

VI. SERVICE INFORMATION

VI-1. Disassembly Procedure.

CAUTION: WAIT ABOUT 15 MINUTES AFTER THE AMPLIFIER HAS BEEN POWERED DOWN BEFORE BEGINNING DISASSEMBLY PROCEDURE, TO ALLOW THE POWER SUPPLY CAPACITORS TO DISCHARGE.

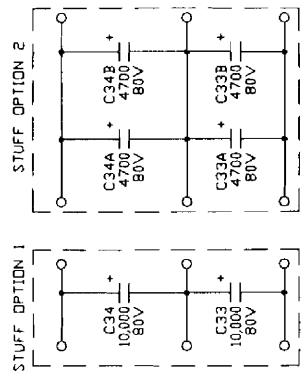
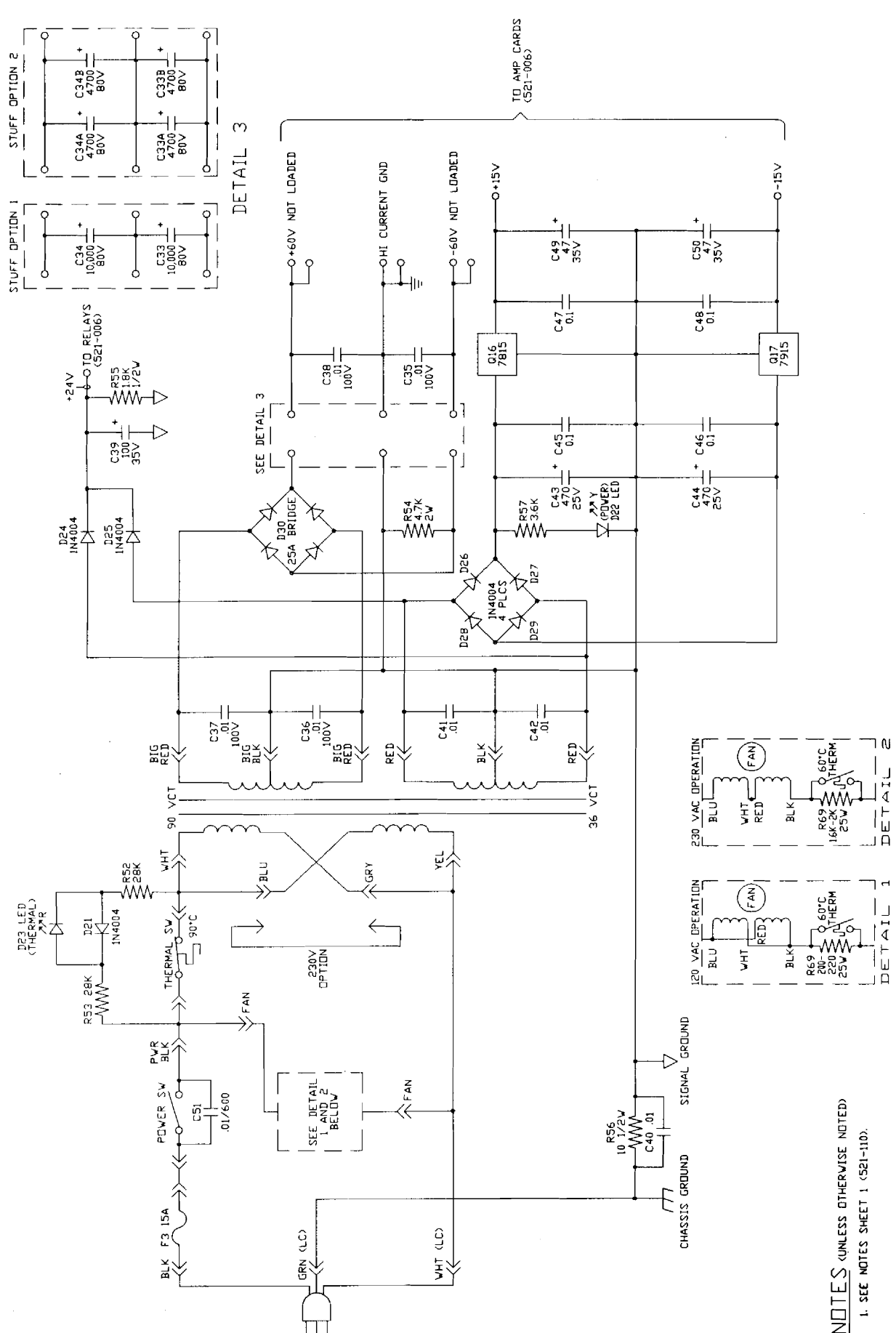
1. Remove the bottom cover: 4 ea. #6 x $\frac{3}{8}$ " phillips screws on the side rails and 10 ea. #6 x $\frac{1}{4}$ " phillips screws on the edges of the bottom cover.
2. To remove a module (PCB card):
 - a. Remove the input/output plate on the rear panel by removing 7 phillips screws, 6 ea. $\frac{3}{8}$ " nuts and washers from the input jacks and 12 ea. #8 tapping screws from the output terminal blocks.
 - b. Remove the 7 phillips screws on the front panel just below the signal/limit/fault LEDs.
 - c. Remove the 8 ea. #6/32 x $\frac{1}{4}$ " machine screws from the left and right edges of the heatsink mounting flange. Now the entire heatsink/module assembly is free to slide to the rear--this will provide the clearance necessary to remove any of the six amp modules.
 - d. To remove a module, first de-solder the black & white wires running to the adjacent card. Then remove 7 ea. of the #4-40 machine screws holding the output, driver and bias transistors to the heatsink. Now pull firmly straight up to disengage the module from the connector--use a rocking motion to ease removal, as the connector is very tight..

NOTE: Be sure that all of the transistor sil pads (insulators) stay on the heatsink--some of these may stick on the transistor and be inadvertently lost or thrown away with the defective component.

3. Module replacement: Factory supplied modules are pre-tuned and ready for installation. If you have made repairs on a module, be sure that ALL diodes are measured and replaced as necessary prior to installation of the module.
 - a. Be sure that all five sil pads (insulators) are in place on the heatsink.
 - b. BE SURE THAT THE NYLON SHOULDER WASHERS ARE IN PLACE ON TRANSISTORS Q2, Q4 and Q8 (TO-220 cases). Install the #4-40 screws in these and snug up only: DO NOT OVERTIGHTEN THESE DRIVER SCREWS AS THIS MAY DAMAGE THE THIN SHOULDER WASHERS AND CAUSE A SHORT.
 - c. Install the remaining 4 ea. #4-40 screws on the output and TIGHTEN THESE FIRMLY TO ENSURE PROPER HEAT TRANSFER TO THE HEATSINK.
 - d. Resolder the black & white wires. Be careful to connect them properly.
 - e. Slide heatsink assembly forward so that all LEDs are properly aligned in the front panel holes. Install and tighten the 8 heatsink mounting screws.
 - f. Replace the seven screws on the front panel.
 - g. Replace the input/output plate and bottom cover (don't forget the four screws holding the bottom cover to the side rails).
4. Power supply repairs.
 - a. Power supply PCB: Do not attempt removal of this card. Instead, remove amplifier modules #1 and #2 as necessary to allow clear access to the foil side of the power supply PCB; then replace any defective components by de-soldering.

b. Transformer removal: The transformer is held in place by four ¼" bolts into separate nuts on the right side and a retaining nut plate on the left side. To remove the two right-side bolts, it is necessary to remove the heatsink assembly to gain access to the two nuts. Remove the 8 heatsink mounting screws, 7 front panel screws and 7 input/output plate screws: now you may slide the heatsink assembly to the rear and lift it up, out and to the left to gain access to the transformer nuts. The two left-side transformer bolts can simply be loosened until the nut plate falls off. Pull all transformer spade plugs from the power PCB and lift the transformer out of the chassis (brace yourself). To replace the transformer, reverse the above procedure; it is necessary to hold the nut plate in place with your fingers to install the two left-side transformer bolts. Reconnect all transformer spade plugs as shown on the power board assembly diagram.

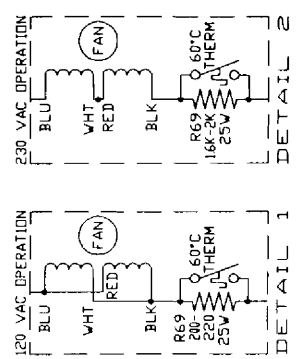
VI-2. Schematics and assembly diagrams.



DETAIL 1

DETAIL 2

DETAIL 3



DETAIL 1

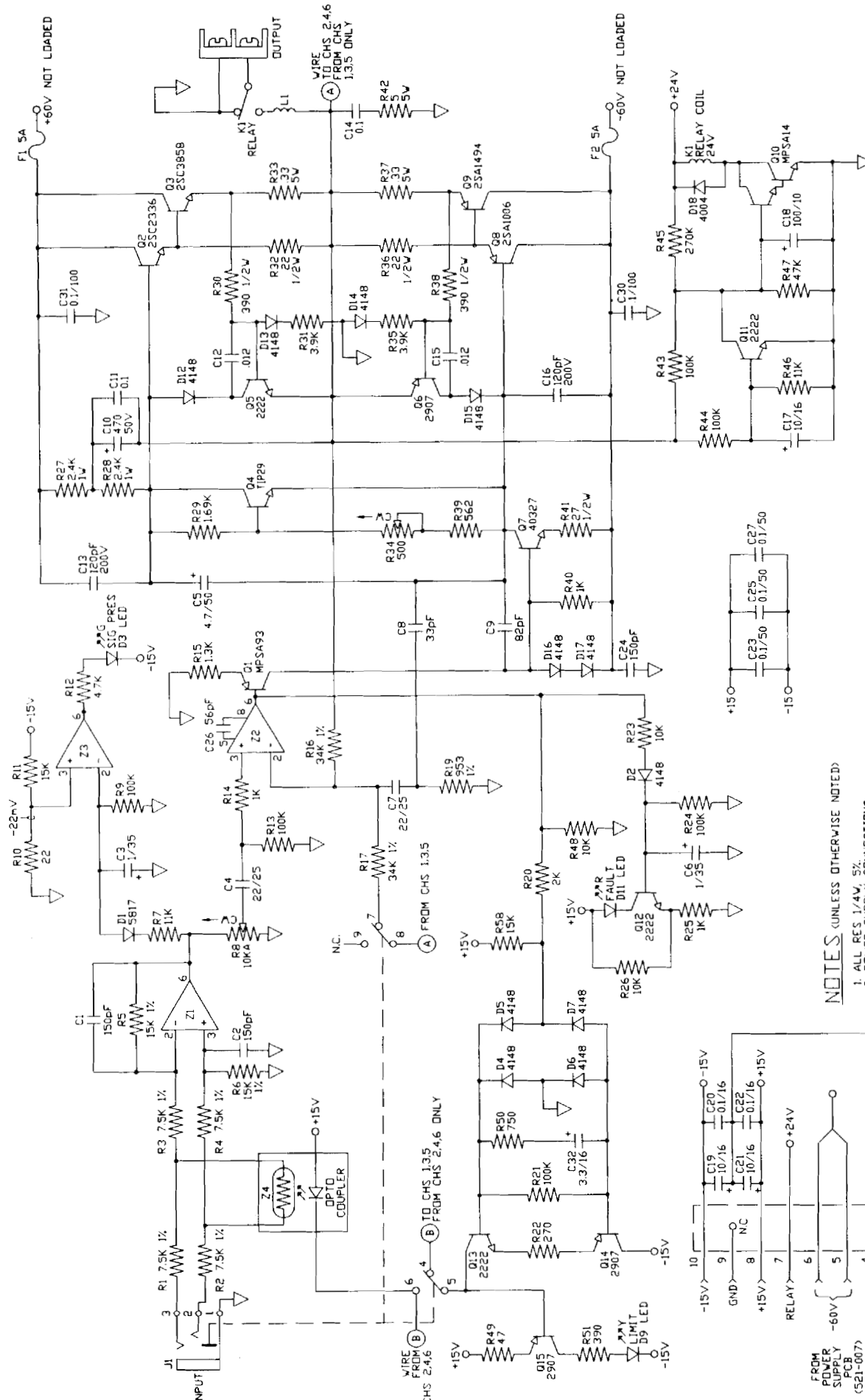
DETAIL 2

NOTES (UNLESS OTHERWISE NOTED)
 1. SEE NOTES SHEET 1 (521-110).

REV. F	ACTION PILOT RUN PICK UPS	DATE 01AUG90	SHEET 2 OF 2	DATE 17-JUN91	APPROVED	DO NOT SCALE DRAWING
DRAWN S. R. MACATEE		DATE 27-JUL-90	CHECKED RGH	TITLE SCHEMATIC MA 6 PWR		
REV. F		521-007		REV. NO.		
DRAWN S. R. MACATEE		DATE 27-JUL-90		CORP. 10802 47th Avenue West, Mukilteo VA 98275-5098 (206) 353-6000		
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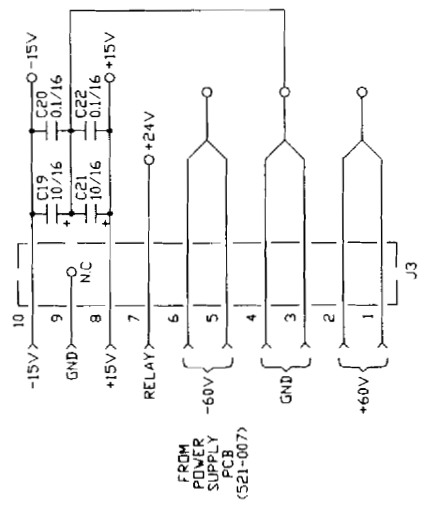


RANE

Corp. 10802 47th Avenue West, Mukiteo
WA 98275-5098 (206) 355-6000

TITLE: **SCHEMATIC**
DRAW NO. **521-006**

- NOTES (UNLESS OTHERWISE NOTED)**
1. ALL RES. 1/4W, 5%.
 2. POWER SUPPLY CONNECTIONS:
SING. POS. SUP. 4
DUAL NEG. SUP. 4
QUAD 11
 3. ALL SVS SHOWN IN THEIR 'OUT' OR 'OFF' POSITION
 4. ONE CHANNEL SHOWN, TYPICAL OF SIX.
 5. I.C.S. Z1, Z3=1D71; Z2=5534
 6. Z4: VACTEC VTL5C2 OR EQUIV.



REVISIONS	REV. H	ACTION	ADDED C24 & C26; CHANGED Z2 TO A 5534	DATE	18SEP91	APPROVED	
		DRAWN	S. TURNIDGE	DATE	22JAN87	CHECKED	A. CLAXTON
		SHEET	1	OF	2		
DO NOT SCALE DRAWING							

