Dual HFREQ		60-45580
A16	Op Amp 4558	CP1	Dual HFREQ		60-45580
A17	Op Amp 4558	CP1	Dual HFREQ		60-45580
A18	Op Amp 4558	CP1	Dual HFREQ		60-45580
A19	Op Amp 4558	CP1	Dual HFREQ		60-45580
A20	Op Amp 4558	CP1	Dual HFREQ		60-45580
A21	Op Amp 4558	CP1	Dual HFREQ		60-45580
A22	Op Amp 4558	CP1	Dual HFREQ		60-45580
A23	Op Amp 4558	CP1	Dual HFREQ		60-45580
A24	Op Amp 4558	CP1	Dual HFREQ		60-45580
A25	Op Amp 4558	CP1	Dual HFREQ		60-45580
A26	Op Amp 4558	CP1	Dual HFREQ		60-45580
A27	Op Amp 4558	CP1	Dual HFREQ		60-45580
A28	Op Amp 4558	CP1	Dual HFREQ		60-45580
A29	Op Amp 4558	CP1	Dual HFREQ		60-45580
A30	Op Amp 4558	CP1	Dual HFREQ		60-45580
A31	IOp Amp 5532		Low Noise		60-55320
A32	IOp Amp 5532		Low Noise		60-55320
A33	IOp Amp 5532		Low Noise		60-55320
A34	IOp Amp 5532		Low Noise		60-55320
A35	Op Amp MC4558	CP1	Dual HFREQ		60-45580
A36	IOp Amp 5532		Low Noise		60-55320
A37	IOp Amp 5532		Low Noise		60-55320
A38	Op Amp 4558	CP1	Dual HFREQ		60-45580
A39	IOp Amp 5532		Low Noise		60-55320
B1	Jumper 0.35”	Wire 22GA			44-13500
B2	Jumper 0.35”	Wire 22GA			44-13500
B3	Jumper 0.35”	Wire 22GA			44-13500
B4	Jumper 0.35”	Wire 22GA			44-13500
B5	Jumper 0.35”	Wire 22GA			44-13500
B6	Jumper 0.35”	Wire 22GA			44-13500
B100	Jumper .35”	0.0Ω	0.35” prep.		50-00035
B201	Jumper .35”	0.0Ω	0.35” prep.		50-00035
B202	Jumper .35”	0.0Ω	0.35” prep.		50-00035
B203	Jumper .35”	0.0Ω	0.35” prep.		50-00035
C1	Capacitor	120PF 500V	Ceramic	10%	45-12152
C2	Capacitor	10µF 50V	Electrolytic	20%	47-10051
C3	Capacitor	10µF 50V	Electrolytic	20%	47-10051
C4	Capacitor	10µF 50V	Electrolytic	20%	47-10051
C5	Capacitor	330PF 1000V	Ceramic	10%	45-33113
C6	Capacitor	27PF 500V	Ceramic	5%	45-27052
C7	Capacitor	0.47µF 100V	Poly	10%	46-47412
C8	Capacitor	0.47µF 100V	Poly	10%	46-47412
C9	Capacitor	10µF 50V	Electrolytic	20%	47-10051
C10	Capacitor	330PF 1000V	Ceramic	10%	45-33113
C11	Capacitor	680PF 500V	Ceramic	5%	45-68152
C12	Capacitor	10µF 50V	Electrolytic	20%	47-10051
C13	Capacitor	1µF 35V	Tant	10%	48-01031
C14	Capacitor	1µF 35V	Tant	10%	48-01031
C15	Capacitor	0.1µF 100V	Poly	10%	46-10412
C16	Capacitor	1µF 35V	Tant	10%	48-01031
C17	Capacitor	0.47µF 100V	Poly	10%	46-47412
C18	Capacitor	0.068µF 100V	Poly	10%	46-68312
C19	Capacitor	1µF 35V	Tant	10%	48-01031
C20	Capacitor	0.1µF 100V	Poly	10%	46-10412
C21	Capacitor	1µF 35V	Tant	10%	48-01031
C22	Capacitor	0.068µF 100V	Poly	10%	46-68312
C23	Capacitor	1µF 35V	Tant	10%	48-01031
C24	Capacitor	0.047µF 100V	Poly	10%	46-47312
C25	Capacitor	0.47µF 100V	Poly	10%	46-47412
C26	Capacitor	0.033µF 100V	Poly	10%	46-33312
C27	Capacitor	0.47µF 100V	Poly	10%	46-47412
C28	Capacitor	0.047µF 100V	Poly	10%	46-47312
C29	Capacitor	0.47µF 100V	Poly	10%	46-47412
C30	Capacitor	0.033µF 100V	Poly	10%	46-33312
C31	Capacitor	0.22µF 100V	Poly	10%	41-22412
C32	Capacitor	0.047µF 100V	Poly	10%	46-47312
C33	Capacitor	0.22µF 100V	Poly	10%	41-22412
C34	Capacitor	0.047µF 100V	Poly	10%	46-47312
C35	Capacitor	0.22µF 100V	Poly	10%	41-22412
C36	Capacitor	0.01µF 100V	Poly	10%	46-10312
C37	Capacitor	0.22µF 100V	Poly	10%	41-22412
C38	Capacitor	0.01µF 100V	Poly	10%	46-10312
C39	Capacitor	0.1µF 100V	Poly	10%	46-10412
C40	Capacitor	0.0068µF 100V	Poly	10%	46-68212
C41	Capacitor	0.1µF 100V	Poly	10%	46-10412
C42	Capacitor	0.0068µF 100V	Poly	10%	46-68212
C43	Capacitor	0.1µF 100V	Poly	10%	46-10412
C44	Capacitor	0.0033µF 100V	Poly	10%	46-33212
C45	Capacitor	0.068µF 100V	Poly	10%	46-68312
C46	Capacitor	0.0068µF 100V	Poly	10%	46-68212
C47	Capacitor	0.047µF 100V	Poly	10%	46-47312
C48	Capacitor	0.0047µF 100V	Poly	10%	46-47212
C49	Capacitor	0.033µF 100V	Poly	10%	46-33312
C50	Capacitor	0.0033µF 100V	Poly	10%	46-33212
C51	Capacitor	0.033µF 100V	Poly	10%	46-33312
C52	Capacitor	0.0033µF 100V	Poly	10%	46-33212
C53	Capacitor	0.022µF 100V	Poly	10%	46-22312
C54	Capacitor	0.0033µF 100V	Poly	10%	46-33212
C55	Capacitor	0.022µF 100V	Poly	10%	46-22312
C56	Capacitor	0.0033µF 100V	Poly	10%	46-33212
C57	Capacitor	0.022µF 100V	Poly	10%	46-22312
C58	Capacitor	0.0022µF 100V	Poly	10%	46-22212
C59	Capacitor	0.01µF 100V	Poly	10%	46-10312
C60	Capacitor	0.001µF 100V	Poly	10%	46-10212
C61	Capacitor	0.01µF 100V	Poly	10%	46-10312
C62	Capacitor	0.001µF 100V	Poly	10%	46-10212
C63	Capacitor	0.0068µF 100V	Poly	10%	46-68212
C64	Capacitor	0.001µF 100V	Poly	10%	46-10212
C65	Capacitor	0.0047µF 100V	Poly	10%	46-47212
C66	Capacitor	0.001µF 100V	Poly	10%	46-10212
C67	Capacitor	0.0047µF 100V	Poly	10%	46-47212
C68	Capacitor	250PF 500V	Ceramic	5%	45-25152
C69	Capacitor	0.0033µF 100V	Poly	10%	46-33212
C70	Capacitor	680PF 500V	Ceramic	5%	45-68152
C71	Capacitor	0.0033µF 100V	Poly	10%	46-33212
C72	Capacitor	560PF 500V	Ceramic	10%	45-56152
C73	Capacitor	0.0022µF 100V	Poly	10%	46-22212
C74	Capacitor	330PF 1000V	Ceramic	10%	45-33113
C75	Capacitor	120PF 500V	Ceramic	10%	45-12152
C76	Capacitor	330PF 1000V	Ceramic	10%	45-33113
C77	Capacitor	330PF 1000V	Ceramic	10%	45-33113
C78	Capacitor	120PF 500V	Ceramic	10%	45-12152
C79	Capacitor	330PF 1000V	Ceramic	10%	45-33113
C80	Capacitor	330PF 1000V	Ceramic	10%	45-33113
C81	Capacitor	27PF 500V	Ceramic	5%	45-27052
C82	Capacitor	0.47µF 100V	Poly	10%	46-47412
C83	Capacitor	0.47µF 100V	Poly	10%	46-47412
C84	Capacitor	10µF 50V	Electrolytic	20%	47-10051
C85	Capacitor	330PF 1000V	Ceramic	10%	45-33113

C86	Capacitor	680PF 500V	Ceramic	5%	45-68152
C87	Capacitor	10µF 50V	Electrolytic	20%	47-10051
C88	Capacitor	1µF 35V	Tant	10%	48-01031
C89	Capacitor	1µF 35V	Tant	10%	48-01031
C90	Capacitor	0.1µF 100V	Poly	10%	46-10412
C91	Capacitor	1µF 35V	Tant	10%	48-01031
C92	Capacitor	0.47µF 100V	Poly	10%	46-47412
C93	Capacitor	0.068µF 100V	Poly	10%	46-68312
C94	Capacitor	1µF 35V	Tant	10%	48-01031
C95	Capacitor	0.1µF 100V	Poly	10%	46-10412
C96	Capacitor	1µF 35V	Tant	10%	48-01031
C97	Capacitor	0.068µF 100V	Poly	10%	46-68312
C98	Capacitor	1µF 35V	Tant	10%	48-01031
C99	Capacitor	0.047µF 100V	Poly	10%	46-47312
C100	Capacitor	0.47µF 100V	Poly	10%	46-47412
C101	Capacitor	0.033µF 100V	Poly	10%	46-33312
C102	Capacitor	0.47µF 100V	Poly	10%	46-47412
C103	Capacitor	0.047µF 100V	Poly	10%	46-47312
C104	Capacitor	0.47µF 100V	Poly	10%	46-47412
C105	Capacitor	0.033µF 100V	Poly	10%	46-33312
C106	Capacitor	0.22µF 100V	Poly	10%	41-22412
C107	Capacitor	0.22µF 100V	Poly	10%	41-22412
C108	Capacitor	0.047µF 100V	Poly	10%	46-47312
C109	Capacitor	0.047µF 100V	Poly	10%	46-47312
C110	Capacitor	0.22µF 100V	Poly	10%	41-22412
C111	Capacitor	0.01µF 100V	Poly	10%	46-10312
C112	Capacitor	0.22µF 100V	Poly	10%	41-22412
C113	Capacitor	0.01µF 100V	Poly	10%	46-10312
C114	Capacitor	0.0068µF 100V	Poly	10%	46-68212
C115	Capacitor	0.0068µF 100V	Poly	10%	46-68212
C116	Capacitor	0.0033µF 100V	Poly	10%	46-33212
C117	Capacitor	0.068µF 100V	Poly	10%	46-68312
C118	Capacitor	0.0068µF 100V	Poly	10%	46-68212
C119	Capacitor	0.047µF 100V	Poly	10%	46-47312
C120	Capacitor	0.0047µF 100V	Poly	10%	46-47212
C121	Capacitor	0.033µF 100V	Poly	10%	46-33312
C122	Capacitor	0.0033µF 100V	Poly	10%	46-33212
C123	Capacitor	0.033µF 100V	Poly	10%	46-33312
C124	Capacitor	0.0033µF 100V	Poly	10%	46-33212
C125	Capacitor	0.022µF 100V	Poly	10%	46-22312
C126	Capacitor	0.0033µF 100V	Poly	10%	46-33212
C127	Capacitor	0.022µF 100V	Poly	10%	46-22312
C128	Capacitor	0.0033µF 100V	Poly	10%	46-33212
C129	Capacitor	0.022µF 100V	Poly	10%	46-22312
C130	Capacitor	0.0022µF 100V	Poly	10%	46-22212
C131	Capacitor	0.01µF 100V	Poly	10%	46-10312
C132	Capacitor	0.001µF 100V	Poly	10%	46-10212
C133	Capacitor	0.01µF 100V	Poly	10%	46-10312
C134	Capacitor	0.001µF 100V	Poly	10%	46-10212
C135	Capacitor	0.0068µF 100V	Poly	10%	46-68212
C136	Capacitor	0.001µF 100V	Poly	10%	46-10212
C137	Capacitor	0.0047µF 100V	Poly	10%	46-47212
C138	Capacitor	0.0033µF 100V	Poly	10%	46-33212
C139	Capacitor	680PF 500V	Ceramic	5%	45-68152
C140	Capacitor	0.0033µF 100V	Poly	10%	46-33212
C141	Capacitor	560PF 500V	Ceramic	10%	45-56152
C142	Capacitor	0.0022µF 100V	Poly	10%	46-22212
C143	Capacitor	330PF 1000V	Ceramic	10%	45-33113
C144	Capacitor	0.0047µF 100V	Poly	10%	46-47212
C145	Capacitor	0.001µF 100V	Poly	10%	46-10212
C146	Capacitor	250PF 500V	Ceramic	5%	45-25152
C147	Capacitor	120PF 500V	Ceramic	10%	45-12152
C148	Capacitor	120PF 500V	Ceramic	10%	45-12152
C149	Capacitor	120PF 500V	Ceramic	10%	45-12152
C150	Capacitor	0.1µF 100V	Poly	10%	46-10412
C151	Capacitor	0.1µF 100V	Poly	10%	46-10412
C152	Capacitor	0.1µF 100V	Poly	10%	46-10412
C153	Capacitor	330PF 1000V	Ceramic	10%	45-33113
C155	Capacitor	10µF 50V	Electrolytic	20%	47-10051
C201	Capacitor	10µF 50V	Electrolytic	20%	47-10051
C202	Capacitor	10µF 50V	Electrolytic	20%	47-10051
C203	Capacitor	27PF 500V	Ceramic	5%	45-27052
C204	Capacitor	27PF 500V	Ceramic	5%	45-27052
C205	Capacitor	10µF 50V	Electrolytic	20%	47-10051
C206	Capacitor	10µF 50V	Electrolytic	20%	47-10051
C207	Capacitor	10µF 50V	Electrolytic	20%	47-10051
C208	Capacitor	27PF 500V	Ceramic	5%	45-27052
C209	Capacitor	27PF 500V	Ceramic	5%	45-27052
C210	Capacitor	10µF 50V	Electrolytic	20%	47-10051
C211	Capacitor	1000µF 25V	Electrolytic	20%	47-10225
C212	Capacitor	10µF 50V	Electrolytic	20%	47-10051
C213	Capacitor	1000µF 25V	Electrolytic	20%	47-10225
C214	Capacitor	10µF 50V	Electrolytic	20%	47-10051
C250			N/U		
D1	LED	Red small	#204HD	3mm T-1.0	60-75320
D2	LED	Green small	#204GD	3mm T-1.0	60-75330
D3	LED	Red small	#204HD	3mm T-1.0	60-75320
D4	LED	Green small	#204GD	3mm T-1.0	60-75330
D5	Diode	1N4003	Rect Gen	1A 200V	60-40030
D6	Diode	1N4003	Rect Gen	1A 200V	60-40030
D7	Diode	1N4003	Rect Gen	1A 200V	60-40030
D8	Diode	1N4003	Rect Gen	1A 200V	60-40030
D9	Diode	1N4003	Rect Gen	1A 200V	60-40030
D10	Diode	1N4003	Rect Gen	1A 200V	60-40030
D11	LED	Red small	#204HD	3mm T-1.0	60-75320
H1	Header	8 Pin Vert	SHS 2.5mm	PCB MTG	23-11008
H2	Header	8 Pin Vert	SHS 2.5mm	PCB MTG	23-11008
H3	Header	4 Pin Vert	SHS 2.5mm	PCB MTG	23-11004
H4	Header	4 Pin Vert	SHS 2.5mm	PCB MTG	23-11004
J1	1/4” Phone		7 Pin Plastic	0.25” 24mm	21-06457
J2	XLR Jack	XLRF Neutrik	Vert	PCB MTG	21-40000
J3	1/4” Phone		7 Pin Plastic	0.25” 24mm	21-06457
J4	XLR Jack	XLRM Neutrik	Vert	PCB MTG	21-40001
J5	1/4” Phone		7 Pin Plastic	0.25” 24mm	21-06457
J6	XLR Jack	XLRF Neutrik	Vert	PCB MTG	21-40000
J7	1/4” Phone		7 Pin Plastic	0.25” 24mm	21-06457
J8	XLR Jack	XLRM Neutrik	Vert	PCB MTG	21-40001
P1	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P2	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P3	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P4	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P5	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P6	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P7	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P8	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P9	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P10	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P11	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P12	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P13	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P14	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P15	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P16	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P17	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P18	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P19	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P20	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P21	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P22	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P23	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P24	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P25	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P26	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P27	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P28	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P29	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332

P30	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P31	Potentiometer	B50K D Vrt 9m35 B	35mm Bush	Pot 9 35F	71-09063
P32	Potentiometer	15C50K x2 Vert	D Shaft	Pot 14 35F	71-13071
P33	Potentiometer	15C50K x2 Vert	D Shaft	Pot 14 35F	71-13071
P201	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P202	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P203	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P204	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P205	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P206	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P207	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P208	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P209	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P210	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P211	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P212	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P213	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P214	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P215	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P216	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P217	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P218	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P219	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P220	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P221	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P222	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P223	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P224	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P225	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P226	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P227	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P228	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P229	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P230	Fader B10K C 30mT		H=.24 C1	25mm Shaft	71-10332
P231	Potentiometer	B50K D Vrt 9m35 B	35mm Bush	Pot 9 35F	71-09063
P232	Potentiometer	15C50K x2 Vert	D Shaft	Pot 14 35F	71-13071
P233	Potentiometer	15C50K x2 Vert	D Shaft	Pot 14 35F	71-13071
PL1	Receptacle AC	Jack AC W/ Fuse	Non-Rvrbl	PCB MTG	21-02804
Q1	Transistor 2N5550 NPN		250V	TO-92	60-55500
Q2	Transistor 2N5550 NPN		250V	TO-92	60-55500
QC1	Spade Connector 90° Horizontal		PCB MTG	0.25	06-40060
QC2	Spade Connector 90° Horizontal		PCB MTG	0.25	06-40060
QC3	Spade Connector 90° Horizontal		PCB MTG	0.25	06-40060
QC4	Spade Connector 90° Horizontal		PCB MTG	0.25	06-40060
R1	1/4W Resistor	5.6K	.35” prep.	5% Film	50-56035
R2	1/4W Resistor	1K	.35” prep.	5% Carbon	50-10035
R3	1/4W Resistor	470Ω	.35” prep.	5% Carbon	50-47025
R4	1/4W Resistor	3K	.35” prep.	5% Carbon	50-30035
R5	1/4W Resistor	24K	.35” prep.	5% Carbon	50-24045
R6	1/4W Resistor	2.2K	.35” prep.	5% Carbon	50-22035
R7	1/4W Resistor	2.2K	.35” prep.	5% Carbon	50-22035
R8	1/4W Resistor	6.8K	.35” prep.	5% Carbon	50-68035
R9	1/4W Resistor	6.8K	.35” prep.	5% Carbon	50-68035
R10	1/4W Resistor	1.0M	.35” prep.	5% Carbon	50-10065
R11	1/4W Resistor	1.5K	.35” prep.	5% Carbon	50-15035
R12	1/4W Resistor	5.6K	.35” prep.	5% Carbon	50-56035
R15	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R16	1/4W Resistor	300K	.35” prep.	5% Carbon	50-30055
R17	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R18	1/4W Resistor	360K	.35” prep.	5% Carbon	50-36055
R19	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R20	1/4W Resistor	220K	.35” prep.	5% Carbon	50-22055
R21	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R22	1/4W Resistor	220K	.35” prep.	5% Carbon	50-22055
R23	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R24	1/4W Resistor	220K	.35” prep.	5% Carbon	50-22055
R25	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R26	1/4W Resistor	360K	.35” prep.	5% Carbon	50-36055
R27	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R28	1/4W Resistor	150K	.35” prep.	5% Carbon	50-15055
R29	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R30	1/4W Resistor	150K	.35” prep.	5% Carbon	50-15055
R31	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R32	1/4W Resistor	130K	.35” prep.	5% Carbon	50-13055
R33	1/4W Resistor	560Ω	.35” prep.	5% Carbon	50-56025
R34	1/4W Resistor	100K	.35” prep.	5% Carbon	50-10055
R35	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R36	1/4W Resistor	300K	.35” prep.	5% Carbon	50-30055
R37	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R38	1/4W Resistor	180K	.35” prep.	5% Carbon	50-18055
R39	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R40	1/4W Resistor	360K	.35” prep.	5% Carbon	50-36055
R41	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R42	1/4W Resistor	220K	.35” prep.	5% Carbon	50-22055
R43	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R44	1/4W Resistor	300K	.35” prep.	5% Carbon	50-30055
R45	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R46	1/4W Resistor	130K	.35” prep.	5% Carbon	50-13055
R47	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R48	1/4W Resistor	180K	.35” prep.	5% Carbon	50-18055
R49	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R50	1/4W Resistor	220K	.35” prep.	5% Carbon	50-22055
R51	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R52	1/4W Resistor	130K	.35” prep.	5% Carbon	50-13055
R53	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R54	1/4W Resistor	130K	.35” prep.	5% Carbon	50-13055
R55	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R56	1/4W Resistor	82K	.35” prep.	5% Carbon	50-82045
R57	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R58	1/4W Resistor	82K	.35” prep.	5% Carbon	50-82045
R59	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R60	1/4W Resistor	220K	.35” prep.	5% Carbon	50-22055
R61	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R62	1/4W Resistor	150K	.35” prep.	5% Carbon	50-15055
R63	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R64	1/4W Resistor	150K	.35” prep.	5% Carbon	50-15055
R65	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R66	1/4W Resistor	130K	.35” prep.	5% Carbon	50-13055
R67	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R68	1/4W Resistor	300K	.35” prep.	5% Carbon	50-30055
R69	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R70	1/4W Resistor	110K	.35” prep.	5% Carbon	50-11055
R71	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R72	1/4W Resistor	82K	.35” prep.	5% Carbon	50-82045
R73	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R74	1/4W Resistor	130K	.35” prep.	5% Carbon	50-13055
R75	1/4W Resistor	5.6K	.35” prep.	5% Carbon	50-56035
R76	1/4W Resistor	5.6K	.35” prep.	5% Carbon	50-56035
R77	1/4W Resistor	10K	.35” prep.	5% Carbon	50-10045
R78	1/4W Resistor	5.6K	.35” prep.	5% Carbon	50-56035
R79	1/4W Resistor	1.0M	.35” prep.	5% Carbon	50-10065
R80	1/4W Resistor	5.6K	.35” prep.	5% Carbon	50-56035
R81	1/4W Resistor	10K	.35” prep.	5% Carbon	50-10045
R82	1/4W Resistor	10K	.35” prep.	5% Carbon	50-10045
R86	1/4W Resistor	10K	.35” prep.	5% Carbon	50-10045
R87	1/4W Resistor	24K	.35” prep.	5% Carbon	50-24045
R88	1/4W Resistor	2.2K	.35” prep.	5% Carbon	50-22035
R89	1/4W Resistor	2.2K	.35” prep.	5% Carbon	50-22035
R90	1/4W Resistor	6.8K	.35” prep.	5% Carbon	50-68035
R91	1/4W Resistor	6.8K	.35” prep.	5% Carbon	50-68035
R92	1/4W Resistor	1.0M	.35” prep.	5% Carbon	50-10065
R93	1/4W Resistor	5.6K	.35” prep.	5% Carbon	50-56035
R96	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R97	1/4W Resistor	300K	.35” prep.	5% Carbon	50-30055
R98	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R99	1/4W Resistor	360K	.35” prep.	5% Carbon	50-36055

R100	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R101	1/4W Resistor	220K	.35” prep.	5% Carbon	50-22055
R102	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R103	1/4W Resistor	220K	.35” prep.	5% Carbon	50-22055
R104	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R105	1/4W Resistor	220K	.35” prep.	5% Carbon	50-22055
R106	1/4W Resistor	360K	.35” prep.	5% Carbon	50-36055
R107	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R108	1/4W Resistor	150K	.35” prep.	5% Carbon	50-15055
R109	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R110	1/4W Resistor	150K	.35” prep.	5% Carbon	50-15055
R111	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R112	1/4W Resistor	130K	.35” prep.	5% Carbon	50-13055
R113	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R114	1/4W Resistor	560Ω	.35” prep.	5% Carbon	50-56025
R115	1/4W Resistor	100K	.35” prep.	5% Carbon	50-10055
R116	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R117	1/4W Resistor	300K	.35” prep.	5% Carbon	50-30055
R118	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R119	1/4W Resistor	180K	.35” prep.	5% Carbon	50-18055
R120	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R121	1/4W Resistor	360K	.35” prep.	5% Carbon	50-36055
R122	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R123	1/4W Resistor	300K	.35” prep.	5% Carbon	50-30055
R124	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R125	1/4W Resistor	220K	.35” prep.	5% Carbon	50-22055
R126	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R127	1/4W Resistor	130K	.35” prep.	5% Carbon	50-13055
R128	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R129	1/4W Resistor	180K	.35” prep.	5% Carbon	50-18055
R130	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R131	1/4W Resistor	220K	.35” prep.	5% Carbon	50-22055
R132	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R133	1/4W Resistor	130K	.35” prep.	5% Carbon	50-13055
R134	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R135	1/4W Resistor	130K	.35” prep.	5% Carbon	50-13055
R136	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R137	1/4W Resistor	82K	.35” prep.	5% Carbon	50-82045
R138	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R139	1/4W Resistor	82K	.35” prep.	5% Carbon	50-82045
R140	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R141	1/4W Resistor	220K	.35” prep.	5% Carbon	50-22055
R142	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R143	1/4W Resistor	150K	.35” prep.	5% Carbon	50-15055
R144	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R145	1/4W Resistor	150K	.35” prep.	5% Carbon	50-15055
R146	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R147	1/4W Resistor	130K	.35” prep.	5% Carbon	50-13055
R148	1/4W Resistor	110K	.35” prep.	5% Carbon	50-11055
R149	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R150	1/4W Resistor	82K	.35” prep.	5% Carbon	50-82045
R151	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R152	1/4W Resistor	130K	.35” prep.	5% Carbon	50-13055
R153	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R154	1/4W Resistor	300K	.35” prep.	5% Carbon	50-30055
R155	1/4W Resistor	680Ω	.35” prep.	5% Carbon	50-68025
R156	1/4W Resistor	5.6K	.35” prep.	5% Carbon	50-56035
R157	1/4W Resistor	5.6K	.35” prep.	5% Carbon	50-56035
R158	1/4W Resistor	10K	.35” prep.	5% Carbon	50-10045
R159	1/4W Resistor	5.6K	.35” prep.	5% Carbon	50-56035
R160	1/4W Resistor	1.0M	.35” prep.	5% Carbon	50-10065
R161	1/4W Resistor	5.6K	.35” prep.	5% Carbon	50-56035
R162	1/4W Resistor	10K	.35” prep.	5% Carbon	50-10045
R163	1/4W Resistor	10K	.35” prep.	5% Carbon	50-10045
R167	1/4W Resistor	10K	.35” prep.	5% Carbon	50-10045
R168	1/4W Resistor	1.5K	.35” prep.	5% Carbon	50-15035
R169	1/4W Resistor	5.6K	.35” prep.	5% Carbon	50-56035
R171	1/4W Resistor	1K	.35” prep.	5% Carbon	50-10035
R172	1/4W Resistor	470Ω	.35” prep.	5% Carbon	50-47025
R201	1/4W Resistor	22K	.35” prep.	5% Carbon	50-22045
R202	1/4W Resistor	22K	.35” prep.	5% Carbon	50-22045
R203	1/4W Resistor	22K	.35” prep.	5% Carbon	50-22045
R204	1/4W Resistor	22K	.35” prep.	5% Carbon	50-22045
R205	1/4W Resistor	22K	.35” prep.	5% Carbon	50-22045
R206	1/4W Resistor	22K	.35” prep.	5% Carbon	50-22045
R207	1/4W Resistor	22K	.35” prep.	5% Carbon	50-22045
R208	1/4W Resistor	22K	.35” prep.	5% Carbon	50-22045
R209	1/4W Resistor	150Ω	.35” prep.	5% Carbon	50-15025
R210	1/4W Resistor	150Ω	.35” prep.	5% Carbon	50-15025
R211	1/4W Resistor	10K	.35” prep.	5% Carbon	50-10045
R212	1/4W Resistor	10K	.35” prep.	5% Carbon	50-10045
R213	1/4W Resistor	150Ω	.35” prep.	5% Carbon	50-15025
R214	1/4W Resistor	150Ω	.35” prep.	5% Carbon	50-15025
R215	1/4W Resistor	10K	.35” prep.	5% Carbon	50-10045
R216	1/4W Resistor	10K	.35” prep.	5% Carbon	50-10045
R250	1/4W Resistor	10Ω	.35” prep.	5% Carbon	50-10015
S1	Switch	DPDT Push Vert	Small Body	PCB MTG	25-02201
S2	Switch	DPDT Push Vert	Small Body	PCB MTG	25-02201
S3	Switch	DPDT Push Vert	Small Body	PCB MTG	25-02201
S4	Switch	DPDT Push Vert	Small Body	PCB MTG	25-02201
T1	Transformer Toroid 7VA		7.5VA±18V	194mA	15-70034
U1	Regulator	7815 +15V & Sink 2A			60-78150
U2	Regulator	7915 -15V & Sink 2A			60-79150
(C154)	Capacitor 120PF Ceramic 10%, Secondary @ Location R82				45-12152
(C156)	Capacitor 120PF Ceramic 10%, Secondary @ Location R163				45-12152

Replacement parts for EQ2030 chassis

Carvin P/N	Description	Qty.
02-18103	FSTON RNG RED 22-18A .250 DIAM	2
02-18206	FSTON FEM RED 22-18A .205X.020	2
02-18250	FSTON FEM RED 22-18A .250X.032	4
03-08600	BUSHING .240X .304X .150	6
04-18007	WIRE 18AWG BLK 7”L UL1061	2
04-18504	WIRE 18AWG GRN 4”L UL1061	2
05-01803	PWR AC 10A 3/18AWG 8’2” W/PLUG	1
06-10025	SMS PPH #4X .375 TYPE AB BLACK	2
06-10035	SMS PPH #4X 1.25 TYPE A BLACK	6
06-10045	SMS PFH #6X .375 TYPE AB BLACK	8
06-10060	MS PPH 6-32X .375 BLACK	6
06-10061	SMS PPH #6 X .375 TYPE A BLACK	5
06-11120	NUT METRIC 12MM KUNMING BLACK	4
06-50030	NUT KEP #6-32 BLACK	6
07-01603	KNOB 6L SWITCH EXTENDED	4
07-12214	KNOB “10” ROTARY BLUE	6
07-70183	CAP EQ GREY .093X .250	60
10-20301	PANEL FRONT EQ2030	1
10-20301	PANEL FRONT EQ2030	1
10-20308	SHIELD EQ2030	1
10-20309	CHASSIS EQ2030	1
10-30005	PANEL TOP EQ2015/2030 XC3000	1
25-62116	SWITCH SPST ON/OFF 4A/250VAC	1
80-20300	* STD PCB ASSY MAIN EQ2030	1
99-30013	BOX 200# SW OPF EQ2030	1
99-91509	BAG SM 15X 9X 31.5X 2ML 250/BX	1
99-99000	TAGS SERIAL NUMBER FINAL 1=2PC	1