

***MARTI
ELECTRONICS***

RPU TRANSMITTER

***MODELS: SRPT-30
SRPT-40A***

RF EXPOSURE WARNING

This remote pickup unit (RPU) contains a radio frequency (RF) transmitter. During normal operation it sends out radio frequency (RF) signals. In August 1996, the Federal Communications Commission (FCC) adopted RF exposure guidelines with safety levels for wireless devices.

CAUTION: To maintain compliance with the FCC's RF exposure guidelines, the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 6 meters from all persons during normal operation and must not be co-located or operating in conjunction with any other antenna or transmitter. In addition, no antenna with a gain of greater than 11 dBi shall be used.

Unauthorized antennas, modifications, or attachments could damage the transmitter and may violate FCC regulations.

WARNING

THIS EQUIPMENT *MUST* BE OPERATED WITH A 3-PRONG GROUNDED OUTLET RECEPTACLE. FAILURE TO USE A PROPERLY GROUNDED OUTLET MAY RESULT IN IMPROPER OPERATION OR SAFETY HAZARD!

LIMITED WARRANTY

The Seller warrants that, at the time of shipment, the products manufactured by the Seller are free from defects in material and workmanship. The Seller's obligation under this warranty is limited to replacement or repair of such products which are returned to Marti at its factory, transportation prepaid and properly insured, provided:

a. Notice of the claimed defect is given to Marti within one (1) year [two (2) years for STL systems] from date of original shipment and goods are returned in accordance with Marti instructions.

b. Equipment, accessories, tubes and batteries not manufactured by Marti are subject to only such adjustments as Marti may obtain from the supplier thereof.

c. This warranty does not apply to equipment which has been altered, improperly handled, or damaged in any way.

The Seller is in no event liable for consequential damages, installation cost or other costs of any nature as a result of the use of the products manufactured or supplied by the Seller, whether used in accordance with instructions or not.

This warranty is in lieu of all others, either expressed or implied. No representative is authorized to assume for the Seller any other liability in connection with Seller's products.

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ABOUT THIS MANUAL

This manual supports both the SRPT-30 and SRPT-40A RPU transmitters for all standard (and some non-standard) frequency bands. The SRPT-30/40A in some frequency bands may not yet be available during the printing of this manual. The manual will be revised as new frequency bands become available.

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INTRODUCTION

See the **SPECIFICATIONS & ORDERING** section for a listing of available frequency ranges and power models.



SRPT-30 DUAL-CHANNEL RPU TRANSMITTER



SRPT-40A FREQUENCY AGILE RPU TRANSMITTER

The Marti Models SRPT-30/40A are wide-band – high power RPU Transmitters designed to operate in the Remote Pick-Up Broadcast Service as defined in Part 74, Subpart D, of the FCC Rules and Regulations. The SRPT-30 replaces the Marti RPT-30 series of RPU's. Like its predecessor, the SRPT-30 has two frequency channels and a four-input mixer for mic/line audio. Unlike the RPT-30, the SRPT-30 uses synthesizer technology (not to be confused with frequency agile) instead of the discrete crystal technology. Also the SRPT-30 is equipped with a wide-band power amplifier that has a power output up to 35 watts that can be adjusted from the front panel. This, combined with the wide-band synthesizer, benefits the operator in the following ways: (1) Frequency separation between F1 and F2 frequency can be up to 50 MHz and (2) No RF tuning required.

The SRPT-40A also uses synthesizer technology with a wide-band power amplifier and requires no tuning. It is frequency agile up to 50 MHz with a front-panel adjustable output power up to 60 watts in some models. The frequency can be “dialed in” from the front panel and will automatically tune precisely to all frequencies divisible by 5 KHz or 6.25 KHz increments. It will also tune to within $\pm 0.00015\%$ tolerance of most other frequencies not divisible by 5 KHz or 6.25 KHz increments. Finally, the user may operate the SRPT-40A in channel mode where he may store and recall up to 10 frequencies.

Refer to the **SPECIFICATIONS & ORDERING** section for a listing of available frequency ranges and power models. These transmitters, when used with their recommended companion receiver, provide a remote broadcast link having audio quality not approached by conventional voice communication radio equipment. The SRPT-30/40A transmitters operate from 110-120 VAC or 220-240 VAC (manually switched internally), 50 - 60 Hz. The transmitters can also operate on 12-15VDC or 15-30VDC battery (or external supply) in fixed, portable, or mobile, service. Four audio input channels are provided with individual mixing gain controls. A meter and selector switch are provided for monitoring forward and reverse power, power supply voltage, PA current and audio compression.

SRPT-30/40A Features:

- **Four balanced microphone mixing inputs, one switchable to balanced line level**
- **No RF tuning required**
- **Switching Power Supply operates on any AC voltage from 110-120 VAC or 220-240 VAC (internally switched), 50 - 60 Hz**
- **LEDs indicate High VSWR, Over-Temperature, AFC Lock, and Transmit**
- **Illuminated VU Meter for displaying Forward/Reverse Power, PA current, Power Supply voltage, and Audio Compression**
- **Output power adjustable from front panel**
- **External 12-15 VDC or 15-30 VDC supply capability and external transmit control**
- **High speed imbedded μ -controller to perform the following additional features:**
 - **Power held constant over frequency, temperature, and voltage change**
 - **High PA temp and VSWR warning indicators**
 - **Auto frequency re-lock due to power outage**
 - **Auto fold-back and recover due to high VSWR**
 - **Auto shutdown due to very high PA temp – auto recover after cool down**
 - **Auto shutdown due to open/short-output – auto recover**

SRPT-40A Only Features:

- Continuous-duty output - 60 watts maximum in some models
- Frequency agile pushwheel switches allow selection of almost any frequency (100 Hz steps) in operating band up to 50 MHz
- 10 user programmable channels
- No frequency look-up table required
- Remembers and locks-on last frequency during power-up
- Frequency resolution: 5 or 6.25 KHz steps – $\pm .00004\%$ accuracy
 - Most other frequencies (100 Hz steps) - $\pm .00015\%$ accuracy

SRPT-30 Only Features:

- Continuous-duty output - 35 watts maximum most models
- Two frequency channels, F1 and F2, selected at time of order
- Up to 50 MHz separation between frequency channels
- Selected frequencies divisible by 5 or 6.25 KHz steps have a $\pm .00004\%$ accuracy
 - Most other selected frequencies have a $\pm .00015\%$ accuracy

Models SRPT-30 and SRPT-40A

Remote Pick-Up Broadcast Transmitters

SPECIFICATIONS & ORDERING

Conditions (unless specified otherwise): 1.5 VSWR, 110 VAC input with B+ = 14.5 Volts, 25°C ambient

Frequency Bands and Maximum Output Power:	See ORDERING INFORMATION below.
Frequency Agility and Accuracy SRPT-40A (450 models and less)	An executed “dialed-in” frequency that operates within model frequency range will have an accuracy within: (1) $\pm .00004\%$ for frequency divisible by 5 or 6.25 KHz, or (2) $\pm .00015\%$ for MOST frequencies NOT divisible by 5 or 6.25 KHz*
Frequency Agility and Accuracy SRPT-40A (800 models and greater)	An executed “dialed-in” frequency that operates within model frequency range will have an accuracy within: (1) $\pm .00004\%$ for frequency divisible by 10 or 12.5 KHz, or (2) $\pm .00015\%$ for MOST frequencies NOT divisible by 10 or 12.5 KHz*
Frequency Selection and Accuracy SRPT-30 (450 models and less)	Two frequencies only, F1 and F2, determined at time of order, must operate within model frequency range and will have an accuracy within: (1) $\pm .00004\%$ for frequency divisible by 5 or 6.25 KHz, or (2) $\pm .00015\%$ for MOST frequencies NOT divisible by 5 or 6.25 KHz*
Frequency Selection and Accuracy SRPT-30 (800 models and greater)	Two frequencies only, F1 and F2, determined at time of order, must operate within model frequency range and will have an accuracy within: (1) $\pm .00004\%$ for frequency divisible by 10 or 12.5 KHz, or (2) $\pm .00015\%$ for MOST frequencies NOT divisible by 10 or 12.5 KHz*
Operating Temp. Range:	-10°C to +45°C
Frequency Stability (over operating temperature range):	0.0001%
Deviation:	Adjustable, ± 20 KHz max
Audio Bandwidth:	Standard: 7.5 KHz Available: 5 KHz, 10 KHz, specials upon request
Signal-to-Noise:	≥ 50 dB
Frequency Response:	± 1.5 dB from 50 Hz to Audio Bandwidth, 75 μ sec pre-emphasis
Distortion:	$\leq 2\%$ from 50 Hz to Audio Bandwidth, 75 μ sec pre-emphasis
Spurious Emissions:	Less than 60 dB
RF Connector:	Type N-Female
Audio inputs:	Four balanced microphone (150 ohms) inputs (XLR-3) with mixing controls. One input switchable to balanced line level at microphone #4 input and D connector on rear panel.
Modulation Control:	Broadcast-quality compressor/limiter built in.
Encoding:	Sub audible 27 Hz. tone encoder built in.
Metering/Indicators:	Illuminated meter indicates forward and reverse power, PA current, B+, and audio compression. LEDs indicate TRANSMIT, AFC LOCK, HIGH VSWR, and HIGH TEMP.
Controls:	(4) Input level controls, METER control knob, ENCODE switch, POWER ADJUST pot, TRANSMIT switch, and MONITOR jack. SRPT-40A: FREQUENCY SELECT switches and EXECUTE switch SRPT-30: F1/F2 switch

Power Requirements:	110-120 VAC or 220-240 VAC (internally switched on power supply for proper input), 50/60 Hz External DC operation on 12 - 15 volts or 15 – 30 volts.
Approximate PA Current Rating (at maximum power output):	SRPT-40A: 8.5 to 10.5 Amps SRPT-30: 6.5 to 7.5 Amps (The data above varies across frequency band and from model to model)
Accessory Connector:	15-pin D connector for DC power, remote control, encode, line level input.
Weight:	Net 8 pounds. Domestic packed 11 pounds. Net 3.63 kilograms. Export packed 5.27 kilograms.
Dimensions:	11.5 in. wide x 3.5 in. high x 14.3 in. deep. (29.21 cm. wide x 8.89 cm. high x 36.32 cm. deep.)

* - There does exist a few non-standard frequencies that will not automatically tune to within .00015% of requested frequency. For those frequencies, the operator must change to the nearest standard frequency and then manually tune the reference oscillator to desired frequency. Consult factory for frequencies not perfectly divisible by 5 KHz or 6.25 KHz. We will be able to tell you how close the output will come to desired frequency.

ORDERING INFORMATION

Conditions (unless specified otherwise): 1.5 VSWR, 110 VAC input with B+ = 14.5 Volts, 25°C ambient

MARTI PART #	Frequency Range (MHz)	Maximum RF Output Power (W)	Typical RF Output Power over Frequency	Certifications
SRPT-40A/150	135-185	60	50W 135-140 MHz 60W 140-175 MHz 40W 175-185 MHz	FCC ID: DDE-RPU-60W-150S (FCC Part 74 Subpart D) Emission Designators: 25K0F3E, 30K0F3E
SRPT-40A/450	435-475	50		FCC ID: DDE-RPU-50W-450S (FCC Part 74 Subpart D) Emission Designators: 10K0F3E, 25K0F3E, 50K0F3E
SRPT-30/150	135-185	35	35W 135-185 MHz	FCC ID: DDE-RPU-60W-150S (FCC Part 74 Subpart D) Emission Designators: 25K0F3E, 30K0F3E
SRPT-30/450	435-475	35		FCC ID: DDE-RPU-50W-450S (FCC Part 74 Subpart D) Emission Designators: 10K0F3E, 25K0F3E, 50K0F3E

NOTE: Other models will be available by 11/1/2002.

Available OPTIONS for the SRPT-30/40A Transmitters

Marti No.	Description
700-251-40A	Mobile Mounting kit.
585-141	12-15 VDC External Supply Cable
585-142	15-30 VDC External Supply Cable
585-139	12-15 VDC Mobile Repeat Cable, CR/AR-10 to SRPT-40A
585-140	15-30 VDC Mobile Repeat Cable, CR/AR-10 to SRPT-40A
585-143	Fixed Repeat Cable, CR/AR-10 to SRPT-40A
700-253	Rack mounting kit.

UNPACKING & INSPECTING

This equipment was factory tested, inspected, packed, and delivered to the carrier with utmost care. Do not accept shipment from carrier which shows damage or shortage until the carrier's agent endorses a statement of the irregularity on the face of the carrier's receipt. Without documentary evidence, a claim cannot be filed.

Unpack equipment immediately upon receipt and thoroughly inspect for concealed damage. If damage is discovered, stop further unpacking and request immediate inspection by local agent of carrier. A written report of the agent's findings, with his signature is necessary to support claim. Check your shipment against the shipping papers for possible shortage. Do not discard any packing material until all items are accounted for. Small items are often thrown away with packing material. Packing material should be retained until equipment testing is completed. Any equipment returned to the factory should be packed in original cartons, insured, and pre-paid.

INSTALLATION

Install rack-mounted equipment in a well-ventilated, well-grounded, and shielded rack cabinet. Do not locate solid-state equipment in a rack above tube-type equipment, which produces high temperatures. It is highly recommended that if the equipment is mounted in a rack cabinet, a blower should be installed in the cabinet as well.

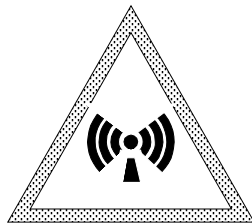
Problems can also be avoided by locating this unit away from other equipment which has transformers that produce strong magnetic fields. These fields can induce hum and noise into the Marti equipment thus reducing performance. Strong radio-frequency (RF) fields should be avoided where possible. Extensive shielding and filtering have been incorporated into this equipment to permit operation in moderate RF environments. All equipment racks, cabinets, etc., should be bonded together by wide copper grounding strap to ensure that all system elements are at RF ground potential.

Stationary Remote Broadcast Installation

The basic stationary remote installation consists of the SRPT-30/40A transmitter, a 110-120 or 220-240 VAC power source, microphones and other audio program sources, and a portable antenna. Remotes using portable antennas inside buildings have very limited range (typically less than one mile). If greater range is needed, consider locating the transmitting antenna outside the building at a height necessary to provide a line-of-sight path to the receiving antenna. This may not be practical if a great length of coaxial cable is required. Many broadcasters are using the Marti mobile relay system to do remotes from inside buildings. This system consists of the originating transmitter with its antenna inside the building which transmits to a "mobile relay" parked outside the building. The mobile relay consists of a Marti Model AR-10 receiver and Marti RPT series transmitter with mobile antennas installed in a vehicle. The AR-10 receiver picks up the encoded signal originating from the RPT series transmitter located inside the building, automatically turns on the relay transmitter (on a different frequency), which re-transmits the program to the distant receiving antenna at the radio station studio or transmitter site. (Mobile relay equipment packages are available from Marti.)

Stationary Remote Installation Procedure

1. The transmitter is normally located near the announcer or engineer to permit access to gain controls, microphone inputs, the monitor jack, and metering.



CAUTION **HIGH LEVEL RF RADIATION**

Personnel must not be near the antenna when radiating. Locate antenna as far as possible from people and equipment susceptible to RF radiation. Do not mount antenna directly on transmitter. Refer to ANSI C95.1 "Limits on Non-Ionizing Radiation."

2. With the SRPT-30/40A TRANSMIT/STANDBY switch in “STANDBY” position, plug the transmitter into a grounded, three-prong, 110-120 or 220-240 VAC outlet.

WARNING

THE MANUAL SWITCH ON THE INTERNAL SWITCHING POWER SUPPLY IS SET AT THE FACTORY TO THE 115 POSITION IF THE ORDER WAS FOR 110-120 VAC.

THE MANUAL SWITCH ON THE INTERNAL SWITCHING POWER SUPPLY IS SET AT THE FACTORY TO THE 230 POSITION IF THE ORDER WAS FOR 220-240 VAC.

IF THE OPERATOR PLANS TO OPERATE THIS UNIT AT AN AC VOLTAGE DIFFERENT THAN WHAT IS STATED ON ORDER, IT IS THE RESPONSIBILITY OF THE PURCHASER TO SWITCH TO THE APPROPRIATE POWER SUPPLY POSITION.

WARNING

THIS EQUIPMENT MUST BE OPERATED WITH A 3-PRONG, GROUNDED, 110-120 OR 220-240 VOLT AC OUTLET RECEPTACLE!

FAILURE TO USE A PROPERLY GROUNDED OUTLET COULD RESULT IN A SAFETY HAZARD OR FAULTY EQUIPMENT PERFORMANCE.

IF AN EXTENSION CORD IS USED, IT MUST BE THE THREE-WIRE GROUNDING TYPE TO INSURE SAFETY.

WARNING

DO NOT CUT OFF THE GROUND PIN OF A 3-PRONG PLUG!

EXCESSIVELY LONG EXTENSION CORDS SHOULD BE AVOIDED SINCE THE VOLTAGE DROP CAN DEGRADE EQUIPMENT PERFORMANCE.

DO NOT ALLOW THE SRPT-30/40A TO GET WET.

DO NOT OPERATE WHERE PERSONNEL TOUCHING THE TRANSMITTER (OR ITS MICROPHONE, ANTENNA, OR OTHER CONNECTED EQUIPMENT) ARE STANDING ON WET GROUND OR CONCRETE.

3. For locations where AC power is not available, the SRPT-30/40A can be powered from a fully charged automobile battery.
4. Connect a portable antenna such as the Marti PAV/150, PAV-450, or YC-450 to the ANTENNA connector on the back of the transmitter.

Mobile Installation

The SRPT-30/40A transmitter can be installed in the vehicle where the TRANSMIT/STANDBY function can be operated directly, or the transmitter can be located elsewhere (in the trunk of a car or rear of a van) and controlled remotely. The choice depends upon the type of vehicle and the type of operation anticipated. The antenna(s) are usually mounted on top of the vehicle to provide maximum height.

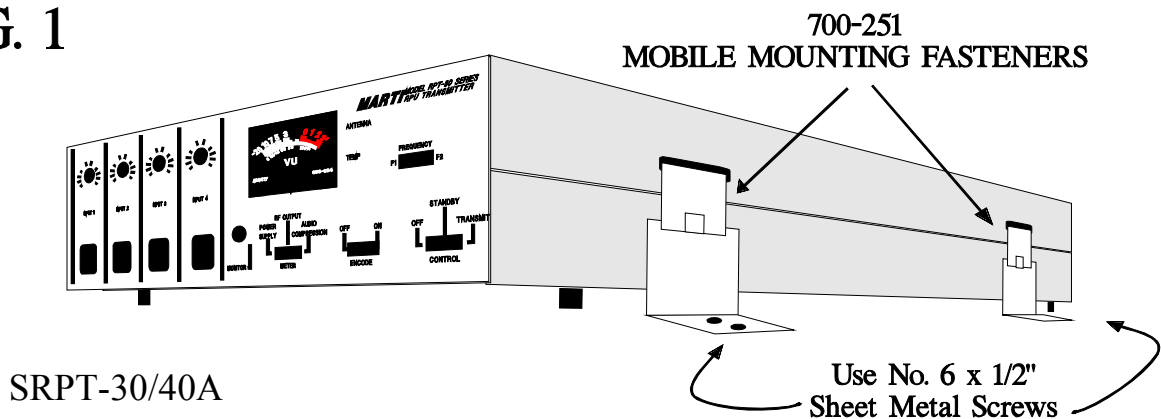
Transmitter Mounting

1. Locate transmitter where vent holes on top and rear of unit are not obstructed. Leave enough space for the mic. Plug on the front panel and the accessory plug on rear of unit.
2. Hook the four mounting fasteners (in retracted position in the four slots on the sides of the transmitter. See Fig. 1. (Fasteners are in Mobile Mounting Kit, 700-251).
3. Mark the location of the two mounting holes in each fastener bracket. Drill 7/64" diameter holes into the mounting surface at the marked places for #6 x 1/2" sheet metal screws.
4. Attach the mounting fasteners with the sheet metal screws provided. Secure the transmitter with the fasteners.

Receiver Mounting

For mobile repeat using the Marti AR-10 Mobile Repeat Receiver, mount the receiver near the transmitter using the three fasteners supplied in Mobile Mounting Kit, 700-251.

FIG. 1



Mobile Remote Control

Remote control of the SRPT-30/40A transmitter requires a switch to control primary 12-15 VDC power (or 15-30 VDC) and a second switch to control the transmit function. The primary 12-15 VDC (or 15-30 VDC) control requirement can be met by tapping the ignition switch circuitry of the vehicle. The "transmit" function can be performed by installing a switch on the vehicle.

FIG. 2A and 2B show the electrical circuit of a mobile installation for 12-15 VDC (585-141) and 15-30 VDC (585-142), respectively.

Mobile Repeat

Mobile repeat operation is covered under **STATIONARY REMOTE BROADCAST INSTALLATION**. Electrical connection for a 12-15 Volt supply is made through Mobile Repeat Cable No. 585-139. This cable is connected between the SRPT-30/40A transmitter and AR/CR-10 receiver. Power is obtained by connecting the fused RED wire to the 12-15 VDC battery or supply. The supply must be capable of delivering 10 Amps minimum. The electrical diagram of this cable is shown in FIG. 3A.

Electrical connection for a 15-30 Volt supply is made through Mobile Repeat Cable No. 585-140. This cable is connected between the SRPT-30/40A transmitter and AR/CR-10 receiver. Power is obtained by connecting the fused BLUE wire to the vehicle 15-30 VDC battery or supply. The supply must be capable of delivering 10 Amps minimum. The electrical diagram of this cable is shown in FIG. 3B.

Mobile Antenna Installation

One or more mobile antennas are required depending upon the various receive and transmit frequencies and whether antenna duplexing is used. Antennas are specified in the various system packages listed in the Marti literature. The installer should follow the instructions supplied with the mobile antennas.

FIG2A - 12-15 VDC EXTERNAL SUPPLY
CABLE FOR SRPT-30/40A
MARTI P/N: 585-141

15-PIN 'D' FEMALE CONNECTOR.
PLUG INTO 'ACCESSORY'
CONNECTOR ON REAR OF SRPT-40A

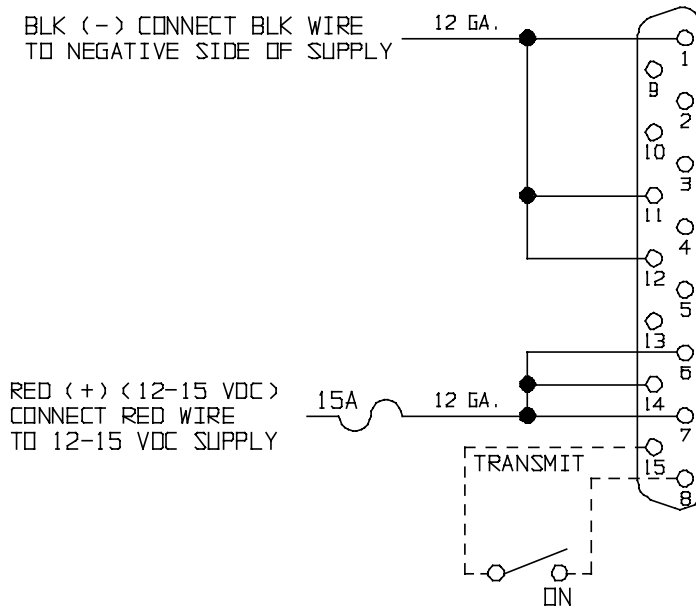


FIG2B - 15-30 VDC EXTERNAL SUPPLY
CABLE FOR SRPT-30/40A
MARTI P/N: 585-142

15-PIN 'D' FEMALE CONNECTOR.
PLUG INTO 'ACCESSORY'
CONNECTOR ON REAR OF SRPT-40A

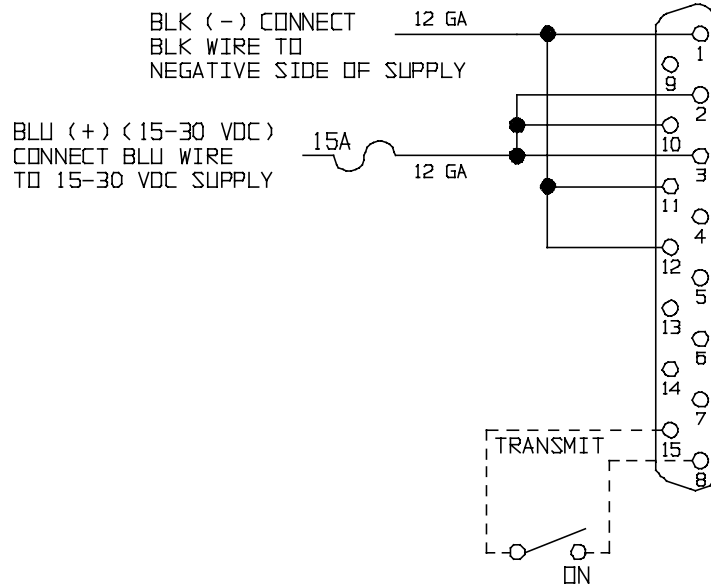


FIG3A - 12-15 VDC MOBILE REPEAT CABLE
AR/CR-10 TO SRPT-30/40A
MARTI P/N: 585-139

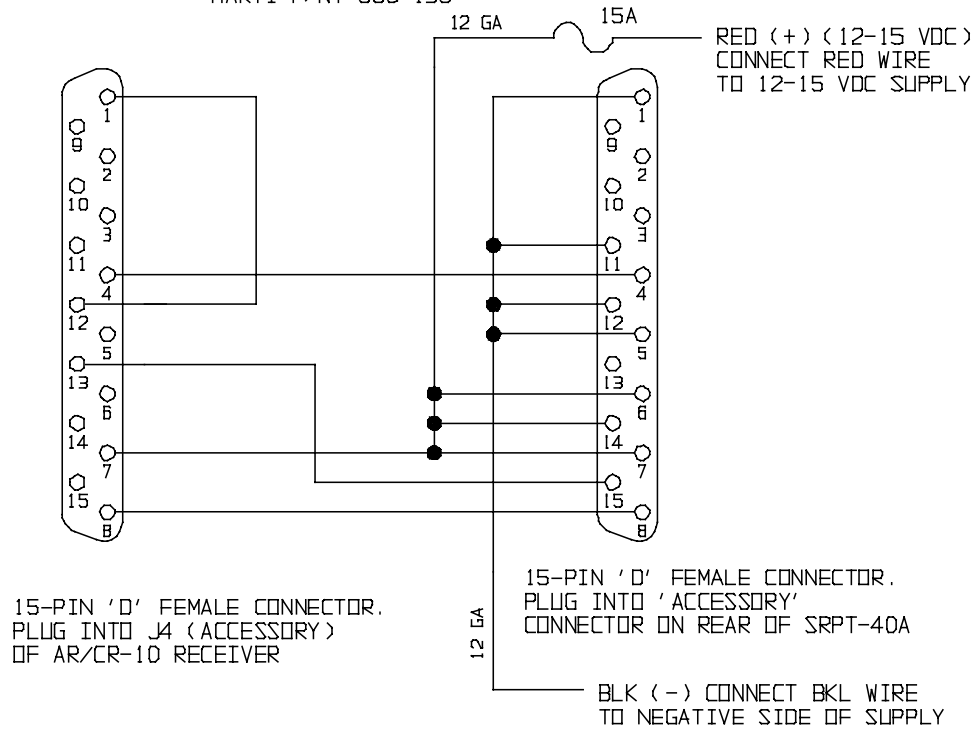


FIG3B - 15-30 VDC MOBILE REPEAT CABLE
AR/CR-10 TO SRPT-30/40A
MARTI P/N: 585-140

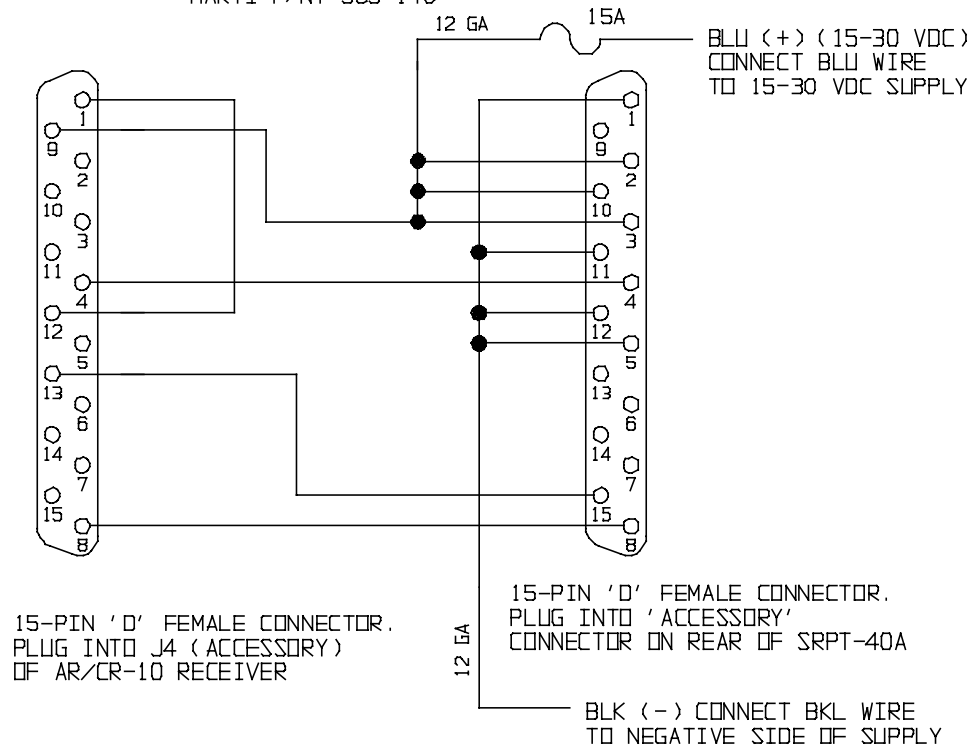
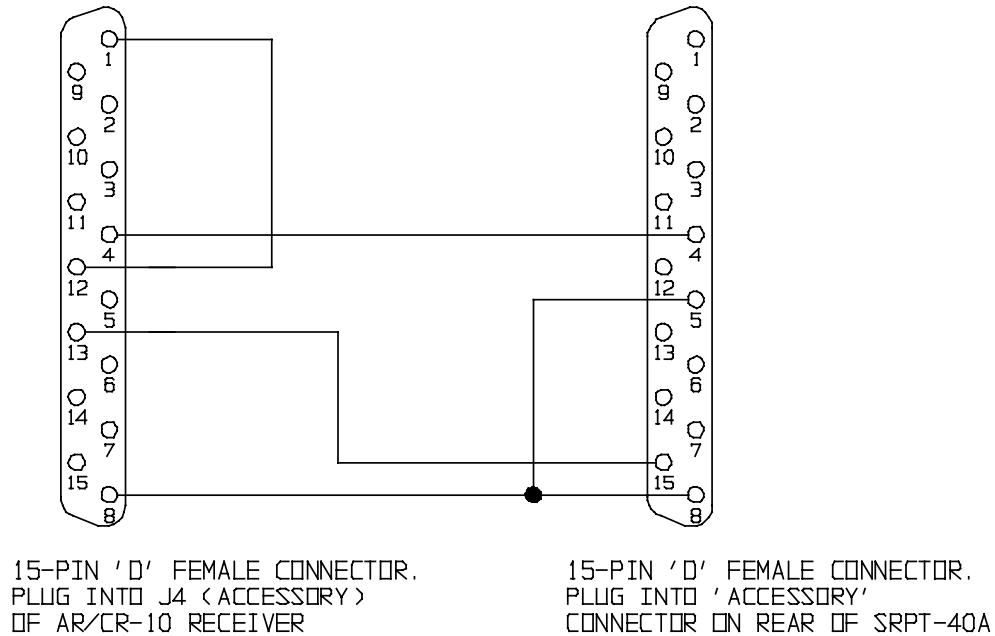


FIG4 - FIXED REPEAT CABLE
AR/CR-10 TO SRPT-30/40A
MARTI P/N: 585-143



Fixed Base Station and Repeater Installation

1. Install transmitter in standard rack by using Rack Mounting Kit No. 700-253 available from Marti.

CAUTION

ALLOW ONE PANEL SPACE ABOVE AND BELOW TRANSMITTER FOR INLET AIR-FLOW TO INTERNAL FAN.

2. Connect transmitting antenna to ANTENNA connector on SRPT-30/40A rear panel.
3. Plug transmitter into a 3-prong, grounded 110-120 or 220-240 VAC outlet.

WARNING

FAILURE TO USE A PROPERLY GROUNDED OUTLET COULD RESULT IN A SAFETY HAZARD OR FAULTY EQUIPMENT PERFORMANCE.

4. For fixed automatic repeater operation, connect Cable No. 585-143 (FIG. 4.) between accessory connectors of the receiver and SRPT-30/40A transmitter. Connect receiving antenna to receiver J6 and transmit antenna to SRPT-30/40A ANTENNA connector.

ANTENNAS

BASE STATION ANTENNA INSTALLATION CHECKLIST

The following suggestions are offered to help those responsible for antenna installations avoid costly errors in assembly and adjustment. Marti Electronics assumes no responsibility for the installation and performance of antenna systems associated with its equipment. The following suggestions are not intended to be a complete step-by-step procedure, simply a listing of some of the most frequently reported errors in antenna system installation.

Antenna Assembly

Follow the manufacturer's instructions carefully. If no instructions were included with the antenna, call or write the antenna manufacturer for instructions. Antennas which have phasing or stacking cables must be assembled carefully to avoid phase reversal or signal cancellation.

Transmission Line Connector Assembly

Do not use RG-58 U or RG-8 U cable for STL station antennas! They have too much loss at VHF and UHF frequencies. Follow the instructions furnished by the manufacturer when cutting coaxial cable. Inspect the cable ends for small metal fragments which can short-circuit the line inside the connector assembly. Check the line for a short-circuit condition after each connector is installed by using an ohmmeter. Pressurized line should be checked for several days under pressure before installation on a tower to ensure that there are no leaks in the line or fittings.

Moisture Proofing Coax Connectors and Fittings

Extreme care must be exercised with coaxial cable before and after connectors have been installed to ensure that moisture does not enter the line. Foam dielectric line can take on moisture absorption which is difficult to detect and remedy. Therefore, keep the line dry while in storage with ends tightly capped. Coaxial splices, connectors, and fittings, to be located outside should be made mechanically tight, then coated with a weather-proofing material over at least two layers of vinyl plastic electrical tape. Moisture problems in antenna systems are usually traced back to connectors which have NOT been properly taped. The Marti K-1 Grounding and Weatherproofing Kit is recommended for use in each new antenna installation.

Location and Grounding of Coaxial Cable

Keep the RPU receiver coaxial cable as far from the broadcast transmitter and its coaxial cable as possible.

WARNING

DO NOT STRAP RECEIVER CABLE TO THE MAIN ANTENNA CABLE AT ANY POINT.

PLACE THE RECEIVER ANTENNA COAXIAL CABLE ON THE OPPOSITE SIDE OF THE TOWER FROM THE MAIN ANTENNA CABLE.

Maintain maximum separation between these cables at all points, including the distance from tower base to transmitter building as well as inside the building.

System Grounding

It is essential that the RPU antenna system be properly grounded for safety and proper operation.

Antenna Installation and Adjustment

The polarization of the transmit and receive antennas of the RPU system must be the same! This means that if the transmitting antenna is vertical, the receiving antenna must also be vertical. Each antenna should be attached to the tower using the proper side mount or top mount hardware. If an RF wattmeter is available, each antenna and transmission line can be checked for VSWR when the transmitter is supplying power to it. The VSWR should be less than 1.5 to 1 (1.5:1).

If the antenna system fails to give the predicted signal strength level, the following items should be checked:

1. Check for correct assembly of antenna.
2. Check that antennas have same polarity.
3. Check VSWR of both transmit and receive antennas. VSWR should be less than 1.5:1.
4. Check for obstructions in the path such as trees and man-made structures. The base antenna must be high enough to provide a line-of-sight path to the remote transmitting antenna.

CAUTION & WARNING

YOU CAN BE *KILLED* IF AN ANTENNA COMES IN CONTACT WITH ELECTRIC POWER LINES OR EXPOSED ELECTRICAL WIRING.

FOR YOUR SAFETY, USE EXTREME CAUTION WHEN IN-STALLING ANTENNAS.

KEEP AWAY FROM POWER LINES.

CONTROL, LED, & CONNECTOR FUNCTIONS

ACCESSORY Input Connector

Audio Input:

When Input 4 is switched to "HI" level, audio can be fed into pins 4 and 5 of the ACCESSORY connector on the rear of the transmitter. Input level should be between 0.2 volts to 2.0 volts rms. The output impedance of the device connected to Input 4 should be 8 - 600 ohms. For unbalanced operation ground pin 5 to pin 1, 8, 11, or 12 and connect audio to pin 4. Use standard 15-pin "subminiature D" female connector with cover.

Transmit Control:

"TRANSMIT" control can be accomplished remotely by a switch circuit connected between pin 15 and one of the available ground pins (pin 1, 8, 11, or 12).

External DC supply:

The SRPT-30/40A can be powered externally by either a 12-15 Volt DC supply or a 15-30 Volt supply. If powered off a 12-15 Volt supply, connect three positive leads of the supply to pins 6, 7, and 14. Connect three negative leads of the supply to three ground pins (pins 1, 11, and 12). Each of the three positive leads and each of the three negative leads should be an 18 gauge wire. You may also use one 12 gauge wire for each positive and negative leads and split the stranded ends into three at the connector end.

ATTENTION

FOR 12-15 VOLT EXTERNAL SUPPLY, THE OPTIMUM VOLTAGE IS FROM 13.5 TO 14.5 VOLTS.

APPLYING A VOLTAGE LOWER THAN 13.5, COULD LIMIT THE MAXIMUM RF OUTPUT POWER AND/OR LIMIT THE OVERALL FREQUENCY RANGE.

ALSO, THE EXTERNAL BATTERY OR POWER SUPPLY MUST BE CAPABLE OF HANDLING A CONSTANT 10 AMPS. THE VOLTAGE MUST REMAIN ABOVE 12 VOLTS AT ALL TIMES, EVEN DURING INITIAL TURN-ON OF TRANSMITTER. POWER SUPPLIES TEND TO SURGE (DROP IN VOLTAGE) WHEN THEY SEE AN INSTANTANEOUS LOAD INCREASE. ALSO, THERE WILL BE A DROP IN VOLTAGE ACROSS THE POWER CABLES. THE POWER CABLES SHOULD BE AS SHORT AS POSSIBLE AND AS HEAVY GAUGE AS POSSIBLE. IF THE VOLTAGE AT THE INPUT OF THE TRANSMITTER DROPS BELOW 12 VOLTS, IN MANY CASES IT WILL CAUSE THE SYNTHESIZER TO COME UNLOCKED.

ONE POSSIBLE REMEDY, IS TO TURN ON THE TRANSMITTER WITH THE FRONT PANEL POWER ADJUST POT TURNED DOWN SO THAT THE OUTPUT POWER IS LOW. THEN SLOWLY ADJUST THE POWER ADJUST POT TO DESIRED OUTPUT POWER.

If powered from a 15-30 Volt supply, connect three positive leads of the supply to three 15-30VDC pins (pins 2, 3, and 10). Connect three negative leads of the supply to three ground pins (pins 1, 11, and 12). Each of the three positive leads and each of the three negative leads should be an 18 gauge wire. You may also use one 12 gauge wire for each positive and negative leads and split the stranded ends into three at the connector end.

ATTENTION

FOR 15-30 VOLT EXTERNAL SUPPLY, IF APPLYING A VOLTAGE LESS THAN 16 VDC, THE SRPT-30/40A INTERNAL B+ SHOULD BE ADJUSTED NO MORE THAN 12 VDC.

IF THIS IS THE CASE, THE MAXIMUM RF OUTPUT POWER AND/OR THE OVERALL FREQUENCY RANGE COULD BE LIMITED.

CAUTION & WARNING

NEVER INSTALL AND CONNECT THE 12-15 VOLT AND THE 15-30 VOLT SUPPLIES AT THE SAME TIME.

ALSO, NEVER CONNECT THE 15-30 VOLT SUPPLY TO THE 12-15 VOLT PINS AND NEVER CONNECT THE 12-15 VOLT SUPPLY TO THE 15-30 VOLT PINS.

DOING SO MAY DAMAGE THE INTERNAL SWITCHING SUPPLY OR EITHER OF THE EXTERNAL DC SUPPLIES.

CAUTION & WARNING

NEVER CONNECT THE SRPT-30/40A TO THE AC LINE AND EITHER OF THE EXTERNAL DC SUPPLIES AT THE SAME TIME.

DOING SO MAY DAMAGE THE INTERNAL SWITCHING SUPPLY OR THE EXTERNAL DC SUPPLY.

AC LINE Switch, AC Receptacle & Fuse

When the transmitter is not in use or if the SRPT-30/40A is to run off of an external supply, the AC LINE switch should be in the “OFF” position.

When ready to use the SRPT-30/40A off of the AC line voltage, plug power cord into the AC Receptacle and switch the AC LINE switch to the “ON” position.

The AC line fuse is rated at 2.5 amps.

AFC LOCK LED

The AFC LOCK LED will either be flashing or solid green at all times, except during initial power up – and in that case it will only be off for a few seconds.

When the SYNTHESIZER is searching for a frequency to lock on to and is therefore *not* locked, the AFC LOCK LED will flash green. When the SYNTHESIZER finds and locks onto the frequency it was searching for, the AFC LOCK LED will stay on, solid green. Three seconds after the SYNTHESIZER becomes locked, it will then be ready and will enable the transmitter to output power.

In normal conditions, the SYNTHESIZER will not come “unlocked” unless sent a command to change to a new frequency. However, other conditions can cause the SYNTHESIZER to come unlocked such as an AC line surge or a sudden and very large change in VSWR. In those cases, the SYNTHESIZER will re-lock back on the assigned frequency. The AFC LOCK LED will flash green until the SYNTHESIZER is locked. Once the SYNTHESIZER is locked it will stay on, solid green.

ANTENNA Connector

Connection of various antenna systems is covered under **INSTALLATION and ANTENNAS**. It is only necessary for the operator or announcer to see that the ANTENNA connector is tight and that the antenna is clear of objects which may affect its radiation efficiency.

CAUTION & WARNING

THE ANTENNA CONNECTOR IS A TYPE “N” FEMALE CONNECTOR AND REQUIRES A MATING TYPE “N” MALE CONNECTOR.

PLUGGING IN A “UHF TYPE (PL-259 OR SO-239)” INTO THE ANTENNA CONNECTOR WILL DAMAGE AND SHORT OUT THE ANTENNA CONNECTOR. THIS COULD BURN UP THE PA MODULE AND OTHER INTERNAL COMPONENTS.

ENCODE Switch

The internal subaudible encoder can be switched “ON” or “OFF” by the front panel switch. Encoding is used to activate a repeater station, tape recorder, etc.

FREQUENCY SELECT Pushwheel Switches and EXECUTE Switch (SRPT-40A only)

Dial in the numbers that represent a frequency, channel number, or other command using the FREQUENCY SELECT Pushwheel switches. Then press and release the EXECUTE switch to “send” the command numbers on the FREQUENCY SELECT pushwheel switches to the internal controller to be decoded and executed. See the **OPERATION** section for a listing and understanding of all commands.

F1/F2 Switch (SRPT-30 only)

Switching to the F1 position will cause the transmitter to lock onto the frequency that was configured at the factory as “F1”. Switching to the F2 position will cause the transmitter to lock onto the frequency that was configured at the factory as “F2”. The F1 and F2 frequencies are selected by the purchaser at the time of order.

AUDIO GAIN Controls

The GAIN potentiometer located above each input connector provides an independent level adjustment for that input. Each GAIN potentiometer is adjusted as follows:

1. Connect input source at normal audio level.
2. Turn GAIN potentiometer to maximum counter-clockwise (“OFF”) position.
3. Place TRANSMIT/STANDBY switch in “STANDBY” position and allow METER pointer to reach 0 VU. Slowly increase gain (clockwise) until METER begins deflecting to the left on audio peaks. Maximum deflection should be -3 to -5 VU on the METER scale. This indicates 100% modulation of the transmitter. Excessive gain settings cause high compression values which result in annoying increase in background noise. A 600 ohm headset may be

plugged into the MONITOR jack to aid in arriving at the proper gain adjustment. In high noise environments, close-talk the microphone and reduce MIC gain until a maximum of -2 VU gain-reduction is indicated.

4. Once the proper gain level is determined, it will not be necessary to change it for that particular microphone or tape player. The broadcast quality compressor/limiter built into the unit will maintain modulation at the maximum level while preventing over-modulation.

HIGH TEMP LED

When the internal controller detects a PA temperature between 85 and 100 degrees C, the HIGH TEMP LED will flash red at a rate of once per second.

When the internal controller detects a PA temperature of greater than 100 degrees C, the RF output power will completely shutdown, and the HIGH TEMP LED will flash red at a rate of twice a second. The RF output power will stay shutdown until the PA temperature has dropped below 85 degrees C. When the internal controller detects that the PA temperature is below 85 degrees C, it will turn off the HIGH TEMP LED and then enable the PA to transmit power.

A HIGH TEMP alarm could be due to the fan malfunctioning, the SRPT-30/40A placed in a closed-in area with limited air circulation, or an experience of high VSWR.

HIGH VSWR LED

When the internal controller detects a VSWR of greater than 2 but less than 4, the HIGH VSWR LED will flash red at a rate of once per second.

When the internal controller detects a VSWR of greater than 4 but less than 6, the output power will limit to a maximum of half the rated power (that was set using the MAX PWR pot (R74) located on the synthesizer – see **TUNE-UP and ADJUSTMENTS** section) and the HIGH VSWR LED will flash red at a rate of twice per second. When the detected VSWR falls less than 4, the output will resume to its previous power setting, the HIGH VSWR LED will flash at a rate of once per second if VSWR greater than 2, and will turn off if VSWR is less than 2.

When the internal controller detects a VSWR of greater than 6, or detects a reverse power of greater than one-third the maximum rated output power, the output power will immediately shut off, the TRANSMIT LED will flash red, and the HIGH VSWR LED will flash rapidly. Every three seconds the controller will attempt to turn on the transmit output but will again shut down if the conditions have not changed. If this occurs, even if the operator turns off the TRANSMIT switch, the HIGH VSWR LED will still flash rapidly. The only way to stop the HIGH VSWR LED from flashing, is to repair the output (i.e., loose connection of output, wrong connector type, wrong cable, faulty antenna, short circuit cable, etc...), and then turn the TRANSMIT switch on (if it was off), and after 3 seconds if the controller does not detect a very high VSWR or high reverse power, the transmit output power will come on.

METER and METER SELECT Knob

When the METER SELECT Knob is either in the FORWARD POWER or REVERSE POWER position, the corresponding measurement can be read off of the top "WATTS" scale of the METER.

When the METER SELECT knob is either in the PA CURRENT or the B+ position, the corresponding measurement can be read off of the middle "VOLTS/AMPS" scale of the METER.

When the METER SELECT knob is in the AUDIO COMPRESSION position, the corresponding measurement can be read off of the bottom "VU" scale of the METER.

MIC Input Connectors

These balanced inputs are for a 150 ohm dynamic microphone such as the Shure BG 1.0 with standard XLR-3 or A3M connector. Microphone connections are given in INSTALLATION.

Input 4 can operate at MIC LEVEL or HIGH LEVEL by means of a SELECTOR switch inside the transmitter just behind the Input 4 pot. The unit is factory selected for “HI” (HIGH) LEVEL balanced input for use with tape machines, etc. To convert Input 4 to MIC (microphone) LEVEL, remove top cover and move switch to “MIC”.

MONITOR Jack

The MONITOR jack is active in “STANDBY” and “TRANSMIT” positions of the TRANSMIT/STANDBY switch. A high-quality headset having 300 ohms or higher impedance can be plugged into the MONITOR jack to make adjustments or to monitor the quality of the audio being transmitted. A miniature, single circuit, 1/8 inch, phone plug should be used with the MONITOR jack.

POWER ADJUST Pot

When the SRPT-30/40A is transmitting, this pot can be adjusted to increase or decrease the output power from the MAXIMUM power setting to almost zero Watts.

TRANSMIT LED

When the TRANSMIT/STANDBY switch is in the STANDBY position, the SRPT-30/40A will not transmit and the TRANSMIT LED will be off.

When the TRANSMIT/STANDBY switch is in the TRANSMIT position but the SYNTHESIZER is *not* ready, the SRPT-30/40A will not transmit and the TRANSMIT LED will flash red.

When the TRANSMIT/STANDBY switch is in the TRANSMIT position and the SYNTHESIZER is ready (which is always three seconds after the SYNTHESIZER becomes locked), the SRPT-30/40A will transmit and the TRANSMIT LED will be on, solid red.

TRANSMIT/STANDBY Switch

This switch is placed in “STANDBY” position to shut off the output power. The synthesizer will still be locked on frequency as indicated by the solid AFC LOCK LED. The TRANSMIT/STANDBY switch is placed in the “TRANSMIT” position when transmission is desired. The output power will turn on immediately at an output power that correlates to the POWER ADJUST position. The TRANSMIT/STANDBY switch should be returned to the “STANDBY” position as soon as a transmission is completed.

OPERATION

Connect up SRPT-30/40A to the AC Line Receptacle or External DC Supply

CAUTION & WARNING

NEVER CONNECT THE SRPT-30/40A TO THE AC LINE AND EITHER OF THE EXTERNAL DC SUPPLIES AT THE SAME TIME.

DOING SO MAY DAMAGE THE INTERNAL SWITCHING SUPPLY OR THE EXTERNAL DC SUPPLY.

AC Line Operation

Position AC LINE switch to “OFF”, then plug SRPT-30/40A into a 110-120 VAC (if internal supply switched to 115) or 220-240 VAC (if internal supply switched to 230), grounded, 3-prong receptacle.

WARNING

DO NOT PLUG INTO AC WITHOUT FIRST KNOWING POSITION POWER SUPPLY SWITCH.

WARNING

THIS EQUIPMENT MUST BE OPERATED WITH A 3-PRONG, GROUNDED, 110-120 or 220-240 VAC RECEPTACLE!

FAILURE TO USE A PROPERLY GROUNDED OUTLET COULD RESULT IN A SAFETY HAZARD OR FAULTY EQUIPMENT PERFORMANCE.

IF AN EXTENSION CORD IS USED, IT MUST BE THE THREE-WIRE GROUNDING TYPE TO INSURE SAFETY.

DO NOT CUT OFF THE GROUND PIN OF A 3-PRONG PLUG!!

External DC Supply (12-15 Volt) Operation

Make sure that the SRPT-30/40A is *not* connected to an AC line. Place the front panel AC LINE switch in the ON position. This turns off External DC Supply (12-15 Volt) to the unit.

The external supply or battery must be capable of delivering 10 Amps if running the SRPT-40A at 50 Watts. Connect up the unit using the Marti 585-141 12-15 VDC External Supply Cable. If choose to build your own cable then follow the drawing on Figure 2A: Connect three positive leads of the supply to pins 6, 7, and 14 of a 15-pin female D connector. Connect three negative leads of the supply to three ground pins (pins 1, 11, and 12) of the 15-pin female D connector. Each of the three positive leads and each of the three negative leads should be an 18 gauge wire. You may

also use one 12 gauge wire for each positive and negative leads and split the stranded ends into three at the connector end.

It is best to have an external switch between the external supply and the unit. Make sure the switch is in the open position before connecting it to external supply. Otherwise make sure that when connecting the positive lead to the external source that the 15-pin D connector is *not* connected to the SRPT-30/40A.

With the front panel AC LINE switch in the ON position, plug in the 15-pin D connector into the ACCESSORY connector located in the rear of the SRPT-30/40A. Turn on external supply (if have a switch). With a voltmeter, measure the voltage on the output of the external supply insuring that it is between 12 and 15 VDC. Switch the front panel AC LINE switch to the OFF position. The unit should power up.

External DC Supply (15-30 Volt) Operation

Make sure that the SRPT-30/40A is *not* connected to an AC line. The front panel AC LINE switch *does not* control the External DC Supply (15-30 Volt) operation. Therefore it does not matter what position it is in.

The external supply or battery must be capable of delivering 10 Amps if running the SRPT-40A at 50 Watts. Connect up the unit using the Marti 585-142 15-30 VDC External Supply Cable. If choose to build your own cable then follow the drawing on Figure 2B: Connect three positive leads of the supply to three 15-30VDC pins (pins 2, 3, and 10). Connect three negative leads of the supply to three ground pins (pins 1, 11, and 2). Each of the three positive leads and each of the three negative leads should be an 18 gauge wire. You may also use one 12 gauge wire for each positive and negative leads and split the stranded ends into three at the connector end.

It is best to have an external switch between the external supply and the unit. Make sure the switch is in the open position before connecting it to external supply. Otherwise make sure that when connecting the positive lead to the external source that the 15-pin D connector is *not* connected to the SRPT-30/40A.

Plug in the 15-pin D connector into the ACCESSORY connector located in the rear of the SRPT-30/40A. Turn on external supply (if have a switch). With a voltmeter, measure the voltage on the output of the external supply insuring that it is between 12 and 15 VDC. The unit should power up.

From 16 to 20 VDC, the SRPT-30/40A will transmit up to 50 Watts RF output. From 20 to 30 VDC the SRPT-40A maximum output power will derate linearly down to 20 watts.

CAUTION & WARNING

NEVER INSTALL AND CONNECT THE 12-15 VOLT AND THE 15-30 VOLT SUPPLIES AT THE SAME TIME.

ALSO, NEVER CONNECT THE 15-30 VOLT SUPPLY TO THE 12-15 VOLT PINS AND NEVER CONNECT THE 12-15 VOLT SUPPLY TO THE 15-30 VOLT PINS.

DOING SO MAY DAMAGE THE INTERNAL SWITCHING SUPPLY OR EITHER OF THE EXTERNAL DC SUPPLIES.

Connect up Antenna

Connect antenna to the ANTENNA connector on the SRPT-30/40A rear panel. Connection of various antenna systems is covered under **INSTALLATION and ANTENNAS**.

CAUTION & WARNING

THE ANTENNA CONNECTOR IS A TYPE “N” FEMALE CONNECTOR AND REQUIRES A MATING TYPE “N” MALE CONNECTOR.

PLUGGING IN A “UHF TYPE (PL-259 OR SO-239)” INTO THE ANTENNA CONNECTOR WILL DAMAGE AND SHORT OUT THE ANTENNA CONNECTOR. THIS COULD BURN UP THE PA MODULE AND OTHER INTERNAL COMPONENTS.

CAUTION

DO NOT TURN ON AC LINE OR EXTERNAL DC POWER UNTIL ANTENNA HAS BEEN PROPERLY CONNECTED TO ANTENNA CONNECTOR!

Power-Up SRPT-30/40A

If using AC line, turn on SRPT-30/40A by turning on front panel AC LINE switch.

If using 12-15 Volt or 15-30 Volt external DC supply, turn on SRPT-30/40A by turning on external DC supply. Refer to the **External DC Supply Operation** procedure above for proper installation and operation.

The SRPT-30/40A will begin a power-up routine. The front panel meter will illuminate immediately. After about three seconds the AFC LOCK LED will begin flashing green indicating that the synthesizer is searching for the last frequency it was last locked on to.

If the TRANSMIT/STANDBY switch is in the TRANSMIT position, the TRANSMIT LED will flash red in unison with the green flashing AFC LOCK LED. Once the synthesizer has found and locked onto the frequency, the AFC LOCK LED will immediately stay on solid green and the TRANSMIT LED will continue to flash red for three additional seconds. After the three seconds, the SYNTHESIZER will be ready, will enable the power amplifier to transmit RF power, and the TRANSMIT LED will stay on solid red.

If the TRANSMIT/STANDBY switch is in the STANDBY position, the TRANSMIT LED and hence, the transmitter RF power, will be off and will stay off even after the SYNTHESIZER has locked and the AFC LOCK LED has illuminated solid green. When the TRANSMIT/STANDBY switch is placed in the TRANSMIT position (and three seconds have elapsed since the SYNTHESIZER became locked) the PA will immediately begin transmitting and the TRANSMIT LED will illuminate solid red.

Adjusting Output Power

Turn the METER CONTROL knob to the FORWARD POWER position and observe the forward power reading on the top scale of the METER. Using a small flat-head screwdriver, adjust the POWER ADJUST pot (located about ¾ of an inch behind the POWER ADJUST bezel ring) to adjust the forward power to a desired output power as indicated on the METER.

What Frequency Will the SRPT-30/40A Power-Up on?

SRPT-30 Only:

The SRPT-30 will power-up on frequency F1 or F2 depending on the position of the F1/F2 front panel switch. The frequencies corresponding to F1 and F2 were determined at the time of order and are hard coded within the synthesizer.

SRPT-40A Only:

The SRPT-40A will always power up on the last frequency it was locked onto before last power-down. If you're not sure what frequency the SRPT-40A will power up on, first make sure that the POWER ADJUST pot is at a minimum (turned fully counter-clockwise) before powering up the SRPT-40A. After the SYNTHESIZER is locked and the TRANSMIT/STANDBY switch is set in the TRANSMIT position, monitor the RF output with a frequency counter. If necessary, increase the POWER ADJUST pot (turn clockwise) slowly until the frequency counter registers a frequency reading.

WARNING

NEVER CONNECT THE FREQUENCY COUNTER DIRECTLY TO THE RF OUTPUT CONNECTOR OF THE SRPT-30 OR SRPT-40A.

THE FREQUENCY COUNTER SHOULD BE COUPLED OFF OF AN RF COUPLER OR A WATT METER.

EXCEEDING THE INPUT POWER RATING OF THE FREQUENCY COUNTER COULD DO INTERNAL DAMAGE TO IT.

Inputting Audio

Plug in microphones (Inputs 1 - 3) or tape player (Input 4 internally switched to "HI" position; See MIC Input Connections, above) and check operation by setting the METER CONTROL knob to the AUDIO COMPRESSION position and observing the compression on METER and by a headset plugged into MONITOR jack. Set AUDIO GAIN controls paragraph in the CONTROL & CONNECTOR FUNCTIONS section for how to adjust for no more than -3 VU audio compression on the METER.

Changing Output Frequency Direct

SRPT-30 Only:

Simply change the position of the F1/F2 front panel switch and the unit will change to the corresponding frequency.

SRPT-40A Only:

To change the frequency of the SRPT-40A, the S1 dip-switches on the Front Panel Control & Meter board (800-385A) behind the front panel (see the SRPT-40A Adjustment Locations) need to be set with switches 1 and 2 in the "ON" position and switches 3 and 4 in the "OFF" position. These positions are the normal position and are set at the factory, so there should be no need to remove the top cover.

When the S1 switches are set as described in the last paragraph, then all that is required is to enter the desired frequency from left to right into the FREQUENCY SELECT pushwheel switches and then press and release the EXECUTE pushbutton switch.

All seven digits on the front panel FREQUENCY SELECT pushwheel switches must be entered. The frequency is entered in MHz where the first three digits represent the left side of the decimal place, and the last four digits represent the right side of the decimal place. For example, the frequency 450.0125 MHz will simply be entered as 4500125.

If a valid frequency is entered and the EXECUTE pushbutton is pressed and released, then the RF output power will immediately turn off (if it was on to begin with) and the SYNTHESIZER will go through its normal routine in searching and locking onto the requested frequency. When the frequency is found, the AFC LOCK LED will stop flashing and illuminate solid green. After three seconds the TRANSMIT LED will stop flashing and illuminate solid red (assuming the TRANSMIT/STANDBY switch is in the TRANSMIT position) and the SRPT-40A will resume transmitting at the new frequency and at the same output power it was before leaving the previous frequency.

What is A Valid Output Frequency?

A valid output frequency is defined as a frequency that operates within the model bandwidth and is either a standard frequency, or is a non-standard frequency that falls within $\pm 0.00015\%$ of the requested frequency. A standard output frequency is one that is divisible by 5 or 6.25 KHz for 450 band models and less, and divisible by 10 or 12.5 KHz for greater than 450 band models. All other frequencies are considered non-standard frequencies. The SRPT-30/40A will lock on standard output frequencies within a $\pm 0.00004\%$ tolerance. The SRPT-30/40A will lock on about 95% of non-standard frequencies. The tolerance of these frequencies fall within $\pm 0.00015\%$ of the requested frequency. If the synthesizer determines that the non-standard frequency will fall outside $\pm 0.00015\%$ of the requested frequency, then this is considered an invalid frequency and it will not change to the requested frequency.

SRPT-30 Only:

There are only two frequencies to choose from, F1 and F2, as configured at the factory, and are always considered valid. However, at the time of order, if the customer requires a frequency that is not divisible by 5 or 6.25 KHz (or by 10 or 12.5 KHz for > than 450 MHz models), we can determine immediately whether or not the requested frequencies will fall within $\pm 0.00015\%$ tolerance. If one or both frequencies do fall not within this tolerance, then the order will be considered special and must be determined by the engineering department at Broadcast Electronics if we can tune to the required frequencies.

SRPT-40A Only:

If an invalid frequency is entered in, or if the same frequency that the SRPT-40A is currently locked on to is entered in, then the SRPT-40A will remain at its current frequency, i.e., nothing will happen. If the operator desires to change to a frequency that is invalid, he must choose the closest valid frequency and then manually tune the reference oscillator on the synthesizer to get to desired frequency. However, if the operator tunes the reference oscillator to get to an invalid frequency, then when needing to change to another frequency (valid or non-valid), the operator may have to retune the reference oscillator again.

Changing Output Frequency via Channel Select – SRPT-40A Only

The frequency can also be changed by entering a channel number that was previously stored with a frequency. See ***Storing Output Frequencies into Channels*** for instructions on how to store frequencies. There are ten channels available for storing and recalling frequencies. These ten channels are preset with default or customer requested frequencies at the factory.

To change frequency via channel select, the S1 dip-switches behind the front panel must be set with switches 1 and 2 in the “ON” position and 3 and 4 in the “OFF” position. These are the default positions and are in the same position as when changing the frequency direct. So there’s no need to remove the top cover.

Now you're ready to enter the channel. This is done by setting the six left-most digits (digits 2-7) of the FREQUENCY SELECT pushwheel switches equal to zero. Then the far right digit (digit 1) is set to the channel of choice (channel 0 – channel 9). After entering the channel, press the EXECUTE pushbutton down and then release. The SYNTHESIZER will change to the frequency that was stored in the channel.

WARNING

THE REMAINING OPERATIONS ARE FEATURES THAT REQUIRE SETTING INTERNAL DIP-SWITCHES.

IN ALL CASES, WHEN PERFORMING THESE OPERATIONS, THE SRPT-40A MUST BE ON AND THE TOP COVER MUST BE REMOVED.

WHEN THE OPERATION IS COMPLETE, ***ALWAYS*** SET THE INTERNAL S1 DIP-SWITCHES WITH SWITCHES 1 AND 2 “ON” AND SWITCHES 3 AND 4 “OFF”. THEN RE-INSTALL THE TOP COVER.

Storing Output Frequencies into Channels – SRPT-40A Only

The SRPT-40A must be locked on a frequency before storing that frequency into one of the ten available channels. It is not necessary, however, that the SRPT-40A be transmitting, hence the TRANSMIT/STANDBY switch can be in STANDBY.

First, lock on to the desired frequency either directly or via channel select. Remove the top cover of the SRPT-40A. Set the S1 dip-switches (located behind the front panel) as follows: Switches 1, 3, and 4 set to the “OFF” position and switch 2 set to the “ON” position.

Next, set the six left-most digits (digits 2-7) of the FREQUENCY SELECT pushwheel switches equal to zero. Then the far right digit (digit 1) is set to the channel of choice (channel 0 – channel 9) to be stored. After entering the channel, press the EXECUTE pushbutton down and then release. The current frequency-in-lock will be stored in the selected channel and the SRPT-40A will remain at its current frequency. If you need to store more channels, repeat the steps in this paragraph.

Finally, put the S1 dip-switches back to where they were, i.e., switches 1 and 2 in the “ON” position and switches 3 and 4 in the “OFF” position. Re-install the top cover.

It would be a good idea to test the stored channel(s) by changing the frequency to some other frequency and then recalling the stored channel(s).

Control Switch Settings – SRPT-40A Only

Control Switch Settings enable or disable important controls used in the SRPT-40A. These control settings include the following:

- Power Adjust Pot
- HiHi VSWR Foldback
- Reverse Power Calibration
- Forward Power Calibration
- HiHi Temperature Shutdown
- Direct Frequency Change
- Channel Frequency Change

Refer to **TABLE (1) - Control Switch Settings Command** for disabling or enabling the desired controls. Remove the top cover. Set the internal dip-switch S1 switches and the FREQUENCY SELECT pushwheel decimals as outlined in Table (1). The entries in **BOLD** are default settings from the factory

When all FREQUENCY SELECT pushwheel decimals have been set to their required values that correspond to the desired control switch setting, you must send the command by pressing the EXECUTE pushbutton down and then releasing. The internal controller will enable or disable the control. Set the internal dip-switch S1 back to its normal position with switch 1 and 2 “ON” and switch 3 and 4 “OFF”. Re-install top cover.

Following is a description of the control settings:

Power Adjust Pot – The default for this setting is “enabled” which allows the user to change the power from almost 0 Watts to the maximum RF output power setting via the front panel POWER ADJUST pot. Refer to the **Maximum Power Setting** paragraph in the **CALIBRATION AND ADJUSTMENT** section of this manual for information on how to set the maximum power. If this user “disables” this setting, then the RF output power will maintain where last set and tuning of the POWER ADJUST pot will have no effect.

HiHi VSWR Foldback – The default for this setting is “enabled”. This means when a VSWR is detected greater than 4, the power will limit to one-half the maximum power setting. If VSWR foldback is “disabled”, then the forward RF power will not try to foldback, even when the controller detects a VSWR of greater than 4. The HIGH VSWR LED will still flash however. For maintaining long life from the power amplifier, it is not recommended to disable VSWR Foldback.

Reverse Power Calibration – The default setting for this setting is “disabled”. This setting should only be “enabled” during calibration (see the **Reverse Power Calibration** paragraph in the **CALIBRATION AND ADJUSTMENT** section).

Forward Power Calibration – The default setting for this setting is “disabled”. This setting should only be “enabled” during calibration (see the **Forward Power Calibration** paragraph in the **CALIBRATION AND ADJUSTMENT** section).

HiHi Temperature Shutdown – The default for this setting is “enabled”. See **High Temp LED** paragraph in the **CONTROL & CONNECTOR FUNCTIONS** section for complete description. When enabled, the power amplifier will shut down when the PA temp reaches 100 degrees C. If “disabled”, then the power amplifier will not shutdown due to HiHi temperature but the HIGH TEMP LED will still flash. Again, for maintaining long life from the power amplifier, it is not recommended to disable High Temperature Shutdown.

Direct Frequency Change – The default for this setting is “enabled” to be able to change the output frequency direct. If “disabled”, then attempting to change the output frequency will be ignored by the internal controller. This setting is useful for locking out anyone from changing frequencies, or to change frequencies via user programmed channels.

Channel Frequency Change – The default for this setting is “enabled” to be able to change the output frequency by channel select. If “disabled”, then attempting to change the output frequency by selecting channels will be ignored by the internal controller. This setting is typically “disabled” if the *Direct Frequency Change* setting is also disabled. In that case, only one frequency can ever be transmitted.

TABLE 1 - Control Switch Settings Command

CONTROL SETTING	DIGIT #7 (far left digit)	DIGIT #6	DIGIT #5	DIGIT #4	DIGIT #3	DIGIT #2	DIGIT #1 (far right digit)
Power Adjust Pot	1	4	0	0	ENB/DIS	0	0
HiHi VSWR Foldback	1	2	0	0	ENB/DIS	0	0
Reverse Power Calibration	1	1	0	0	ENB/ DIS	0	0
Forward Power Calibration	1	0	4	0	ENB/ DIS	0	0
HiHi Temperature Shutdown	1	0	2	0	ENB/DIS	0	0
Direct Frequency Change	1	0	0	0	ENB/DIS	2	0
Channel Frequency Change	1	0	0	0	ENB/DIS	1	0

Notes:

Internal Dip-Switch (S1): Switch 1, 3, and 4 are “OFF”; Switch2 is “ON”

ENB (Enable) = 1, DIS (Disable) = 0

Bold selection indicates factory default setting

THEORY OF OPERATION

Refer to Block Diagram Drawing No. 702-115, 702-117, and appropriate Schematic Diagrams.

CIRCUIT BOARD DESCRIPTION

PRE-AMP/MIXER Board, 800-251

Each of the four microphone inputs is fed to a low-noise differential op-amp (half of an NE-5532). Critical resistors in the input circuits are low-noise, precision, temperature stable types to obtain maximum performance from the pre-amps. Monolithic chip capacitors are used to filter RF voltages that may be present at the microphone inputs. The four op-amp outputs are fed to gain pots then resistively mixed and routed to the COMPRESSOR BOARD.

COMPRESSOR Board, 800-166

Several functions are performed on this board. Integrated Circuit IC-1 serves as a (a) pre-amp [not used on the SRPT-40, (b) pre-emphasis amplifier, (c) voltage-controlled attenuator, and (d) regulator /ripple rejection. Pre-emphasized audio out of IC-1B is also fed to D2 - D3 which form an adjustable series peak-limiting circuit. This circuit is adjusted to limit only audio peaks which get past the compressor. The limiter circuit feeds a low-pass filter (L1, C23, and R46) which reduces the audio bandwidth to that specified for the operating channel of the transmitter. To this is mixed the output of the tone encoder, IC-2A, which is a low-distortion Wien bridge oscillator. This composite signal is then fed to the Modulation port (on P2) of the Transmitter Synthesizer Board, 800-375AT. This audio signal is also fed to IC-2B which amplifies it to a level suitable for a 600 ohm headphone monitor. IC-2C is a DC amplifier the input of which is connected to the AGC (automatic gain control) circuit and the output of which drives the audio compression meter.

AUDIO REGULATION Board, 800-168-40A

This board simply provides a regulated B+ (approximately 11 Volts) to the Pre-Amp/Mixer Board, 800-251 and the Compressor Board, 800-166. This additional regulation helps reduce power supply noise and provides B+ isolation from other circuitry.

TRANSMITTER SYNTHESIZER Board, 800-375AT

The fundamental purpose of this board is to accomplish two things: (1) Generate the final output frequency and (2) FM modulate the mixed audio. The circuitry to achieve this consists of a Phase-Locked Loop (PLL), which includes a Frequency Synthesizer IC, Voltage-Controlled Oscillator, a pre-scaler, a reference frequency oscillator, and a low-frequency loop filter. The Frequency Synthesizer IC is a programmable device for setting internal counters for allowing the reference frequency oscillator to be a perfect multiple of the final output frequency. The reference frequency oscillator is a 12.8 MHz TCXO. The low-frequency loop filter is a one-Hertz active type. The 64/128 pre-scaler is used to help aid in the multiplying.

The audio output from the 800-166 COMPRESSOR board is fed into the TRANSMITTER SYNTHESIZER's VCO which FM modulates the signal at the final output frequency. This modulated RF output signal is then sent to the 800-388A Two-Stage RF PA board for final amplification.

Included on the TRANSMITTER SYNTHESIZER board is a high-speed microcontroller. This controller decodes and acts on commands sent from the Front Panel Control & Meter board (800-378A). These commands include new frequency change (direct or channel select), control switch settings, calibration, etc. The controller also monitors and regulates forward power, monitors VSWR and PA temperature, performs auto foldback of power due to high VSWR and then recovers when VSWR lowers, and performs auto shutdown of power due to very high temp. It has internal EEPROM for storing important information such as frequency channels and historical info. The controller also detects synthesizer lock and unlock as well as enabling a fastlock feature for far frequency changes.

FRONT PANEL CONTROL & METER Board, 800-389A (800-382A – some models) – SRPT-30 only

This board does the following:

- Sends F1/F2 state to TRANSMITTER SYNTHESIZER,
- Displays LED alarm information received from the TRANSMITTER SYNTHESIZER,
- Receives and decodes digital data from TRANSMITTER SYNTHESIZER for forward and reverse power readings and converts to analog signals,
- Directs POWER ADJUST analog signal to TRANSMITTER SYNTHESIZER,
- Multiplexes all analog metering signals via METER SELECT knob for independently monitoring on METER,
- Sends state of the TRANSMIT/STANDBY switch.

FRONT PANEL CONTROL & METER Board, 800-385A (800-378A – some models) – SRPT-40A only

This board does the following:

- Collects and sends commands from the front panel pushwheel switches to the on-board microcontroller of the TRANSMITTER SYNTHESIZER board,
- Displays LED alarm information received from the TRANSMITTER SYNTHESIZER,
- Receives and decodes digital data from TRANSMITTER SYNTHESIZER for forward and reverse power readings and converts to analog signals,
- Directs POWER ADJUST analog signal to TRANSMITTER SYNTHESIZER,
- Multiplexes all analog metering signals via METER SELECT knob for independently monitoring on METER,
- Sends state of the TRANSMIT/STANDBY switch.

TWO-STAGE RF POWER AMPLIFIER Board, 800-388A (800-373A – some models)

The RF output signal (50 mW max) from the TRANSMITTER SYNTHESIZER is fed into this TWO-STAGE RF POWER AMPLIFIER board. The RF goes through two stages of RF amplification. The first stage (U2) is a 1-Watt (max) pre-driver. It has an input and output transformer (T1 and T2) for achieving optimum 50 Ohm matching between the stages. The output of T2 is fed into the final PA module (U3) for an output of up to 60 Watts max. This PA module usually has a lower RF output for SRPT-30's. The signal is then low-passed filtered through FL1 and then fed through a directional coupler for monitoring forward and reflected power. An Automatic Power Control (APC) circuit residing on the TRANSMITTER SYNTHESIZER board stabilizes and maintains an accurate output power level by comparing it to a reference power level which is set by the user via the front panel POWER ADJUST pot. The APC circuit samples the forward power via the coupled forward power on PA board.

This board also provides regulated B+ for powering the PA and the rest of the chassis when using 15-30 Volts external supply. Finally, there also exist circuitry for regulating the fan, measuring PA temperature, and monitoring PA current.

SWITCHING POWER SUPPLY, 800-383A (800-324A – some models)

The Switching Power Supply accepts input from 110-120 or 220-240 VAC and supplies 15 VDC and up to 10 Amperes to power the SRPT-30/40A. The power supply must be switched to the appropriate 115 or 230 position. This is usually done at the factory.

RPU TRANSMITTER I/O Board, 800-379AR

This board passes and distributes external power supply input via the back-panel ACCESSORY connector. It also passes and directs the ENCODE, TX REM CNTL, and external audio signals. All signals are LC filtered.

RF SYSTEM & CONTROL

Refer to Block Diagram Drawing 702-117. The fundamental RF generation of the SRPT-30/40A takes place on the TRANSMITTER SYNTHESIZER board in a circuit known as a Phased-Locked Loop (PLL). The final output frequency (F_{out}) is generated by the Voltage Controlled Oscillator (VCO). F_{out} is determined by the Reference Frequency (F_r) and N by the relation: $F_{out} = F_r \times N$.

N is made up by the internal n and a counters of the Frequency Synthesizer IC and by P , the divide-by-128 prescaler. The value N is equal to: $N = n \times P + a$. We can now write F_{out} in the form: $F_{out} = F_r \times (n \times P + a)$.

Therefore, with P as a constant value of 128, the n and a counters can be programmed in such a way that the output frequency F_{out} will always be an integer multiple of the Reference Frequency, F_r . The a -counter will always be a number from 0 to 128, and the n -counter will be a number from 1 to 1023.

The Reference Frequency, F_r , is generated by the 12.8 MHz TCXO (Temperature Controlled Crystal Oscillator) and the internal R -counter of the Frequency Synthesizer IC. This relation is simply: $F_r = F_{osc} / R$, where $F_{osc} = 12.8$ MHz and R is the programmable R -counter.

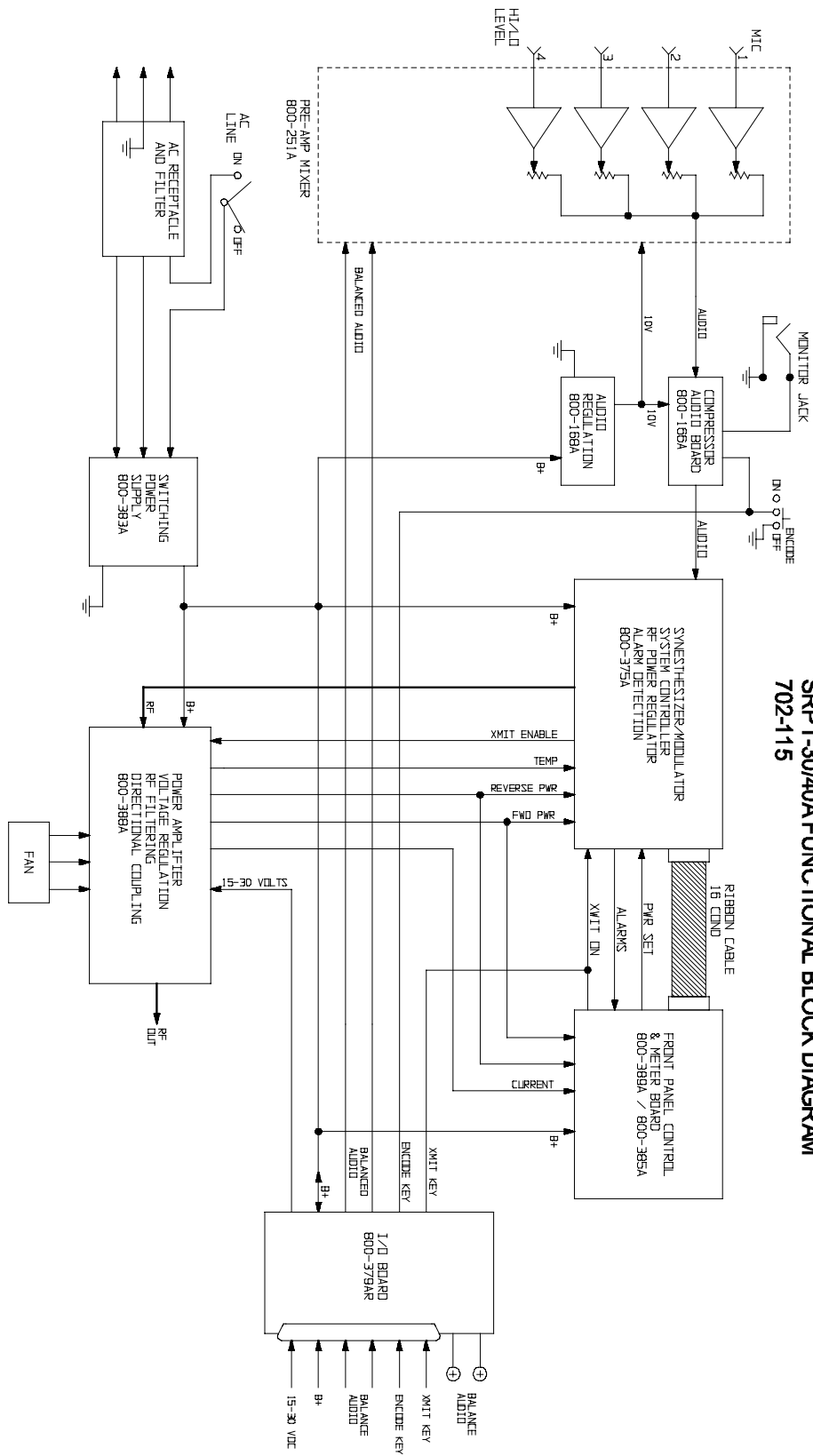
The desired output frequency and the Reference Frequency information is sent from the operator via the front panel to the microcontroller. The microcontroller will set the n and a -counters to yield the requested output frequency, and will set the R -counter to yield the requested Reference Frequency. The Reference Frequency is rarely changed, so typically, F_{ref} is treated as a constant and only the output frequency is changed.

The output frequency is modulated by the injected audio at the input of the VCO. The amount of modulation is determined by the Modulation setting. The VCO will alter the output frequency in deviation and rate corresponding to the amplitude and rate (frequency) of the input voltage signal (audio). This is commonly known as frequency modulation (FM). Since the loop filter has a low frequency response (1 Hz), the PLL will not track the modulated signal and as a result, only the VCO output will change.

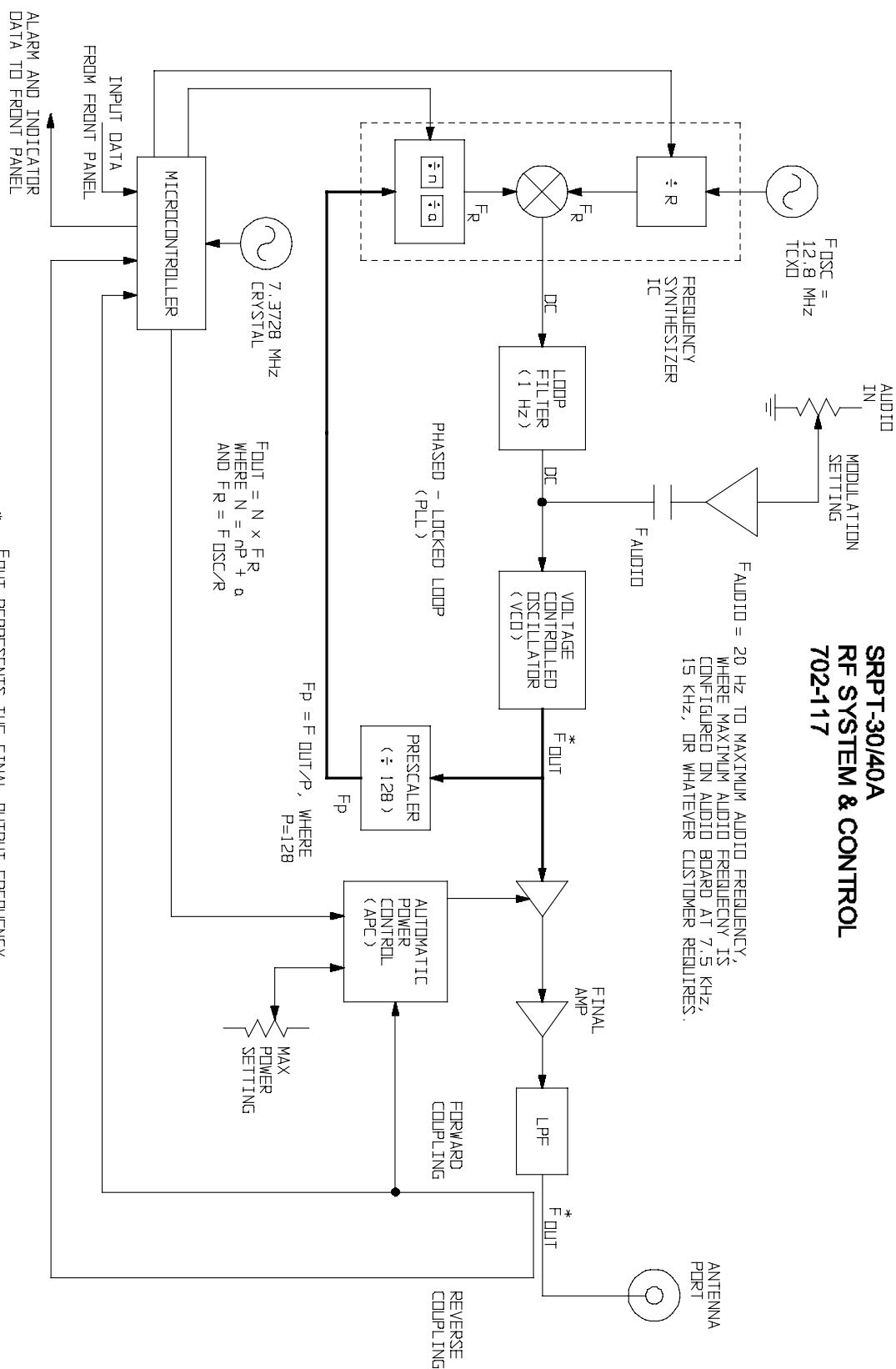
The RF power and power control circuit is shared by the TRANSMITTER SYNTHESIZER and the TWO-STAGE RF POWER AMPLIFIER. The output of the VCO is sent to a controlled amplifier and is then sent to the TWO-STAGE RF POWER AMPLIFIER for final amplification. To maintain a steady and constant RF output (over temperature and voltage changes), a sample of the RF output power (Forward coupling) is sent to the Automatic Power Control (APC) circuit and compared to a reference output power setting. Any delta changes are instantly compensated for in the APC circuit and an adjustment is made in the controlled amplifier. A MAX POWER setting can be user adjusted to limit the final RF output power.

The low-pass filter (LPF) following the final amplifier will filter out all spurious harmonics to a level lower than – 60 dB. The Reverse coupling samples any return power and is sent to the microcontroller. Since the Forward coupling is also sent to the microcontroller, the VSWR can be determined. The microcontroller will “foldback” the output power if the VSWR exceeds a value of 4. Finally, all front panel alarms and indicators are sent from the microcontroller.

SRPT-30/40A FUNCTIONAL BLOCK DIAGRAM 702-115



SRPT-30/40A RF SYSTEM & CONTROL 702-117



* - F_{OUT} REPRESENTS THE FINAL OUTPUT FREQUENCY RANGE OF THE SRPT-40A MODEL. SEE THE SPECIFICATIONS SECTION FOR A LISTING OF MODELS.

RECOMMENDED TEST EQUIPMENT

Distortion Analyzer	Krohn-Hite Model 6801
Oscillator	Krohn-Hite Model 4500
Attenuator Set	Hewlett-Packard Model 3500
Frequency Counter	Hewlett-Packard Model 5383A (option 001)
Digital Multimeter	Beckman Model 3030
Analog Multimeter	Triplett Model 630
RF Attenuator	adjustable 0-110 dB
RF Signal Generator	Marconi Model 2022C
Spectrum Analyzer	Hewlett-Packard Model 8558B
Wattmeter (50 ohms impedance)	Bird Model 43
5 or 50 watt element	100-250 MHz or 400-1000 MHz, Bird
Automatic Modulation Meter	Wavetek Model 4101
50 watt RF Load	Microwave Associates Model 44003
Stereo Monitor	Belar Model FMS-2
Stereo Generator	Aphex Model AX400
Oscilloscope	Tektronix Model 2215

TOOLS FOR ALIGNMENT

Tuning Tool	GC 9300
Tuning Tool	GC 9440
Tuning Tool	Spectrol 8T000
Tuning Tool	Sprague-Goodman
Screwdriver	Xcelite R184, 1/8" x 4"

SRPT-30/40A TRANSMITTER FACTORY TEST REPORT

Customer: _____ Address: _____

Serial No.: _____

- ____ Set internal switching power supply = 14.5 Volts
- ____ Program synthesizer
- ____ Frequency measurement, adjust, and changing
- ____ Forward power calibration and metering
- ____ Reverse power calibration and metering
- ____ Current metering calibration
- ____ Verify B+ metering
- ____ Audio board limiter set
- ____ Audio compressor meter set to 0 VU
- ____ Signal to noise within specifications
- ____ Frequency response within specifications
- ____ Distortion within specifications
- ____ Set deviation to 3.6 KHz at -3 VU, 400 Hz audio
- ____ Set encode frequency to 27 Hz
- ____ Set encode frequency deviation to 600 Hz
- ____ Test 12-15 VDC external supply
- ____ Calibrate internal regulator and test 15-30 VDC external supply

24-Hour Burn-in: Start: Date _____ Time _____
 Stop: Date _____ Time _____

____ Fine tune frequency adjust at _____ MHz
____ Max power adjust to _____ Watts

Customer Specific Settings (if different from standard):

Deviation _____ Encode deviation _____ Audio response _____ Max power _____

Channel settings (SRPT-40A only - upon request):

CH0: _____ MHz CH1: _____ MHz CH2: _____ MHz CH3: _____ MHz
CH4: _____ MHz CH5: _____ MHz CH6: _____ MHz CH7: _____ MHz
CH8: _____ MHz CH9: _____ MHz

____ Frequency change disabled (SRPT-40A only) ____ Channel change disabled (SRPT-40A only)

DATE: _____ SIGNATURE: _____

TUNE-UP AND ADJUSTMENTS

Refer to Location of Adjustments Drawing No. 702-120 and appropriate schematic diagrams for each module.

This equipment was thoroughly tested and inspected at the factory prior to shipment. The actual equipment performance was recorded on the SRPT-30/40A TRANSMITTER FACTORY TEST REPORT. Adjustments should rarely be necessary in the field and should be attempted only by highly trained technicians familiar with this type of equipment. Laboratory grade test equipment is required and is listed under TEST EQUIPMENT AND TOOLS. For location of adjustments and test points in the SRPT-30/40A Transmitter refer to Adjustment Location Diagram, 702-120.

NOTE

FOR ALL ADJUSTMENTS, REMOVE THE TOP COVER FROM THE SRPT-30/40A CHASSIS.

REPLACE THE COVER WHEN THE ADJUSTMENT PROCEDURE IS COMPLETE.

Switching Power Supply Voltage Adjustment

The input to the switching power supply can be from 110-120 or 220-240 VAC, 50/60 Hz. The DC B+ output, measured off of one of the red wires of the switching supply, can be slightly adjusted at B+ ADJUST. The recommended B+ reading should be 14.5 volts.

B+ Adjustment When Using 15-30VDC External Supply

CAUTION

THIS ADJUSTMENT HAS BEEN SET AT THE FACTORY AND SHOULD *NOT* REQUIRE ANY FURTHER ADJUSTMENTS.

1. Remove AC line voltage from SRPT-30/40A.
2. Connect up external supply to the 15-30VDC pins of the AUXILLARY connector (see the **ACCESSORY Input Connector** paragraph in the **CONTROL & CONNECTOR FUNCTIONS** section).
3. Switch the AC LINE front panel switch to the "OFF" position.
4. Turn on external supply and adjust to approximately 18 VDC.
5. Using a VOLT METER, with negative lead connected to ground (chassis), connect the positive lead to one of the red wires connected to the 800-379AR I/O board.
6. On the TWO-STAGE RF POWER AMPLIFIER board adjust B+ ADJUST (pot R5) in the direction required to achieve a B+ reading of 13.5 to 14.5 Volts. This voltage should be adjusted with the TRANSMIT/STANDBY switch in "STANDBY" position.

WARNING

IF THE 15-30 VOLT SUPPLY IS LESS THAN 16 VOLTS, THE B+ ADJUST SHOULD BE SET TO 12 VOLTS.

THIS MAY LIMIT THE MAXIMUM OUTPUT POWER AND FREQUENCY RANGE.

Frequency Measurement

The RF output frequency of this transmitter should be measured as often as necessary to insure on-frequency operation and to comply with regulations. Monitor the RF output with a frequency counter via an RF coupler or Watt meter.

WARNING

NEVER CONNECT THE FREQUENCY COUNTER DIRECTLY TO THE RF OUTPUT CONNECTOR OF THE SRPT-30/40A.

THE FREQUENCY COUNTER SHOULD BE COUPLED OFF OF AN RF COUPLER OR A WATT METER.

EXCEEDING THE INPUT POWER RATING OF THE FREQUENCY COUNTER COULD DO INTERNAL DAMAGE TO IT.

Frequency Fine-Tune Adjust

CAUTION

THIS ADJUSTMENT HAS BEEN SET AT THE FACTORY AND SHOULD *NOT* REQUIRE ANY FURTHER ADJUSTMENTS.

1. Set the SRPT-30/40A on frequency while transmitting.
2. Remove the TRANSMITTER SYNTHESIZER cover.
3. On the TRANSMITTER SYNTHESIZER board tweak the FINE TUNE FREQ ADJ (U15) while viewing a frequency counter.
4. Re-install the TRANSMITTER SYNTHESIZER cover.

Front Panel Meter Adjust – Forward Power

CAUTION

THIS ADJUSTMENT IS ALSO MADE DURING THE FORWARD POWER CALIBRATION ADJUSTMENT.

IT IS NOT RECOMMENDED TO PERFORM THE FORWARD POWER CALIBRATION JUST TO ADJUST THE FRONT PANEL METER - FORWARD POWER.

1. With the SRPT-30/40A powered on and transmitting, tweak the front panel POWER ADJUST pot fully clockwise for maximum power out.
2. Turn the front panel knob to FORWARD POWER.
3. On the FRONT PANEL CONTROL & METER board, tweak the FWD PWR pot (R48) to correlate the front panel METER (using WATTS scale) to the WATT METER connected to the ANTENNA connector.

Front Panel Meter Adjust – Reverse Power

WARNING

THIS ADJUSTMENT SHOULD ONLY BE MADE DURING REVERSE POWER CALIBRATION.

Front Panel Meter Adjust – PA Current

1. With the SRPT-30/40A powered on and transmitting, tweak the front panel POWER ADJUST pot fully clockwise for maximum power out.
2. On the FRONT PANEL CONTROL & METER board measure the voltage across P6 pin 8 and P6 pin 4, with the positive lead on P6 pin 8.
3. Divide this voltage by 0.025. The result is the PA current.
4. Turn the METER SELECT knob to PA CURRENT.
5. On the FRONT PANEL CONTROL & METER board adjust the PA CURRENT pot (R50) to set the front panel METER (using the AMPS scale) to equal the calculated current.

Maximum Power Adjust

CAUTION

THIS ADJUSTMENT IS ALSO MADE DURING THE FORWARD POWER CALIBRATION ADJUSTMENT.

IT IS NOT RECOMMENDED TO PERFORM THE FORWARD POWER CALIBRATION JUST TO ADJUST THE MAXIMUM POWER.

1. Remove the cover from the SYNTHESIZER.
2. On the SYNTHESIZER tweak the MAX PWR pot (R74) fully counter-clockwise.
3. With the SRPT-30/40A powered on and transmitting, tweak the front panel POWER ADJUST pot fully clockwise.
4. On the SYNTHESIZER tweak the MAX PWR pot (R74) clockwise to the desired maximum output power, but do not exceed maximum power output as specified for your model.

5. Replace the SYNTHESIZER cover.

Encoder Adjustments

1. Connect dummy load with sampling attenuator to ANTENNA connector of SRPT-30/40A.
2. Connect an accurate standard FM deviation meter and frequency counter to sampling attenuator.
3. Place TRANSMIT/STANDBY switch in "TRANSMIT" position.
4. Place ENCODE switch in "ON" position and adjust encode level pot R33 on COMPRESSOR AUDIO board, 800-166 for 600 Hz deviation.
5. Connect a scope probe to the bottom leg of R32 of the 800-166 COMPRESSOR AUDIO board and connect the BNC end of the scope probe to a low-frequency counter.
6. Adjust R37 on the 800-166 COMPRESSOR AUDIO board so that the frequency counter reads 27.1 Hz.
7. Remove scope probe and return ENCODE switch to "OFF" position.

Audio Adjustments

1. With no audio input, switch METER to AUDIO COMPRESSION position and set ZERO VU ADJUST pot (R22) on COMPRESSOR AUDIO board, 800-166 to read 0 VU on the meter.
2. With ENCODE switch "OFF", connect a harmonic distortion analyzer to the audio output of the Marti receiver being used with the SRPT-30/40A.
3. Feed a 100 microvolt signal from the transmitter into the receiver RF input via the sampling attenuator.

WARNING

NEVER FEED THE OUTPUT OF THE SRPT-30/40A DIRECTLY INTO A RECEIVER!

THE INPUT STAGE OF THE RECEIVER WILL BE DESTROYED INSTANTLY!

4. Modulate the transmitter with a 2500 Hz tone at 3 dB compression.
5. Turn LIMIT LEVEL pot (R26) on the COMPRESSOR AUDIO board, 800-166 to maximum counter-clockwise position. Note distortion. It should be less than 2%. Slowly turn R26 clockwise until an additional 0.1% distortion is indicated on the distortion meter.
6. With ENCODE switch "ON" and using a Marti receiver having a subaudible decoder which has been set to 27 Hz by an audio generator of at least 1% accuracy, adjust ENCODE FREQ pot (R37) for maximum indication on the "DECODE SIGNAL LEVEL" meter of the receiver.
7. Connect an audio voltmeter to the output terminals of the Marti receiver. Feed a 100 microvolt signal into the receiver from an RF attenuator/sampler connected to the output of the transmitter.
8. Using an audio signal generator connected to MIC INPUT 4 (HIGH LEVEL) of the transmitter with a level 20 dB below compression level at 2500 Hz, sweep the audio over the audio response range for the transmitter model number being aligned. Refer to the **SPECIFICATIONS & ORDERING** section for correct response for designator on your transmitter.
9. At the maximum specified response frequency, adjust the FREQ RESPONSE tuning slug in coil L1 on COMPRESSOR AUDIO board, 800-166 for maximum level or best response curve.

Modulation Adjustment

1. Connect a modulation (or deviation) meter to the output of the SRPT-30/40A.

WARNING

NEVER CONNECT THE MODULATION METER DIRECTLY TO THE RF OUTPUT CONNECTOR OF THE SRPT-30/40A.

THE MODULATION METER SHOULD BE COUPLED OFF OF AN RF COUPLER OR A WATT METER.

EXCEEDING THE INPUT POWER RATING OF THE MODULATION METER COULD DO INTERNAL DAMAGE TO IT.

2. Remove the TRANSMITTER SYNTHESIZER cover.
3. Inject a tone into the transmitter at maximum audio modulation (in most cases this is 7.5 KHz) at 3 dB compression.
4. Adjust pot R63 on the TRANSMITTER SYNTHESIZER while viewing the modulation meter. Turning the pot clockwise to increase modulation and turn it counter-clockwise to decrease it.

WARNING

INCREASING THE MODULATION WILL INCREASE THE TRANSMITTER BANDWIDTH!

5. Replace the TRANSMITTER SYNTHESIZER cover.

Procedure for Removing Pre-Amp Mixer Board, 800-251

1. Remove knobs and hardware from four level control pots on front panel.
2. Notice the Neutrik mic. Connector has a small hole near the center in addition to the three pin receptacles. This hole contains a tiny locking mechanism. Using a small (0.75" wide) flat blade screwdriver, insert tool into hole and turn slowly until screwdriver engages connector lock. Use care!
3. Turn screwdriver counter-clockwise (1/8 turn) until mic. Insert releases.
4. After following the above procedure on each input, gently push the black plastic inserts out of the metal shells while simultaneously pushing the gain adjust pots inward until the board releases from the front panel.
5. Remove board from the chassis and service. To re-install board reverse the above procedure. Be careful! The locking mechanism is delicate.

Forward Power Calibration – SRPT-40A Only

Note: *The SRPT-30 Forward Power Calibration can only be performed at the factory.*

CAUTION

THIS ADJUSTMENT HAS BEEN SET AT THE FACTORY AND SHOULD *NOT* REQUIRE ANY FURTHER ADJUSTMENTS.

WARNING

TO MAINTAIN CALIBRATION, NEVER ADJUST THE FP CAL (R20) POT ON THE TWO-STAGE RF PA BOARD, OTHERWISE THE FORWARD POWER MUST BE RECALIBRATED.

IF IT BECOMES NECESSARY TO RECALIBRATE, READ AND STUDY THIS SECTION CAREFULLY BEFORE PROCEEDING.

1. Power down the SRPT-40A (i.e., turn off AC LINE switch or turn off external supply).
2. Make sure that the WATT METER is connected to the ANTENNA connector and that the WATT METER is terminated with a 50-Ohm load rated at 100 Watts minimum.
3. Remove cover from SYNTHESIZER.
4. On the SYNTHESIZER make sure that the P2 jumper is in the FP position (FP is the normal position).
5. On the TWO-STAGE POWER AMPLIFIER board, tweak the FP CAL pot (R20) fully clockwise (approximately 20 turns).
6. On the SYNTHESIZER, tweak the MAX PWR pot (R74) fully counter-clockwise (approximately 20 turns).
7. Power up SRPT-40A, but leave front panel TRANSMIT/STANDBY switch in the “STANDBY” position. Wait for SRPT-40A to become locked on frequency.
8. Referring to **Table (2) – Forward and Reverse Power Calibration**, find the row that lists your model. Follow this row to the **CAL. FREQ. (MHz)** column. This number represents the frequency your model is to be calibrated at. Change the SRPT-40A to this calibrated frequency.
9. Measure the B+ voltage. Adjust the B+ if necessary by referring to **Switching Power Supply Adjustment** or **B+ Adjustment When Using 15-30VDC External Supply**. If using a 12-15 volt external supply, adjust its voltage to 13.5 to 14.5 volts. It is recommended that the VOLT METER is monitoring B+ throughout this procedure.
10. On the FRONT PANEL CONTROL & METER board, adjust S1 dip-switches with switch 1, 3, and 4 “OFF” and switch 2 “ON”.
11. Set the front panel FREQUENCY SELECT pushwheel switches as follows:
 - DECIMAL 7 (far left digit) = “1”
 - DECIMAL 6 = “4”
 - DECIMAL 5 = “0”
 - DECIMAL 4 = “0”
 - DECIMAL 3 = “0”
 - DECIMAL 2 = “0”
 - DECIMAL 1 (far right digit) = “0”
12. Depress and release the front panel EXECUTE pushbutton switch. This command will disable the front panel POWER ADJUST pot.
13. Set the front panel FREQUENCY SELECT pushwheel switches as follows:
 - DECIMAL 7 (far left digit) = “1”
 - DECIMAL 6 = “2”
 - DECIMAL 5 = “0”
 - DECIMAL 4 = “0”
 - DECIMAL 3 = “0”
 - DECIMAL 2 = “0”
 - DECIMAL 1 (far right digit) = “0”
14. Depress and release the front panel EXECUTE pushbutton switch. This command will disable VSWR Foldback.
15. Set the front panel FREQUENCY SELECT pushwheel switches as follows:
 - DECIMAL 7 (far left digit) = “1”
 - DECIMAL 6 = “0”
 - DECIMAL 5 = “4”
 - DECIMAL 4 = “0”
 - DECIMAL 3 = “1”
 - DECIMAL 2 = “0”
 - DECIMAL 1 (far right digit) = “0”

16. Depress and release the front panel EXECUTE pushbutton switch. The SRPT-40A is now in the Forward Power Calibration mode.
17. On the FRONT PANEL CONTROL & METER board, adjust S1 dip-switches with switch 1, 2, and 4 “OFF” and switch 3 “ON”.
18. Set the front panel FREQUENCY SELECT pushwheel switches as follows:
 - DECIMAL 7 (far left digit) = “1”
 - DECIMAL 6 = “any number”
 - DECIMAL 5 = “any number”
 - DECIMAL 4 = “any number”
 - DECIMAL 3 = “any number”
 - DECIMAL 2 = “any number”
 - DECIMAL 1 (far right digit) = “any number”
19. Depress and release the front panel EXECUTE pushbutton switch. This command will set the internal power control pot to maximum and the position of the POWER ADJUST pot is ignored.
20. Put the TRANSMIT/STANDBY switch in the “TRANSMIT” position. The output power (as indicated by the WATT METER) should be close to 0 Watts.

NOTE

THE HIGH VSWR LED MAY BLINK FROM TIME TO TIME, BUT SIMPLY IGNORE IT DURING THIS CALIBRATION PROCEDURE.

21. The front panel TRANSMIT LED should be off. On the SYNTHESIZER, tweak the MAX PWR pot (R74) clockwise until the TRANSMIT LED just comes on. The output power should increase as indicated by the WATT METER.
22. Referring to **Table (2) - Forward and Reverse Power Calibration**, find the row that lists your model. Follow this row to the first number listed under the **FWD PWR LEVELS (W)** column (**@ Decimal 5 = 0**). This number is the maximum calibrated power.
23. On the TWO-STAGE POWER AMPLIFIER board, tweak the FP CAL pot (R20) counter-clockwise (slowly) until the output power (as indicated by the WATT METER) reaches this maximum calibrated power.

WARNING

THE FP CAL POT (R20) IS NOW CALIBRATED.

DO NOT ADJUST IT ANYMORE!

STEPS 24 THROUGH 29 ARE REQUIRED FOR RE-PROGRAMMING THE INTERNAL FORWARD POWER CALIBRATION TABLE. THIS WILL YIELD THE MOST ACCURATE CALIBRATION. HOWEVER, IN MOST CASES THESE STEPS CAN BE SKIPPED WHILE STILL MAINTAINING A VERY ACCURATE CALIBRATION. IF DECIDE TO SKIP, PLEASE CONTINUE AT STEP 30.

24. Set the front panel FREQUENCY SELECT pushwheel switches as follows:
 - DECIMAL 7 (far left digit) = “2”
 - DECIMAL 6 = “any number”
 - DECIMAL 5 = “0”
 - DECIMAL 4 = “any number”
 - DECIMAL 3 = “any number”
 - DECIMAL 2 = “any number”
 - DECIMAL 1 (far right digit) = “any number”
25. Depress and release the front panel EXECUTE pushbutton switch. This command will store the raw power into the internal calibration table.

26. Referring again to **Table (2) – Forward and Reverse Power Calibration**, find the row that lists your model number. Follow the row to the column **FWD PWR LEVELS (W)**. The corresponding number under **DECIMAL 5 = 1** is the next calibrated power. On the SYNTHESIZER, tweak the MAX PWR pot (R74) such that the output power equals this calibrated power.
27. On the front panel FREQUENCY SELECT pushwheel switches, change *only* DECIMAL 5 = “1”.
28. Depress and release the front panel EXECUTE pushbutton switch. This command will store the calibrated power into a software calibration table.
29. Repeat steps (26) thru (28) for the remaining decimals, DECIMAL 5 = “2” thru DECIMAL 5 = “8” using the corresponding calibrated power numbers under DECIMAL 5 = “#”.

NOTE

THE INTERNAL FORWARD POWER CALIBRATION TABLE IS NOW COMPLETE.

30. On the SYNTHESIZER, tweak the MAX PWR pot (R74) to the desired *maximum* output power, but do not exceed 50 Watts.

NOTE

AT THIS POINT WE WILL NOW CALIBRATE THE FRONT PANEL METER – FORWARD POWER.

31. Turn the front panel knob to FORWARD POWER.
32. On the FRONT PANEL CONTROL & METER board, tweak the FWD PWR pot (R48) to correlate the front panel METER (using WATTS scale) to the WATT METER connected to the ANTENNA connector.
33. On the FRONT PANEL CONTROL & METER board, adjust S1 dip-switches with switch 1, 3, and 4 “OFF” and switch 2 “ON”.
34. Set the front panel FREQUENCY SELECT pushwheel switches as follows:
 - DECIMAL 7 (far left digit) = “1”
 - DECIMAL 6 = “0”
 - DECIMAL 5 = “4”
 - DECIMAL 4 = “0”
 - DECIMAL 3 = “0”
 - DECIMAL 2 = “0”
 - DECIMAL 1 (far right digit) = “0”
35. Depress and release the front panel EXECUTE pushbutton switch. The SRPT-40A is now out of Forward Power Calibration mode.
36. Set the front panel FREQUENCY SELECT pushwheel switches as follows:
 - DECIMAL 7 (far left digit) = “1”
 - DECIMAL 6 = “2”
 - DECIMAL 5 = “0”
 - DECIMAL 4 = “0”
 - DECIMAL 3 = “1”
 - DECIMAL 2 = “0”
 - DECIMAL 1 (far right digit) = “0”
37. Depress and release the front panel EXECUTE pushbutton switch. This command will enable VSWR Foldback.
38. Set the front panel FREQUENCY SELECT pushwheel switches as follows:
 - DECIMAL 7 (far left digit) = “1”
 - DECIMAL 6 = “4”
 - DECIMAL 5 = “0”
 - DECIMAL 4 = “0”

- DECIMAL 3 = "1"
DECIMAL 2 = "0"
DECIMAL 1 (far right digit) = "0"
39. Depress and release the front panel EXECUTE pushbutton switch. This command will enable the front panel POWER ADJUST pot.
 40. Tweak the front panel POWER ADJUST pot fully clockwise to verify that the output power goes to the set maximum power. Tweak the POWER ADJUST pot counter-clockwise verifying that the output power drops as tweaking. The output power should be close to 0 Watts when the POWER ADJUST pot is fully counter-clockwise.
 41. Adjust the POWER ADJUST pot to the desired output power.
 42. If you are not satisfied with the maximum output power, first adjust the front panel POWER ADJUST pot fully clockwise for maximum power, then adjust the MAX PWR pot (R74) on the SYNTHESIZER to the desired maximum output power.
 43. Replace the cover on the SYNTHESIZER.
 44. On the FRONT PANEL CONTROL & METER board, adjust S1 dip-switches with switch 1 and 2 "ON", and 3 and 4 "OFF". This places the SRPT-40A back into normal operation.

Reverse Power Calibration - SRPT-40A Only

Note: The SRPT-30 Reverse Power Calibration can only be performed at the factory.

CAUTION

THIS ADJUSTMENT HAS BEEN SET AT THE FACTORY AND SHOULD *NOT* REQUIRE ANY FURTHER ADJUSTMENTS.

WARNING

TO MAINTAIN CALIBRATION, NEVER ADJUST THE RP CAL (R17) POT ON THE TWO-STAGE RF PA BOARD, OTHERWISE THE REVERSE POWER MUST BE RECALIBRATED.

IF IT BECOMES NECESSARY TO RECALIBRATE, READ AND STUDY THIS SECTION CAREFULLY BEFORE PROCEEDING.

1. Power down the SRPT-40A (i.e., turn off AC LINE switch or turn off external supply).
2. Make sure that the WATT METER is connected to the ANTENNA connector.

NOTE

IT IS PRESUMED THAT A BIRD WATT METER OR EQUIVALENT IS USED.

3. Disconnect the 50-Ohm load from the Bird WATT METER.
4. Rotate the element in the Bird Watt Meter 180 degrees counter-clockwise for measuring reverse power.
5. Remove cover from SYNTHESIZER.
6. On the SYNTHESIZER place jumper on P2 in the RP position.
7. On the TWO-STAGE POWER AMPLIFIER board, tweak the RP CAL pot (R17) fully clockwise (approximately 20 turns).
8. On the SYNTHESIZER, tweak the MAX PWR pot (R74) fully counter-clockwise (approximately 20 turns).

9. Power up SRPT-40A, but leave front panel TRANSMIT/STANDBY switch in the “STANDBY” position. Wait for SRPT-40A to become locked on frequency.
10. Referring to **Table (2) – Forward and Reverse Power Calibration**, find the row that lists your model. Follow this row to the **CAL. FREQ. (MHz)** column. This number represents the frequency your model is to be calibrated at. Change the SRPT-40A to this calibrated frequency.
11. Measure the B+ voltage. Adjust the B+ if necessary by referring to **Switching Power Supply Adjustment** or **B+ Adjustment When Using 15-30VDC External Supply**. If using a 12-15 volt external supply, adjust its voltage to 13.5 to 14.5 volts. It is recommended that the VOLT METER is monitoring B+ throughout this procedure.
12. On the FRONT PANEL CONTROL & METER board, adjust S1 dip-switches with switch 1, 3, and 4 “OFF” and switch 2 “ON”.
13. Set the front panel FREQUENCY SELECT pushwheel switches as follows:
 DECIMAL 7 (far left digit) = “1”
 DECIMAL 6 = “4”
 DECIMAL 5 = “0”
 DECIMAL 4 = “0”
 DECIMAL 3 = “0”
 DECIMAL 2 = “0”
 DECIMAL 1 (far right digit) = “0”
14. Depress and release the front panel EXECUTE pushbutton switch. This command will disable the front panel POWER ADJUST pot.
15. Set the front panel FREQUENCY SELECT pushwheel switches as follows:
 DECIMAL 7 (far left digit) = “1”
 DECIMAL 6 = “2”
 DECIMAL 5 = “0”
 DECIMAL 4 = “0”
 DECIMAL 3 = “0”
 DECIMAL 2 = “0”
 DECIMAL 1 (far right digit) = “0”
16. Depress and release the front panel EXECUTE pushbutton switch. This command will disable VSWR Foldback.
17. Set the front panel FREQUENCY SELECT pushwheel switches as follows:
 DECIMAL 7 (far left digit) = “1”
 DECIMAL 6 = “1”
 DECIMAL 5 = “0”
 DECIMAL 4 = “0”
 DECIMAL 3 = “1”
 DECIMAL 2 = “0”
 DECIMAL 1 (far right digit) = “0”
18. Depress and release the front panel EXECUTE pushbutton switch. The SRPT-40A is now in the Reverse Power Calibration mode.
19. On the FRONT PANEL CONTROL & METER board, adjust S1 dip-switches with switch 1, 2, and 4 “OFF” and switch 3 “ON”.
20. Set the front panel FREQUENCY SELECT pushwheel switches as follows:
 DECIMAL 7 (far left digit) = “1”
 DECIMAL 6 = “any number”
 DECIMAL 5 = “any number”
 DECIMAL 4 = “any number”
 DECIMAL 3 = “any number”
 DECIMAL 2 = “any number”
 DECIMAL 1 (far right digit) = “any number”
21. Depress and release the front panel EXECUTE pushbutton switch. This command will set the internal power control pot to maximum and the position of the POWER ADJUST pot is ignored.
22. Put the TRANSMIT/STANDBY switch in the “TRANSMIT” position. The output “reverse” power (as indicated by the WATT METER) should be close to 0 Watts.

NOTE

THE HIGH VSWR LED MAY BLINK FROM TIME TO TIME, BUT SIMPLY IGNORE IT DURING THIS CALIBRATION PROCEDURE.

23. The front panel TRANSMIT LED should be off. On the SYNTHESIZER, tweak the MAX PWR pot (R74) clockwise until the TRANSMIT LED just comes on. The output “reverse” power should increase as indicated by the WATT METER.
24. Referring to **Table (2) - Forward and Reverse Power Calibration**, find the row that lists your model. Follow this row to the first number listed under the **REV PWR LEVELS (W)** column (@ **Decimal 5 = 0**). This number is the maximum reverse calibrated power.
25. On the TWO-STAGE POWER AMPLIFIER board, tweak the RP CAL pot (R17) counter-clockwise (slowly) until the output power (as indicated by the WATT METER) reaches this maximum reverse calibrated power.

WARNING

THE RP CAL POT (R17) IS NOW CALIBRATED.

DO NOT ADJUST IT ANYMORE!

STEPS 26 THROUGH 31 ARE REQUIRED FOR RE-PROGRAMMING THE INTERNAL FORWARD POWER CALIBRATION TABLE. THIS WILL YIELD THE MOST ACCURATE CALIBRATION. HOWEVER, IN MOST CASES THESE STEPS CAN BE SKIPPED WHILE STILL MAINTAINING A VERY ACCURATE CALIBRATION. IF DECIDE TO SKIP, PLEASE CONTINUE AT STEP 32.

26. Set the front panel FREQUENCY SELECT pushwheel switches as follows:
 - DECIMAL 7 (far left digit) = “2”
 - DECIMAL 6 = “any number”
 - DECIMAL 5 = “0”
 - DECIMAL 4 = “any number”
 - DECIMAL 3 = “any number”
 - DECIMAL 2 = “any number”
 - DECIMAL 1 (far right digit) = “any number”
27. Depress and release the front panel EXECUTE pushbutton switch. This command will store the raw power into the internal calibration table.
28. Referring again to **Table (2) – Forward and Reverse Power Calibration**, find the row that lists your model number. Follow the row to the column **REV PWR LEVELS (W)**. The corresponding number under **DECIMAL 5 = 1** is the next reverse calibrated power. On the SYNTHESIZER, tweak the MAX PWR pot (R74) such that the output power equals this reverse calibrated power.
29. On the front panel FREQUENCY SELECT pushwheel switches, change *only* DECIMAL 5 = “1”.
30. Depress and release the front panel EXECUTE pushbutton switch. This command will store the reverse calibrated power into a software calibration table.
31. Repeat steps (28) thru (30) for the remaining decimals, DECIMAL 5 = “2” thru DECIMAL 5 = “8” using the corresponding reverse calibrated power numbers under DECIMAL 5 = “#”.

NOTE

THE INTERNAL REVERSE POWER CALIBRATION TABLE IS NOW COMPLETE.

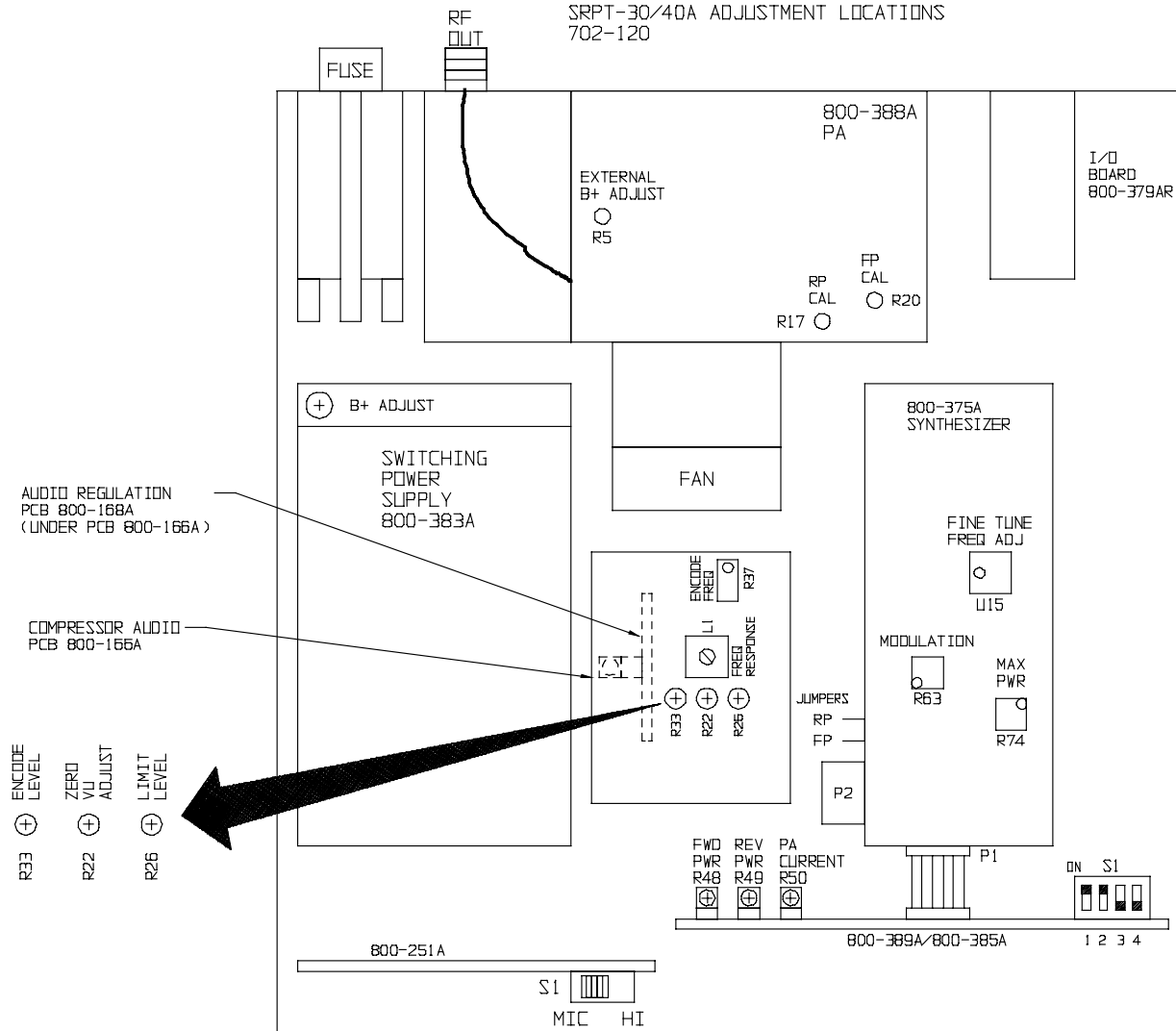
AT THIS POINT WE WILL NOW CALIBRATE THE FRONT PANEL METER – REVERSE POWER.

32. On the SYNTHESIZER, tweak the MAX PWR pot (R74) so that the reverse output power reads 10 Watts as indicated by the Bird WATT METER.
33. Turn the front panel METER SELECT knob to REVERSE POWER.
34. On the FRONT PANEL CONTROL & METER board, tweak the REV PWR pot (R49) to correlate the front panel METER (using WATTS scale) to the WATT METER connected to the ANTENNA connector.
35. On the SYNTHESIZER, tweak the MAX PWR pot (R74) fully counter-clockwise.
36. Put the TRANSMIT/STANDBY switch in the "STANDBY" position.
37. Remove the SYNTHESIZER P2 jumper from the RP position and put the jumper in the FP position.
38. On the FRONT PANEL CONTROL & METER board, adjust S1 dip-switches with switch 1, 3, and 4 "OFF" and switch 2 "ON".
39. Set the front panel FREQUENCY SELECT pushwheel switches as follows:
 - DECIMAL 7 (far left digit) = "1"
 - DECIMAL 6 = "1"
 - DECIMAL 5 = "0"
 - DECIMAL 4 = "0"
 - DECIMAL 3 = "0"
 - DECIMAL 2 = "0"
 - DECIMAL 1 (far right digit) = "0"
40. Depress and release the front panel EXECUTE pushbutton switch. The SRPT-40A is now out of Reverse Power Calibration mode.
45. Set the front panel FREQUENCY SELECT pushwheel switches as follows:
 - DECIMAL 7 (far left digit) = "1"
 - DECIMAL 6 = "2"
 - DECIMAL 5 = "0"
 - DECIMAL 4 = "0"
 - DECIMAL 3 = "1"
 - DECIMAL 2 = "0"
 - DECIMAL 1 (far right digit) = "0"
46. Depress and release the front panel EXECUTE pushbutton switch. This command will enable VSWR Foldback.
47. Set the front panel FREQUENCY SELECT pushwheel switches as follows:
 - DECIMAL 7 (far left digit) = "1"
 - DECIMAL 6 = "4"
 - DECIMAL 5 = "0"
 - DECIMAL 4 = "0"
 - DECIMAL 3 = "1"
 - DECIMAL 2 = "0"
 - DECIMAL 1 (far right digit) = "0"
48. Depress and release the front panel EXECUTE pushbutton switch. This command will enable the front panel POWER ADJUST pot.
49. Re-connect the 50-Ohm load on the WATT METER.
50. Rotate the WATT METER element clockwise 180 degrees.
51. Put the TRANSMIT/STANDBY switch in the "TRANSMIT" position.
52. Tweak the front panel POWER ADJUST pot fully clockwise.
53. Adjust the MAX PWR pot (R74) on the SYNTHESIZER to the desired maximum output power.
54. Replace the cover on the SYNTHESIZER.
55. On the FRONT PANEL CONTROL & METER board, adjust S1 dip-switches with switch 1 and 2 "ON", and 3 and 4 "OFF". This places the SRPT-40A back into normal operation.

TABLE 2 – Forward and Reverse Power Calibration

MODEL	CAL. FREQ. (MHz)	FWD PWR LEVELS (W) @ DECIMAL 5 =										REV PWR LEVELS (W) @ DECIMAL 5 =									
		0	1	2	3	4	5	6	7	8		0	1	2	3	4	5	6	7	8	
SRPT-40A/150	175.0000	64.0	56.0	48.0	40.0	32.0	24.0	16.0	8.0	0.0		25.6	22.4	19.2	16.0	12.8	9.6	6.4	3.2	0.0	
SRPT-30/150	165.0000	40.0	35.0	30.0	25.0	20.0	15.0	10.0	5.0	0.0		16.0	14.0	12.0	10.0	8.0	6.0	4.0	2.0	0.0	
SRPT-40A/230	220.0000	36.0	31.5	27.0	22.5	18.0	13.5	9.0	4.5	0.0		14.4	12.6	10.8	9.0	7.2	5.4	3.6	1.8	0.0	
SRPT-30/230	220.0000	36.0	31.5	27.0	22.5	18.0	13.5	9.0	4.5	0.0		14.4	12.6	10.8	9.0	7.2	5.4	3.6	1.8	0.0	
SRPT-40A/250	250.0000	40.0	35.0	30.0	25.0	20.0	15.0	10.0	5.0	0.0		16.0	14.0	12.0	10.0	8.0	6.0	4.0	2.0	0.0	
SRPT-30/250	250.0000	40.0	35.0	30.0	25.0	20.0	15.0	10.0	5.0	0.0		16.0	14.0	12.0	10.0	8.0	6.0	4.0	2.0	0.0	
SRPT-40A/330	330.0000	36.0	31.5	27.0	22.5	18.0	13.5	9.0	4.5	0.0		14.4	12.6	10.8	9.0	7.2	5.4	3.6	1.8	0.0	
SRPT-30/330	330.0000	36.0	31.5	27.0	22.5	18.0	13.5	9.0	4.5	0.0		14.4	12.6	10.8	9.0	7.2	5.4	3.6	1.8	0.0	
SRPT-40A/450	450.0000	56.0	49.0	42.0	35.0	28.0	21.0	14.0	7.0	0.0		25.6	22.4	19.2	16.0	12.8	9.6	6.4	3.2	0.0	
SRPT-30/450	450.0000	40.0	35.0	30.0	25.0	20.0	15.0	10.0	5.0	0.0		16.0	14.0	12.0	10.0	8.0	6.0	4.0	2.0	0.0	
SRPT-40A/950	950.0000	22.4	19.6	16.8	14.0	11.2	8.4	5.6	2.8	0.0		9.6	8.4	7.2	6.0	4.8	1.2	2.4	1.2	0.0	
SRPT-30/950	950.0000	22.4	19.6	16.8	14.0	11.2	8.4	5.6	2.8	0.0		9.6	8.4	7.2	6.0	4.8	1.2	2.4	1.2	0.0	

SRPT-30/40A ADJUSTMENT LOCATIONS 702-120



***SRPT-30/40A
BILL OF MATERIAL
AND
SCHEMATICS***

**BOM
SRPT-40A/450
705-ST40A-4**

Part Des-ignator	Part Description	Manufacturer	Manufacturer Part #	MARTI Part #
	SRPT-40A Mainframe			700-250-41A
	Top Panel Vender Assembly			700-250-40P
	Screw, 6-32 x 1/4" phillips pan head (14)			500-183

**BOM
SRPT-40A MAINFRAME
700-250-41A**

Part Des-ignator	Part Description	Manufacturer	Manufacturer Part #	MARTI Part #
	Bottom Panel Vender Assembly			700-250-41P
	Back Panel Assembly			700-250-43A
	Screw, 6-32 x 1/4" phillips pan head (6)			500-183
	Front Panel Assembly			700-250-42A
	Screw, 6-32 x 1/4" phillips pan head (4)			500-183
	Transmitter Synthesizer Assembly – 150 band			800-375AT150
	Transmitter Synthesizer Assembly – 450 band			800-375AT450
	Spacer, 4-40 x 1/2 hex threaded insulated (4)			513-040
	Screw, 4-40 x 1/4" phillips pan head M/S Ni. (4)			500-004
	Lockwasher, #4 internal tooth small pattern z (4)			500-055
	SRPT-40 Audio Board			800-166AS
	Spacer, #6 x 1/4 round (2)	Keystone	1457A	513-019
	Screw, 6-32 x 3/8" phillips pan head (2)			500-192
	SRPT-40A Audio Regulation Board			800-168-40A
	Sil Pad TO220 .75 x .5" ADHSV	Berquist	3223-07AC-58	DB68027
	Washer, TO-220 Shoulder NYL	Thermalloy	7721-7PPS	DB61024
	Screw, 4-40 x 1/4" phillips pan head M/S Black			500-180
	Kepps nut 4 x 40 zinc 4CNKEOZ			500-199
	Screw, 4-40 x 1/4" phillips pan head M/S Blk (2)			500-180
	ONLY ONE OF THE FOLLOWING TWO POWER SUPPLIES IS USED DEPENDING ON VERSION SRPT-40A			
	Power Supply, Switching 15V, 10 Amp	Mean Well	S-150-15	800-383A
	Power Supply TEK150S00-XXX for SRPT-40	IPS	UL200-13	800-324A
	Screw, 4MM x 5MM Phillips Pan Head MS (4)			500-225
	Lockwasher, 4MM Split (4)			500-226
	Solder Lug, #6 (2)	Concord	707-1406	512-009
	Screw, 6-32 x 3/8" phillips pan head (2)			500-192
	Keps nut 6 x 32 zinc 6CNKEOZ (2)			500-200
	Wire Clip on Adhesive Base	Richco	#WCB-250-	510-279

01A-RT

Cable Assembly, SRPT-40A main			586-207
Cable Assembly, AC/Power Supply/Switch			586-208
Cable Assembly, AC Conn. to Fuseholder (2)	Altair	TAC#9678	586-194
Cable Assembly, AC ground			586-209
Ribbon Cable 6"	DigiKey	M3AAA1606R-ND	586-134

**BOM
BOTTOM PANEL VENDER ASSEMBLY
700-250-41P**

Part Designator	Part Description	Manufacturer	Manufacturer Part #	MARTI Part #
	Panel, Bot., SRPT-40A, metalwork & silkscreen	Marti		700-250-41
	Side Plate AR-10/RPT-2/15/30/SRPT-40A (4)			700-203-5
	Rivet 1/8 x .165 semi-tubular black 100 (8)		CE100732	500-184
	Handle Assy., black w/black plated steel			510-132
	Rivet 1/8 x .312 semi-tubular stan (2)			500-186
	Washer, C-126=820W Brass/Nickel Plated (2)			500-127
	Bumper, Bruce Plastics 0772-0014 black (6)			510-205
	Rivet, CE-100 5/16" steel nickel (6)			500-126
	Washer, C-126=820W Brass/Nickel Plated (6)			500-127

**BOM
BACK PANEL ASSEMBLY
700-250-43A**

Part Designator	Part Description	Manufacturer	Manufacturer Part #	MARTI Part #
	Panel, Back, SRPT-40A, metalwork & silkscreen	Marti		700-250-43
	Board Assembly, Power Amplifier – 150 band			800-373A150-60
	Board Assembly, Power Amplifier – 450 band			800-373A450-50
	Screw, #6 x 1/2" hex washer hd type TCS zi (4)			500-153
	Board Assembly, RPU Trans I/O Board			800-379AR
	Fuseholder,	Littlefuse	342-004	510-072
	Fuse, 4 Amp., 3AG	Littlefuse	312-0	510-204
	AC Receptacle	Corcom	10EEA1	510-267
	Screw, 4-40 x 3/8" phillips oval head M/S (2)			500-188
	Cable Assembly, RF Output			586-202
	Screw, 4-40 x 1/4" phillips pan hd M/S Nickel (4)			500-004
	Hex Nut, #4-40 Regular Nickel Plated (4)			500-002-1

BOM
POWER AMPLIFIER ASSEMBLY
800-373A150-60

Part Designator	Part Description	Manufacturer	Manufacturer Part #	MARTI Part #
	Board Assembly, Two-Stage RF PA - Generic	Marti		800-373A
U3	IC, PA Module, 135-185 MHz, 60 W	Mitsubishi	M68702HA	468-702
U5	IC, SMT, Regulator, 5A	National Semi.	LM338T	401-338
U6	IC, SMT, Regulator, 5A	National Semi.	LM338T	401-338
U7	IC, SMT, Regulator, 5A	National Semi.	LM338T	401-338
D1	Not Used			
D2	Not Used			
FL1	Filter, low-pass, see La - Ld and Ca - Cc below:			
La	Inductor, SMT, size1206, 56nH	Coilcraft	1812SMS-56NJ	350-200
Lb	Inductor, SMT, size1206, 82nH	Coilcraft	1812SMS-82NJ	350-201
Lc	Inductor, SMT, size1206, 82nH	Coilcraft	1812SMS-82NJ	350-201
Ld	Inductor, SMT, size1206, 56nH	Coilcraft	1812SMS-56NJ	350-200
Ca	Capacitor, SMT, size 1206, 18pF, COG, 100V	Kemet	C1206C180J5	270-180
			GAC	
Cb	Capacitor, SMT, size 1206, 18pF, COG, 100V	Kemet	C1206C180J5	270-180
			GAC	
Cc	Capacitor, SMT, size 1206, 18pF, COG, 100V	Kemet	C1206C180J5	270-180
			GAC	
R1	Resistor, SMT, size 1206, 0 ohms	Dale	CRCW1206000	185-000
			ZT-X	
R30	Thermistor, 1K @ 25 degrees C	Fenwal	142-102FAG-RB1	120-002
P1	Connector, 8-pin header, large - cut from 550-162	Molex	26-48-6248	550-138
P3	Connector, 6-pin header, smal - cut from 550-214	Molex	22-28-4361	550-324
	Cover, Two Stage Power Amplifier	Marti		700-226-61
	Copper foam, adhesive - cut from DB65112 (.05)			DB65112
	FAN ASSEMBLY			
	Fan Bracket (2)	Marti		700-226-57
	Screw, #6 - 1/2 Hex Washer Head TypeTCS Zinc Plated(4)			500-153
	Fan Base Plate	Marti		700-226-58
	Screw, 6-32 x 1/4" phillips pan head M/S Nickel plated (4)			500-020
	Grommet, 3/8" (4)	GC	11-292-C	510-031
	Screw, 6-32 x 5/8" phillips pan head M/S Nickel plated (4)			500-025
	Spacer, #6 x 1/4 round (4)	Keystone	1457A	513-019
	Flat Washer, #6 SAE (4)			500-058
	Keps nut, 6x32 zinc 6CNKEOZ (4)			500-200
	Fan, NMB 2410ML04WB40-P00	Adda	AD0612HS-	510-231

Foam tape, 1/2 x 1/16 (0.125)	3M	A70GL 4016	510-253
Fan Mount Insulation			510-260
Wire Clip on Adhesive Base	Richco	WCB-250-01A-RT	510-279

PA BOARD MOUNT

Screw, 4-40 x 1/2" phillips pan head M/S Nickel plated(5)			500-011
Lockwasher, #4 internal tooth small pattern Zinc (5)			500-055
Spacer, 4-40 x 3/8 hex threaded (5)	Keystone	1450B	513-022

PA MODULE MOUNT

Screw, #6 - 1/2 Hex Washer head typeTCS Zinc plated (2)			500-153
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REGULATOR MOUNT

Screw, #4 x 1/4" slot hex wash hd type B tapping Zinc plated (3)			500-130
SIL PAD to218 .86" x .74" ADHSV (3)	Berquist	3223-07AC-58	DB68027
Washer, TO-220 Shoulder NYL (3)	Thermalloy	#7721-7PPS	DB61024
Heatsink, Drilled for PA Board			520-050D5

BOM POWER AMPLIFIER ASSEMBLY 800-373A450-50

Part Designator	Part Description	Manufacturer	Manufacturer Part #	MARTI Part #
U3	Board Assembly, Two-Stage RF PA - Generic IC, Power Amplifier Module, 440-470 MHz, 50 W	Marti Mitsubishi	M68703HA	800-373A 468-703
U5	IC, SMT, Regulator, 5A	National Semi.	LM338T	401-338
U6	IC, SMT, Regulator, 5A	National Semi.	LM338T	401-338
U7	IC, SMT, Regulator, 5A	National Semi.	LM338T	401-338
D1	Not Used			
D2	Not Used			
FL1	Filter, low-pass, see La - Ld and Ca - Cc below:			
La	Inductor, SMT, size1206, 5nH	Coilcraft	A04TJ	350-192
Lb	Inductor, SMT, size1206, 8nH	Coilcraft	A05TJ	350-194
Lc	Inductor, SMT, size1206, 8nH	Coilcraft	A05TJ	350-194
Ld	Inductor, SMT, size1206, 5nH	Coilcraft	A04TJ	350-192
Ca	Capacitor, SMT, size 1206, 4.7pF, COG, 100V	Kemet	C1206C479C1 GAC	270-407-1
Cb	Capacitor, SMT, size 1206, 4.7pF, COG, 100V	Kemet	C1206C479C1 GAC	270-407-1
Cc	Capacitor, SMT, size 1206, 4.7pF, COG, 100V	Kemet	C1206C479C1 GAC	270-407-1
R1	Resistor, SMT, size 1206, 0 ohms	Dale	CRCW1206000	185-000

R30	Thermistor, 1K @ 25 degrees C	Fenwal	ZT-X 142-102FAG- RB1	120-002
P1	Connector, 8-pin header, large - cut from 550-162	Molex	26-48-6248	550-138
P3	Connector, 6-pin header, smal - cut from 550-214	Molex	22-28-4361	550-324
	Cover, Two Stage Power Amplifier Copper foam, adhesive - cut from DB65112 (.05)	Marti		700-226-61 DB65112
	FAN ASSEMBLY			
	Fan Bracket (2)	Marti		700-226-57
	Screw, #6 - 1/2 Hex Washer Head TypeTCS Zinc Plated(4)			500-153
	Fan Base Plate	Marti		700-226-58
	Screw, 6-32 x 1/4" phillips pan head M/S Nickel plated (4)			500-020
	Grommet, 3/8" (4)	GC	11-292-C	510-031
	Screw, 6-32 x 5/8" phillips pan head M/S Nickel plated (4)			500-025
	Spacer, #6 x 1/4 round (4)	Keystone	1457A	513-019
	Flat Washer, #6 SAE (4)			500-058
	Keps nut, 6x32 zinc 6CNKEOZ (4)			500-200
	Fan, NMB 2410ML04WB40-P00	Adda	AD0612HS- A70GL	510-231
	Foam tape, 1/2 x 1/16 (0.125)	3M	4016	510-253
	Fan Mount Insulation			510-260
	Wire Clip on Adhesive Base	Richco	WCB-250-01A- RT	510-279
	PA BOARD MOUNT			
	Screw, 4-40 x 1/2" phillips pan head M/S Nickel plated(5)			500-011
	Lockwasher, #4 internal tooth small patern Zinc (5)			500-055
	Spacer, 4-40 x 3/8 hex threaded (5)	Keystone	1450B	513-022
	PA MODULE MOUNT			
	Screw, #6 - 1/2 Hex Washer head typeTCS Zinc plated (2)			500-153
	REGULATOR MOUNT			
	Screw, #4 x 1/4" slot hex wash hd type B tapping Zinc plated (3)			500-130
	SIL PAD to218 .86" x .74" ADHSV (3)	Berquist	3223-07AC-58	DB68027
	Washer, TO-220 Shoulder NYL (3)	Thermalloy	#7721-7PPS	DB61024
	Heatsink, Drilled for PA Board			520-050D5

BOM
TWO-STAGE RF PA BOARD ASSEMBLY - GENERIC

800-373A

Part Designator	Part Description	Manufacturer	Manufacturer Part #	MARTI Part #
U1	IC, SMT, Op-amp, quad, rail-to-rail	Analog Devices	OP-495GS	400-495
U2	IC, SMT, Amplifier MMIC, Wideband, 1 Watt	Mini-Circuits	HELA-10	See K1
U3	See higher level BOM			
U4	Not Used			
U5	See higher level BOM			
U6	See higher level BOM			
U7	See higher level BOM			
U8	IC, SMT, Op-amp, general purpose	Analog Devices	OP-295GS	400-295
T1	Transformer, SMT, RF, 20 - 1200 MHz, n=1	Mini-Circuits	ADTL1-12	See K1
T2	Transformer, SMT, RF, 20 - 1200 MHz, n=1	Mini-Circuits	ADTL1-12	See K1
K1	Kit, includes U2, T1, and T2	Mini-Circuits	HELA-10B	400-001
Q1	Transistor, SMT, PNP	Motorola	MMBT2907ALT1	420-907
Q2	Transistor, SMT, PNP	Motorola	MMBT2907ALT1	420-907
Q3	Transistor, SMT, NPN	Motorola	MMBT3904LT1	439-041
Q4	Transistor, SMT, NPN	Motorola	MMJT9410	429-410
Q5	Transistor, SMT, NPN	Motorola	MMBT3904LT1	439-041
Q6	Not Used			
D1	See higher level BOM			
D2	See higher level BOM			
D3	Diode, SMT	Motorola	MMBD101L	410-305
D4	Diode, SMT	Motorola	MMBD101L	410-305
D5	Diode, SMT, Zener, 2.5V	Motorola	MMSZ5222BT1	415-222
D6	Diode, SMT, Zener, 13V	Vishay	BZX84C13TR	415-840
FL1	See higher level BOM			
R1	See higher level BOM			
R2	Resistor, SMT, size 1206, 274 ohms	Dale	CRCW1206-274	185-274
R3	Resistor, SMT, 3 Watt, 0.05 ohms	Dale	WSR-3-.05-1%	184-005
R4	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R5	Potentiometer, SMT, 5K ohms	Bourns	3224W-502E	108-502
R6	Resistor, SMT, size 1206, 150 ohms	Dale	CRCW1206-150	185-151
R7	Resistor, SMT, size 1206, 100 ohms	Dale	CRCW1206-100	185-101
R8	Resistor, SMT, 3 Watt, 0.1 ohms	Dale	WSR-3-.1-1%	184-001
R9	Resistor, SMT, 3 Watt, 0.1 ohms	Dale	WSR-3-.1-1%	184-001
R10	Resistor, SMT, 3 Watt, 0.1 ohms	Dale	WSR-3-.1-1%	184-001
R11	Resistor, SMT, size 1206, 10K ohms	Dale	CRCW1206-10k	185-103
R12	Resistor, SMT, size 1206, 1K ohms	Dale	CRCW1206-1.0K	185-102
R13	Resistor, SMT, size 1206, 15K ohms	Dale	CRCW1206-15K	185-153
R14	Resistor, SMT, size 1206, 1K ohms	Dale	CRCW1206-	185-102

			1.0K	
R15	Not Used			
R16	Not Used			
R17	Potentiometer, SMT, 5K ohms	Bourns	3224W-502E	108-502
R18	Resistor, SMT, 3 Watt, 0.05 ohms	Dale	WSR-3-.05-1%	184-005
R19	Not Used			
R20	Potentiometer, SMT, 5K ohms	Bourns	3224W-502E	108-502
R21	Resistor, SMT, size 1206, 10K ohms	Dale	CRCW1206-10k	185-103
R22	Resistor, SMT, size 1206, 51.1 ohms	Dale	CRCW1206-51.1	185-51.1
R23	Resistor, SMT, size 1206, 51.1 ohms	Dale	CRCW1206-51.1	185-51.1
R24	Resistor, SMT, size 1206, 10K ohms	Dale	CRCW1206-10k	185-103
R25	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R26a	Resistor, SMT, size 1206, 0 ohms	Dale	CRCW1206000 ZT-X	185-000
R26b	Not Used			
R27a	Resistor, SMT, size 1206, 0 ohms	Dale	CRCW1206000 ZT-X	185-000
R27b	Not Used			
R28	Resistor, SMT, size 1206, 10K ohms	Dale	CRCW1206-10k	185-103
R29	Resistor, SMT, size 1206, 22.1K ohms	Dale	CRCW1206-22.1k	185-22.1K
R30	See higher level BOM			
R31	Resistor, SMT, size 1206, 3.32K ohms	Dale	CRCW1206-3.32k	185-3.32K
R32	Resistor, SMT, size 1206, 10K ohms	Dale	CRCW1206-10k	185-103
R33	Resistor, SMT, size 1206, 1K ohms	Dale	CRCW1206-1.0K	185-102
R34	Resistor, SMT, size 1206, 2.21K ohms	Dale	CRCW1206-2.21k	185-2.21K
R35	Resistor, SMT, size 1206, 10K ohms	Dale	CRCW1206-10k	185-103
R36	Resistor, SMT, size 1206, 10K ohms	Dale	CRCW1206-10k	185-103
R37	Not Used			
R38	Not Used			
R39	Resistor, SMT, size 1206, 2.21K ohms	Dale	CRCW1206-2.21k	185-2.21K
R40	Resistor, SMT, size 1206, 2.21K ohms	Dale	CRCW1206-2.21k	185-2.21K
R41	Resistor, SMT, size 1206, 2.21K ohms	Dale	CRCW1206-2.21k	185-2.21K
C1	Capacitor, SMT, size 1206, .01uF, X7R, 50V	Kemet	C1206C103J5R AC	270-103
C2	Capacitor, SMT, size 1206, .01uF, X7R, 50V	Kemet	C1206C103J5R AC	270-103
C3	Capacitor, SMT, size 1206, .01uF, X7R, 50V	Kemet	C1206C103J5R AC	270-103
C4	Capacitor, SMT, size 1206, .01uF, X7R, 50V	Kemet	C1206C103J5R	270-103

C5	Capacitor, SMT, size 1206, .01uF, X7R, 50V	Kemet	AC C1206C103J5R 270-103
C6	Capacitor, SMT, size 1206, .01uF, X7R, 50V	Kemet	AC C1206C103J5R 270-103
C7	Capacitor, SMT, size 1206, 4700pF, COG, 100V	Kemet	AC C1206C472J1 270-472
C8	Capacitor, Tantalum, SMT, size B, 10uF, 16V	Kemet	GAC T491B106K016 298-106
C9	Capacitor, SMT, size 1206, 4700pF, COG, 100V	Kemet	AS C1206C472J1 270-472
C10	Capacitor, Tantalum, SMT, size B, 10uF, 16V	Kemet	GAC T491B106K016 298-106
C11	Capacitor, SMT, size 1206, 4700pF, COG, 100V	Kemet	AS C1206C472J1 270-472
C12	Capacitor, Tantalum, SMT, size B, 10uF, 16V	Kemet	GAC T491B106K016 298-106
C13	Capacitor, Tantalum, SMT, size C, 33uF, 16V	Kemet	AS T491C336K016 298-336
C14	Not Used		AS
C15	Capacitor, SMT, size 1206, 4700pF, COG, 100V	Kemet	C1206C472J1 270-472
C16	Capacitor, Tantalum, SMT, size C, 33uF, 16V	Kemet	GAC T491C336K016 298-336
C17	Capacitor, Tantalum, SMT, size A, 1uF, 16V	Kemet	AS T491A105K016 298-105
C18	Capacitor, Tantalum, SMT, size A, 1uF, 16V	Kemet	AS T491A105K016 298-105
C19	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	AS C1206C102J1 270-102
C20	Capacitor, Tantalum, SMT, size C, 33uF, 16V	Kemet	GAC T491C336K016 298-336
C21	Capacitor, Tantalum, SMT, size A, 1uF, 16V	Kemet	AS T491A105K016 298-105
C22	Capacitor, Tantalum, SMT, size A, 1uF, 16V	Kemet	AS T491A105K016 298-105
C23	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	AS C1206C102J1 270-102
C24	Capacitor, SMT, size 1206, .1uF, X7R, 50V	Kemet	GAC C1206C104J5R 270-104
C25	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	AC C1206C102J1 270-102
C26	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	GAC C1206C102J1 270-102
C27	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	GAC C1206C102J1 270-102
C28	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	GAC C1206C102J1 270-102
C29	Capacitor, Tantalum, SMT, size C, 33uF, 16V	Kemet	GAC T491C336K016 298-336
C30	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	AS C1206C102J1 270-102
C31	Capacitor, Tantalum, SMT, size D, 100uF, 16V	Kemet	GAC T491X107K016 298-107
C32	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	AS C1206C102J1 270-102
			GAC

C33	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C34	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
L1	Inductor, SMT, power, 0.68	Coilcraft	DO3316P-681HC	350-196
L2	Inductor, SMT, size 1008, 330nH	Coilcraft	1008CS-331XKBC	350-191
L3	Inductor, SMT, size 1008, 330nH	Coilcraft	1008CS-331XKBC	350-191
L4	Inductor, SMT, power, 1 uH	Coilcraft	DT1608C-102	350-197
L5	Inductor, SMT, power, 1 uH	Coilcraft	DT1608C-102	350-197
L6	Inductor, SMT, power, 1 uH	Coilcraft	DT1608C-102	350-197
L7	Inductor, SMT, size 1008, 330nH	Coilcraft	1008CS-331XKBC	350-191
P1	See higher level BOM			
P2	Connector, SMT, RF	Hirose	S.FL2-R-SMT	550-193
P3	See higher level BOM			
	Shield, exterior fencing, Power Amp	Leader Tech	47-CBSU-2.75x5.75x.4	700-268
	Shield, interior fencing, Power Amp Rev E PC board, Power Amplifier, Rev A	Marti		700-226-59 800-373B

BOM
RPU TRANS I/O BOARD
800-379-AR

Part Designator	Part Description	Manufacturer	Manufacturer Part #	MARTI Part #
C1	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C2	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C3	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C4	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C5	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C6	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C7	Capacitor, SMT, size 1206, 22pF, 50V	Kemet	C1206C220J5 GAC	270-220
C8	Capacitor, SMT, size 1206, 22pF, 50V	Kemet	C1206C220J5 GAC	270-220
C9	Capacitor, SMT, size 1206, 22pF, 50V	Kemet	C1206C220J5 GAC	270-220
L1	Inductor, SMT, power, 0.68	Coilcraft	DO3316P-681HC	350-196
L2	Inductor, SMT, power, 0.68	Coilcraft	DO3316P-681HC	350-196
L3	Inductor, SMT, size 1812, 10 uH	Delevan	DN-12103TR	330-024

L4	Inductor, SMT, size 1812, 10 uH	Delevan	DN-12103TR	330-024
L5	Inductor, SMT, size 1812, 10 uH	Delevan	DN-12103TR	330-024
L6	Inductor, SMT, size 1812, 10 uH	Delevan	DN-12103TR	330-024
L7	Inductor, SMT, size 1812, 10 uH	Delevan	DN-12103TR	330-024
L8	Inductor, SMT, size 1812, 10 uH	Delevan	DN-12103TR	330-024
L9	Inductor, SMT, size 1812, 10 uH	Delevan	DN-12103TR	330-024
P1	Not Used			
P2	Connector, 8-pin angle, large - cut from 24-pin	Molex	26-48-6246	
P3	Connector, R. Ang. Dual Row 16-pin cut fr 80-pin	Mouser (Amp)	571-41033300	
J4	Connector, D-Sub 15 pin angle	Keltron	DNR-15PJL-SG	550-170
TB-1	Not Used			
	Screw, 4-40 x 7/16" phillips pan head (2)			500-162
	Screw, 6-32 x 1/4" phillips pan head (2)			500-020
	Brackets, #4 (2)	Keystone	612	510-210
	PC board, STL/RPU Trans I/O, Rev A			800-379B

BOM
FRONT PANEL ASSEMBLY
700-250-42A

Part Designator	Part Description	Manufacturer	Manufacturer Part #	MARTI Part #
	Panel, Front, SRPT-40A, metalwork & silkscreen	Marti		700-250-42
	Switch, Pushwheel, BCD 10 position (7)	Mouser	106-9905	530-087
	Switch End Cap, Right side	Mouser	106-9901	530-088
	Switch End Cap, Left side	Mouser	106-9902	530-089
	LED, Indicator, Rectangular, Red (3)	Fairchild	MV57124A	417-124
	LED, Indicator, Rectangular, Green (1)	Fairchild	MV54124A	414-124
	Polytube, Manhatten#AF155A-20-yel (0.782")			510-005
	Assembly, Pushbutton Switch, RPU			530-085A
	Assembly, Toggle Switch, RPU			530-008-3
	Switch, Rocker, Miniature, DPDT, Red	Mouser	629-GRS402210	530-090
	Switch, slide DPDT	Switchcraft	4620	530-001
	Keps nut 4 x 40 zinc 4CNKEOZ (2)			500-199
	Bushing, black shorty	Microplastic	B-312-250	510-113
	Assembly Board, Front Panel Control & Meter			800-378AF
	Spacer, 4-40x1 hex threaded (6)	Keystone	2205	513-034
	Screw, 4-40 x 1/4" phillips pan hd M/S Nickel (6)			500-004

Assembly Board, RPT-30 Pre-Amp Mixer				800-251A
Connector Shell XLR RECEPTACLE (4)				550-155-2
Screw, 4-40 x 3/8 ' phillips oval head M/S (8)				500-188
Connector, Tini-Jax	Switchcraft	41		550-083
Capacitor, .01 mf 50v GMV disc Pace				217-104
Control knob, #ME450-2023 (4)				510-215
Control knobs, #45KNO23				510-212

BOM
PUSHBUTTON SWITCH ASSEMBLY - RPU
530-085A

Part Des-ignator	Part Description	Manufacturer	Manufacturer Part #	MARTI Part #
S1	Switch, Pushbutton, SPST, Momentary, Green	Mouser	103-1209	530-085
	Connector pins, Molex 16-02-0086 (2)	Molex	16-02-0086	550-205
	Connector, 4 Pin Single Row Housing			550-229
	Wire, UL1429 22/7 OS-1 White/Violet (0.220)			580-058
	Wire, UL1429 22/7 OS-1 Yellow/Violet (0.220)			580-061

BOM
TOGGLE SWITCH ASSEMBLY - RPU
530-008-3

Part Des-ignator	Part Description	Manufacturer	Manufacturer Part #	MARTI Part #
S1	Switch, toggle SPDT	Apem	#5636AB16	530-008
	Connector pins, (2)	Molex	16-02-0086	550-205
	Connector, 4 Pin Single Row Housing			550-229
	Wire, UL1429 22/7 OS-1 White/Violet (0.220)			580-058
	Wire, UL1429 22/7 OS-1 Yellow/Violet (0.220)			580-061

BOM
FRONT PANEL CONTROL AND METER BOARD - FINAL ASSEMBLY
800-378AF

Part Des-ignator	Part Description	Manufacturer	Manufacturer Part #	MARTI Part #
	Board Assy, Front Panel Control & Meter - SMT	Marti		800-378A
R48	Potentiometer, 5K ohms, single turn, ang. mount	Bourns	3309W-502	103-502
R49	Potentiometer, 5K ohms, single turn, ang.	Bourns	3309W-502	103-502

R50	mount Potentiometer, 5K ohms, single turn, ang.	Bourns	3309W-502	103-502
R51	mount Potentiometer, 5K ohms, single turn	Bourns	3309P-502	101-502
S1	Switch, Dip, 4-position, right angle	Apem	DA04T	530-086
S2	Switch, Rotary, 6-position	Mouser	10WA135	530-059
M1	Meter, Watts, Volts/Amps, VU			030-045M
B1	Lamp, Subminiature	Lumex	IFL-LX2162-16T	510-196
B2	Lamp, Subminiature	Lumex	IFL-LX2162-16T	510-196
P1	Connector, dual row header, 40-pin cut fr 80-pin	Mouser (Amp)	571-41033280(550-326)	550-326-40
P2	Connector, 4-pin header cut fr 36-pin	Molex	22-28-4361	550-226
P3	Connector, 4-pin header cut fr 36-pin	Molex	22-28-4361	550-226
P4	Connector, dual row header, 16-pin cut fr 80-pin	Mouser (Amp)	571-41033280(550-326)	550-326-16
P5	Connector, 6-pin header, large - cut from 24-pin	Molex	26-48-6248	550-136
P6	Connector, 8-pin header, large - cut from 24-pin	Molex	26-48-6248	550-138

BOM
FRONT PANEL CONTROL AND METER BOARD - SMT ASSEMBLY
800-378A

Part Designator	Part Description	Manufacturer	Manufacturer Part #	MARTI Part #
U1	IC, 8-Bit Ser/Par In, Ser Out SR	Phillips	74HC165D	401-165
U2	IC, 8-Bit Ser/Par In, Ser Out SR	Phillips	74HC165D	401-165
U3	IC, 8-Bit Ser/Par In, Ser Out SR	Phillips	74HC165D	401-165
U4	IC, 8-Bit Ser/Par In, Ser Out SR	Phillips	74HC165D	401-165
U5	IC, SMT, 8-Bit Ser In, Par Out SR	Phillips	74HC164D	401-164
U6	IC, Octal D Flip-Flop w 3-St Out	Phillips	74HC374D	401-374
U7	IC, SMT, Regulator, Adjustable, 1.5 Amps	National	LM317AEMP	401-317
Q1	Transistor, SMT, NPN	Motorola	MMBT3904LT1	439-041
Q2	Transistor, SMT, NPN	Motorola	MMBT3904LT1	439-041
Q3	Transistor, SMT, NPN	Motorola	MMBT3904LT1	439-041
Q4	Transistor, SMT, NPN	Motorola	MMBT3904LT1	439-041
R1	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R2	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R3	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R4	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R5	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R6	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k

R7	Resistor, SMT, size 1206, 4.75K ohms	Dale	4.75k CRCW1206-4.75k	185-4.75k
R8	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R9	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R10	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R11	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R12	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R13	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R14	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R15	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R16	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R17	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R18	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R19	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R20	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R21	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R22	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R23	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R24	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R25	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R26	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R27	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R28	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R29	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R30	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R31	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R32	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R33	Resistor, SMT, size 1206, 1K ohms	Dale	CRCW1206-1.0K	185-102
R34	Resistor, SMT, size 1206, 475 ohms	Dale	CRCW1206-	185-475

R35	Resistor, SMT, size 1206, 475 ohms	Dale	475 CRCW1206-475	185-475
R36	Resistor, SMT, size 1206, 475 ohms	Dale	CRCW1206-475	185-475
R37	Resistor, SMT, size 1206, 475 ohms	Dale	CRCW1206-475	185-475
R38	Resistor, SMT, size 1206, 182 ohms	Dale	CRCW1206-182	185-182
R39	Resistor, SMT, size 1206, 182 ohms	Dale	CRCW1206-182	185-182
R40	Resistor, SMT, size 1206, 182 ohms	Dale	CRCW1206-182	185-182
R41	Resistor, SMT, size 1206, 182 ohms	Dale	CRCW1206-182	185-182
R42	Resistor, SMT, size 1206, 68.1 ohms	Dale	CRCW1206-68.1	185-68.1
R43	Resistor, SMT, size 1206, 68.1 ohms	Dale	CRCW1206-68.1	185-68.1
R44	Resistor, SMT, size 1206, 392 ohms	Dale	CRCW1206-392	185-392
R45	Resistor, SMT, size 1206, 1.21K ohms	Dale	CRCW1206-1.21K	185-1.21K
R46	Resistor, SMT, size 1206, 432 ohms	Dale	CRCW1206-432	185-432
R47	Resistor, SMT, size 1206, 47.5K ohms	Dale	CRCW1206-47.5K	185-47.5K
R48	See higher level BOM			
R49	See higher level BOM			
R50	See higher level BOM			
R51	See higher level BOM			
R52	Resistor, SMT, size 1206, 68.1 ohms	Dale	CRCW1206-68.1	185-68.1
R53	Resistor, SMT, size 1206, 68.1 ohms	Dale	CRCW1206-68.1	185-68.1
C1	Capacitor, Tantalum, SMT, size A, 1uF, 16V	Kemet	T491A105K016 AS	298-105
C2	Capacitor, Tantalum, SMT, size A, 1uF, 16V	Kemet	T491A105K016 AS	298-105
C3	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C4	Capacitor, SMT, size 1206, .01uF, X7R, 50V	Kemet	C1206C103J5R AC	270-103
S1	See higher level BOM			
S2	See higher level BOM			
M1	See higher level BOM			
B1	See higher level BOM			
B2	See higher level BOM			
P1	See higher level BOM			
P2	See higher level BOM			
P3	See higher level BOM			

P4 See higher level BOM
P5 See higher level BOM
P6 See higher level BOM

PC board, Front Panel Control and Meter, Rev
A

800-378B

BOM
RPT-30 Pre-Amp Mixer
800-251A

Part Des-ignator	Part Description	Manufacturer	Manufacturer Part #	MARTI Part #
IC1	Integrated Circuit	Signetics	NE5532AN	405-532
IC2	Integrated Circuit	Signetics	NE5532AN	405-532
R1	Resistor, 2.21K ohm 1/4 watt 1% metal film			145-222
R2	Resistor, 1.5K ohm 1/4 watt 1% metal film			145-152
R3	Resistor, 1.5K ohm 1/4 watt 1% metal film			145-152
R4	Resistor, 100K ohm 1/4 watt 1% metal film			145-104
R5	Resistor, 100K ohm 1/4 watt 1% metal film			145-104
R6	Resistor, 15K ohm 1/4 watt 1% metal film			145-153
R7	Potentiometer, 25K ohm linear taper PC mount			100-143
R8	Resistor, 2.21K ohm 1/4 watt 1% metal film			145-222
R9	Resistor, 1.5K ohm 1/4 watt 1% metal film			145-152
R10	Resistor, 1.5K ohm 1/4 watt 1% metal film			145-152
R11	Resistor, 100K ohm 1/4 watt 1% metal film			145-104
R12	Resistor, 100K ohm 1/4 watt 1% metal film			145-104
R13	Resistor, 15K ohm 1/4 watt 1% metal film			145-153
R14	Potentiometer, 25K ohm linear taper PC mount			100-143
R15	Resistor, 2.21K ohm 1/4 watt 1% metal film			145-222
R16	Resistor, 1.5K ohm 1/4 watt 1% metal film			145-152
R17	Resistor, 1.5K ohm 1/4 watt 1% metal film			145-152
R18	Resistor, 100K ohm 1/4 watt 1% metal film			145-104
R19	Resistor, 100K ohm 1/4 watt 1% metal film			145-104
R20	Resistor, 15K ohm 1/4 watt 1% metal film			145-153
R21	Potentiometer, 25K ohm linear taper PC mount			100-143
R22	Resistor, 2.21K ohm 1/4 watt 1% metal film			145-222
R23	Resistor, 2360K ohm 1/4 watt 1% carbon film			145-364-1
R24	Resistor, 2360K ohm 1/4 watt 1% carbon film			145-364-1
R25	Resistor, 1.5K ohm 1/4 watt 1% metal film			145-152
R26	Resistor, 1.5K ohm 1/4 watt 1% metal film			145-152
R27	Resistor, 100K ohm 1/4 watt 1% metal film			145-104
R28	Resistor, 100K ohm 1/4 watt 1% metal film			145-104
R29	Resistor, 15K ohm 1/4 watt 1% metal film			145-153
R30	Potentiometer, 25K ohm linear taper PC mount			100-143
R31	Resistor, 22.1K ohm 1/4 watt 1% metal film			145-223
R32	Resistor, 22.1K ohm 1/4 watt 1% metal film			145-223
R33	Resistor, 5.6K ohm 1/4 watt 5% metal film			145-562
C1	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C2	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C3	Capacitor, electrolytic 22uF 25V Mepco 307			219-200
C4	Capacitor, electrolytic 22uF 25V Mepco 307			219-200

C5	Capacitor, SMT, size 1206, 27pF, 50V	Kemet	C1206C270J5 GAC	270-270
C6	Capacitor, SMT, size 1206, 27pF, 50V	Kemet	C1206C270J5 GAC	270-270
C7	Capacitor, 10 pf 5% NPO disc Pace F6NPO1C1			255-100
C8	Capacitor, electrolytic 22uF 25V Mepco 307			219-200
C9	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C10	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C11	Capacitor, electrolytic 22uF 25V Mepco 307			219-200
C12	Capacitor, electrolytic 22uF 25V Mepco 307			219-200
C13	Capacitor, SMT, size 1206, 27pF, 50V	Kemet	C1206C270J5 GAC	270-270
C14	Capacitor, SMT, size 1206, 27pF, 50V	Kemet	C1206C270J5 GAC	270-270
C15	Capacitor, 10 pf 5% NPO disc Pace F6NPO1C1			255-100
C16	Capacitor, electrolytic 22uF 25V Mepco 307			219-200
C17	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C18	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C19	Capacitor, electrolytic 22uF 25V Mepco 307			219-200
C20	Capacitor, electrolytic 22uF 25V Mepco 307			219-200
C21	Capacitor, SMT, size 1206, 27pF, 50V	Kemet	C1206C270J5 GAC	270-270
C22	Capacitor, SMT, size 1206, 27pF, 50V	Kemet	C1206C270J5 GAC	270-270
C23	Capacitor, 10 pf 5% NPO disc Pace F6NPO1C1			255-100
C24	Capacitor, electrolytic 22uF 25V Mepco 307			219-200
C25	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C26	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C27	Capacitor, electrolytic 22uF 25V Mepco 307			219-200
C28	Capacitor, electrolytic 22uF 25V Mepco 307			219-200
C29	Capacitor, SMT, size 1206, 27pF, 50V	Kemet	C1206C270J5 GAC	270-270
C30	Capacitor, SMT, size 1206, 27pF, 50V	Kemet	C1206C270J5 GAC	270-270
C31	Capacitor, 10 pf 5% NPO disc Pace F6NPO1C1			255-100
C32	Capacitor, electrolytic 22uF 25V Mepco 307			219-200
C33	Capacitor, electrolytic 22uF 25V Mepco 307			219-200
C34	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C35	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C36	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C37	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
S1	Switch, side action slide DPDT Ark-Les S-9		S-9022CD00-H	530-051
J1	Connector, XLR Receptacle Insert	Nuetrik	#3FD-V-I-O	550-155-1
J2	Connector, XLR Receptacle Insert	Nuetrik	#3FD-V-I-O	550-155-1

J3	Connector, XLR Receptacle Insert	Nuetrik	#3FD-V-I-O	550-155-1
J4	Connector, XLR Receptacle Insert	Nuetrik	#3FD-V-I-O	550-155-1
	Connector, 6 pin Molex angle header			550-159
	Grounding Strap, RPT-30 Pre-Amp			700-250-15
	PC board, Pre-amp/Mixer RPT-30			800-251B

BOM
TRANSMITTER SYNTHESIZER ASSEMBLY
800-375AT150

Part Des-ignator	Part Description	Manufacturer	Manufacturer Part #	MARTI Part #
	Board Assembly, Trans. Syn. - Generic	Marti		800-375AT
U6	VCO, 135-185 MHz	Synergy	VFC135185	400-185
R46	Resistor, SMT, size 1206, 475K ohm	Dale	CRCW1206475 KFKTA	185-475K
R47	Resistor, SMT, size 1206, 475K ohm	Dale	CRCW1206475 KFKTA	185-475K
R48	Resistor, SMT, size 1206, 475K ohm	Dale	CRCW1206475 KFKTA	185-475K
R49	Resistor, SMT, size 1206, 475K ohm	Dale	CRCW1206475 KFKTA	185-475K
R50	Resistor, SMT, size 1206, 2.55K ohms	Dale	CRCW1206-2.55K	185-2.55K
R51	Resistor, SMT, size 1206, 2.55K ohms	Dale	CRCW1206-2.55K	185-2.55K
R65	Not Used			
C14	Capacitor, SMT, size 1206, 4700pF, X7R, 100V	Kemet	C1206C472J5 GACTU	270-472
C15	Capacitor, SMT, size 1206, 4700pF, X7R, 100V	Kemet	C1206C472J5 GACTU	270-472
P1	Connector, R. Ang. Dual Row 16-pin cut fr 80-pin	Mouser (Amp)	571-41033240(550-325)	550-325-16
P2	Connector, R. Ang. Dual Row 20-pin cut fr 80-pin	Mouser (Amp)	571-41033240(550-325)	550-325-20
	Jumper, 2-Conductor, .1 centers (1)	Molex	15-38-1024	550-182

BOM
TRANSMITTER SYNTHESIZER ASSEMBLY
800-375AT450

Part Des-ignator	Part Description	Manufacturer	Manufacturer Part #	MARTI Part #
	Board Assembly, Trans. Syn. - Generic	Marti		800-375AT

U6	VCO, 430-480 MHz	Synergy	VFC430480	400-480
R46	Resistor, SMT, size 1206, 301K ohm	Dale	CRCW1206-301K	185-301K
R47	Resistor, SMT, size 1206, 301K ohm	Dale	CRCW1206-301K	185-301K
R48	Resistor, SMT, size 1206, 301K ohm	Dale	CRCW1206-301K	185-301K
R49	Resistor, SMT, size 1206, 301K ohm	Dale	CRCW1206-301K	185-301K
R50	Resistor, SMT, size 1206, 2.55K ohms	Dale	CRCW1206-2.55K	185-2.55K
R51	Resistor, SMT, size 1206, 2.55K ohms	Dale	CRCW1206-2.55K	185-2.55K
R65	Resistor, SMT, size 1206, 0 ohms	Dale	CRCW1206000 ZT-X	185-000
C14	Capacitor, SMT, size 1206, .01uF, X7R, 50V	Kemet	C1206C103J5R AC	270-103
C15	Capacitor, SMT, size 1206, .01uF, X7R, 50V	Kemet	C1206C103J5R AC	270-103
P1	Connector, R. Ang. Dual Row 16-pin cut fr 80-pin	Mouser (Amp)	571-41033240(550-325)	550-325-16
P2	Connector, R. Ang. Dual Row 20-pin cut fr 80-pin	Mouser (Amp)	571-41033240(550-325)	550-325-20
	Jumper, 2-Conductor, .1 centers (1)	Molex	15-38-1024	550-182

BOM
TRANSMITTER SYNTHESIZER BOARD ASSEMBLY - GENERIC
800-375AT

Part Designator	Part Description	Manufacturer	Manufacturer Part #	MARTI Part #
U1	IC, SMT, Microcontroller	Atmel	AT90S4433-8AI	409-044
U2	IC, SMT, Op-amp, quad, rail-to-rail	Analog Devices	OP-495GS	400-495
U3	Not Used			
U4	IC, SMT, Prescaler, Dual Mod, 64/65 - 128/129	Motorola	MC12054A	402-054
U5	IC, SMT, PLL Frequency Synthesizer, serial inp	Motorola	MC145158DW 2	400-158
U6	See higher level BOM			
U7	IC, SMT, Op-amp, Low Noise, High Audio BW	Analog Devices	OP-275GS	401-275
U8	IC, SMT, Op-amp, Low Noise, High Audio BW	Analog Devices	OP-275GS	401-275
U9	IC, SMT, Digital Pot., +/-15V, 10K ohms	Analog Devices	AD7376AR10	407-376
U10	IC, SMT, MMIC amplifier, 2 GHz, Broadband	NEC	UPC1678GV	400-678

U11	IC, SMT, MMIC amplifier, 2 GHz, Broadband	NEC	UPC1678GV	400-678
U12	Not Used			
U13	Not Used			
U14	IC, SMT, Regulator, Adjustable, 1.5 Amps	National	LM317AEMP	401-317
U15	Crystal, SMD, TCXO, 12.8 MHz, 5 Volt	Abrakon	ASTX-01-12.800MHz	012-280
U16	IC, SMT, Digital Pot., 2 CH, 100K ohms	Analog Devices	AD8402AR100	408-402
Q1	Transistor, SMT, Darlington, NPN	Motorola	MMBTA14LT1	420-141
Q2	Transistor, SMT, Darlington, NPN	Motorola	MMBTA14LT1	420-141
Q3	Transistor, SMT, Darlington, NPN	Motorola	MMBTA14LT1	420-141
Q4	Transistor, SMT, Darlington, NPN	Motorola	MMBTA14LT1	420-141
Q5	Transistor, SMT, Darlington, NPN	Motorola	MMBTA14LT1	420-141
Q6	Not Used			
Q7	Transistor, SMT, NPN	Motorola	MMBT3904LT1	439-041
Q8	Transistor, SMT, NPN	Motorola	MMBT3904LT1	439-041
Q9	Transistor, SMT, NPN	Motorola	MMBT3904LT1	439-041
D1	Diode, SMT, Zener, 13V	Vishay	BZX84C13TR	415-840
D2	Diode, SMT, Zener, 5.1V	Motorola	BZX84C5V1LT1	418-451
D3	Diode, SMT, Zener, 4.7V	Motorola	BZX84C4V7LT1	418-447
D4	Diode, SMT, Zener, 5.1V	Motorola	BZX84C5V1LT1	418-451
X1	Crystal, SMT, 7.3728 MHz, 50ppm	Epson	MA-506-7.3728M-C2	011-7.3728
R1	Resistor, SMT, size 1206, 2.74K ohms	Dale	CRCW1206-2.74K	185-2.74K
R2	Resistor, SMT, size 1206, 5.11K	Dale	CRCW1206-5.11K	185-5.11K
R3	Resistor, SMT, size 1206, 1K ohms	Dale	CRCW1206-1.0K	185-102
R4	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R5	Resistor, SMT, size 1206, 22.1 ohms	Dale	CRCW1206-22.1	185-22.1
R6	Resistor, SMT, size 1206, 1K ohms	Dale	CRCW1206-1.0K	185-102
R7	Resistor, SMT, size 1206, 1K ohms	Dale	CRCW1206-1.0K	185-102
R8	Resistor, SMT, size 1206, 10K ohms	Dale	CRCW1206-10k	185-103
R9	Not Used			
R10	Not Used			
R11	Resistor, SMT, size 1206, 4.75K ohms	Dale	CRCW1206-4.75k	185-4.75k
R12	Not Used			
R13	Resistor, SMT, size 1206, 100K ohm	Dale	CRCW1206-100K	185-104
R14	Resistor, SMT, size 1206, 1K ohms	Dale	CRCW1206-1.0K	185-102
R15	Resistor, SMT, size 1206, 1K ohms	Dale	CRCW1206-	185-102

R16	Resistor, SMT, size 1206, 100K ohm	Dale	1.0K CRCW1206-100K	185-104
R17	Resistor, SMT, size 1206, 1K ohms	Dale	CRCW1206-1.0K	185-102
R18	Resistor, SMT, size 1206, 10 ohms	Dale	CRCW1206-10	185-100
R19	Resistor, SMT, size 1206, 1K ohms	Dale	CRCW1206-1.0K	185-102
R20	Resistor, SMT, size 1206, 10K ohms	Dale	CRCW1206-10k	185-103
R21	Resistor, SMT, size 1206, 18.2 ohms	Dale	CRCW1206-18.2	185-18.2
R22	Resistor, SMT, size 1206, 18.2 ohms	Dale	CRCW1206-18.2	185-18.2
R23	Resistor, SMT, size 1206, 18.2 ohms	Dale	CRCW1206-18.2	185-18.2
R24	Resistor, SMT, size 1206, 39.2 ohms	Dale	CRCW1206-39.2	185-39.2
R25	Resistor, SMT, size 1206, 39.2 ohms	Dale	CRCW1206-39.2	185-39.2
R26	Resistor, SMT, size 1206, 15 ohm	Dale	CRCW1206-15	185-150
R27	Resistor, SMT, size 1206, 15 ohm	Dale	CRCW1206-15	185-150
R28	Resistor, SMT, size 1206, 39.2 ohms	Dale	CRCW1206-39.2	185-39.2
R29	Resistor, SMT, size 1206, 39.2 ohms	Dale	CRCW1206-39.2	185-39.2
R30	Resistor, SMT, size 1206, 2.74K ohms	Dale	CRCW1206-2.74K	185-2.74K
R31	Resistor, SMT, size 1206, 5.11K	Dale	CRCW1206-5.11K	185-5.11K
R32	Resistor, SMT, size 1206, 5.11K	Dale	CRCW1206-5.11K	185-5.11K
R33	Resistor, SMT, size 1206, 1K ohms	Dale	CRCW1206-1.0K	185-102
R34	Resistor, SMT, size 1206, 47.5 ohms	Dale	CRCW1206-47.5	185-47.5
R35	Resistor, SMT, size 1206, 10 ohms	Dale	CRCW1206-10	185-100
R36	Resistor, SMT, size 1206, 10 ohms	Dale	CRCW1206-10	185-100
R37	Resistor, SMT, size 1206, 133 ohms	Dale	CRCW1206-133	185-133
R38	Resistor, SMT, size 1206, 0 ohms	Dale	CRCW1206000 ZT-X	185-000
R39	Not Used			
R40	Not Used			
R41	Not Used			
R42	Not Used			
R43	Resistor, SMT, size 1206, 51.1 ohms	Dale	CRCW1206-51.1	185-51.1
R44	Resistor, SMT, size 1206, 3.32K ohms	Dale	CRCW1206-3.32k	185-3.32K
R45	Resistor, SMT, size 1206, 1K ohms	Dale	CRCW1206-1.0K	185-102
R46	See higher level BOM			
R47	See higher level BOM			
R48	See higher level BOM			
R49	See higher level BOM			

R50	See higher level BOM			
R51	See higher level BOM			
R52	Resistor, SMT, size 1206, 10K ohms	Dale	CRCW1206-10k	185-103
R53	Resistor, SMT, size 1206, 1.62K ohms	Dale	CRCW1206-1.62k	185-1.62K
R54	Resistor, SMT, size 1206, 475 ohms	Dale	CRCW1206-475	185-475
R55	Resistor, SMT, size 1206, 475 ohms	Dale	CRCW1206-475	185-475
R56	Resistor, SMT, size 1206, 475 ohms	Dale	CRCW1206-475	185-475
R57	Resistor, SMT, size 1206, 475 ohms	Dale	CRCW1206-475	185-475
R58	Resistor, SMT, size 1206, 475 ohms	Dale	CRCW1206-475	185-475
R59	Resistor, SMT, size 1206, 100 ohms	Dale	CRCW1206-100	185-101
R60	Resistor, SMT, size 1206, 2.74K ohms	Dale	CRCW1206-2.74K	185-2.74K
R61	Resistor, SMT, size 1206, 5.11K	Dale	CRCW1206-5.11K	185-5.11K
R62	Resistor, SMT, size 1206, 475 ohms	Dale	CRCW1206-475	185-475
R63	Potentiometer, SMT, 5K ohms	Bourns	3224W-502E	108-502
R64a	Not Used			
R64b	Not Used			
R65	See higher level BOM			
R66	Resistor, SMT, size 1206, 10K ohms	Dale	CRCW1206-10k	185-103
R67	Resistor, SMT, size 1206, 1K ohms	Dale	CRCW1206-1.0K	185-102
R68	Resistor, SMT, size 1206, 10K ohms	Dale	CRCW1206-10k	185-103
R69	Resistor, SMT, size 1206, 1K ohms	Dale	CRCW1206-1.0K	185-102
R70	Resistor, SMT, size 1206, 1K ohms	Dale	CRCW1206-1.0K	185-102
R71	Resistor, SMT, size 1206, 1K ohms	Dale	CRCW1206-1.0K	185-102
R72	Resistor, SMT, size 1206, 1K ohms	Dale	CRCW1206-1.0K	185-102
R73	Resistor, SMT, size 1206, 2.21K ohms	Dale	CRCW1206-2.21K	185-2.21K
R74	Potentiometer, SMT, 5K ohms	Bourns	3224W-502E	108-502
R75	Resistor, SMT, size 1206, 1K ohms	Dale	CRCW1206-1.0K	185-102
R76	Resistor, SMT, size 1206, 22.1K ohms	Dale	CRCW1206-22.1K	185-22.1K
R77	Resistor, SMT, size 1206, 10K ohms	Dale	CRCW1206-10k	185-103
R78	Resistor, SMT, size 1206, 100 ohms	Dale	CRCW1206-100	185-101
R79	Resistor, SMT, size 1206, 475 ohms	Dale	CRCW1206-475	185-475
R80	Resistor, SMT, size 1206, 475 ohms	Dale	CRCW1206-	185-475

R81	Resistor, SMT, size 1206, 1K ohms	Dale	475 CRCW1206-1.0K	185-102
R82	Resistor, SMT, size 1206, 475 ohms	Dale	CRCW1206-475	185-475
R83	Resistor, SMT, size 1206, 10 ohms	Dale	CRCW1206-10	185-100
R84	Resistor, SMT, size 1206, 10 ohms	Dale	CRCW1206-10	185-100
R85	Resistor, SMT, size 1206, 133 ohms	Dale	CRCW1206-133	185-133
R86	Resistor, SMT, size 1206, 1K ohms	Dale	CRCW1206-1.0K	185-102
R87	Resistor, SMT, size 1206, 475 ohms	Dale	CRCW1206-475	185-475
C1	Capacitor, Tantalum, SMT, size D, 100uF, 16V	Kemet	T491D107K016 AS	298-107
C2	Not Used			
C3	Capacitor, Tantalum, SMT, size D, 100uF, 16V	Kemet	T491D107K016 AS	298-107
C4	Capacitor, Tantalum, SMT, size D, 47uF, 16V	Kemet	T491D476K016 AS	298-476
C5	Capacitor, Tantalum, SMT, size A, 1uF, 16V	Kemet	T491A105K016 AS	298-105
C6	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C7	Capacitor, Tantalum, SMT, size D, 47uF, 16V	Kemet	T491D476K016 AS	298-476
C8	Capacitor, Tantalum, SMT, size A, 1uF, 16V	Kemet	T491A105K016 AS	298-105
C9	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C10	Capacitor, Tantalum, SMT, size D, 15uF, 25V	Kemet	T491D156K025 AS	298-156
C11	Capacitor, Tantalum, SMT, size X, 150uF, 16V	Kemet	T491X157K016 AS	298-157
C12	Capacitor, Tantalum, SMT, size D, 15uF, 25V	Kemet	T491D156K025 AS	298-156
C13	Capacitor, Tantalum, SMT, size X, 150uF, 16V	Kemet	T491X157K016 AS	298-157
C14	See higher level BOM			
C15	See higher level BOM			
C16	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C17	Capacitor, Tantalum, SMT, size D, 100uF, 16V	Kemet	T491D107K016 AS	298-107
C18	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C19	Capacitor, SMT, size 1206, .01uF, X7R, 50V	Kemet	C1206C103J5R AC	270-103
C20	Capacitor, SMT, size 1206, .1uF, X7R, 50V	Kemet	C1206C104J5R AC	270-104
C21	Capacitor, Tantalum, SMT, size A, 1uF, 16V	Kemet	T491A105K016 AS	298-105
C22	Capacitor, Tantalum, SMT, size D, 100uF, 16V	Kemet	T491D107K016 AS	298-107
C23	Capacitor, Tantalum, SMT, size D, 100uF, 16V	Kemet	T491D107K016	298-107

C24	Capacitor, Tantalum, SMT, size A, 1uF, 16V	Kemet	AS T491A105K016	298-105
C25	Capacitor, SMT, size 1206, .01uF, X7R, 50V	Kemet	AS C1206C103J5R	270-103
C26	Capacitor, SMT, size 1206, 10pF, 50V	Kemet	AC C1206C100J5	270-100
C27	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	GAC C1206C102J1	270-102
C28	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	GAC C1206C102J1	270-102
C29	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	GAC C1206C102J1	270-102
C30	Capacitor, SMT, size 1206, .01uF, X7R, 50V	Kemet	GAC C1206C103J5R	270-103
C31	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	AC C1206C102J1	270-102
C32	Capacitor, Tantalum, SMT, size A, 1uF, 16V	Kemet	GAC T491A105K016	298-105
C33	Capacitor, SMT, size 1206, .01uF, X7R, 50V	Kemet	AS C1206C103J5R	270-103
C34	Capacitor, Tantalum, SMT, size A, 1uF, 16V	Kemet	AC T491A105K016	298-105
C35	Capacitor, SMT, size 1206, .1uF, X7R, 50V	Kemet	AS C1206C104J5R	270-104
C36	Capacitor, Tantalum, SMT, size D, 47uF, 16V	Kemet	AC T491D476K016	298-476
C37	Capacitor, Tantalum, SMT, size D, 100uF, 16V	Kemet	AS T491D107K016	298-107
C38	Capacitor, Tantalum, SMT, size A, 1uF, 16V	Kemet	AS T491A105K016	298-105
C39	Capacitor, SMT, size 1206, .01uF, X7R, 50V	Kemet	AS C1206C103J5R	270-103
C40	Capacitor, Tantalum, SMT, size D, 100uF, 16V	Kemet	AC T491D107K016	298-107
C41	Capacitor, Tantalum, SMT, size B, 10uF, 16V	Kemet	AS T491B106K016	298-106
C42	Capacitor, Tantalum, SMT, size A, 1uF, 16V	Kemet	AS T491A105K016	298-105
C43	Capacitor, SMT, size 1206, .01uF, X7R, 50V	Kemet	AS C1206C103J5R	270-103
C44	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	AC C1206C102J1	270-102
C45	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	GAC C1206C102J1	270-102
C46	Not Used		GAC	
C47	Not Used			
C48	Not Used			
C49	Not Used			
C50	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1	270-102
C51	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	GAC C1206C102J1	270-102
C52	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	GAC C1206C102J1	270-102
C53	Capacitor, Tantalum, SMT, size D, 100uF, 16V	Kemet	GAC T491D107K016	298-107

C54	Capacitor, Tantalum, SMT, size A, 1uF, 16V	Kemet	AS T491A105K016	298-105
C55	Capacitor, SMT, size 1206, .01uF, X7R, 50V	Kemet	AS C1206C103J5R	270-103
C56	Capacitor, Tantalum, SMT, size A, 1uF, 16V	Kemet	AC T491A105K016	298-105
C57	Capacitor, SMT, size 1206, 33pF, 50V	Kemet	AS C1206C330J5	270-330
C58	Capacitor, SMT, size 1206, 33pF, 50V	Kemet	GAC C1206C330J5	270-330
C59	Capacitor, Tantalum, SMT, size D, 100uF, 16V	Kemet	GAC T491D107K016	298-107
C60	Capacitor, Tantalum, SMT, size D, 100uF, 16V	Kemet	AS T491D107K016	298-107
C61	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	AS C1206C102J1	270-102
C62	Capacitor, Tantalum, SMT, size A, 1uF, 16V	Kemet	GAC T491A105K016	298-105
			AS	
L1	Inductor, SMT, size 1812, 10 uH	Delevan	DN-12103TR	330-024
L2	Inductor, SMT, size 1812, 10 uH	Delevan	DN-12103TR	330-024
L3	Inductor, SMT, size 1812, 10 uH	Delevan	DN-12103TR	330-024
L4	Inductor, SMT, size 1008, 330nH	Coilcraft	1008CS- 331XKBC	350-191
L5	Inductor, SMT, size 1008, 330nH	Coilcraft	1008CS- 331XKBC	350-191
L6	Inductor, SMT, size 1812, 10 uH	Delevan	DN-12103TR	330-024
L7	Inductor, SMT, size 1812, 10 uH	Delevan	DN-12103TR	330-024
L8	Inductor, SMT, size 1812, 10 uH	Delevan	DN-12103TR	330-024
L9	Inductor, SMT, size 1812, 10 uH	Delevan	DN-12103TR	330-024
P1	See higher level BOM			
P2	See higher level BOM			
J1	Connector, SMT, RF	Hirose	S.FL2-R-SMT	550-193
	Exterior fencing and cover, Synthesizer	Leader Tech	88-CBSU- 2.25x5.75x0.8	700-226-63
	PC board, Transmitter Synthesizer, Rev A			800-375B

BOM
SRPT-40 Audio Board
800-166AS

Part Designator	Part Description	Manufacturer	Manufacturer Part #	MARTI Part #
IC1	Integrated Circuit	SGS	TDA1054M	401-054
IC2	Integrated Circuit	TI	LM3900N	403-900
D1	Diode, 1N4148 Philips			410-914
D2	Diode, 1N4148 Philips			410-914
D3	Diode, 1N4148 Philips			410-914
D4	Diode, 1N4148 Philips			410-914

D5	Diode, 1N4148 Philips			410-914
D6	Diode, General Instruments 1N4007			414-007
R1	Resistor, 1K ohm 1/4 watt 1% metal film			145-102
R2	Resistor, 47K ohm 1/4 watt 1% metal film			145-473
R3	Resistor, 182 ohm 1/4 watt 1% metal film			145-181
R4	Resistor, 680 ohm 1/4 watt 1% metal film			145-681
R5	Resistor, 150 ohm 1/4 watt 1% metal film			145-151
R6	Resistor, 100K ohm 1/4 watt 1% metal film			145-104
R7	Resistor, 3.32k ohm 1/4 watt 1% metal film			145-332
R8	Resistor, 3.9k ohm 1/4 watt 1% metal film			145-392
R9	Resistor, 3.3 ohm 1/4 watt 1% metal film			145-030
R10	Resistor, 3.9k ohm 1/4 watt 1% metal film			145-392
R11	Resistor, 100K ohm 1/4 watt 1% metal film			145-104
R12	Resistor, 100K ohm 1/4 watt 1% metal film			145-104
R13	Resistor, 330 ohm 1/4 watt 1% metal film			145-331
R14	Resistor, 8.2k ohm 1/4 watt 1% metal film			145-822
R15	Resistor, 3.9k ohm 1/4 watt 1% metal film			145-392
R16	Resistor, 33k ohm 1/4 watt 1% metal film			145-333
R17	Resistor, 220 ohm 1/4 watt 1% metal film			145-221
R18	Not Used			
R19	Resistor, 2.21 meg ohm 1/4 watt 1% metal film			145-225
R20	Resistor, 470k ohm 1/4 watt 1% metal film			145-474
R21	Not Used			
R22	Potentiometer, 5K ohm cermet Bourns 3309P-			101-502
R23	Resistor, 3.32k ohm 1/4 watt 1% metal film			145-332
R24	Resistor, 2.7k ohm 1/4 watt 1% metal film			145-272
R25	Resistor, 4.75k ohm 1/4 watt 1% metal film			145-472
R26	Potentiometer, 100K ohm cermet Bourns 3309			101-104
R27	Resistor, 2.21k ohm 1/4 watt 1% metal film			145-222
R28	Resistor, 2.21 meg ohm 1/4 watt 1% metal film			145-225
R29	Resistor, 10 meg ohm 1/4 watt 5% metal film			145-106
R30	Resistor, 8.2 meg ohm 1/4 watt 5% carbon film			145-825
R31	Resistor, 221k ohm 1/4 watt 1% RN55D2213F			145-224-1
R32	Resistor, 22.1k ohm 1/4 watt 1% metal film			145-223
R33	Potentiometer, 100K ohm cermet Bourns 3309			101-104
R34	Resistor, 10K ohm 1/4 watt 1% metal film			145-103
R35	Resistor, 475k ohm 1/4 watt 1% SFR5			145-474-1
R36	Resistor, 475k ohm 1/4 watt 1% SFR5			145-474-1
R37	Potentiometer, 1meg ohm cermet Bourns 3296			101-105
R38	Resistor, 1 meg ohm 1/4 watt 1% metal film			145-105
R39	Resistor, 1 meg ohm 1/4 watt 1% metal film			145-105
R40	Resistor, 2.21 meg ohm 1/4 watt 1% metal film			145-225
R41	Resistor, 560 ohm 1/4 watt 1% metal film			145-561
R42	Resistor, 2.21 meg ohm 1/4 watt 1% metal film			145-225
R43	Resistor, 1K ohm 1/4 watt 1% metal film			145-102
R44	Resistor, 8.2k ohm 1/4 watt 1% metal film			145-822
R45	Resistor, 2.7k ohm 1/4 watt 1% metal film			145-272
R46	Resistor, 15K ohm 1/4 watt 1% metal film			145-153
R47	Resistor, 100K ohm 1/4 watt 1% metal film			145-104
	Resistor, 4.75k ohm 1/4 watt 1% metal film			145-472
C	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102

C	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C1	Capacitor, 470 pf 50v 10% Y5P disc			253-471
C2	Capacitor, tantalum, 4.7 mf 16v Kem			299-470
C3	Capacitor, 106 50V Radial Electroly			219-106
C4	Capacitor, electrolytic 22uF radial			219-220
C5	Not Used			
C6	Not Used			
C7	Capacitor, .27 mf 100v 10% polypro CD MTC1			226-274
C8	Not Used			
C9	Capacitor, electrolytic 220uF 25V radial N			219-221
C10	Capacitor, 68pF 5% 200V ceramic dipped C31			256-680C
C11	Capacitor, .0082 nfd 2.5% 100v poly			215-822
C12	Capacitor, .01 mf 50v GMV disc Pace F6Z5U1			217-104
C13	Capacitor, electrolytic 220uF 25V radial N			219-221
C14	Capacitor, electrolytic 220uF 25V radial N			219-221
C15	Capacitor, 470 pf 50v 10% Y5P disc			253-471
C16	Capacitor, .1 mf 100v 10% mylar OSG			217-103
C17	Capacitor, tantalum, 4.7 mf 16v Kem			299-470
C18	Capacitor, 106 50V Radial Electroly			219-106
C19	Capacitor, tantalum, 4.7 mf 16v Kem			299-470
C20	Capacitor, .012 mfd 2.5% 100v polypro Seac			215-123
C21	Capacitor, electrolytic 22uF radial			219-220
C22	Capacitor, .012 mfd 2.5% 100v polypro Seac			215-123
C23	Capacitor, .0024 mfd 2.5% 100v polypro Sea			215-242
C24	Capacitor, 47pF 5% 200V ceramic dipped C31			255-470C
C25	Capacitor, .022 mfd 2.5% 100v polypro Seac			215-223
C26	Capacitor, .0039 mfd 2.5% 100v polypro Sea			215-392
C27	Capacitor, 47pF 5% 200V ceramic dipped C31			255-470C
C28	Capacitor, .01 mf 50v GMV disc Pace F6Z5U1			217-104
C29	Capacitor, 470 pf 50v 10% Y5P disc			253-471
C30	Capacitor, electrolytic 22uF radial			219-220
C31	Capacitor, .27 mf 100v 10% polypro CD MTC1			226-274
L1	Inductor, 387-150M 40000-1500000 uH #47271			350-032
	Rivet, CE100 7/32 steel nickel (2)			500-119
	Brackets, #6 Keystone 634 (2)			510-210
	Connector, 10 pin header (cut from			550-123

BOM
SRPT-40 Audio Regulation Board
800-168-40A

Part Designator	Part Description	Manufacturer	Manufacturer Part #	MARTI Part #
U1	IC, SMT, Regulator, 5A	National Semi.	LM338T	401-338
R1	Resistor, 240 ohm 1/4 watt 1% metal film			145-241-1
R2	Resistor, 2K ohm 1/4 watt 1% metal film			145-202-2
C1	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C2	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C3	Capacitor, SMT, size 1206, 1000pF, COG, 100V	Kemet	C1206C102J1 GAC	270-102
C4	Capacitor, electrolytic 22uF radial	NIC	UVX1V220MD A1TD	219-220
C5	Capacitor, electrolytic 22uF radial	NIC	UVX1V220MD A1TD	219-220
	Rivet, CE100 7/32 steel nickel (2)			500-119
	Brackets, #6 (2)	Keystone	634	510-210
	PC board, STL-10 Regulation			800-168-1B

BOM
TOP PANEL VENDER ASSEMBLY
700-250-40P

Part Designator	Part Description	Manufacturer	Manufacturer Part #	MARTI Part #
	Panel, Top, SRPT-40A, metalwork & silkscreen	Marti		700-250-40
	Bumper, Bruce Plastics 0772-0014 black (2)			510-205
	Rivet, CE-100 5/16" steel nickel (2)			500-126
	Washer, C-126=820W Brass/Nickel Plated (2)			500-127

Front Panel Control Meter

SYMBOL	DESCRIPTION	PART NUMBER	QTY
	PC BOARD, FRONT PANEL CONTROL AND METER, SRPT-40A	800-385B	1
B1,B2	Subminiature Lamp, Lumex IFL-LX2162-16T	510-196	2
C1,C2	Cap SMT 1mF 16V Tantalum Kemet T491A105M016AS	298-105	2
C3	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C4	Cap, Monolithic chip 10000pF 10% XR7 Kemet C1206C103J5RACTR	270-103	1
C5,C6	Cap SMT 1mF 16V Tantalum Kemet T491A105M016AS	298-105	2
J7,J8	CONN,HEADER 3 PIN	417-0003	2
M1	METER, 60 WATTS, VOLTS/AMPS, VU	030-046M	1
P1	CONN,HEADER,16-PIN,PCB MOUNT	417-1606	1
P2	Connector, 4 pin single header (cut from 550-214)	550-226	1
P4	CONN,HEADER,16-PIN,PCB MOUNT	417-1606	1
P5	Connector, 6 pin Molex header (cut from 550-162)	550-136	1
P5	Connector, 8 pin Molex header (cut from 550-162)	550-138	1
P7,P8	Open Top Two Circuit Shunt Molex 15-38-1024	550-182	2
Q1 thru Q4	Transistor, SMT, General Purpose,NPN, Motorola MMBT3904LT1	439-041	4
Q5	Transistor, SMT, Darlington, NPN, Mototrola MMBTA14LT1	420-141	1
R1 thru R14	Resistor, SMT, 1206, 4.75K, Dale CRCW1206-4.75K	185-4.75K	14
R15	Resistor, SMT, 1206, 4.75K, Dale CRCW1206-4.75K	185-4.75K	1
R16 thru R26	Resistor, SMT, 1206, 4.75K, Dale CRCW1206-4.75K	185-4.75K	11
R27	Resistor, SMT, 1206, 4.75K, Dale CRCW1206-4.75K	185-4.75K	1
R28 thru R32	Resistor, SMT, 1206, 4.75K, Dale CRCW1206-4.75K	185-4.75K	5
R33	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
R34 thru R37	Resistor, SMT, Size 1206, 475 ohms, Dale CRCW1206-475	185-475	4
R38 thru R41	Resistor, SMT, size 1206, 182 ohms, Dale CRCW1206-182	185-182	4
R42,R43	Resistor, SMT, size 1206, 68.1 ohms, Dale CRCW1206-68.1	185-68.1	2
R44	Resistor, SMT, size 1206, 392 ohms, Dale CRCW1206-392	185-392	1
R45	Resistor, SMT, size 1206, 1.21K ohms, Dale CRCW1206-1.21K	185-1.21K	1
R46	Resistor, SMT, size 1206, 432 ohms, Dale CRCW1206-432	185-432	1
R47	Resistor, SMT, size 1206, 47.5K ohms, Dale CRCW1206-47.5K	185-47.5K	1
R48 thru R50	Potentiometer, 5k ohm cermet Bourns 3309W-1-502	103-502	3
R51	Potentiometer, 5k ohm cermet Bourns 3309P-1-502	101-502	1
R52,R53	Resistor, SMT, size 1206, 68.1 ohms, Dale CRCW1206-68.1	185-68.1	2
R54 thru R57	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	4
R58,R59	Resistor, 10K ohm 1/8 watt 1% chip Dale CRCW1206-10K	185-103	2
R60	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
R61	RESISTOR, 332 OHM, SURFACE MOUNT,+/-1%, 1/8W	185-332	1
S1	Switch, Dip, 4 Position, Right Angle, Apem DA04T	530-086	1
S2	Switch, rotary 10WA135	530-059	1
U1 thru U4	IC, 8-Bit Ser/Par In, Ser Out SR Phillips 74HC165D	401-165	4
U5	IC, SMT, 8-Bit Ser In, Par Out SR Phillips 74HC164D	401-164	1
U6	IC, Octal D Flip-Flop w 3-St Out Phillips 74HC374D	401-374	1
U7	IC, SMT, Regulator,Adjustable, 1.5 Amps,National LM317AEMP	401-317	1
U8 thru U11	IC, Inverter, Open-drain Gate, Philips 74AHC1G06GW	400-106	4
U12	ICSMT, Digital Pot,2 Ch,100K ohms,Analog Device AD8402AR100	408-402	1
U13	IC,OP-amp, General Purpose Analog Device OP295GS	400-295	1

SRPT-30
Transmitter, 110/220VAC

<i>SYMBOL</i>	<i>DESCRIPTION</i>	<i>PART NUMBER</i>	<i>QTY</i>
	<i>Power Cord, Black Detachable Power Dynamics #10088-A</i>	<i>580-116</i>	<i>1</i>
	<i>Box, STL-10/R-10/CR-10/RPT-30/SCD-SCG-10</i>	<i>600-041</i>	<i>1</i>
	<i>SRPT-30/450</i>	<i>705-ST30-4</i>	<i>1</i>
	<i>KIT, BINDER & MANUAL, SRPT-30</i>	<i>979-9967</i>	<i>1</i>

SRPT-30
Kit, Binder Manual

<i>SYMBOL</i>	<i>DESCRIPTION</i>	<i>PART NUMBER</i>	<i>QTY</i>
	<i>INSTRUCTION MANUAL, SRPT-30</i>	<i>566-035</i>	<i>1</i>
	<i>MAN, COVER, MARTI REAR</i>	<i>597-9996</i>	<i>1</i>
	<i>MAN, COVER, MARTI FRONT, W/ WINDOW</i>	<i>597-9997</i>	<i>1</i>
	<i>BINDER, MARTI, 1 IN, BLUE, W CD POCKET</i>	<i>598-0013</i>	<i>1</i>

SRPT-30
Top Level Assy

SYMBOL	DESCRIPTION	PART NUMBER	QTY
	SCREW,M3 X 20,PHILLIPS PAN HEAD,SS	420-3720	4
	RIV,1/8X.422L .126-.187GR CLOS	421-1111	8
	4-40 X .187 S.S. HEX NUT	421-4007	1
	6-32 KEP NUT	421-6008	2
	SCREW,SEMS 6-32 X 7/16" PAN PH.ST.	422-6107	7
	#4 FLAT SS .250 X .125 X .018	423-4001	1
	#4 LOCK S.S. SPLIT	423-4002	5
	#6 LOCK SPLIT	423-6002	4
	STOFF,ALUM 1/4HEX X 1 1/2 6-32	441-0068	4
	PANEL,TOP COVER,SRPT-30	471-5387	1
	PANEL,BOTTOM COVER,SRPT-30	471-5388	1
	Screw, 6-32 x 3/8" phillips pan head M/S nickel plated	500-022	2
	Screw, 4-40 x 3/8" phillips pan head Black Zinc	500-182	1
	Screw, 6-32 x 1/4" phillips pan head Black Zinc	500-183	26
	Screw, SEMS 4-40x3/8 Phillips Pan Head MS Black Zinc	500-211	4
	Handle Assy., black w/ black plated steel hdwe #1879-376-370	510-132	1
	Bumper, Bruce Plastics 0772-0014 black	510-205	8
	Spacer, 4-40 x 1/2 hex threaded insulated Keystone 1902C	513-040	4
	Cable Assembly w/2 conn. KSM-2189-04"	586-115	1
	Ribbon Cable 6" Digi Key #M3AAA1606R-ND	586-134	1
	CABLE ASSEMBLY, SRPT-30/40A MN HRNS(SBCM)	586-211	1
	FRONT PANEL ASSEMBLY, SRPT-30	700-250-44A	1
	REAR PANEL ASSEMBLY, SRPT-30	700-450-30	1
	SRPT-40A Audio Board	800-166A40A	1
	SRPT-40A Audio Regulation Board Assembly	800-168-40A	1
	Transmitter Synthesizer Assembly 450 Band	800-375AT450	1
	Power Supply, Switching 15V, 10 Amp	800-383A	1
	Washer, TO-220 Shoulder NYL Thermalloy #7721-7PPS	DB61024	1
	Sil Pad TO220 .75"x.5" ADHSV Berquist 3223-07AC-58	DB68027	1

SRPT-30
Cable Assy, Main Harness

SYMBOL	DESCRIPTION	PART NUMBER	QTY
	LUG,QUICK DISCONNECT #18-22	410-1421	3
	LUG,TERM #6 SPADE #16-22	410-1489	7
	HSNG,MOD IV 4 POS 87499-7 AMP	417-0138	1
	CONTACT,CRIMP,MOD-IV 87809-1	417-8766	28
	Solder Lug, #6 Concord 707-1406	512-009	2
	Terminal,NICHIFU TMDN #125-250-03FA TERMINAL	512-020	5
	Connector, 6 pin Molex housing 09-50-8060	550-135	2
	Connector, Crimp Terminal Pin Molex 08-52-0112	550-327	39
	Wire, UL1061 22/7 OTC Black	580-040	5
	Wire, UL1061 22/7 OTC White	580-042	1
	Wire, UL1061 22/7 OTC Red	580-043	4
	Wire, UL1061 22/7 OTC Yellow	580-044	2
	Wire, UL1061 22/7 OTC Green	580-046	1
	Wire, UL1061 22/7 OS-1 Orange	580-047	1
	Wire, UL1061 22/7 OTC Violet	580-048	1
	Wire, UL1061 22/7 OTC Slate	580-049	1
	Wire, UL1061 22/7 OS-1 White/Red	580-050	2
	Wire, UL1061 22/7 OTC White/Blue	580-051	2
	Wire, UL1061 22/7 OTC White/Orange	580-052	1
	Wire, UL1061 22/7 OTC White/Brown	580-055	2
	Wire, UL1061 22/7 OTC White/Slate	580-056	3
	Wire, UL1061 22/7 OTC White/Violet	580-058	2
	Wire, UL1061 22/7 OTC Yellow/Blue	580-059	2
	Wire, UL1429 22/7 OS-1 Yellow/Green	580-060	2
	Wire, UL1061 22/7 OTC Yellow/Brown w/ overall tin coating	580-065	1
	Shielded Wire, 16-C-22-SPJ White/Orange 1 cond 22/ 19x34 pvc	580-089	2
	Shielded Wire, 16-C-22-SPJ White/Yellow 1 Cond.22/ 19x34 pvc	580-090	1
	Shielded Wire, 16-C-22-SPJ White/Green 1 Cond.22/ 19x34 pvc	580-091	2
	Shielded Wire, 16-C-22-SPJ White/Blue 1 Cond.22/ 19x34 pvc	580-092	1
	Wire, Stranded UL1015-20/ 10 Black Tinned Copper	580-130	6
	Wire, UL1061-18/ 16 #18 Red #M370-2	580-133	12
	Wire, UL1061-18/ 16 #18 Blue	580-136	1
	WIRE,AWG22,19/34 WHT	601-2209	1
J1	Connector, 10 pin Molex housing 09-50-8100	550-122	1
J1	Connector, 8 pin Molex housing 09-50-8080	550-137	1
J2	HOUSING, 16 PIN, DOUBLE ROW, AMP 1-87456-2	417-0602	1
J2	Connector, 8 pin Molex housing 09-50-8080	550-137	1
J3	HOUSING,SKT,6PIN,AMP MOD IV	417-0601	1
J3	HOUSING, 16 PIN, DOUBLE ROW, AMP 1-87456-2	417-0602	1
J6	Connector, 8 pin Molex housing 09-50-8080	550-137	1

SRPT-30
Front Panel Assy

SYMBOL	DESCRIPTION	PART NUMBER	QTY
	Capacitor, .01 mf 50v GMV disc Jetcon F7Z5U1C103Z-TR	217-104	1
	LED INDICATOR,GRN,RECTANGULAR	323-2124	1
	IND,LED,RED CMD57124A	323-7124	3
	HSNG,MOD IV 4 POS 87499-7 AMP	417-0138	1
	CONTACT,CRIMP,MOD-IV 87809-1	417-8766	4
	4-40 X .187 S.S. HEX NUT	421-4007	2
	#4 LOCK S.S. SPLIT	423-4002	2
	Washer, Switchcraft #S1790-1	500-123	1
	Flat Washer, Micro Plastics #FW250-062 nylon	500-164	1
	Screw, 4-40 x 3/8" phillips oval head M/S black zinc	500-188	8
	Screw, SEMS 4-40x1/4 Phillips Pan Head MS Black Zinc	500-210	6
	Polytube, Manhatten#AF155A-20-yel	510-005	1
	Bushing, #B-312-250 black shorty Microplastic #22MP01015	510-113	1
	Control Knobs, #45KNO23	510-212	1
	Control Knob, #ME450-2023	510-215	4
	Switch, slide DPDT Switchcraft 46206LR	530-001	1
	Switch, toggle SPDT C&K 7101MYZQ or Apem #5636AB16	530-008	2
	Switch, Rocker, Miniature,DPDT, Red Mouser #629-GRS402210	530-090	1
	Connector, Tini-Jax Switchcraft 41	550-083	1
	Connector Shell XLR Receptacle	550-155-2	4
	FRONT PANEL, SRPT-30	700-250-44	1
	RPT-30/ SRPT-40 Pre-Amp Mixer(SBCM)	800-251A	1
	SRPT-30 FRONT PANEL CONTROL & METER(SBCM)	800-382A	1

SRPT-30
Rear Panel Assy

SYMBOL	DESCRIPTION	PART NUMBER	QTY
	GROMMET,3/8IDX5/8ODFOR7/16HOLE	400-0014	1
	STRIP,QUIET SHIELD,6.00x.197	400-0600	1
	GROMMET,FOR 3/8	400-2170	1
	ASSY,FEMALE SCREWLOCK 205817-1	420-0817	1
	SCREW,2-56X.312,S.S. PH SC	420-2105	2
	SCREW,4-40X.312,S.S. PH	420-4105	2
	SCREW,4-40X.375,S.S. PH	420-4106	4
	SCREW,6-32X.750,S.S. PH	420-6112	2
	4-40 KEP NUT	421-4008	3
	6-32 KEP NUT	421-6008	4
	SOUTHCO SHEET EDGE 6-32	421-6908	4
	SCREW,SEMS 6-32 X 7/16" PAN PH.ST.	422-6107	10
	#6 LOCK SPLIT	423-6002	2
	FILLER,REAR,SRPT-30	471-5385	1
	PANEL,BACK,SRPT-30	471-5386	1
	PARTITION,SRPT-30	471-5389	1
	Screw, 4-40 x 3/8" phillips oval head M/S black zinc	500-188	2
	Keps nut 4 x 40 zinc 4CNKEOZ	500-199	4
	Screw, SEMS 4-40x1/4 Phillips Pan Head MS Black Zinc	500-210	5
	Grommet, 3/8" GC 11-292-C	510-031	4
	Fuseholder, Littlefuse #342-004	510-072	1
	Fuse, 4 Amp., 3AG Littlefuse #312-004	510-204	1
	Fan, NMB 2410ML04WB40-P00 or ADDA #AD0612HS-A70GL	510-231	1
	Flexible Grommet, Tyton FP/A (82' per roll)	510-246	1
	Cable Assembly, AC Connector to Fuseholder	586-194	1
	Cable Assembly, AC Connector to Ground	586-195	1
	Cover,Two Stage Power Amplifier	700-226-61	1
	SRPT-30/450 PA ASSEMBLY	800-373A450-30	1
	RPU Transmitter I/O Board Assy (SBCM)	800-379AR	1
	CABLE, RF OUTPUT, SRPT-40A (SBCM)	949-0365	1
	Cover Gasket 2/4-CH DSTL Drawing #A1D4040 REV 2	DB65112	1
	FILTER,RFI,10A 250VAC,50/60HZ	339-0006	1

SRPT-30
Audio Board Assy

SYMBOL	DESCRIPTION	PART NUMBER	QTY
	RIV,CLOSED-END .125 X .316L	421-1113	2
	Brackets, #6 Keystone 634	510-210	2
	Generic RPU Audio Board Assembly (SBCM)	800-166CM	1
	Loctite TAK PAK High Temp. Gel #49904 3gm tube	900-018	1
	Labels, Brady DAT-16-607-10	910-057	1
C23	Capacitor, .0024 mfd 2.5% 100v polypro Seacor PFAB240HGUE	215-242	1
R43	Resistor, 1k ohm 1/4 watt 1% metal film Mepco SFR55 1K 1%TR	145-102	1
R46	Resistor, 15k ohm 1/4 watt 1% metal film Mepco SFR25	145-153	1
R48	Resistor, 4.75K ohm 1/4 watt 1% metal film Mepco SFR25	145-472	1
R49	Resistor, 2.21 meg ohm 1/4 watt 1% metal film (2.21 Meg 1%)	145-225	1

Audio Regulation Board Assy

<i>SYMBOL</i>	<i>DESCRIPTION</i>	<i>PART NUMBER</i>	<i>QTY</i>
	<i>Pop-Rivet, AD42BS Aluminum</i>	<i>500-105</i>	<i>2</i>
	<i>Brackets, #6 Keystone 634</i>	<i>510-210</i>	<i>2</i>
	<i>PC Board, Regulator RPT-15 STL-10 REV-9524</i>	<i>800-168-1B</i>	<i>1</i>
<i>C1</i>	<i>Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked</i>	<i>270-102</i>	<i>1</i>
<i>C2</i>	<i>Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked</i>	<i>270-102</i>	<i>1</i>
<i>C3</i>	<i>Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked</i>	<i>270-102</i>	<i>1</i>
<i>C4</i>	<i>Capacitor. electrolytic 22uF 25V Mepco 3073BA220T025JPA</i>	<i>219-200</i>	<i>1</i>
<i>C5</i>	<i>Capacitor. electrolytic 22uF 25V Mepco 3073BA220T025JPA</i>	<i>219-200</i>	<i>1</i>
<i>R1</i>	<i>Resistor, 240 ohm 1/4 watt 1% SFR55 240 1% TR</i>	<i>145-241-1</i>	<i>1</i>
<i>R2</i>	<i>RES,2K OHM,1/4W,1%</i>	<i>100-2041</i>	<i>1</i>
<i>U1</i>	<i>Integated Circuit,SMT,Regulator,5 amp,National LM338T</i>	<i>401-338</i>	<i>1</i>

Transmitter Synthesizer Assy - 450MHz Band

SYMBOL	DESCRIPTION	PART NUMBER	QTY
	Transmitter Synthesizer Board Assy Generic (SBCM)	800-375AT	1
C7	Capacitor,Tantalum,SMT,size D, 47uF,16V Kemet T491D476K016AS	298-476	1
C14	Cap, Monolithic chip 10000pF 10% XR7 Kemet C1206C103J5RACTR	270-103	1
C15	Cap, Monolithic chip 10000pF 10% XR7 Kemet C1206C103J5RACTR	270-103	1
R19	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
R46	Resistor, SMT, size 1206, 301K ohms, Dale CRCW1206-301K	185-301K	1
R47	Resistor, SMT, size 1206, 301K ohms, Dale CRCW1206-301K	185-301K	1
R48	Resistor, SMT, size 1206, 301K ohms, Dale CRCW1206-301K	185-301K	1
R49	Resistor, SMT, size 1206, 301K ohms, Dale CRCW1206-301K	185-301K	1
R50	Resistor, SMT, size 1206, 2.55K ohms, Dale CRCW1206-2.55K	185-2.55K	1
R51	Resistor, SMT, size 1206, 2.55K ohms, Dale CRCW1206-2.55K	185-2.55K	1
R65	Resistor,0 Ohm 1206 Chip Mfg# DALCRCW1206000ZT-X	185-000	1
U6	IC, VCO, 430-480 Mhz, Synergy VFC430480	400-480	1

Pre-Amp Mixer Board Assy

SYMBOL	DESCRIPTION	PART NUMBER	QTY
	Grounding Strap, RPT-30 Pre-Amp	700-250-15	1
	PC Board, Pre-amp/Mixer RPT-30 REV-9520	800-251B	1
	Loctite TAK PAK High Temp. Gel #49904 3gm tube	900-018	1
C1	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C2	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C3	Capacitor. electrolytic 22uF 25V Mepco 3073BA220T025JPA	219-200	1
C4	Capacitor. electrolytic 22uF 25V Mepco 3073BA220T025JPA	219-200	1
C5	Capacitor, monolithic chip 27 pf 50v 5% Kemet C1206C270J5GAC	270-270	1
C6	Capacitor, monolithic chip 27 pf 50v 5% Kemet C1206C270J5GAC	270-270	1
C7	Capacitor, 10 pf 5% NPO disc Pace F5NPO1C100J-TR	255-100	1
C8	Capacitor. electrolytic 22uF 25V Mepco 3073BA220T025JPA	219-200	1
C9	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C10	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C11	Capacitor. electrolytic 22uF 25V Mepco 3073BA220T025JPA	219-200	1
C12	Capacitor. electrolytic 22uF 25V Mepco 3073BA220T025JPA	219-200	1
C13	Capacitor, monolithic chip 27 pf 50v 5% Kemet C1206C270J5GAC	270-270	1
C14	Capacitor, monolithic chip 27 pf 50v 5% Kemet C1206C270J5GAC	270-270	1
C15	Capacitor, 10 pf 5% NPO disc Pace F5NPO1C100J-TR	255-100	1
C16	Capacitor. electrolytic 22uF 25V Mepco 3073BA220T025JPA	219-200	1
C17	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C18	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C19	Capacitor. electrolytic 22uF 25V Mepco 3073BA220T025JPA	219-200	1
C20	Capacitor. electrolytic 22uF 25V Mepco 3073BA220T025JPA	219-200	1
C21	Capacitor, monolithic chip 27 pf 50v 5% Kemet C1206C270J5GAC	270-270	1
C22	Capacitor, monolithic chip 27 pf 50v 5% Kemet C1206C270J5GAC	270-270	1
C23	Capacitor, 10 pf 5% NPO disc Pace F5NPO1C100J-TR	255-100	1
C24	Capacitor. electrolytic 22uF 25V Mepco 3073BA220T025JPA	219-200	1
C25	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C26	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C27	Capacitor. electrolytic 22uF 25V Mepco 3073BA220T025JPA	219-200	1
C28	Capacitor. electrolytic 22uF 25V Mepco 3073BA220T025JPA	219-200	1
C29	Capacitor, monolithic chip 27 pf 50v 5% Kemet C1206C270J5GAC	270-270	1
C30	Capacitor, monolithic chip 27 pf 50v 5% Kemet C1206C270J5GAC	270-270	1
C31	Capacitor, 10 pf 5% NPO disc Pace F5NPO1C100J-TR	255-100	1
C32	Capacitor. electrolytic 22uF 25V Mepco 3073BA220T025JPA	219-200	1
C33	Capacitor. electrolytic 22uF 25V Mepco 3073BA220T025JPA	219-200	1
C34	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C35	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C36	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C37	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
IC1	Integrated Circuit, Signetics NE5532AN, Phillips	405-532	1
IC2	Integrated Circuit, Signetics NE5532AN, Phillips	405-532	1
J1	Connector, XLR Receptacle Insert Nuetrik#3FD-V-I-O	550-155-1	1
J2	Connector, XLR Receptacle Insert Nuetrik#3FD-V-I-O	550-155-1	1
J3	Connector, XLR Receptacle Insert Nuetrik#3FD-V-I-O	550-155-1	1
J4	Connector, XLR Receptacle Insert Nuetrik#3FD-V-I-O	550-155-1	1
P1	Connector, 6 pin Molex angle header (cut from 550-163)	550-149	1

Pre-Amp Mixer Board Assy

R1	Resistor, 2.21K ohm 1/4 watt 1% metal film Mepco SFR25	145-222	1
R2	Resistor, 1.5k ohm 1/4 ohm 1% metal film Mepco SFR25	145-152	1
R3	Resistor, 1.5k ohm 1/4 ohm 1% metal film Mepco SFR25	145-152	1
R4	Resistor, 100k ohm 1/4 watt 1% metal film Mepco SFR25	145-104	1
R5	Resistor, 100k ohm 1/4 watt 1% metal film Mepco SFR25	145-104	1
R6	Resistor, 15k ohm 1/4 watt 1% metal film Mepco SFR25	145-153	1
R7	Potentiometer,25kohm linear taper PC mt Xicon/ Alpha #31VQ403	100-143	1
R8	Resistor, 2.21K ohm 1/4 watt 1% metal film Mepco SFR25	145-222	1
R9	Resistor, 1.5k ohm 1/4 ohm 1% metal film Mepco SFR25	145-152	1
R10	Resistor, 1.5k ohm 1/4 ohm 1% metal film Mepco SFR25	145-152	1
R11	Resistor, 100k ohm 1/4 watt 1% metal film Mepco SFR25	145-104	1
R12	Resistor, 100k ohm 1/4 watt 1% metal film Mepco SFR25	145-104	1
R13	Resistor, 15k ohm 1/4 watt 1% metal film Mepco SFR25	145-153	1
R14	Potentiometer,25kohm linear taper PC mt Xicon/ Alpha #31VQ403	100-143	1
R15	Resistor, 2.21K ohm 1/4 watt 1% metal film Mepco SFR25	145-222	1
R16	Resistor, 1.5k ohm 1/4 ohm 1% metal film Mepco SFR25	145-152	1
R17	Resistor, 1.5k ohm 1/4 ohm 1% metal film Mepco SFR25	145-152	1
R18	Resistor, 100k ohm 1/4 watt 1% metal film Mepco SFR25	145-104	1
R19	Resistor, 100k ohm 1/4 watt 1% metal film Mepco SFR25	145-104	1
R20	Resistor, 15k ohm 1/4 watt 1% metal film Mepco SFR25	145-153	1
R21	Potentiometer,25kohm linear taper PC mt Xicon/ Alpha #31VQ403	100-143	1
R22	Resistor, 2.21K ohm 1/4 watt 1% metal film Mepco SFR25	145-222	1
R23	Resistor, 360k ohm 1/4 watt 1% carbon film CF1/4-360K	145-364-1	1
R24	Resistor, 360k ohm 1/4 watt 1% carbon film CF1/4-360K	145-364-1	1
R25	Resistor, 1.5k ohm 1/4 ohm 1% metal film Mepco SFR25	145-152	1
R26	Resistor, 1.5k ohm 1/4 ohm 1% metal film Mepco SFR25	145-152	1
R27	Resistor, 100k ohm 1/4 watt 1% metal film Mepco SFR25	145-104	1
R28	Resistor, 100k ohm 1/4 watt 1% metal film Mepco SFR25	145-104	1
R29	Resistor, 15k ohm 1/4 watt 1% metal film Mepco SFR25	145-153	1
R30	Potentiometer,25kohm linear taper PC mt Xicon/ Alpha #31VQ403	100-143	1
R31	Resistor, 22.1k ohm 1/4 watt 1% metal film Mepco SFR25	145-223	1
R32	Resistor, 22.1k ohm 1/4 watt 1% metal film Mepco SFR25	145-223	1
R33	Resistor, 5.6k ohm 1/4 watt 5% metal film Mepco SFR25	145-562	1
S1	Switch, side action slide DPDT Ark-Les S-9022CD00-H	530-051	1

Front Panel Control Meter Assy

SYMBOL	DESCRIPTION	PART NUMBER	QTY
	PC BOARD, FP CNTL AND MTR, SRPT-30	800-382B	1
B1	Subminiature Lamp, Lumex IFL-LX2162-16T	510-196	1
B2	Subminiature Lamp, Lumex IFL-LX2162-16T	510-196	1
C1	Cap SMT 1mF 16V Tantalum Kemet T491A105M016AS	298-105	1
C2	Cap SMT 1mF 16V Tantalum Kemet T491A105M016AS	298-105	1
C3	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C4	Cap, Monolithic chip 10000pF 10% XR7 Kemet C1206C103J5RACTR	270-103	1
M1	Meter, Watts, Volts/Amps,VU	030-045M	1
P1	CONN,HEADER,16-PIN,PCB MOUNT	417-1606	1
P2	Connector, 4 pin single header (cut from 550-214)	550-226	1
P4	CONN,HEADER,16-PIN,PCB MOUNT	417-1606	1
P5	Connector, 6 pin Molex header (cut from 550-162)	550-136	1
P6	Connector, 8 pin Molex header (cut from 550-162)	550-138	1
Q1	Transistor, SMT, General Purpose,NPN, Motorola MMBT3904LT1	439-041	1
Q2	Transistor, SMT, General Purpose,NPN, Motorola MMBT3904LT1	439-041	1
Q3	Transistor, SMT, General Purpose,NPN, Motorola MMBT3904LT1	439-041	1
Q4	Transistor, SMT, General Purpose,NPN, Motorola MMBT3904LT1	439-041	1
R34	Resistor, SMT, Size 1206, 475 ohms, Dale CRCW1206-475	185-475	1
R35	Resistor, SMT, Size 1206, 475 ohms, Dale CRCW1206-475	185-475	1
R36	Resistor, SMT, Size 1206, 475 ohms, Dale CRCW1206-475	185-475	1
R37	Resistor, SMT, Size 1206, 475 ohms, Dale CRCW1206-475	185-475	1
R38	Resistor, SMT, size 1206, 182 ohms, Dale CRCW1206-182	185-182	1
R39	Resistor, SMT, size 1206, 182 ohms, Dale CRCW1206-182	185-182	1
R40	Resistor, SMT, size 1206, 182 ohms, Dale CRCW1206-182	185-182	1
R41	Resistor, SMT, size 1206, 182 ohms, Dale CRCW1206-182	185-182	1
R42	Resistor, SMT, size 1206, 68.1 ohms, Dale CRCW1206-68.1	185-68.1	1
R43	Resistor, SMT, size 1206, 68.1 ohms, Dale CRCW1206-68.1	185-68.1	1
R44	Resistor, SMT, size 1206, 392 ohms, Dale CRCW1206-392	185-392	1
R45	Resistor, SMT, size 1206, 1.21K ohms, Dale CRCW1206-1.21K	185-1.21K	1
R46	Resistor, SMT, size 1206, 432 ohms, Dale CRCW1206-432	185-432	1
R47	Resistor, SMT, size 1206, 47.5K ohms, Dale CRCW1206-47.5K	185-47.5K	1
R48	Potentiometer, 5k ohm cermet Bourns 3309W-1-502	103-502	1
R49	Potentiometer, 5k ohm cermet Bourns 3309W-1-502	103-502	1
R50	Potentiometer, 5k ohm cermet Bourns 3309W-1-502	103-502	1
R51	Potentiometer, 5k ohm cermet Bourns 3309P-1-502	101-502	1
R52	Resistor, SMT, size 1206, 68.1 ohms, Dale CRCW1206-68.1	185-68.1	1
R53	Resistor, SMT, size 1206, 68.1 ohms, Dale CRCW1206-68.1	185-68.1	1
R55	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
S2	Switch, rotary 10WA135	530-059	1
U5	IC, SMT, 8-Bit Ser In, Par Out SR Phillips 74HC164D	401-164	1
U6	IC, Octal D Flip-Flop w 3-St Out Phillips 74HC374D	401-374	1
U7	IC, SMT, Regulator,Adjustable, 1.5 Amps,National LM317AEMP	401-317	1

SRPT-30
FP Control Meter BRD Assy (SBCM)

SYMBOL	DESCRIPTION	PART NUMBER	QTY
	SRPT-30 FP CONTROL & METER BRD	800-389B	1
B1,B2	Subminiature Lamp, Lumex IFL-LX2162-16T	510-196	2
C1,C2	Cap SMT 1mF 16V Tantalum Kemet T491A105M016AS	298-105	2
C3	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C4	Cap, Monolithic chip 10000pF 10% XR7 Kemet C1206C103J5RACTR	270-103	1
C5,C6	Cap SMT 1mF 16V Tantalum Kemet T491A105M016AS	298-105	2
J7,J8	CONN,HEADER 3 PIN	417-0003	2
M1	METER, 60 WATTS, VOLTS/AMPS, VU	030-046M	1
P1	CONN,HEADER,16-PIN,PCB MOUNT	417-1606	1
P2	Connector, 4 pin single header (cut from 550-214)	550-226	1
P4	CONN,HEADER,16-PIN,PCB MOUNT	417-1606	1
P5	Connector, 6 pin Molex header (cut from 550-162)	550-136	1
P5	Connector, 8 pin Molex header (cut from 550-162)	550-138	1
P7,P8	Open Top Two Circuit Shunt Molex 15-38-1024	550-182	2
Q1 thru Q4	Transistor, SMT, General Purpose,NPN, Motorola MMBT3904LT1	439-041	4
Q5	Transistor, SMT, Darlington, NPN, Mototrola MMBTA14LT1	420-141	1
R34 thru R37	Resistor, SMT, Size 1206, 475 ohms, Dale CRCW1206-475	185-475	4
R38 thru R41	Resistor, SMT, size 1206, 182 ohms, Dale CRCW1206-182	185-182	4
R42,R43	Resistor, SMT, size 1206, 68.1 ohms, Dale CRCW1206-68.1	185-68.1	2
R44	Resistor, SMT, size 1206, 392 ohms, Dale CRCW1206-392	185-392	1
R45	Resistor, SMT, size 1206, 1.21K ohms, Dale CRCW1206-1.21K	185-1.21K	1
R46	Resistor, SMT, size 1206, 432 ohms, Dale CRCW1206-432	185-432	1
R47	Resistor, SMT, size 1206, 47.5K ohms, Dale CRCW1206-47.5K	185-47.5K	1
R48 thru R50	Potentiometer, 5k ohm cermet Bourns 3309W-1-502	103-502	3
R51	Potentiometer, 5k ohm cermet Bourns 3309P-1-502	101-502	1
R52,R53	Resistor, SMT, size 1206, 68.1 ohms, Dale CRCW1206-68.1	185-68.1	2
R55	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
R58,R59	Resistor, 10K ohm 1/8 watt 1% chip Dale CRCW1206-10K	185-103	2
R60	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
R61	RESISTOR, 332 OHM, SURFACE MOUNT,+/-1%, 1/8W	185-332	1
S2	Switch, rotary 10WA135	530-059	1
U5	IC, SMT, 8-Bit Ser In, Par Out SR Phillips 74HC164D	401-164	1
U6	IC, Octal D Flip-Flop w 3-St Out Phillips 74HC374D	401-374	1
U7	IC, SMT, Regulator,Adjustable, 1.5 Amps,National LM317AEMP	401-317	1
U12	ICSMT, Digital Pot,2 Ch,100K ohms,Analog Device AD8402AR100	408-402	1
U13	IC,OP-amp, General Purpose Analog Device OP295GS	400-295	1
R53	Resistor, SMT, size 1206, 68.1 ohms, Dale CRCW1206-68.1	185-68.1	1
R55	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
S2	Switch, rotary 10WA135	530-059	1
U5	IC, SMT, 8-Bit Ser In, Par Out SR Phillips 74HC164D	401-164	1
U6	IC, Octal D Flip-Flop w 3-St Out Phillips 74HC374D	401-374	1
U7	IC, SMT, Regulator,Adjustable, 1.5 Amps,National LM317AEMP	401-317	1

SRPT-30
PA Assembly

SYMBOL	DESCRIPTION	PART NUMBER	QTY
	SCREW,SEMS 6-32 X 7/16" PAN PH.ST.	422-6107	2
	#4 FLAT SS .250 X .125 X .018	423-4001	3
	Screw, 4-40 x 1/2" phillips pan head M/S nickel plated	500-011	5
	Lockwasher, #4 internal tooth small pattern zinc plated	500-055	5
	Screw, SEMS 4-40x3/8 Phillips Pan Head MS Black Zinc	500-211	3
	Spacer, 4-40 x 3/8 hex threaded Keystone 1450B	513-022	5
	Heatsink, Drilled for Revised STL-10/15C Rev B	520-050D5	1
	Thermalcote, Thermalloy #251 1# container	920-003	1
	ASSY., THERMOCOUPLE	959-0321	1
	Washer, TO-220 Shoulder NYL Thermalloy #7721-7PPS	DB61024	3
A1	Two-Stage RF Power Amplifier Board Assy- Generic (SBCM)	800-373A	1
C35	Capacitor,SMT,size 1206,4.7pF,COG,100V Kemet C1206C479C1GAC	270-407-1	1
C36	Capacitor,SMT,size 1206,4.7pF,COG,100V Kemet C1206C479C1GAC	270-407-1	1
C37	Capacitor,SMT,size 1206,4.7pF,COG,100V Kemet C1206C479C1GAC	270-407-1	1
INS1	INSULATOR,MICA,TO-220,56-77-11	407-0036	1
INS2	INSULATOR,MICA,TO-220,56-77-11	407-0036	1
INS3	INSULATOR,MICA,TO-220,56-77-11	407-0036	1
L8	Inductor, SMT, size 1206, 5nH, Coilcraft A04TJ	350-192	1
L9	Inductor, SMT, size 1206, 8nH, Coilcraft A05TJ	350-194	1
L10	Inductor, SMT, size 1206, 8nH, Coilcraft A05TJ	350-194	1
L11	Inductor, SMT, size 1206, 5nH, Coilcraft A04TJ	350-192	1
R1	Resistor,0 Ohm 1206 Chip Mfg# DALCRCW1206000ZT-X	185-000	1
U3	IC, PA MODULE, 440-470 MHZ, 30W	468-762	1
U5	Integrated Circuit,SMT,Regulator,5 amp,National LM338T	401-338	1
U6	Integrated Circuit,SMT,Regulator,5 amp,National LM338T	401-338	1
U7	Integrated Circuit,SMT,Regulator,5 amp,National LM338T	401-338	1

RPU Transmitter I/O Board Assy

SYMBOL	DESCRIPTION	PART NUMBER	QTY
	<i>Screw, 4-40 x 7/16" phillips pan head MS zinc plated</i>	500-162	2
	<i>PC Board, STL/RPU Transmitter I/O Rev A</i>	800-379B	1
C1	<i>Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked</i>	270-102	1
C2	<i>Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked</i>	270-102	1
C3	<i>Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked</i>	270-102	1
C4	<i>Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked</i>	270-102	1
C5	<i>Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked</i>	270-102	1
C6	<i>Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked</i>	270-102	1
C7	<i>Cap, monolithic chip, 22 pf 50v 5% KEMET C1206C220J5GACTR</i>	270-220	1
C8	<i>Cap, monolithic chip, 22 pf 50v 5% KEMET C1206C220J5GACTR</i>	270-220	1
C9	<i>Cap, monolithic chip, 22 pf 50v 5% KEMET C1206C220J5GACTR</i>	270-220	1
J4	<i>Connector, D-Sub 15 pin angle Keltron DNR-15PJL-SG</i>	550-170	1
L1	<i>Inductor, SMT, Power, 0.68, Coilcraft DO3316P-681HC</i>	350-196	1
L2	<i>Inductor, SMT, Power, 0.68, Coilcraft DO3316P-681HC</i>	350-196	1
L3	<i>Inductor, 10uH SMT DN12103JTR-ND DELEVAN 5%</i>	330-024	1
L4	<i>Inductor, 10uH SMT DN12103JTR-ND DELEVAN 5%</i>	330-024	1
L5	<i>Inductor, 10uH SMT DN12103JTR-ND DELEVAN 5%</i>	330-024	1
L6	<i>Inductor, 10uH SMT DN12103JTR-ND DELEVAN 5%</i>	330-024	1
L7	<i>Inductor, 10uH SMT DN12103JTR-ND DELEVAN 5%</i>	330-024	1
L8	<i>Inductor, 10uH SMT DN12103JTR-ND DELEVAN 5%</i>	330-024	1
L9	<i>Inductor, 10uH SMT DN12103JTR-ND DELEVAN 5%</i>	330-024	1
P2	<i>Connector, 8 pin Molex angle header (cut from 550-163)</i>	550-176	1
P3	<i>Conn,2x8 pin dual row header right angle cut from 550-217</i>	550-211	1

SRPT-30
RF Output Cable

<i>SYMBOL</i>	<i>DESCRIPTION</i>	<i>PART NUMBER</i>	<i>QTY</i>
	JACK,N PANEL FOR RG-142B/U	417-0076	1
	CBL,COAX TEFLON RG 142B/U BELDEN	621-0001	1

Two-Stage RF Power Amplifier Board Assy - Generic

SYMBOL	DESCRIPTION	PART NUMBER	QTY
	TAPE,KAPTON 1/4	700-0119	1
	RF Shielding Fence For Power Amplifier(Interior)	700-226-59	1
	Leader Tech Fence # 47-CBSU-2.75 X 5.75 X .4 NO COVER	700-268	1
	PC Board, Power Amplifier	800-373B	1
C1	Cap, Monolithic chip 10000pF 10% XR7 Kemet C1206C103J5RACTR	270-103	1
C2	Cap, Monolithic chip 10000pF 10% XR7 Kemet C1206C103J5RACTR	270-103	1
C3	Cap, Monolithic chip 10000pF 10% XR7 Kemet C1206C103J5RACTR	270-103	1
C4	Cap, Monolithic chip 10000pF 10% XR7 Kemet C1206C103J5RACTR	270-103	1
C5	Cap, Monolithic chip 10000pF 10% XR7 Kemet C1206C103J5RACTR	270-103	1
C6	Cap, Monolithic chip 10000pF 10% XR7 Kemet C1206C103J5RACTR	270-103	1
C7	Cap., SMT, 1206, 4700 pf, COG, 100V, Kemet C1206C472J5GACTU	270-472	1
C8	Cap., Tantalum, SMT, Size B, 10uF, 16V,Kemet T491B106K016AS	298-106	1
C9	Cap., SMT, 1206, 4700 pf, COG, 100V, Kemet C1206C472J5GACTU	270-472	1
C10	Cap., Tantalum, SMT, Size B, 10uF, 16V,Kemet T491B106K016AS	298-106	1
C11	Cap., SMT, 1206, 4700 pf, COG, 100V, Kemet C1206C472J5GACTU	270-472	1
C12	Cap., Tantalum, SMT, Size B, 10uF, 16V,Kemet T491B106K016AS	298-106	1
C15	Cap., SMT, 1206, 4700 pf, COG, 100V, Kemet C1206C472J5GACTU	270-472	1
C16	Cap.,Tantalum,SMT,Size C, 33uF,16V,Sprague T491C336K016AS	298-336	1
C17	Cap SMT 1mF 16V Tantalum Kemet T491A105M016AS	298-105	1
C18	Cap SMT 1mF 16V Tantalum Kemet T491A105M016AS	298-105	1
C19	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C20	Cap.,Tantalum,SMT,Size C, 33uF,16V,Sprague T491C336K016AS	298-336	1
C21	Cap SMT 1mF 16V Tantalum Kemet T491A105M016AS	298-105	1
C22	Cap SMT 1mF 16V Tantalum Kemet T491A105M016AS	298-105	1
C23	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C24	Capacitor, Monolithic Chip 100000pF 1% C1206C104J5RAC Kemet	270-104	1
C25	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C26	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C27	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C28	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C29	Cap.,Tantalum,SMT,Size C, 33uF,16V,Sprague T491C336K016AS	298-336	1
C30	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C31	Cap.,Tantalum,SMT, Size D, 100uF, 16V,Kemet T491X107K016AS	298-107	1
C32	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C33	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C34	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
D3	Diode, Motorola MMBD101L chip	410-305	1
D4	Diode, Motorola MMBD101L chip	410-305	1
D5	Diode, Zener, SMT, 2.5V, Motorola MMSZ5222BT1	415-222	1
D6	Diode, Zener, SMT, 13V, Vishay BZX84C13TR	415-840	1
D7	Diode, SMT, Zener, 4.7V, Motorola BZX84C4V7LT1	418-447	1
L1	Inductor, SMT, Power, 0.68, Coilcraft DO3316P-681HC	350-196	1
L2	Inductor, SMT, 1008, 330nH, Coilcraft 1008CS-331XKBC	350-191	1
L3	Inductor, SMT, 1008, 330nH, Coilcraft 1008CS-331XKBC	350-191	1
L4	Inductor, SMT, Power, 1uH, Coilcraft DT1608C-102	350-197	1
L5	Inductor, SMT, Power, 1uH, Coilcraft DT1608C-102	350-197	1
L6	Inductor, SMT, Power, 1uH, Coilcraft DT1608C-102	350-197	1
L7	Inductor, SMT, 1008, 330nH, Coilcraft 1008CS-331XKBC	350-191	1
P1	Connector, 8 pin Molex header (cut from 550-162)	550-138	1
P2	Connector, S.FL2-R-SMT surface mount Hirose	550-193	1
P3	Connector,6-Pin Header	550-324	1

Two-Stage RF Power Amplifier Board Assy - Generic

Q1	Transistor, SMT, PNP, Motorola MMBT2907ALT1	420-907	1
Q2	Transistor, SMT, PNP, Motorola MMBT2907ALT1	420-907	1
Q3	Transistor, SMT, General Purpose,NPN, Motorola MMBT3904LT1	439-041	1
Q4	Transistor, SMT, NPN, Motorola MMJT9410	429-410	1
Q5	Transistor, SMT, General Purpose,NPN, Motorola MMBT3904LT1	439-041	1
R2	Resistor, SMT, 1206, 274 ohm, Dale CRCW1206-274	185-274	1
R3	Resistor, SMT, 3Watt. 0.05 ohms, Dale WSR-3-.05-1%	184-005	1
R4	Resistor, SMT, 1206, 4.75K, Dale CRCW1206-4.75K	185-4.75K	1
R5	Potentiometer, 5K ohms, SMT, Bourns 3224W-1-502E	108-502	1
R6	Resistor, SMT, size 1206, 392 ohms, Dale CRCW1206-392	185-392	1
R7	Resistor, Dale CRCW1206-100 1/8 W 100 ohm chip	185-101	1
R8	Resistor, SMT, 3 Watt, 0.1 ohm 1%, Dale WSR-3-.1-1%	184-001	1
R9	Resistor, SMT, 3 Watt, 0.1 ohm 1%, Dale WSR-3-.1-1%	184-001	1
R10	Resistor, SMT, 3 Watt, 0.1 ohm 1%, Dale WSR-3-.1-1%	184-001	1
R11	Resistor, 10K ohm 1/8 watt 1% chip Dale CRCW1206-10K	185-103	1
R12	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
R13	Resistor, #263-47k ohm 1/8 watt 5% chip	185-473	1
R14	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
R15	Resistor, SMT, 1206, 274 ohm, Dale CRCW1206-274	185-274	1
R17	Potentiometer, 5K ohms, SMT, Bourns 3224W-1-502E	108-502	1
R18	Resistor, SMT, 3Watt. 0.05 ohms, Dale WSR-3-.05-1%	184-005	1
R19	Resistor, SMT, size 1206, 1.21K ohms, Dale CRCW1206-1.21K	185-1.21K	1
R20	Potentiometer, 5K ohms, SMT, Bourns 3224W-1-502E	108-502	1
R21	Resistor, 10K ohm 1/8 watt 1% chip Dale CRCW1206-10K	185-103	1
R22	Resistor, SMT, 1206, 51.1 ohm, Dale CRCW1206-51.1	185-51.1	1
R23	Resistor, SMT, 1206, 51.1 ohm, Dale CRCW1206-51.1	185-51.1	1
R24	Resistor, 10K ohm 1/8 watt 1% chip Dale CRCW1206-10K	185-103	1
R25	Resistor, SMT, 1206, 4.75K, Dale CRCW1206-4.75K	185-4.75K	1
R27	Resistor, SMT, Size 1206, 475 ohms, Dale CRCW1206-475	185-475	1
R28	Resistor, SMT, size 1206, 1.21K ohms, Dale CRCW1206-1.21K	185-1.21K	1
R29	Resistor, SMT, 1206, 22.1K, Dale CRCW1206-22.1K	185-22.1K	1
R31	Resistor, SMT, 1206, 3.32K, Dale CRCW1206-3.32K	185-3.32K	1
R32	Resistor, 10K ohm 1/8 watt 1% chip Dale CRCW1206-10K	185-103	1
R33	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
R34	Resistor, SMT, 1206, 2.21K ohms, Dale CWCW1206-2.21K	185-2.21K	1
R35	Resistor, 10K ohm 1/8 watt 1% chip Dale CRCW1206-10K	185-103	1
R36	Resistor, 10K ohm 1/8 watt 1% chip Dale CRCW1206-10K	185-103	1
R39	Resistor, SMT, 1206, 2.21K ohms, Dale CWCW1206-2.21K	185-2.21K	1
R40	Resistor, SMT, 1206, 2.21K ohms, Dale CWCW1206-2.21K	185-2.21K	1
R41	Resistor, SMT, 1206, 2.21K ohms, Dale CWCW1206-2.21K	185-2.21K	1
T1	IC, SMT, Amplifier, Wideband, 1 Watt Mini Circuit HELA-10B Kit	400-001	1
T2	IC, SMT, Amplifier, Wideband, 1 Watt Mini Circuit HELA-10B Kit	400-001	1
U1	IC, SMT, Op-amp, quad, rail to rail, Analog Device OP-495GS	400-495	1
U2	IC, SMT, Amplifier, Wideband, 1 Watt Mini Circuit HELA-10B Kit	400-001	1
U8	IC, OP-amp, General Purpose Analog Device OP295GS	400-295	1

Two-Stage RF Power Amplifier Board Assy - Generic

SYMBOL	DESCRIPTION	PART NUMBER	QTY
	TAPE,KAPTON 1/4	700-0119	0
	RF Shielding Fence For Power Amplifier(Interior)	700-226-59	1
	Leader Tech Fence # 47-CBSU-2.75 X 5.75 X .4 NO COVER	700-268	1
	PC BOARD, TWO-STAGE RF PA	800-388B	1
C1 thru C6	Cap, Monolithic chip 10000pF 10% XR7 Kemet C1206C103J5RACTR	270-103	6
C7	Cap., SMT, 1206, 4700 pf, COG, 100V, Kemet C1206C472J5GACTU	270-472	1
C8	Cap., Tantalum, SMT, Size B, 10uF, 16V,Kemet T491B106K016AS	298-106	1
C9	Cap., SMT, 1206, 4700 pf, COG, 100V, Kemet C1206C472J5GACTU	270-472	1
C10	Cap., Tantalum, SMT, Size B, 10uF, 16V,Kemet T491B106K016AS	298-106	1
C11	Cap., SMT, 1206, 4700 pf, COG, 100V, Kemet C1206C472J5GACTU	270-472	1
C12	Cap., Tantalum, SMT, Size B, 10uF, 16V,Kemet T491B106K016AS	298-106	1
C15	Cap., SMT, 1206, 4700 pf, COG, 100V, Kemet C1206C472J5GACTU	270-472	1
C16	Cap.,Tantalum,SMT,Size C, 33uF,16V,Sprague T491C336K016AS	298-336	1
C17,C18	Cap SMT 1mF 16V Tantalum Kemet T491A105M016AS	298-105	2
C19	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C20	Cap.,Tantalum,SMT,Size C, 33uF,16V,Sprague T491C336K016AS	298-336	1
C21,C22	Cap SMT 1mF 16V Tantalum Kemet T491A105M016AS	298-105	2
C23	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C24	Capacitor, Monolithic Chip 100000pF 1% C1206C104J5RAC Kemet	270-104	1
C25 thru C28	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	4
C29	Cap.,Tantalum,SMT,Size C, 33uF,16V,Sprague T491C336K016AS	298-336	1
C30	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C31	Cap.,Tantalum,SMT, Size D, 100uF, 16V,Kemet T491X107K016AS	298-107	1
C32 thru C34	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	3
C40	Cap SMT 1mF 16V Tantalum Kemet T491A105M016AS	298-105	1
D3,D4	Diode, Motorola MMBD101L chip	410-305	2
D5	Diode, Zener, SMT, 2.5V, Motorola MMSZ5222BT1	415-222	1
D6	Diode, Zener, SMT, 13V, Vishay BZX84C13TR	415-840	1
D7	Diode, SMT, Zener, 4.7V, Motorola BZX84C4V7LT1	418-447	1
L1	Inductor, SMT, Power, 0.68, Coilcraft DO3316P-681HC	350-196	1
L2,L3	Inductor, SMT, 1008, 330nH, Coilcraft 1008CS-331XKBC	350-191	2
L4 thru L6	Inductor, SMT, Power, 1uH, Coilcraft DT1608C-102	350-197	3
L7	Inductor, SMT, 1008, 330nH, Coilcraft 1008CS-331XKBC	350-191	1
P1	Connector, 8 pin Molex header (cut from 550-162)	550-138	1
P2	Connector, S.FL2-R-SMT surface mount Hirose	550-193	1
P3	Connector,6-Pin Header	550-324	1
Q1,Q2	Transistor, SMT, PNP, Motorola MMBT2907ALT1	420-907	2
Q3	Transistor, SMT, General Purpose,NPN, Motorola MMBT3904LT1	439-041	1
Q4	Transistor, SMT, NPN, Motorola MMJT9410	429-410	1
Q5	Transistor, SMT, General Purpose,NPN, Motorola MMBT3904LT1	439-041	1
R2	Resistor, SMT, 1206, 274 ohm, Dale CRCW1206-274	185-274	1
R3	Resistor,SMT, 3Watt. 0.05 ohms, Dale WSR-3-.05-1%	184-005	1
R4	Resistor, SMT, 1206, 4.75K, Dale CRCW1206-4.75K	185-4.75K	1
R5	Potentiometer, 5K ohms, SMT, Bourns 3224W-1-502E	108-502	1
R6	Resistor, SMT, size 1206, 392 ohms, Dale CRCW1206-392	185-392	1
R7	Resistor, Dale CRCW1206-100 1/8 W 100 ohm chip	185-101	1
R8 thru R10	Resistor, SMT, 3 Watt, 0.1 ohm 1%, Dale WSR-3-.1-1%	184-001	3
R11	Resistor, 10K ohm 1/8 watt 1% chip Dale CRCW1206-10K	185-103	1
R12	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
R13	Resistor, SMT, size 1206, 15K ohms, Dale CRCW1206-15K	185-153	1
R14	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
R15	Resistor, SMT, 1206, 274 ohm, Dale CRCW1206-274	185-274	1
R17	Potentiometer, 5K ohms, SMT, Bourns 3224W-1-502E	108-502	1
R18	Resistor,SMT, 3Watt. 0.05 ohms, Dale WSR-3-.05-1%	184-005	1

Two-Stage RF Power Amplifier Board Assy - Generic

R19	Resistor, SMT, size 1206, 1.21K ohms, Dale CRCW1206-1.21K	185-1.21K	1
R20	Potentiometer, 5K ohms, SMT, Bourns 3224W-1-502E	108-502	1
R21	Resistor, 10K ohm 1/8 watt 1% chip Dale CRCW1206-10K	185-103	1
R22,R23	Resistor, SMT, 1206, 51.1 ohm, Dale CRCW1206-51.1	185-51.1	2
R24	Resistor, 10K ohm 1/8 watt 1% chip Dale CRCW1206-10K	185-103	1
R25	Resistor, SMT, 1206, 4.75K, Dale CRCW1206-4.75K	185-4.75K	1
R27	Resistor, SMT, Size 1206, 475 ohms, Dale CRCW1206-475	185-475	1
R28	Resistor, SMT, size 1206, 1.21K ohms, Dale CRCW1206-1.21K	185-1.21K	1
R29	Resistor, SMT, 1206, 22.1K, Dale CRCW1206-22.1K	185-22.1K	1
R31	Resistor, SMT, 1206, 3.32K, Dale CRCW1206-3.32K	185-3.32K	1
R32	Resistor, 10K ohm 1/8 watt 1% chip Dale CRCW1206-10K	185-103	1
R33	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
R34	Resistor, SMT, 1206, 2.21K ohms, Dale CWCW1206-2.21K	185-2.21K	1
R35,R36	Resistor, 10K ohm 1/8 watt 1% chip Dale CRCW1206-10K	185-103	2
R39 thru R41	Resistor, SMT, 1206, 2.21K ohms, Dale CWCW1206-2.21K	185-2.21K	3
T1,T2	IC,SMT,Amplifier,Wideband, 1 Watt Mini Circuit HELA-10B Kit	400-001	2
U1	IC, SMT, Op-amp, quad, rail to rail, Analog Device OP-495GS	400-495	1
U2	IC,SMT,Amplifier,Wideband, 1 Watt Mini Circuit HELA-10B Kit	400-001	1
U8	IC,OP-amp, General Purpose Analog Device OP295GS	400-295	1
R20	Potentiometer, 5K ohms, SMT, Bourns 3224W-1-502E	108-502	1
R21	Resistor, 10K ohm 1/8 watt 1% chip Dale CRCW1206-10K	185-103	1
R22	Resistor, SMT, 1206, 51.1 ohm, Dale CRCW1206-51.1	185-51.1	1
R23	Resistor, SMT, 1206, 51.1 ohm, Dale CRCW1206-51.1	185-51.1	1
R24	Resistor, 10K ohm 1/8 watt 1% chip Dale CRCW1206-10K	185-103	1
R25	Resistor, SMT, 1206, 4.75K, Dale CRCW1206-4.75K	185-4.75K	1
R27	Resistor, SMT, Size 1206, 475 ohms, Dale CRCW1206-475	185-475	1
R28	Resistor, SMT, size 1206, 1.21K ohms, Dale CRCW1206-1.21K	185-1.21K	1
R29	Resistor, SMT, 1206, 22.1K, Dale CRCW1206-22.1K	185-22.1K	1
R31	Resistor, SMT, 1206, 3.32K, Dale CRCW1206-3.32K	185-3.32K	1
R32	Resistor, 10K ohm 1/8 watt 1% chip Dale CRCW1206-10K	185-103	1
R33	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
R34	Resistor, SMT, 1206, 2.21K ohms, Dale CWCW1206-2.21K	185-2.21K	1
R35	Resistor, 10K ohm 1/8 watt 1% chip Dale CRCW1206-10K	185-103	1
R36	Resistor, 10K ohm 1/8 watt 1% chip Dale CRCW1206-10K	185-103	1
R39	Resistor, SMT, 1206, 2.21K ohms, Dale CWCW1206-2.21K	185-2.21K	1
R40	Resistor, SMT, 1206, 2.21K ohms, Dale CWCW1206-2.21K	185-2.21K	1
R41	Resistor, SMT, 1206, 2.21K ohms, Dale CWCW1206-2.21K	185-2.21K	1
T1	IC,SMT,Amplifier,Wideband, 1 Watt Mini Circuit HELA-10B Kit	400-001	1
T2	IC,SMT,Amplifier,Wideband, 1 Watt Mini Circuit HELA-10B Kit	400-001	1
U1	IC, SMT, Op-amp, quad, rail to rail, Analog Device OP-495GS	400-495	1
U2	IC,SMT,Amplifier,Wideband, 1 Watt Mini Circuit HELA-10B Kit	400-001	1
U8	IC,OP-amp, General Purpose Analog Device OP295GS	400-295	1

Transmitter Synthesizer Board Assy - Generic

SYMBOL	DESCRIPTION	PART NUMBER	QTY
C52	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
	TAPE,KAPTON 1/4	700-0119	1
	Exterior Fencing&Cover,Synth Leader Tech88-CBSU-2.25x5.75x.8	700-226-63	1
	PC Board, Transmitter Synthesizer,	800-375B	1
C1	Cap.,Tantalum,SMT, Size D, 100uF, 16V,Kemet T491X107K016AS	298-107	1
C3	Cap.,Tantalum,SMT, Size D, 100uF, 16V,Kemet T491X107K016AS	298-107	1
C4	Capacitor,Tantalum,SMT,size D, 47uF,16V Kemet T491D476K016AS	298-476	1
C5	Cap SMT 1mF 16V Tantalum Kemet T491A105M016AS	298-105	1
C6	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C8	Cap SMT 1mF 16V Tantalum Kemet T491A105M016AS	298-105	1
C9	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C10	Capacitor,Tantalum,SMT,size D, 15uF,25V Kemet T491D156K025AS	298-156	1
C11	Capacitor,Tantalum,SMT,size X,150uF,16V Kemet T491X157K016AS	298-157	1
C12	Capacitor,Tantalum,SMT,size D, 15uF,25V Kemet T491D156K025AS	298-156	1
C13	Capacitor,Tantalum,SMT,size X,150uF,16V Kemet T491X157K016AS	298-157	1
C16	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C17	Cap.,Tantalum,SMT, Size D, 100uF, 16V,Kemet T491X107K016AS	298-107	1
C18	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C19	Cap, Monolithic chip 10000pF 10% XR7 Kemet C1206C103J5RACTR	270-103	1
C20	Capacitor, Monolithic Chip 100000pF 1% C1206C104J5RAC Kemet	270-104	1
C21	Cap SMT 1mF 16V Tantalum Kemet T491A105M016AS	298-105	1
C22	Cap.,Tantalum,SMT, Size D, 100uF, 16V,Kemet T491X107K016AS	298-107	1
C23	Cap.,Tantalum,SMT, Size D, 100uF, 16V,Kemet T491X107K016AS	298-107	1
C24	Cap SMT 1mF 16V Tantalum Kemet T491A105M016AS	298-105	1
C25	Cap, Monolithic chip 10000pF 10% XR7 Kemet C1206C103J5RACTR	270-103	1
C26	Capacitor, monolithic chip, 10 pf 50v Kemet C1206C100J5GACTR	270-100	1
C27	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C28	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C29	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C30	Cap, Monolithic chip 10000pF 10% XR7 Kemet C1206C103J5RACTR	270-103	1
C31	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C32	Cap SMT 1mF 16V Tantalum Kemet T491A105M016AS	298-105	1
C33	Cap, Monolithic chip 10000pF 10% XR7 Kemet C1206C103J5RACTR	270-103	1
C34	Cap SMT 1mF 16V Tantalum Kemet T491A105M016AS	298-105	1
C35	Capacitor, Monolithic Chip 100000pF 1% C1206C104J5RAC Kemet	270-104	1
C36	Capacitor,Tantalum,SMT,size D, 47uF,16V Kemet T491D476K016AS	298-476	1
C38	Cap SMT 1mF 16V Tantalum Kemet T491A105M016AS	298-105	1
C39	Cap, Monolithic chip 10000pF 10% XR7 Kemet C1206C103J5RACTR	270-103	1
C40	Cap.,Tantalum,SMT, Size D, 100uF, 16V,Kemet T491X107K016AS	298-107	1
C41	Cap., Tantalum, SMT, Size B, 10uF, 16V,Kemet T491B106K016AS	298-106	1
C42	Cap SMT 1mF 16V Tantalum Kemet T491A105M016AS	298-105	1
C43	Cap, Monolithic chip 10000pF 10% XR7 Kemet C1206C103J5RACTR	270-103	1
C44	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C45	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C50	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C51	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C53	Cap.,Tantalum,SMT, Size D, 100uF, 16V,Kemet T491X107K016AS	298-107	1
C54	Cap SMT 1mF 16V Tantalum Kemet T491A105M016AS	298-105	1
C55	Cap, Monolithic chip 10000pF 10% XR7 Kemet C1206C103J5RACTR	270-103	1
C56	Cap SMT 1mF 16V Tantalum Kemet T491A105M016AS	298-105	1
C57	Capacitor,monolithic chip,33 pf 50v 5% Kemet C1206C330J5GAC	270-330	1
C58	Capacitor,monolithic chip,33 pf 50v 5% Kemet C1206C330J5GAC	270-330	1
C59	Cap.,Tantalum,SMT, Size D, 100uF, 16V,Kemet T491X107K016AS	298-107	1

Transmitter Synthesizer Board Assy - Generic

C60	Cap.,Tantalum,SMT, Size D, 100uF, 16V,Kemet T491X107K016AS	298-107	1
C61	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C62	Cap SMT 1mF 16V Tantalum Kemet T491A105M016AS	298-105	1
D1	Diode, Zener, SMT, 13V, Vishay BZX84C13TR	415-840	1
D2	Diode, SMT, Zener, 5.1V Motorola BZX84C5V1LT1	418-451	1
D3	Diode, SMT, Zener, 4.7V, Motorola BZX84C4V7LT1	418-447	1
D4	Diode, SMT, Zener, 5.1V Motorola BZX84C5V1LT1	418-451	1
J1	Connector, S.FL2-R-SMT surface mount Hirose	550-193	1
JP1	Open Top Two Circuit Shunt Molex 15-38-1024	550-182	1
L1	Inductor, 10uH SMT DN12103JTR-ND DELEVAN 5%	330-024	1
L2	Inductor, 10uH SMT DN12103JTR-ND DELEVAN 5%	330-024	1
L3	Inductor, 10uH SMT DN12103JTR-ND DELEVAN 5%	330-024	1
L4	Inductor, SMT, 1008, 330nH, Coilcraft 1008CS-331XKBC	350-191	1
L5	Inductor, SMT, 1008, 330nH, Coilcraft 1008CS-331XKBC	350-191	1
L6	Inductor, 10uH SMT DN12103JTR-ND DELEVAN 5%	330-024	1
L7	Inductor, 10uH SMT DN12103JTR-ND DELEVAN 5%	330-024	1
L8	Inductor, 10uH SMT DN12103JTR-ND DELEVAN 5%	330-024	1
L9	Inductor, 10uH SMT DN12103JTR-ND DELEVAN 5%	330-024	1
P1	Conn,16-Pin (cut from 550-325) Right Angle	550-325-16	1
P2	Conn,20-Pin (cut from 550-325) Right Angle	550-325-20	1
Q1	Transistor, SMT, Darlington, NPN, Mototrola MMBTA14LT1	420-141	1
Q2	Transistor, SMT, Darlington, NPN, Mototrola MMBTA14LT1	420-141	1
Q3	Transistor, SMT, Darlington, NPN, Mototrola MMBTA14LT1	420-141	1
Q4	Transistor, SMT, Darlington, NPN, Mototrola MMBTA14LT1	420-141	1
Q5	Transistor, SMT, Darlington, NPN, Mototrola MMBTA14LT1	420-141	1
Q7	Transistor, SMT, General Purpose,NPN, Motorola MMBT3904LT1	439-041	1
Q8	Transistor, SMT, General Purpose,NPN, Motorola MMBT3904LT1	439-041	1
Q9	Transistor, SMT, General Purpose,NPN, Motorola MMBT3904LT1	439-041	1
R1	Resistor, SMT, size 1206, 2.74K ohms, Dale CRCW1206-2.74K	185-2.74K	1
R2	Resistor, SMT, size 1206, 5.11K ohms, Dale CRCW1206-5.11K	185-5.11K	1
R3	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
R4	Resistor, SMT, 1206, 4.75K, Dale CRCW1206-4.75K	185-4.75K	1
R5	Resistor, SMT, size 1206, 22.1 ohms, Dale CRCW1206-22.1	185-22.1	1
R6	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
R7	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
R8	Resistor, 10K ohm 1/8 watt 1% chip Dale CRCW1206-10K	185-103	1
R11	Resistor, SMT, 1206, 4.75K, Dale CRCW1206-4.75K	185-4.75K	1
R13	Resistor, Dale CRCW1206-100K 100k ohm 1/8 watt 1% chip	185-104	1
R14	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
R15	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
R16	Resistor, Dale CRCW1206-100K 100k ohm 1/8 watt 1% chip	185-104	1
R17	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
R18	Resistor, 10 Ohm Dale CRCW1206-10 1% Tape & Reel	185-100	1
R20	Resistor, 10K ohm 1/8 watt 1% chip Dale CRCW1206-10K	185-103	1
R21	Resistor, SMT, size 1206, 18.2 ohms, Dale CRCW1206-18.2	185-18.2	1
R22	Resistor, SMT, size 1206, 18.2 ohms, Dale CRCW1206-18.2	185-18.2	1
R23	Resistor, SMT, size 1206, 18.2 ohms, Dale CRCW1206-18.2	185-18.2	1
R24	Resistor, 10 Ohm Dale CRCW1206-10 1% Tape & Reel	185-100	1
R25	Resistor, 10 Ohm Dale CRCW1206-10 1% Tape & Reel	185-100	1
R26	Resistor, SMT, size 1206, 133 ohms, Dale CRCW1206-133	185-133	1
R27	Resistor, 15 ohm 1/8 watt 5% chip Dale #CRCW1206150JT	185-150	1
R28	Resistor, SMT, size 1206, 39.2 ohms, Dale CRCW1206-39.2	185-39.2	1
R29	Resistor, SMT, size 1206, 39.2 ohms, Dale CRCW1206-39.2	185-39.2	1
R30	Resistor, SMT, size 1206, 2.74K ohms, Dale CRCW1206-2.74K	185-2.74K	1

Transmitter Synthesizer Board Assy - Generic

R31	Resistor, SMT, size 1206, 5.11K ohms, Dale CRCW1206-5.11K	185-5.11K	1
R32	Resistor, SMT, size 1206, 5.11K ohms, Dale CRCW1206-5.11K	185-5.11K	1
R33	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
R34	Resistor, SMT, size 1206, 47.5 ohms, Dale CRCW1206-47.5	185-47.5	1
R35	Resistor, 10 Ohm Dale CRCW1206-10 1% Tape & Reel	185-100	1
R36	Resistor, 10 Ohm Dale CRCW1206-10 1% Tape & Reel	185-100	1
R37	Resistor, SMT, size 1206, 133 ohms, Dale CRCW1206-133	185-133	1
R38	Resistor, 0 Ohm 1206 Chip Mfg# DALCRCW1206000ZT-X	185-000	1
R43	Resistor, SMT, 1206, 51.1 ohm, Dale CRCW1206-51.1	185-51.1	1
R44	Resistor, SMT, 1206, 3.32K, Dale CRCW1206-3.32K	185-3.32K	1
R45	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
R52	Resistor, 10K ohm 1/8 watt 1% chip Dale CRCW1206-10K	185-103	1
R53	Resistor, SMT, 1206, 1.62K Ohm, Dale CRCW1206-1.62K	185-1.62K	1
R54	Resistor, SMT, 1206, 4.75K, Dale CRCW1206-4.75K	185-4.75K	1
R55	Resistor, SMT, Size 1206, 475 ohms, Dale CRCW1206-475	185-475	1
R56	Resistor, SMT, 1206, 4.75K, Dale CRCW1206-4.75K	185-4.75K	1
R57	Resistor, SMT, Size 1206, 475 ohms, Dale CRCW1206-475	185-475	1
R58	Resistor, SMT, 1206, 4.75K, Dale CRCW1206-4.75K	185-4.75K	1
R59	Resistor, Dale CRCW1206-100 1/8 W 100 ohm chip	185-101	1
R60	Resistor, SMT, size 1206, 2.74K ohms, Dale CRCW1206-2.74K	185-2.74K	1
R61	Resistor, SMT, size 1206, 5.11K ohms, Dale CRCW1206-5.11K	185-5.11K	1
R62	Resistor, SMT, Size 1206, 475 ohms, Dale CRCW1206-475	185-475	1
R63	Potentiometer, 5K ohms, SMT, Bourns 3224W-1-502E	108-502	1
R66	Resistor, 10K ohm 1/8 watt 1% chip Dale CRCW1206-10K	185-103	1
R67	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
R68	Resistor, 10K ohm 1/8 watt 1% chip Dale CRCW1206-10K	185-103	1
R69	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
R70	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
R71	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
R72	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
R73	Resistor, SMT, 1206, 2.21K ohms, Dale CWCW1206-2.21K	185-2.21K	1
R74	Potentiometer, 5K ohms, SMT, Bourns 3224W-1-502E	108-502	1
R75	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
R76	Resistor, SMT, 1206, 22.1K, Dale CRCW1206-22.1K	185-22.1K	1
R77	Resistor, 10K ohm 1/8 watt 1% chip Dale CRCW1206-10K	185-103	1
R78	Resistor, Dale CRCW1206-100 1/8 W 100 ohm chip	185-101	1
R79	Resistor, SMT, 1206, 4.75K, Dale CRCW1206-4.75K	185-4.75K	1
R80	Resistor, SMT, 1206, 4.75K, Dale CRCW1206-4.75K	185-4.75K	1
R81	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
R82	Resistor, SMT, 1206, 4.75K, Dale CRCW1206-4.75K	185-4.75K	1
R83	Resistor, 10 Ohm Dale CRCW1206-10 1% Tape & Reel	185-100	1
R84	Resistor, 10 Ohm Dale CRCW1206-10 1% Tape & Reel	185-100	1
R85	Resistor, SMT, size 1206, 133 ohms, Dale CRCW1206-133	185-133	1
R86	Resistor, 1K ohm 1/8 watt 1% chip Dale CRCW1206-1K	185-102	1
R87	Resistor, SMT, 1206, 4.75K, Dale CRCW1206-4.75K	185-4.75K	1
U1	IC, SMT, Microcontroller Atmel AT90S4433-8AI	409-044	1
U2	IC, SMT, Op-amp, quad, rail to rail, Analog Device OP-495GS	400-495	1
U4	IC, SMT, Prescaler, Dual Mod, 64/65-128/129 Motorola MC12054AD	402-054	1
U5	IC, SMT, PLL Freq Synth, Serial inp Motorola MC145158DW2	400-158	1
U7	IC, SMT, Op-amp, Low Noise, High Audio BW Analog Device OP-275GS	401-275	1
U8	IC, SMT, Op-amp, Low Noise, High Audio BW Analog Device OP-275GS	401-275	1
U9	IC, SMT, Digital Pot, +/-15V, 10K Ohms Analog Device AD7376AR10	407-376	1
U10	IC, SMT, MMIC amplifier, 2 GHz, Broadband, NEC UPC1678GV	400-678	1
U11	IC, SMT, MMIC amplifier, 2 GHz, Broadband, NEC UPC1678GV	400-678	1

Transmitter Synthesizer Board Assy - Generic

U14	IC, SMT, Regulator, Adjustable, 1.5 Amps, National LM317AEMP	401-317	1
U15	Crystal, SMD 12.8 MHz Abracon #ASTX-01-12.800Mhz 5 volt	012-280	1
U16	ICSMT, Digital Pot, 2 Ch, 100K ohms, Analog Device AD8402AR100	408-402	1
X1	Crystal, SMT, 7.3728 MHz, 50ppm, Epson MA-506-7.3728M-C2	011-7.3728	1

Cable Assy, AC Connector to Ground

<i>SYMBOL</i>	<i>DESCRIPTION</i>	<i>PART NUMBER</i>	<i>QTY</i>
	<i>Solder Lug, #4 short Concord 707-1204</i>	<i>512-018</i>	<i>1</i>
	<i>Terminal, NICHIFU TMDN #125-250-03FA TERMINAL</i>	<i>512-020</i>	<i>1</i>
	<i>Wire, Stranded UL1015-20/10 Black Tinned Copper</i>	<i>580-130</i>	<i>1</i>

SRPT-30
Thermocouple Assy

<i>SYMBOL</i>	<i>DESCRIPTION</i>	<i>PART NUMBER</i>	<i>QTY</i>
	<i>Thermistor, Fenwal 142-102-FAG-RB1 1000 OHM @ 25C 10%</i>	<i>120-002</i>	<i>1</i>
	<i>Terminal, vinyl insulated C10 #10 stud #10-12 wire</i>	<i>512-002</i>	<i>1</i>
	<i>Hysol Epoxi-Patch Kit 11C Black</i>	<i>900-019</i>	<i>1</i>

Generic RPU Audio Board Assy

SYMBOL	DESCRIPTION	PART NUMBER	QTY
	PC Board, Audio RPT-2/15/30 REV-9526	800-166B	1
C1	Capacitor, 470 pf 50v 10% Y5P disc Jetcon F6Y5P1C471K-JT	253-471	1
C2	Capacitor, tantalum, 4.7 mf 16v Kemet T350B475K016AS	299-470	1
C3	Capacitor, 106 50V Radial Electrolytic SPG 515D106M050JA6A	219-106	1
C4	Capacitor, electrolytic 22uF radial 35V	219-220	1
C7	Cap., .27 mf 100v 10% polypro CD MTC1P27K OR Bishop C21B274K	226-274	1
C9	Capacitor, electrolytic 220uF 25V radial NIC UVX1E221MPA1TD	219-221	1
C10	Cap., 68pF 5% 200V ceramic dipped Kemet C317C680J2G5CA	256-680C	1
C11	Capacitor, .0082 Mfd 2.5% 100v polypro Seacor PFWAB82OHGNE	215-822	1
C12	Capacitor, .01 mf 50v GMV disc Jetcon F7Z5U1C103Z-TR	217-104	1
C13	Capacitor, electrolytic 220uF 25V radial NIC UVX1E221MPA1TD	219-221	1
C14	Capacitor, electrolytic 220uF 25V radial NIC UVX1E221MPA1TD	219-221	1
C15	Capacitor, 470 pf 50v 10% Y5P disc Jetcon F6Y5P1C471K-JT	253-471	1
C16	Capacitor, .1 mf 100v 10% mylar Ohsung OSG2A104K BULK	217-103	1
C17	Capacitor, tantalum, 4.7 mf 16v Kemet T350B475K016AS	299-470	1
C18	Capacitor, 106 50V Radial Electrolytic SPG 515D106M050JA6A	219-106	1
C19	Capacitor, tantalum, 4.7 mf 16v Kemet T350B475K016AS	299-470	1
C20	Capacitor, .012 mfd 2.5% 100v polypro Seacor PFWAC120HGUE	215-123	1
C21	Capacitor, electrolytic 22uF radial 35V	219-220	1
C22	Capacitor, .012 mfd 2.5% 100v polypro Seacor PFWAC120HGUE	215-123	1
C24	Cap., 47pF 5% 200V ceramic dipped Kemet C317C470J2G5CA	255-470C	1
C25	Capacitor, .022 mfd 2.5% 100v polypro Seacor PFWAC220HGNE	215-223	1
C26	Capacitor, .0039 mfd 2.5% polypro Seacor PFWAB390HGNE	215-392	1
C27	Cap., 47pF 5% 200V ceramic dipped Kemet C317C470J2G5CA	255-470C	1
C28	Capacitor, .01 mf 50v GMV disc Jetcon F7Z5U1C103Z-TR	217-104	1
C29	Capacitor, 470 pf 50v 10% Y5P disc Jetcon F6Y5P1C471K-JT	253-471	1
C30	Capacitor, electrolytic 22uF radial 35V	219-220	1
C31	Cap., .27 mf 100v 10% polypro CD MTC1P27K OR Bishop C21B274K	226-274	1
C32	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C33	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C34	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C35	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C36	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C37	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C38	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C39	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C40	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
C41	Cap,monolithic,1000pf 50v 5%KemetC1206C102J5GACTR marked	270-102	1
D1	Diode, 1N4148 Philips	410-914	1
D2	Diode, 1N4148 Philips	410-914	1
D3	Diode, 1N4148 Philips	410-914	1
D4	Diode, 1N4148 Philips	410-914	1
D5	Diode, 1N4148 Philips	410-914	1
D6	Diode, General Instruments 1N4007	414-007	1
IC1	Integrated Circuit, SGS TDA1054M	401-054	1
IC2	Integrated Circuit, TI LM3900N	403-900	1
L1	Inductor, 387-150M 40000-150000 uH Aurora #47271-011	350-032	1

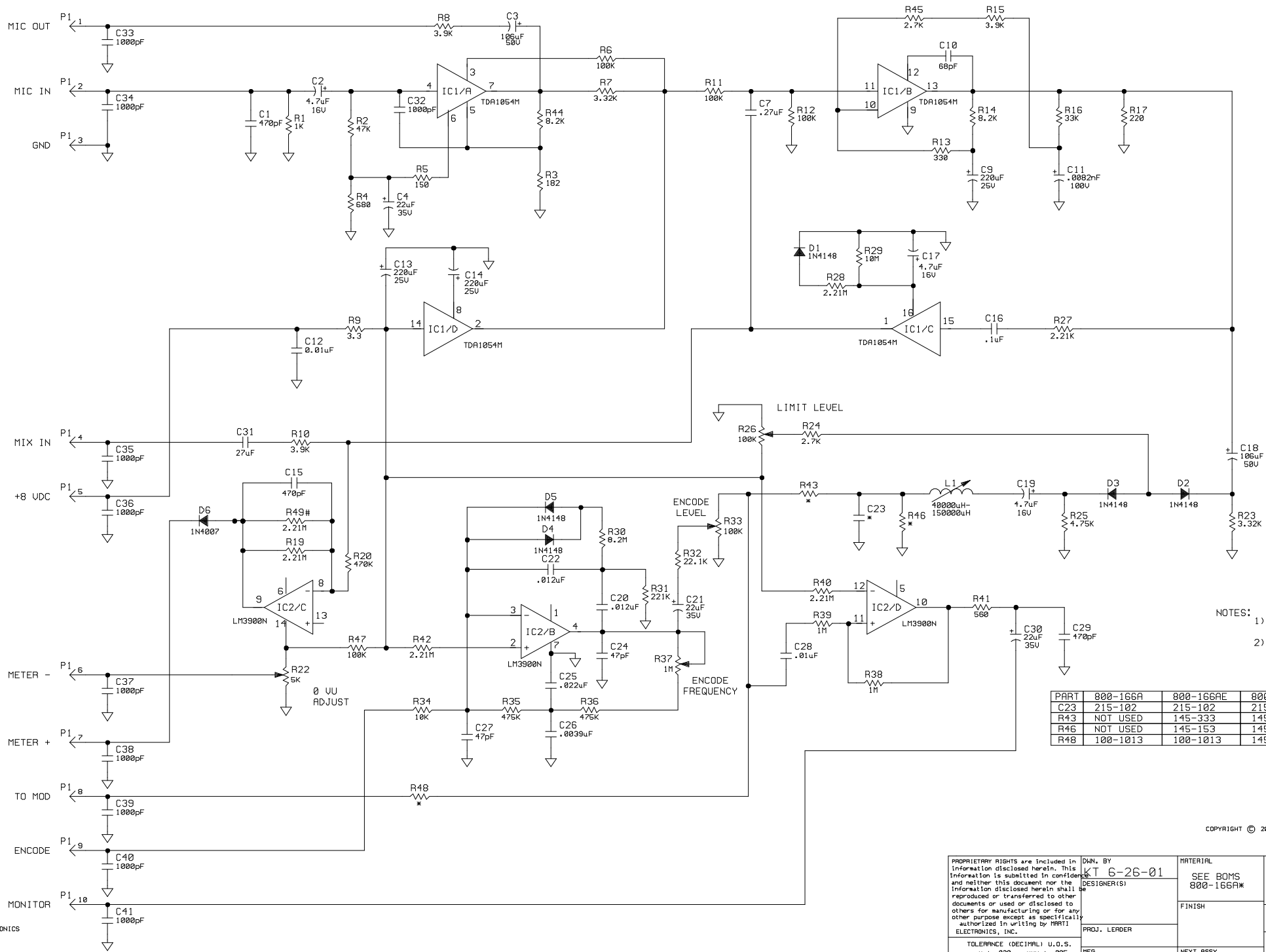
Generic RPU Audio Board Assy

P1	Connector, 10 pin header (cut from 550-162)	550-123	1
R1	Resistor, 1k ohm 1/4 watt 1% metal film Mepco SFR55 1K 1%TR	145-102	1
R2	Resistor, 47k ohm 1/4 watt 1% metal film Mepco SFR25	145-473	1
R3	Resistor, 182 ohm 1/4 watt 1% metal film Mepco SFR25	145-181	1
R4	Resistor, 680 ohm 1/4 watt 1% metal film Mepco SFR25	145-681	1
R5	Resistor, 150 ohm 1/4 watt 1% metal film Mepco SFR25	145-151	1
R6	Resistor, 100k ohm 1/4 watt 1% metal film Mepco SFR25	145-104	1
R7	Resistor, 3.32k ohm 1/4 watt 1% metal film Mepco SFR55	145-332	1
R8	Resistor, 3.9k ohm 1/4 watt 1% metal film Mepco SFR25	145-392	1
R9	Resistor, 3.3 ohm 1/4 watt 1% metal film Mepco SFR25	145-030	1
R10	Resistor, 3.9k ohm 1/4 watt 1% metal film Mepco SFR25	145-392	1
R11	Resistor, 100k ohm 1/4 watt 1% metal film Mepco SFR25	145-104	1
R12	Resistor, 100k ohm 1/4 watt 1% metal film Mepco SFR25	145-104	1
R13	Resistor, 330 ohm 1/4 watt 1% metal film Mepco SFR25	145-331	1
R14	Resistor, 8.2k ohm 1/4 watt 1% metal film Mepco SFR25	145-822	1
R15	Resistor, 3.9k ohm 1/4 watt 1% metal film Mepco SFR25	145-392	1
R16	Resistor, 33k ohm 1/4 watt 1% metal film Mepco SFR25	145-333	1
R17	Resistor, 220 ohm 1/4 watt 1% metal film Mepco SFR25	145-221	1
R19	Resistor, 2.21 meg ohm 1/4 watt 1% metal film (2.21 Meg 1%)	145-225	1
R20	Resistor, 470k ohm 1/4 watt 1% metal film Koa MF55D TR	145-474	1
R22	Potentiometer, 5k ohm cermet Bourns 3309P-1-502	101-502	1
R23	Resistor, 3.32k ohm 1/4 watt 1% metal film Mepco SFR55	145-332	1
R24	Resistor, 2.7k ohm 1/4 watt 1% metal film Mepco SFR25	145-272	1
R25	Resistor, 4.75K ohm 1/4 watt 1% metal film Mepco SFR25	145-472	1
R26	Potentiometer, 100K ohm cermet Bourns 3309P-1-104	101-104	1
R27	Resistor, 2.21K ohm 1/4 watt 1% metal film Mepco SFR25	145-222	1
R28	Resistor, 2.21 meg ohm 1/4 watt 1% metal film (2.21 Meg 1%)	145-225	1
R29	Resistor, 10 meg ohm 1/4 watt 5% metal film Mepco SFR25	145-106	1
R30	Resistor, 8.2 meg ohm 1/4 watt 5% carbon film 29SJ250	145-825	1
R31	Resistor, 221k ohm 1/4 watt 1% RN55D2213F	145-224-1	1
R32	Resistor, 22.1k ohm 1/4 watt 1% metal film Mepco SFR25	145-223	1
R33	Potentiometer, 100K ohm cermet Bourns 3309P-1-104	101-104	1
R34	Resistor, 10k ohm 1/4 watt 1% metal film Mepco SFR25	145-103	1
R35	Resistor, 475k ohm 1/4 watt 1% SFR55 475K 1%	145-474-1	1
R36	Resistor, 475k ohm 1/4 watt 1% SFR55 475K 1%	145-474-1	1
R37	Potentiometer, 1meg ohm cermet Bourns 3296Y-1-105 top adjust	104-105	1
R38	Resistor, 1 meg ohm 1/4 watt 1% metal film Mepco SFR25	145-105	1
R39	Resistor, 1 meg ohm 1/4 watt 1% metal film Mepco SFR25	145-105	1
R40	Resistor, 2.21 meg ohm 1/4 watt 1% metal film (2.21 Meg 1%)	145-225	1
R41	Resistor, 560 ohm 1/4 watt 1% metal film Mepco SFR25	145-561	1
R42	Resistor, 2.21 meg ohm 1/4 watt 1% metal film (2.21 Meg 1%)	145-225	1
R44	Resistor, 8.2k ohm 1/4 watt 1% metal film Mepco SFR25	145-822	1
R45	Resistor, 2.7k ohm 1/4 watt 1% metal film Mepco SFR25	145-272	1
R47	Resistor, 100k ohm 1/4 watt 1% metal film Mepco SFR25	145-104	1

Cable Assy, AC Connector to Fuseholder

<i>SYMBOL</i>	<i>DESCRIPTION</i>	<i>PART NUMBER</i>	<i>QTY</i>
	<i>Terminal, NICHIFU TMDN #125-250-03FA TERMINAL</i>	<i>512-020</i>	<i>2</i>
	<i>Wire, Stranded UL1015-20/10 Black Tinned Copper</i>	<i>580-130</i>	<i>1</i>

REVISIONS					
REV	DATE	DESCRIPTION	DRAFTER	APPROVED	ECN
2	6-26-01	REDDRAWN IN CAD	KT		
A	8-13-01	UPDATED TO MATCH BOMS	KT		10504
B	10-9-01	ADDED R49 AND ASSEMBLY 800-166A40A	KT		10549



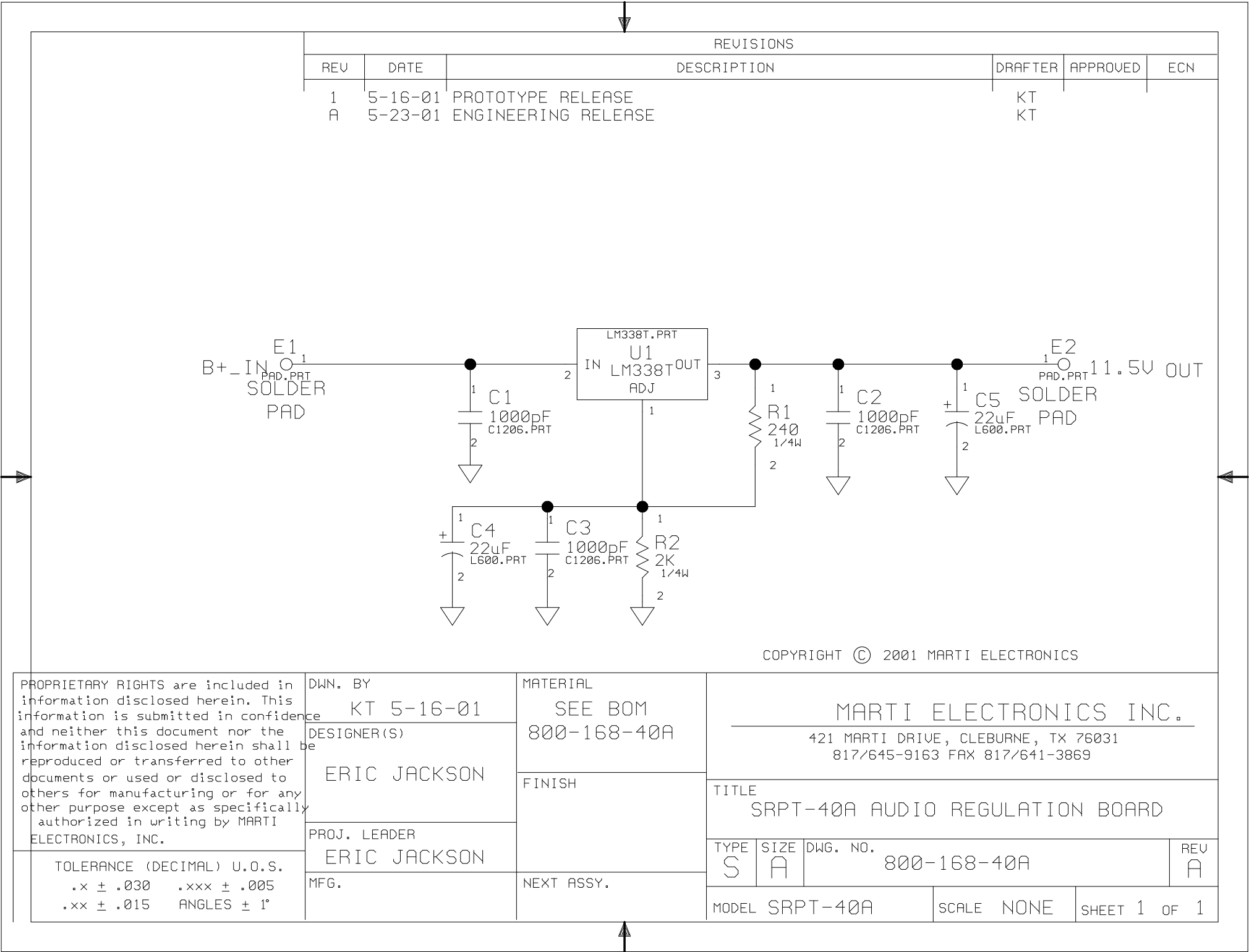
- NOTES:
- * PARTS NOT STUFFED ON 800-166CM, SEE TABLE FOR WERE USED
 - # R49 USED ONLY ON 800-166A40A

PART	800-166A	800-166AE	800-166AS	800-166A	800-166A40A
C23	215-102	215-102	215-242	215-223	215-242
R43	NOT USED	145-333	145-102	145-102	145-102
R46	NOT USED	145-153	145-153	145-822	145-153
R48	100-1013	100-1013	145-472	100-1013	145-472

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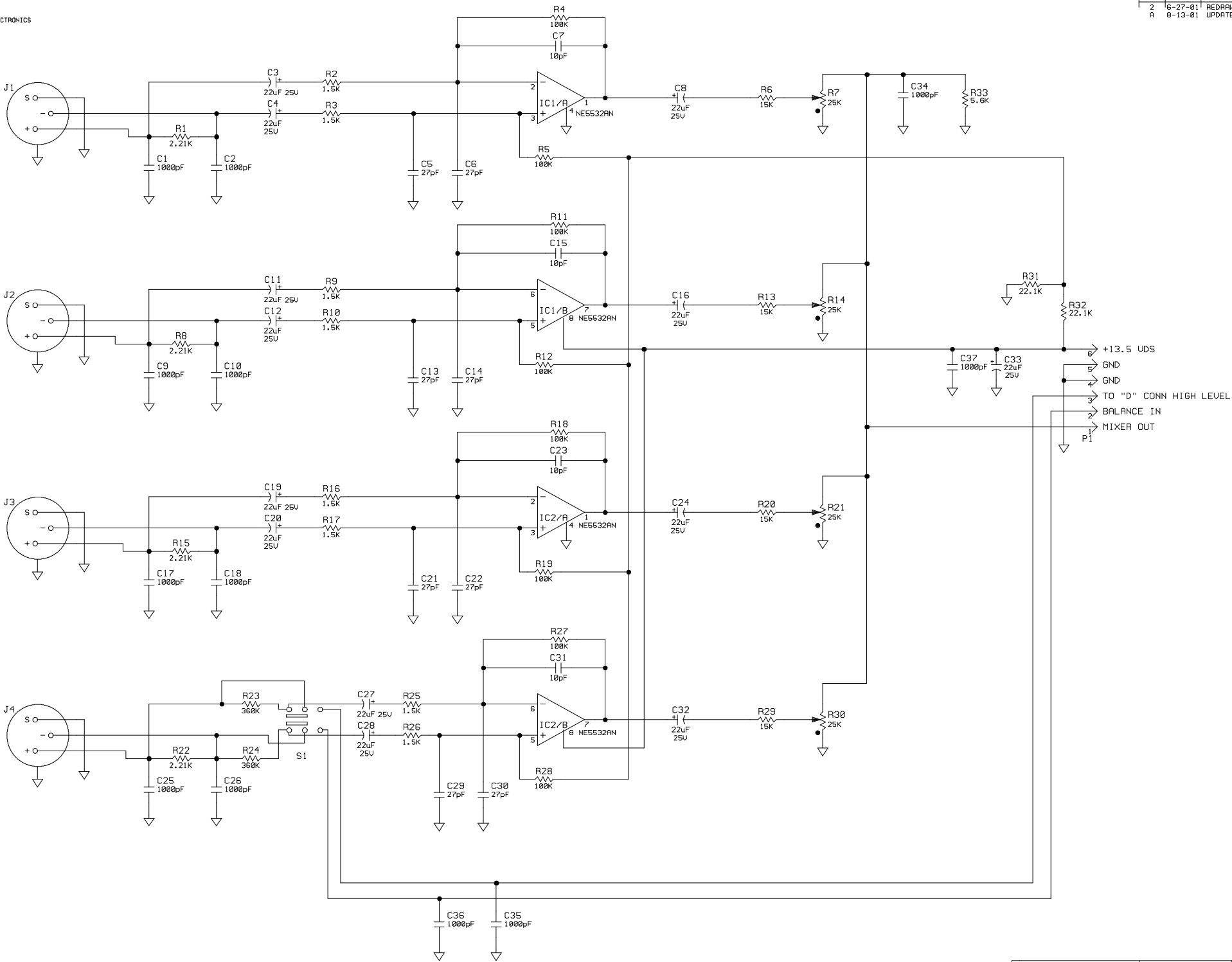
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		TOLERANCE (DECIMAL) U.O.S. .X ± .030 .XXX ± .005 .XX ± .015 ANGLES ± 1		FINISH		TITLE AUDIO BOARD	
PROJECT LEADER		NEXT ASSY.		TYPE SIZE DWG. NO. 800-166A/RE/AT/AS/CM		REV B	
MFG.		MODEL		SAPT-40 RPT-2/15/30		SCALE NONE	
						SHEET 1 OF 1	



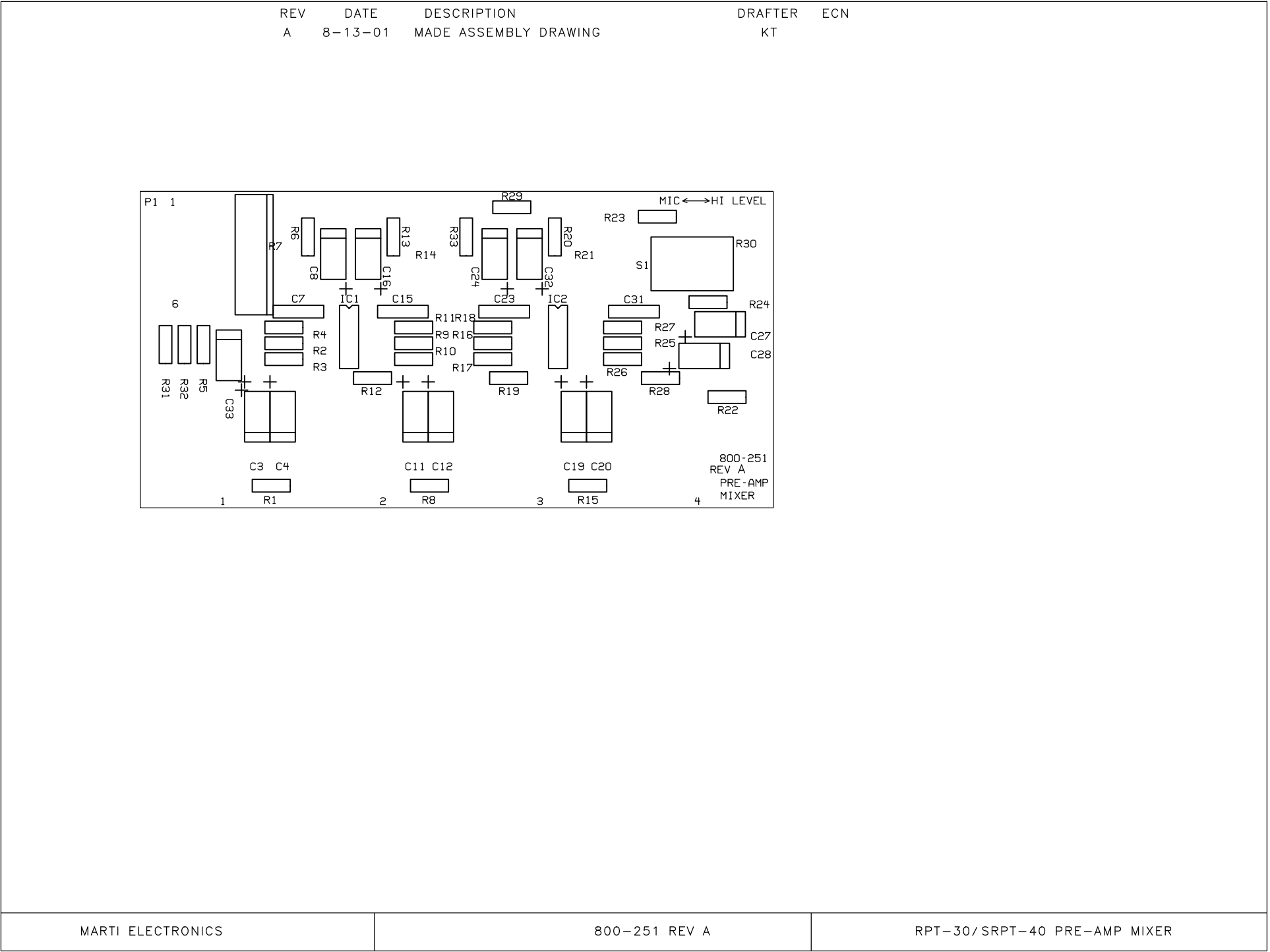
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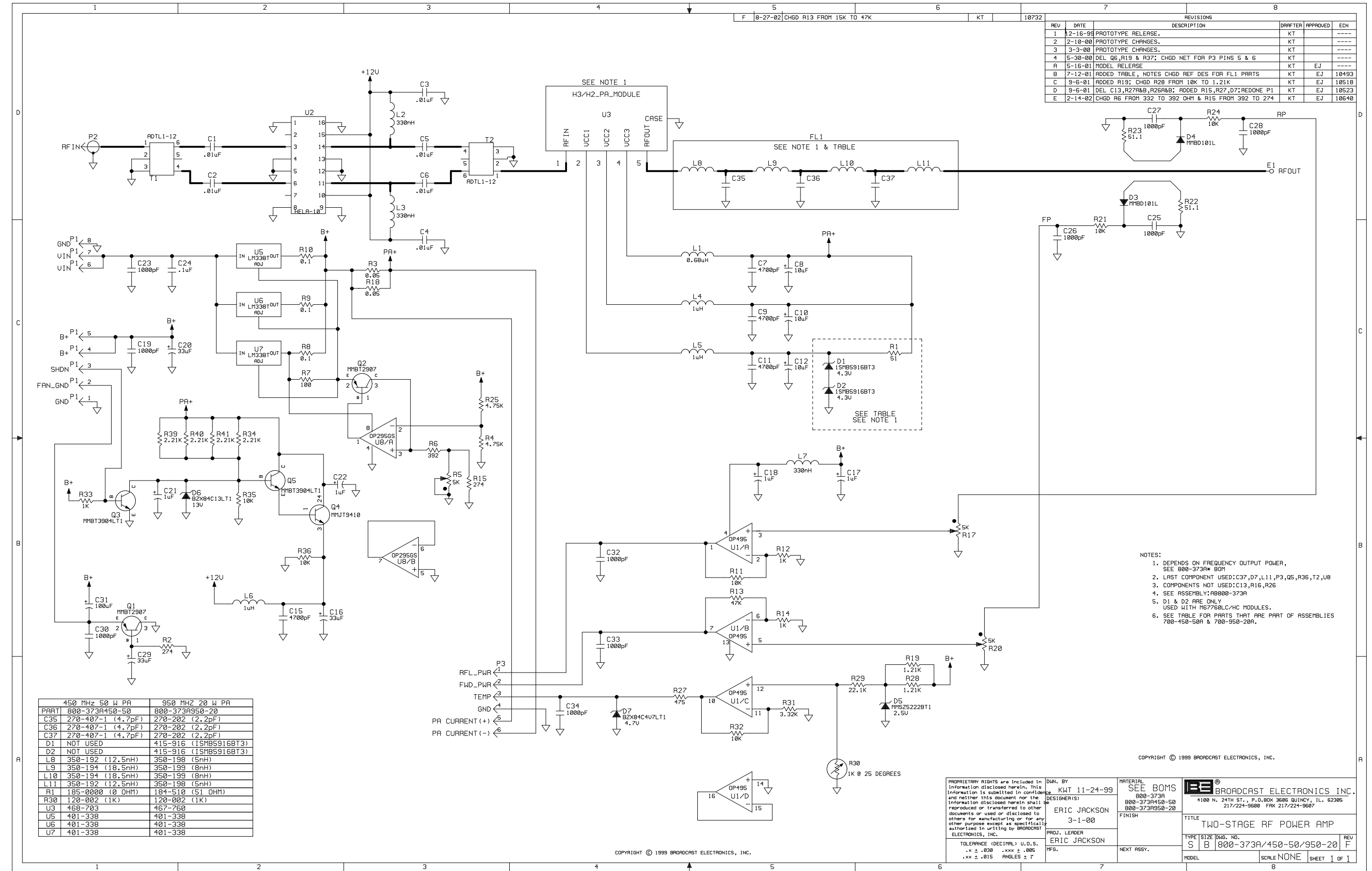
REVISIONS				DRAWN	APPROVED	ECN
REV	DATE	DESCRIPTION				
2	6-27-01	REDRAWN IN CAD		KT		
A	8-13-01	UPDATED TO MATCH BOM		KT		



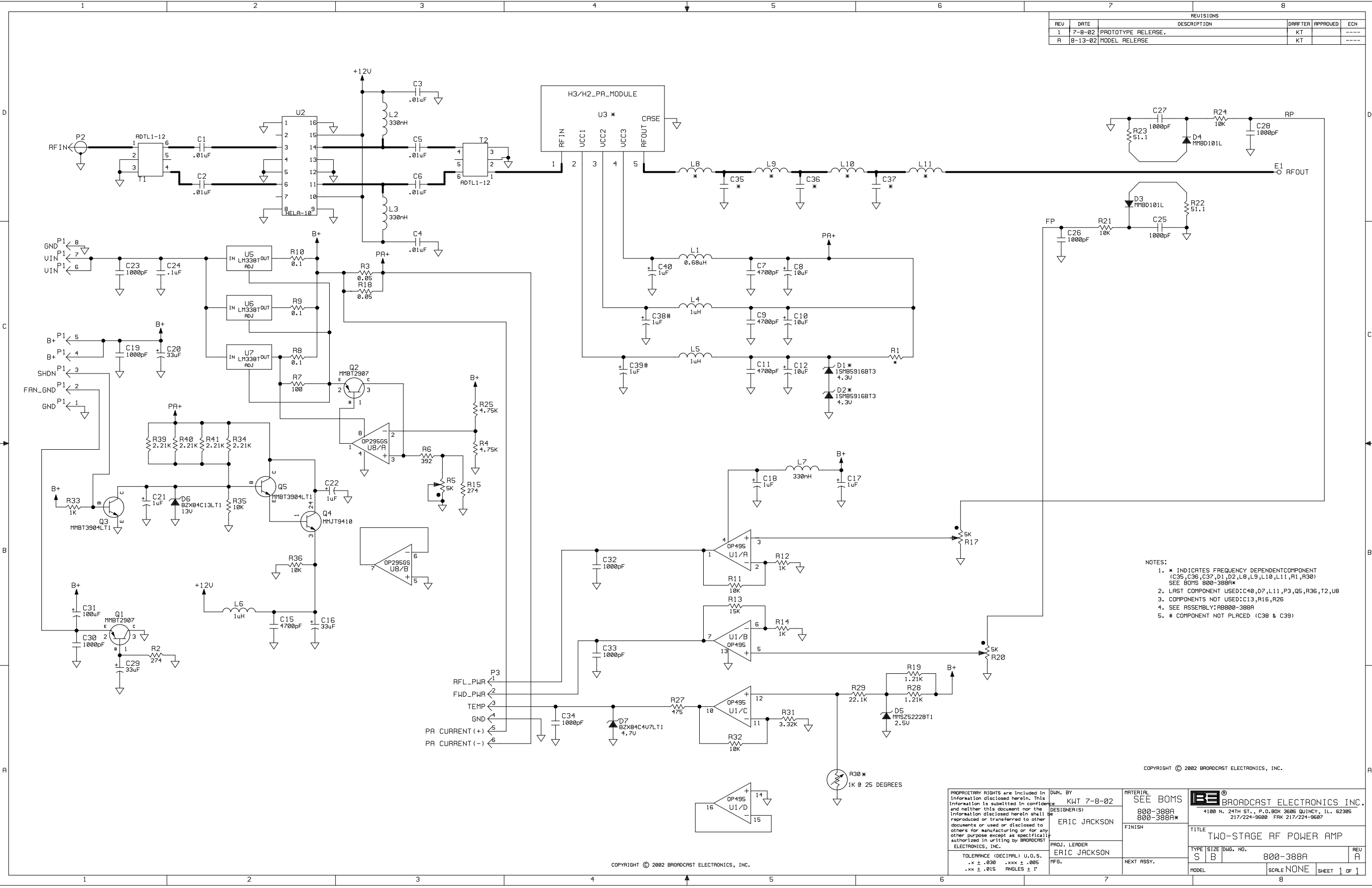
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		DESIGNER(S)		FINISH		TITLE PRE-AMPLIFIER/MIXER	
TOLERANCE (DECIMAL) U.S.S. .xx ± .030 .xxx ± .005 .xx ± .015 ANGLES ± 1		PROJ. LEADER		NEXT ASSY.		TYPE SIZE DWG. NO. S D 800-251A	
MFG.				MODEL		SCALE NONE SHEET 1 OF 1	
						REV A	





REVISIONS						
REV	DATE	DESCRIPTION	DRAFTER	APPROVED	ECN	
1	7-8-02	PROTOTYPE RELEASE.	KT			
A	8-13-02	MODEL RELEASE	KT			



- NOTES:
- * INDICATES FREQUENCY DEPENDENT COMPONENT (C35, C36, C37, D1, D2, L8, L9, L10, L11, R1, R30) SEE BOMS 800-388A*
 - LAST COMPONENT USED: C40, D7, L11, P3, Q5, R36, T2, U8
 - COMPONENTS NOT USED: C13, R16, R26
 - SEE ASSEMBLY: AB800-388A
 - # COMPONENT NOT PLACED (C38 & C39)

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DESIGNER(S) ERIC JACKSON		PROJ. LEADER ERIC JACKSON	FINISH	TITLE TWO-STAGE RF POWER AMP	
TOLERANCE (DECIMAL) U.O.S. .X ± .030 .XXX ± .005 .XX ± .015 ANGLES ± 1°		PROJ. LEADER ERIC JACKSON	NEXT ASSY.	TYPE SIZE DWS. NO. S B 800-388A	
				MODEL SCALE NONE	
				SHEET 1 OF 1	

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REVISIONS					
REV	DATE	DESCRIPTION	DRAFTER	APPROVED	ECN
1	7-8-02	PROTOTYPE RELEASE	KWT		----
2	7-8-02	CHGD MC3D TO ROGERS 4350	KWT		----
A	8-13-02	MODEL RELEASE	KWT		----

NOTES:

- 1) SEE SCHEMATIC: SB800-388A
- 2) * INDICATES PARTS STUFFED DURING 800-388A* ASSEMBLIES (C35,C36,C37, D1,D2,L8-L11,R1,R30,U3,U5-U7)
- 3) # INDICATES PARTS NOT PLACED (C38 & C39)

SOLDER BEAD AROUND OUTSIDE
OF FENCE TO GROUND PLANE OF PCB

WRITE FINAL ASSEMBLY NUMBER IN BOX

WRITE REV LEVEL IN BOX

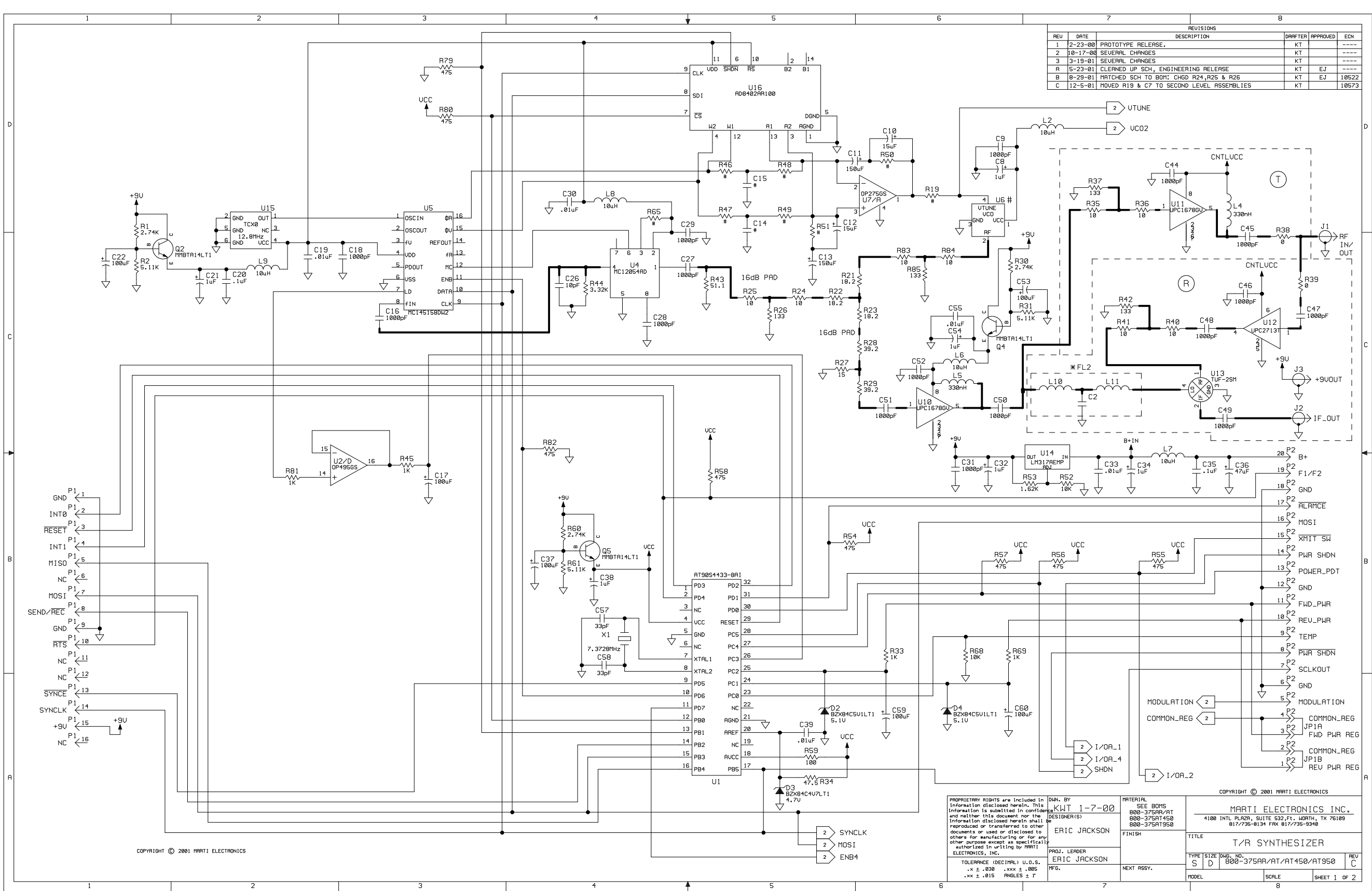
ADD A PIECE OF KAPTON
TAPE (700-0119) TO
TRACE FROM P2 - T1.

SOLDER BEAD ON INTERNAL
FENCE ON THE BOTTOM OF
FENCE TO GND PLANE OF PCB

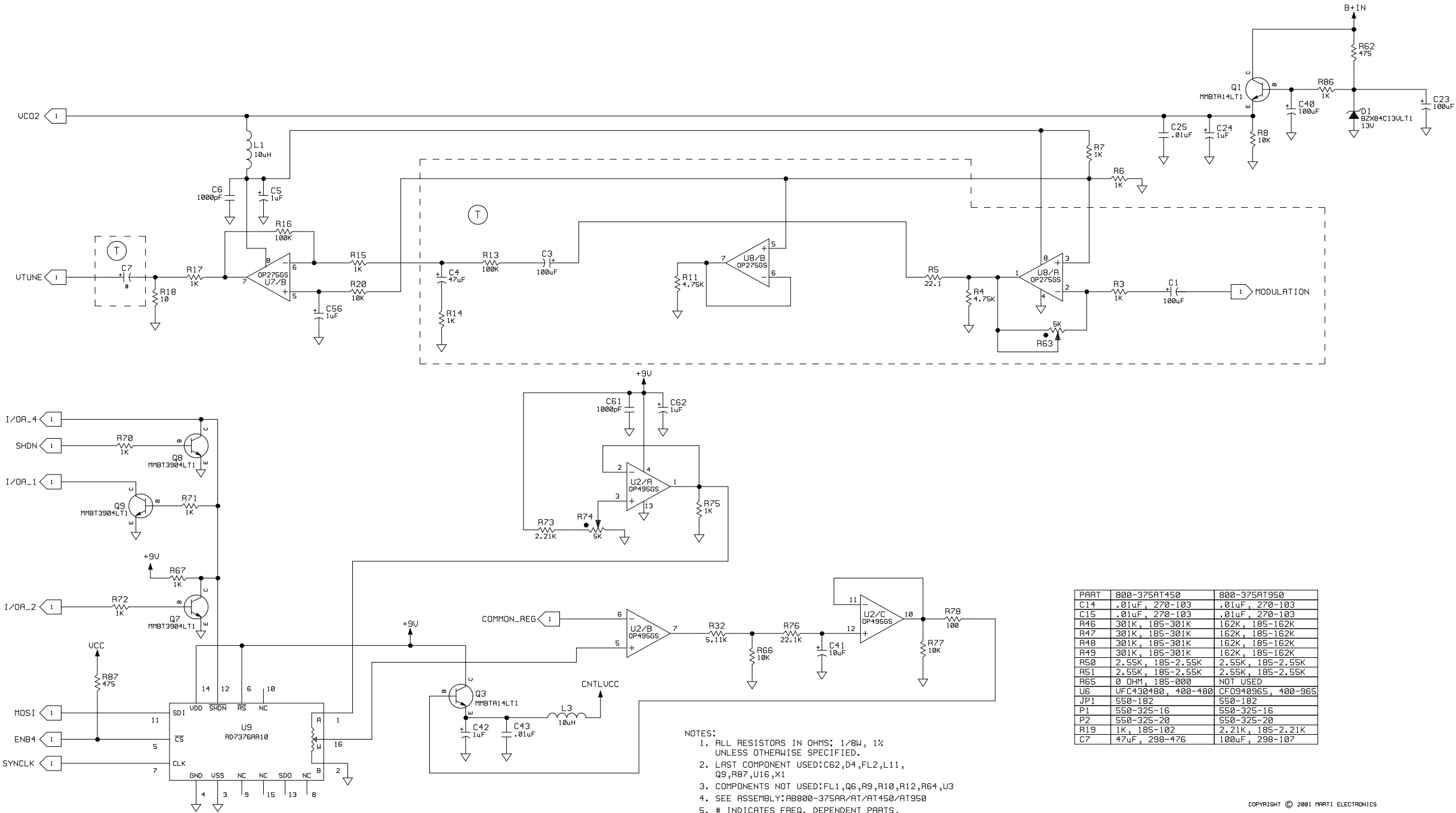
START FENCING IN THIS CORNER
WITH FIRST FINGER TO HAVE A
HOLE IN IT. INSTALL IN
CLOCKWISE DIRECTION.

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	DESIGNER(S)				
	PROJ. LEADER ERIC JACKSON	FINISH	TITLE TWO-STAGE RF POWER AMP		
	MFG.	NEXT ASSY.	TYPE A	SIZE B	DWG No. 800-388A REV A
TOLERANCE (DECIMAL) U.O.S. .X ± .030 .XXX ± .005 .XX ± .015 ANGLES + 1°			MODEL NNNN	SCALE 1/1	SHEET 1 OF 1



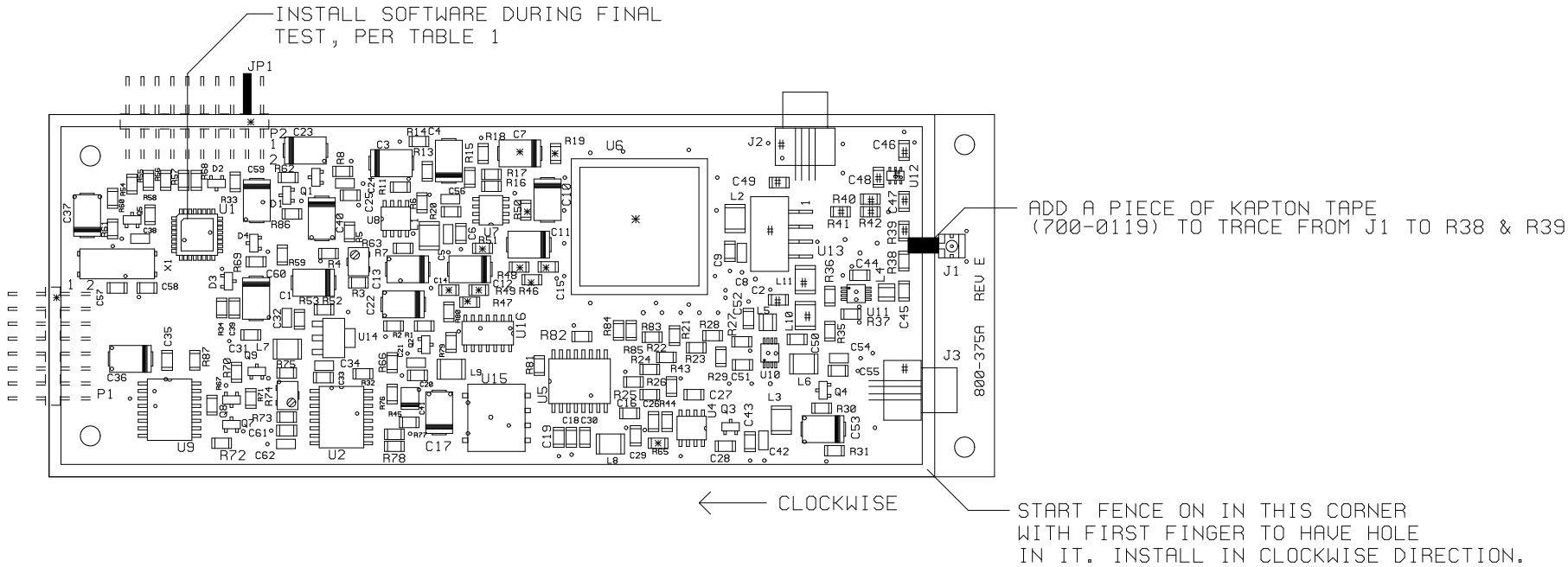
REVISIONS					
REV	DATE	DESCRIPTION	DRAFTER	APPROVED	ECN
1	2-23-00	PROTOTYPE RELEASE.	KT		----
2	10-17-00	SEVERAL CHANGES	KT		----
3	3-19-01	SEVERAL CHANGES	KT		----
A	5-23-01	CLEANED UP SCH., ENGINEERING RELEASE	KT		----
B	8-29-01	MATCHED SCH TO BOM & ADDED TABLE.	KT	EJ	10522
C	12-5-01	MOVED R19 & C7 TO SECOND LEVEL ASSEMBLIES	KT		10573



REVISIONS					
REV	DATE	DESCRIPTION	DRAFTER	APPROVED	ECN
1	2-23-00	PROTOTYPE RELEASE.	KT		
2	10-23-00	CHANGED LAYOUT	KT		
3	3-20-01	CHANGED LAYOUT	KT		
A	5-23-01	ENGINEERING RELEASE	KT		
B	8-29-01	MATCHED ASSEMBLY TO BOM: CHGD R24-R26	KT	EJ	10522
C	9-5-01	MOVED C7 & R19 TO SECOND LEVEL ASSEMBLIES	KT	EJ	10573
D	2-1-02	ADDED FENCE & KAPTON TAPE NOTES	KT	EJ	10620
E	4-3-02	ADDED SOFTWARE TABLE	KT		10668

TABLE 1

MODEL	SOFTWARE	VER
800-375AT450	800-375AT450SW1	1.0
800-375AT950	800-375AT950SW1	1.0



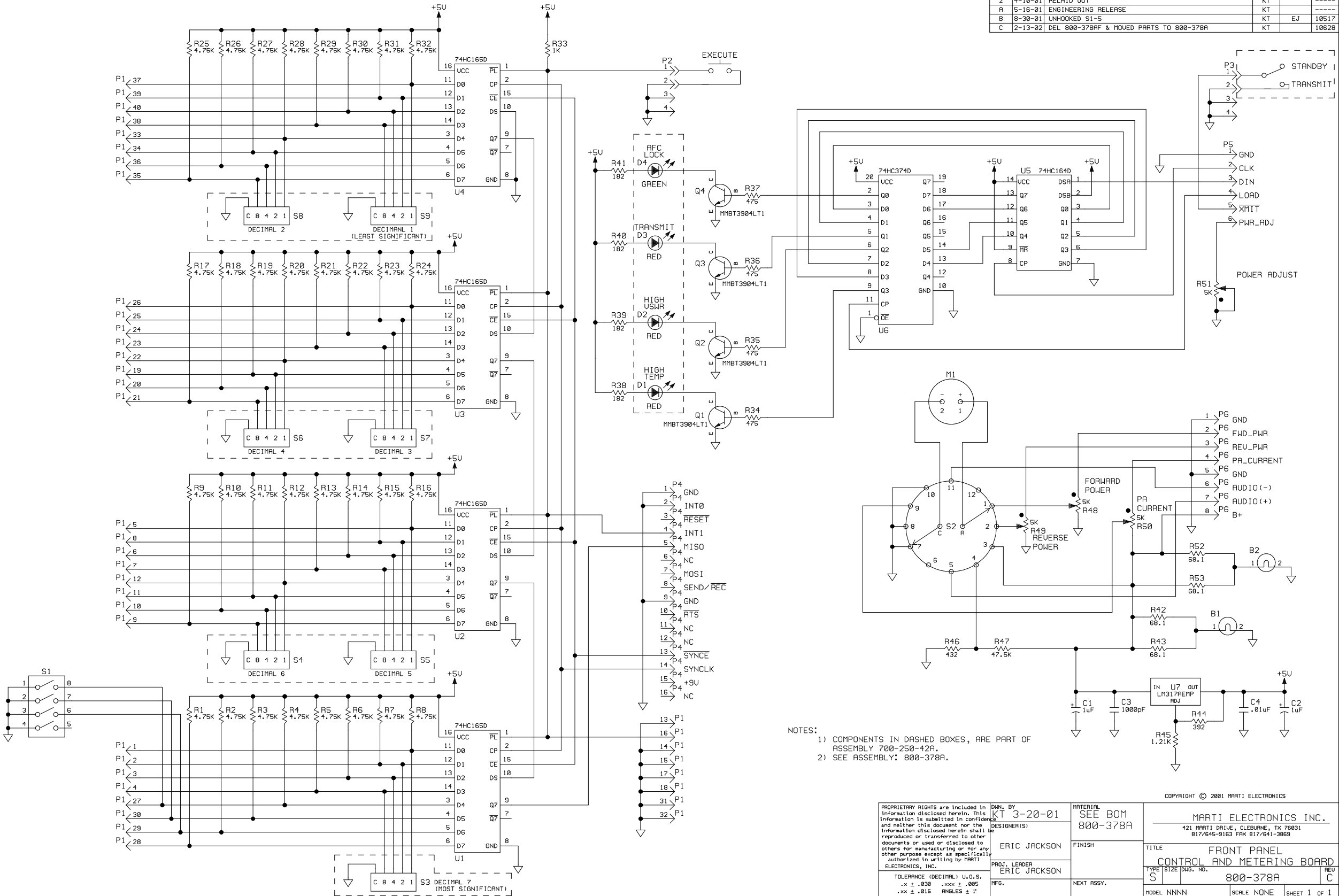
NOTES:

- P1 AND P2 ARE MOUNTED ON THE SOLDER SIDE OF PCB.
- * INDICATES PARTS STUFFED DURING ASSEMBLIES 800-375AT450 & 800-375AT950 (C7,C14,C15,JP1,P1,P2,R19,R46-51,R65,U6)
- # INDICATES PARTS USED ON 800-375AR ASSEMBLY ONLY (C46-C49,C2,J2,J3,L10,L11,R39-R42,U12,U13)
- JP1 IS STUFFED ON P2 PINS 3 & 4 FOR FWD PWR, P2 PINS 1 & 2 FOR RFL PWR.

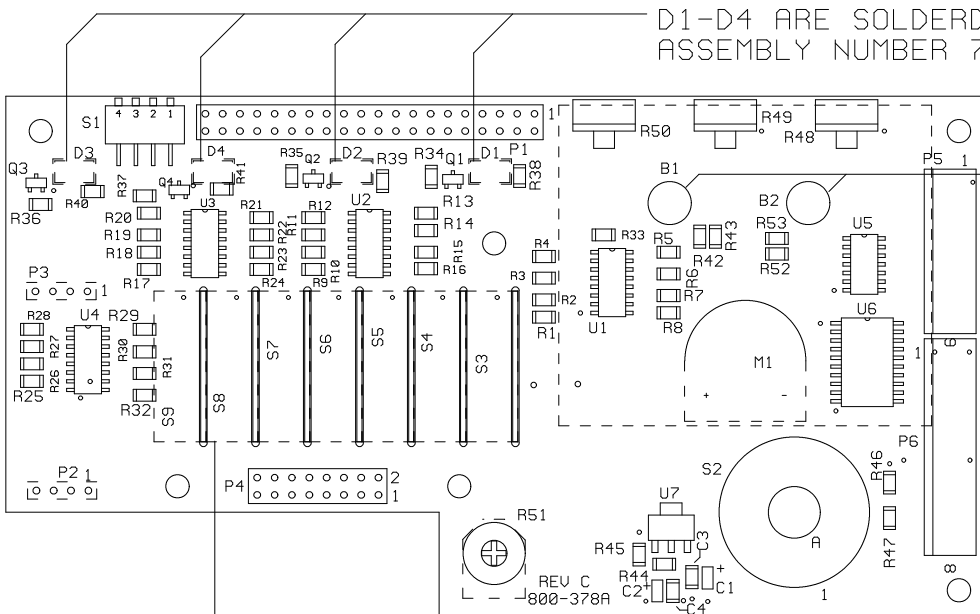
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	DESIGNER(S) ERIC JACKSON		TITLE T/R SYNTHESIZER				
	PROJ. LEADER ERIC JACKSON	FINISH	TYPE		SIZE	DWG No.	REV
	MFG.	NEXT ASSY.	A	B	800-375AR/AT/AT450/AT950		E
TOLERANCE (DECIMAL) U.O.S. .X ± .030 .XXX ± .005 .XX ± .015 ANGLES + 1°		MODEL SRPT-40		SCALE 1/1		SHEET 1 OF 1	

REVISIONS					
REV	DATE	DESCRIPTION	DRAFTER	APPROVED	ECN
1	3-21-01	PROTOTYPE RELEASE	KT		-----
2	4-10-01	RELAID OUT	KT		-----
A	5-16-01	ENGINEERING RELEASE	KT		-----
B	8-30-01	UNHOOKED S1-S	KT	EJ	10517
C	2-13-02	DEL 800-378AF & MOVED PARTS TO 800-378A	KT		10628

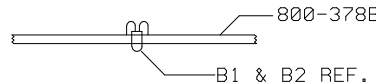


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SEE DETAIL "A"

S3-S9 ARE SOLDERD TO PCB ON
ASSEMBLY NUMBER 700-250-42A



DETAIL "A"

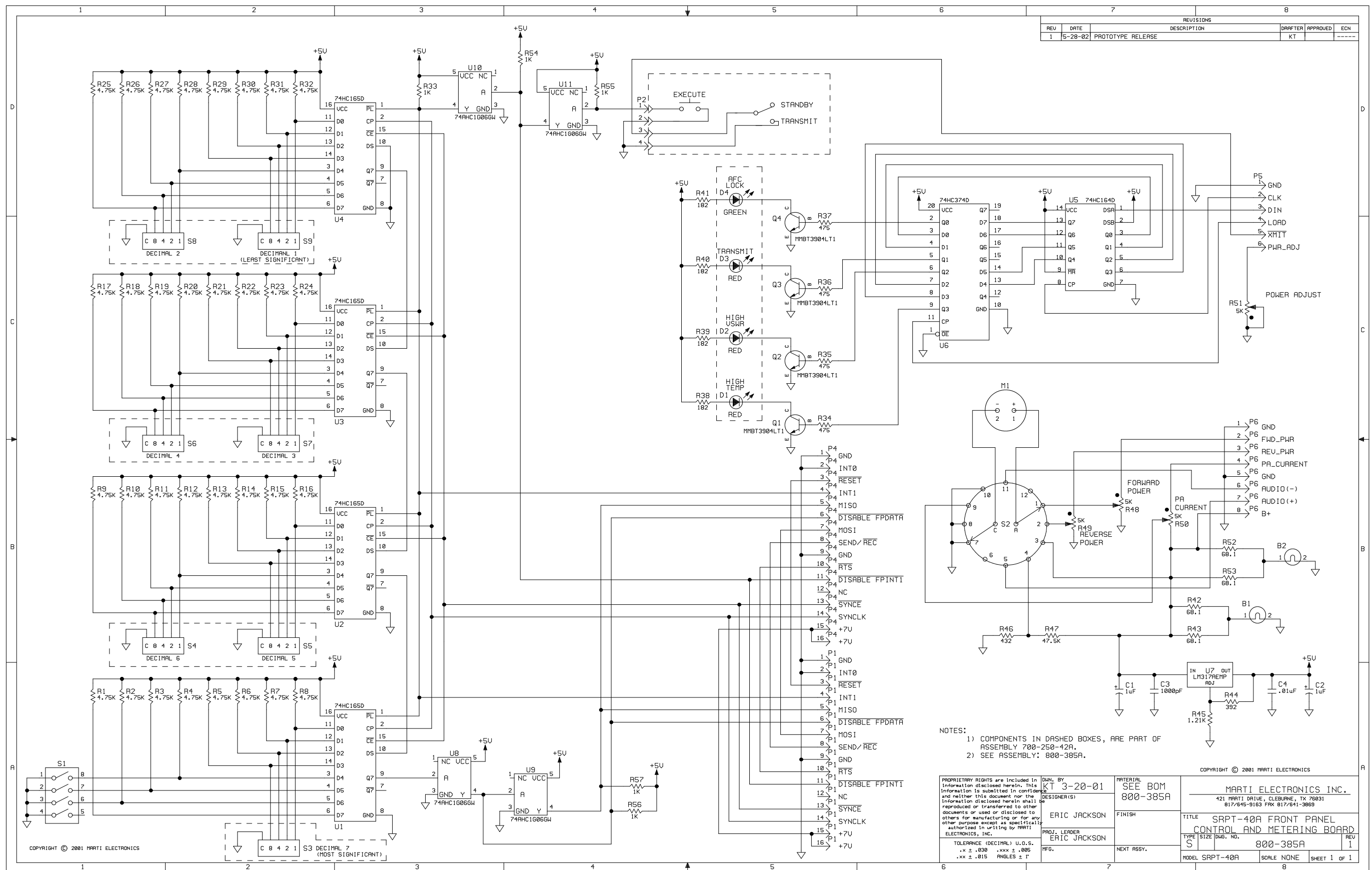
REVISIONS					
REV	DATE	DESCRIPTION	DRAFTER	APPROVED	ECN
1	3-23-01	PROTOTYPE RELEASE	KT		----
2	4-11-01	RELAID OUT BOARD	KT		----
A	5-16-01	ENGINEERING RELEASE	KT	EJ	----
B	8-30-01	UNHOOKED PIN 5 OF S1	KT	EJ	10517
C	2-13-02	DELETED 800-378AF & MOVED PARTS TO 800-378A	KT		10628

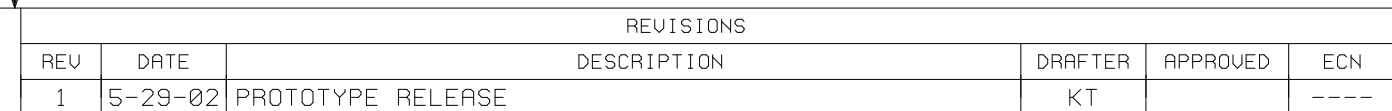
NOTES:

- 1) DASHED OUTLINE PARTS ARE STUFFED ON SOLDER SIDE (M1,P2,P3,S2 & R51)
- 2) SEE SCHEMATIC: SB800-378A.

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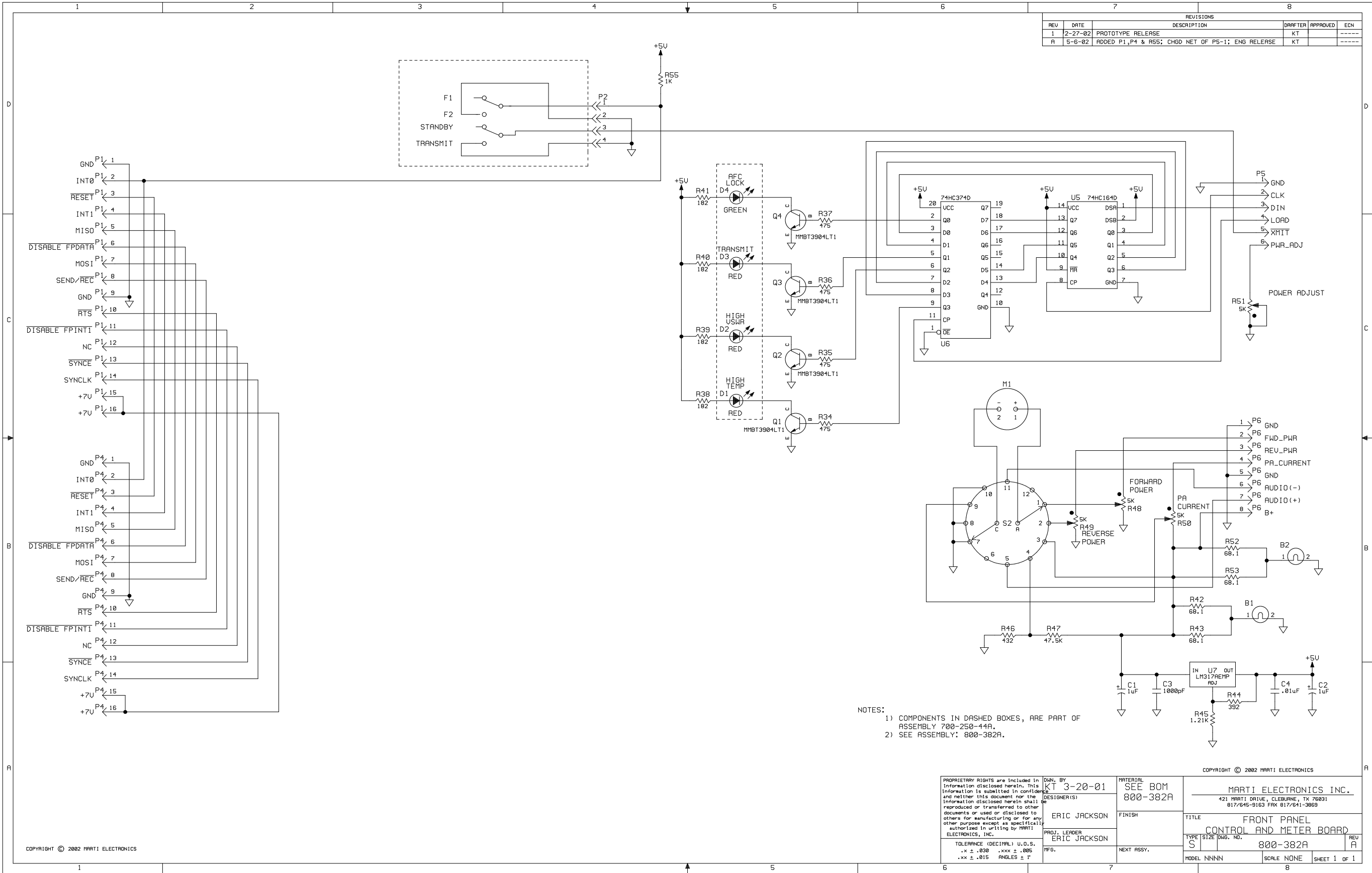
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	DESIGNER(S) ERIC JACKSON				
	PROJ. LEADER ERIC JACKSON	FINISH	TITLE FRONT PANEL CONTROL AND METERING BOARD		
	MFG.	NEXT ASSY.	TYPE A	SIZE B	DWG No. 800-378A
TOLERANCE (DECIMAL) U.O.S. .X ± .030 .XXX ± .005 .XX ± .015 ANGLES + 1°			MODEL NNNN	SCALE 1/1	SHEET 1 OF 1

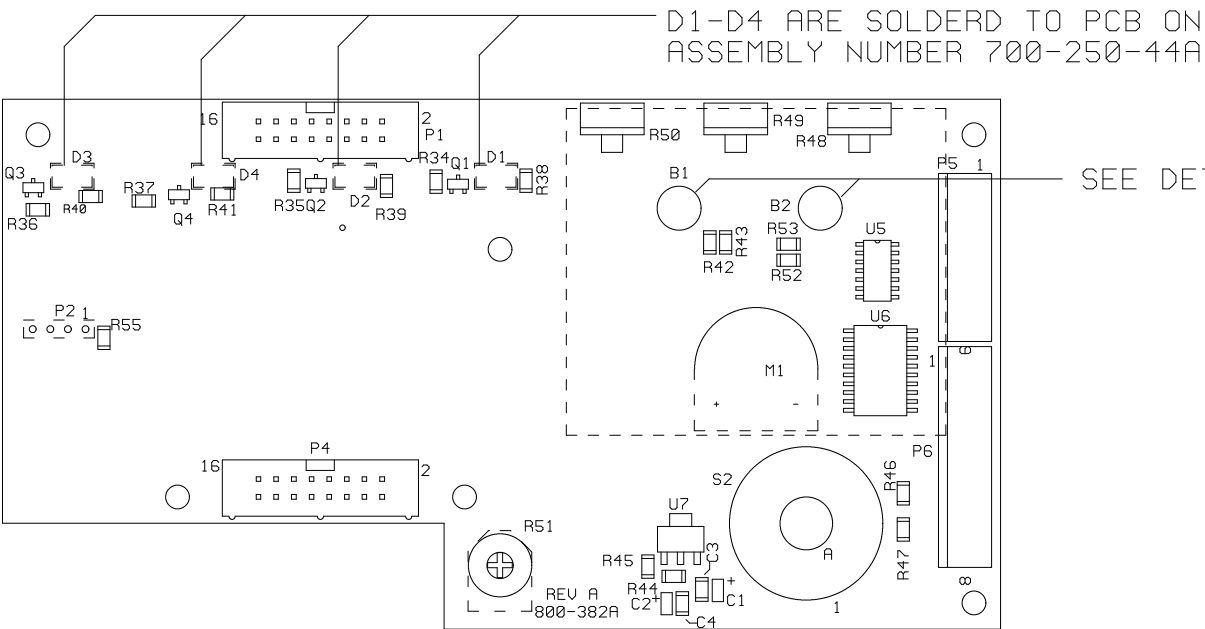




- 1) DASHED OUTLINE PARTS ARE STUFFED ON SOLDER SIDE (M1,P2,S2 & R51)
- 2) SEE SCHEMATIC: SB800-385A.
- 3) ARROW ON P1 & P4 POINT AT PIN 2.

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	DESIGNER(S) ERIC JACKSON	FINISH	TITLE SRPT-40A FRONT PANEL CONTROL AND METERING BOARD			
	PROJ. LEADER ERIC JACKSON					
	MFG.					
TOLERANCE (DECIMAL) U.O.S. .X ± .030 .XXX ± .005 .XX ± .015 ANGLES + 1°		NEXT ASSY.	MODEL SRPT-40A		SCALE 1/1	SHEET 1 OF 1

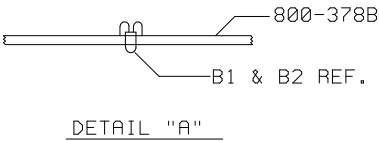




SEE DETAIL "A"

NOTES:

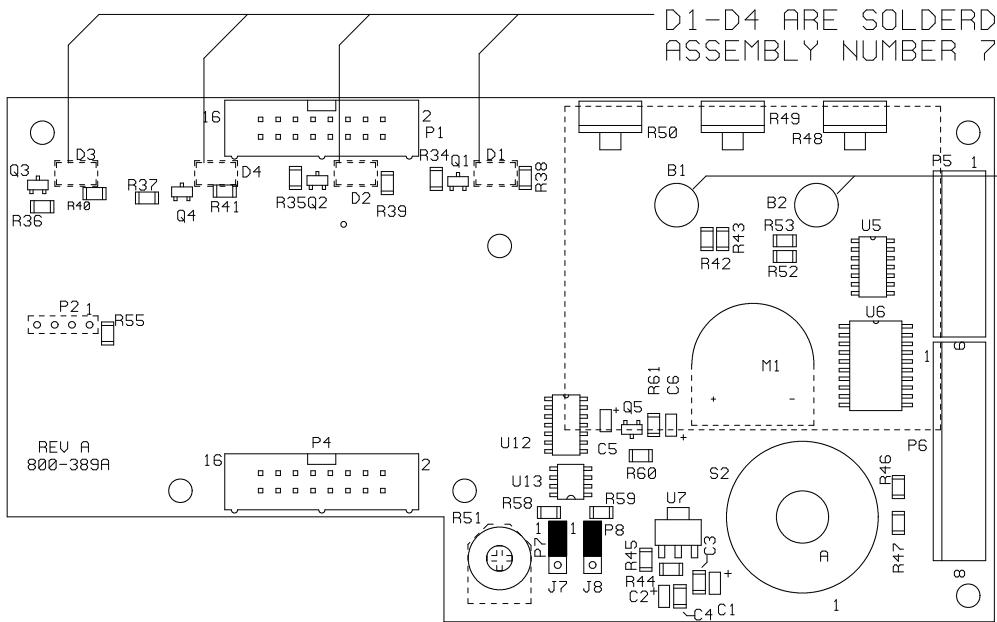
- 1) DASHED OUTLINE PARTS ARE STUFFED ON SOLDER SIDE (M1,P2,S2 & R51)
- 2) SEE SCHEMATIC: SB800-378A.
- 3) ARROW ON P1 & P4 POINT AT PIN 2.



REVISIONS					
REV	DATE	DESCRIPTION	DRAFTER	APPROVED	ECN
1	3-1-02	PROTOTYPE RELEASE	KT		----
A	5-6-02	ADDED P1,P4 & R55; ENGINEERING RELEASE	KT		----

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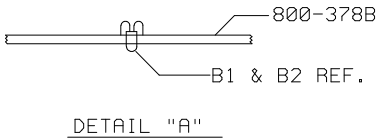
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	DESIGNER(S) ERIC JACKSON				
	PROJ. LEADER ERIC JACKSON	FINISH	TITLE FRONT PANEL CONTROL AND METERING BOARD		
	MFG.	NEXT ASSY.	TYPE A	SIZE B	DWG No. 800-382A
TOLERANCE (DECIMAL) U.O.S. .X ± .030 .XXX ± .005 .XX ± .015 ANGLES + 1°			MODEL NNNN	SCALE 1/1	SHEET 1 OF 1



SEE DETAIL "A"

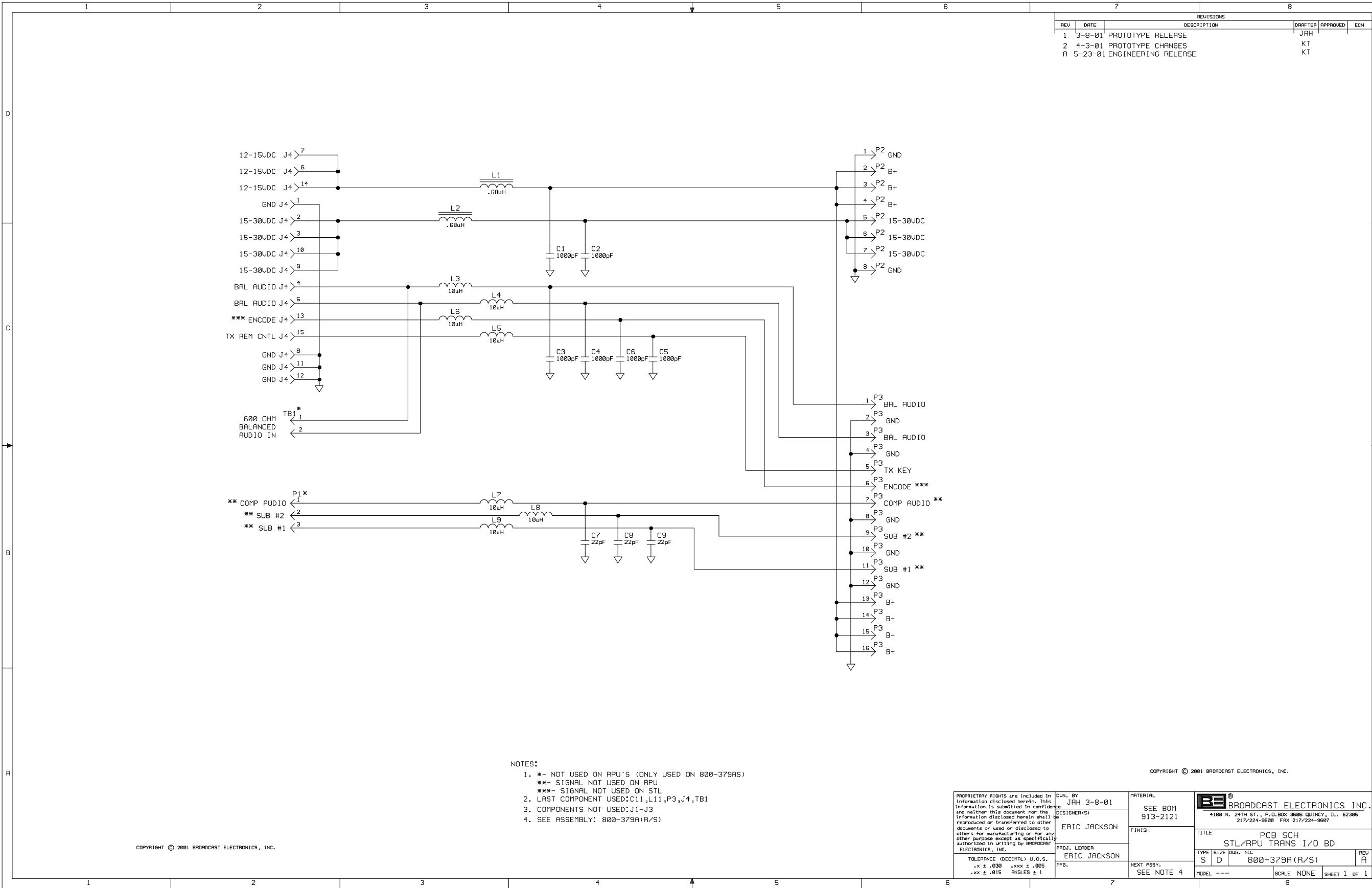
NOTES:

- 1) DASHED OUTLINE PARTS ARE STUFFED ON SOLDER SIDE (M1,P2,S2 & R51)
- 2) SEE SCHEMATIC: SB800-389A.
- 3) ARROW ON P1 & P4 POINT AT PIN 2.



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	DESIGNER(S) ERIC JACKSON		TITLE FRONT PANEL CONTROL AND METERING BOARD			
	PROJ. LEADER ERIC JACKSON	FINISH	TYPE A	SIZE B	DWG No. 800-389A	REV A
	MFG.	NEXT ASSY.	MODEL SRPT-30		SCALE 1/1	SHEET 1 OF 1



REVISIONS						
REV	DATE	DESCRIPTION	DRAFTER	APPROVED	ECN	
1	3-8-01	PROTOTYPE RELEASE	JAH			
2	4-3-01	PROTOTYPE CHANGES	KT			
A	5-23-01	ENGINEERING RELEASE	KT			

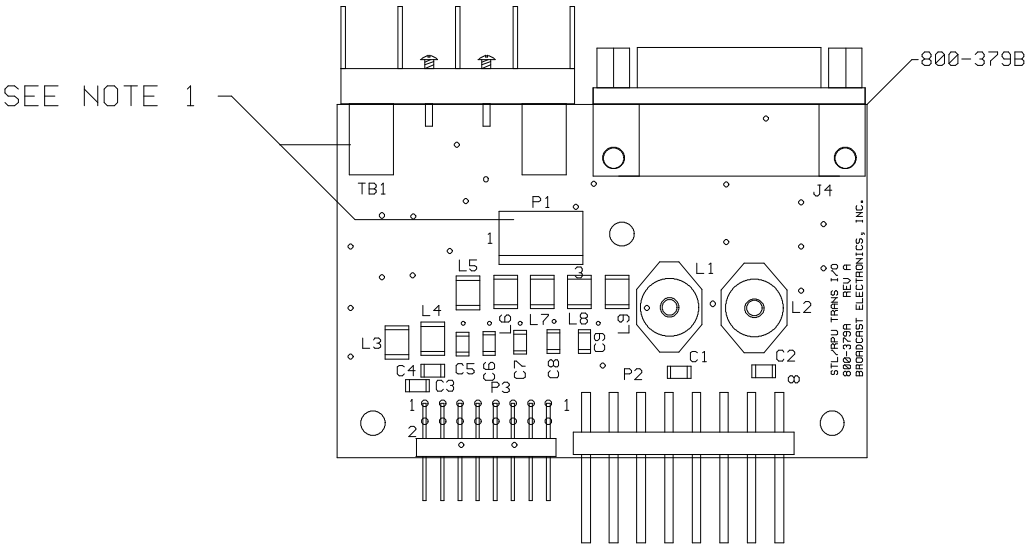
- NOTES:
1. *- NOT USED ON RPU'S (ONLY USED ON 800-379AS)
 2. LAST COMPONENT USED: C11, L11, P3, J4, TB1
 3. COMPONENTS NOT USED: J1-J3
 4. SEE ASSEMBLY: 800-379A(R/S)

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DESIGNER(S) ERIC JACKSON		PROJ. LEADER ERIC JACKSON		NEXT ASSY. SEE NOTE 4		MODEL ---		REV A
TOLERANCE (DECIMAL) U.O.S. .X ± .030 .XXX ± .005 .XX ± .015 ANGLES ± 1		SCALE NONE		SHEET 1 OF 1				

REVISIONS					
REV	DATE	DESCRIPTION	DRAFTER	APPROVED	ECN
1	3-13-01	PROTOTYPE RELEASE	JAH		---
2	4-4-01	PROTOTYPE CHANGES	KT		---
A	5-23-01	ENGINEERING RELEASE	KT		---



NOTES:
1) TB1 & P1 USED ON 800-379AS ONLY.

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	DESIGNER(S) ERIC JACKSON	FINISH		
	PROJ. LEADER ERIC JACKSON	NEXT ASSY.	TITLE PCB ASSY STL/RPU TRANS I/O BD	
	MFG.		TYPE A	SIZE B
TOLERANCE (DECIMAL) U.O.S. .X ± .030 .XXX ± .005 .XX ± .015 ANGLES + 1°		DWG No. 800-379A(R/S)		REV A
		MODEL NNNN	SCALE 1/1	SHEET 1 OF 1