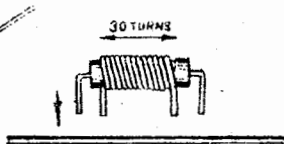
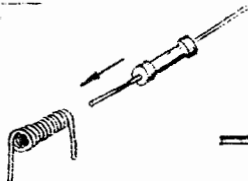
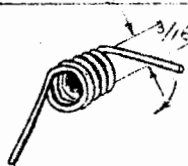


**UNITRONICS UA400** manual

40 watt r.m.s. complementary  
audio power amplifier

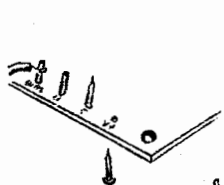
L 1 Winding Procedure:



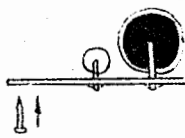
Wind 30 turns of 24 s.w.g. wire on 3/16 in. diameter.

and

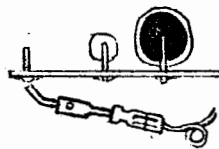
Pass the 10 ohm 1W resistor through and bend to fit P.C.



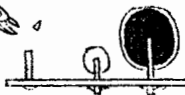
Lead-out pins mounting procedure



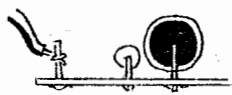
1. Push the pin in.



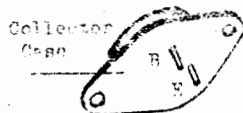
2. Solder to the P.C.



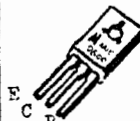
3. Cut off the tip.



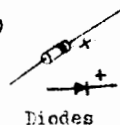
4. Connect the wire.



Metal Can Power Transistors



Biasing Tr. Plastic Trs.



Diodes

Zeners



Transistor Leads Identifications

Epoxy Transistors

### SPECIFICATIONS

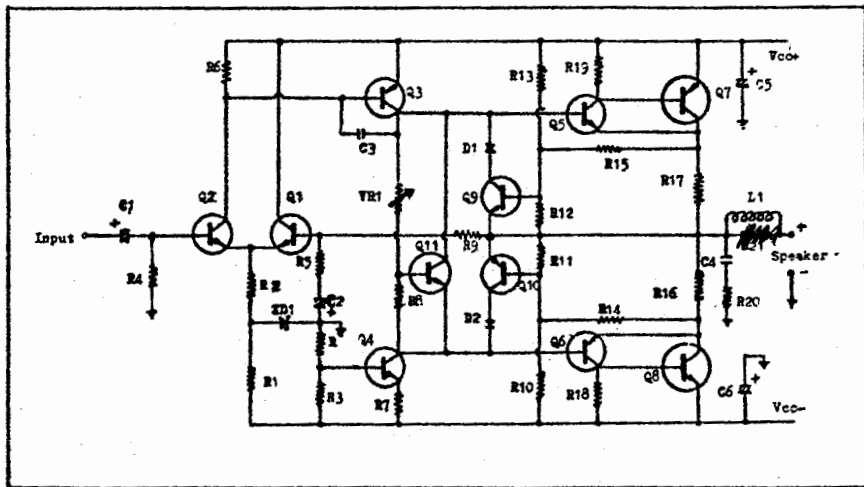
Power Output: Music (IHP).....	4 ohms	80 watts / 8 ohms	55 watts
Continuous.....	4 ohms	60 watts / 8 ohms	45 watts
Total Harmonic Distortion .....	less than 0.1% at 1KHz at 40 watts/8 ohms		
	less than 0.03% at 1KHz at 30 watts/8 ohms		
	less than 0.02% at 1KHz at 0.5 watt/8 ohms		
Intermodulation Distortion (70KHz and 7KHz signals mixed at ratio 4:1) .....		less than 0.05% at 40 watts	
Signal to Noise ratio (S/N) .....		better than 100db	
Frequency Response .....		10KHz to 100KHz flat	
		5Hz to 200KHz -1db	
Power Bandwidth (40 watt output).....		5Hz to 50KHz	-3db
Input Sensitivity (1KHz for Full Output) Type A .....		1.0Volt r.m.s	
	Type B .....	0.5Volt r.m.s	
Input Impedance .....		10K ohms	
Damping Factor (1KHz/8 ohms).....		more than 100	
Speaker Impedance Requirement.....		4 to 16 ohms	
Power Requirement .....		split-supply	±33-35 V D. C.

Distortion will be higher for Type B operation. However sensitivity is increased, so that low output preamplifier can be used. See text for Type B operation.

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# UNITRONICS

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**UNITRONICS**

UNITRONICS UA400 PARTS LIST

Semiconductors:

Q1 ..... MPS9632(S)  
 Q2 ..... MPS9632(S)  
 Q3 ..... MPS 156  
 Q4 ..... MPS A06  
 Q5 ..... MPS A06  
 Q6 ..... MPS 156  
 Q7 ..... MJ 2955  
 Q8 ..... ZF 3055  
 Q9 ..... MPS 9619  
 Q10 ..... MPS 9669  
 Q11 ..... MPS9632J  
 D1 ..... C1022  
 D2 ..... C1022  
 ZD1 ..... MZ92-15

Capacitors:

C1 ..... 10uf 15V  
 C2 ..... 50uf 15V  
 C3 ..... 50pf  
 C4 ..... 0.1uf  
 C5 ..... 50-100uf 50V  
 C6 ..... 50-100uf 50V

Resistors:

R ..... 2TK  
 R1 ..... 3.3K  
 R2 ..... 7.5K  
 R3 ..... 1.2K  
 R4 ..... 10K  
 R5 ... 470 ohm (see also  
 TYPE B) Operation  
 R6 ..... 680 ohm  
 R7 ..... 150 ohm  
 R8 ..... 1.2K  
 R9 ..... 10K  
 R10 ..... 5-1/2 10K  
 R11 ..... 100 ohm  
 R12 ..... 100 ohm  
 R13 ..... 5-1/2 10K  
 R14 ..... 220 ohm  
 R15 ..... 220 ohm  
 R16 . 0.5u(2W) 1A(1W)x2  
 R17 . 0.5u(2W) 1A(1W)x2  
 R18 ..... 100 ohm  
 R19 ..... 100 ohm  
 R20 ..... 10 ohm  
 R21 ..... 1K POT  
 VR1 ..... 1K POT  
 L1 - 3 turns 24s.w.g.wire

Miscellaneous:

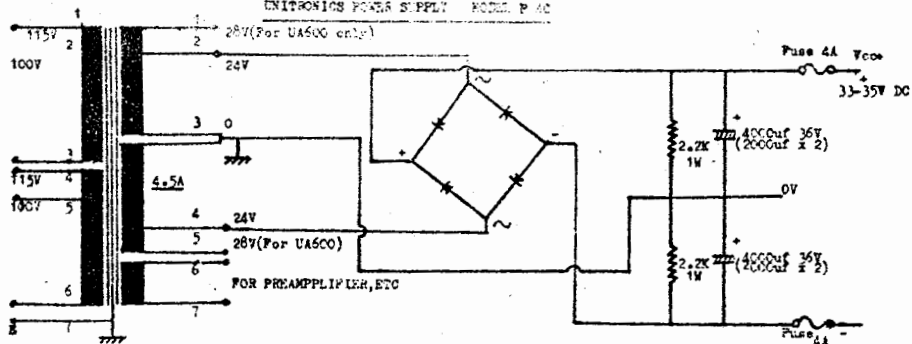
Printed Circuit Board ..  
 ..... 1 pc.  
 Heat Sink ..... 1 pc.  
 Silicone Grease .. 1 pk.  
 Power Tr. Mica ... 2 pc.  
 Power Tr. Washer 4 pcs.  
 Transistor mounting screw  
 ..... 1 pk.  
 PC mounting screw 1 pk.  
 Lead out connector pins  
 ..... 1 pk.  
 Lead out wires ... 1 pk.  
 Solder ..... 1 coil  
 Instruction Manual  
 ..... 1 copy

IMPORTANT:

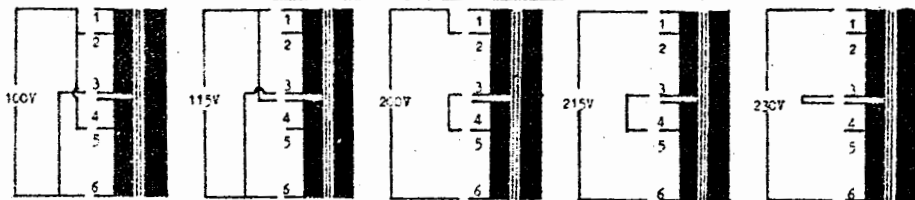
Check all parts (transistors etc.) before assembly, observe the polarity of condensers and diodes, etc. Donot use acid-core solders.

**UNITRONICS**

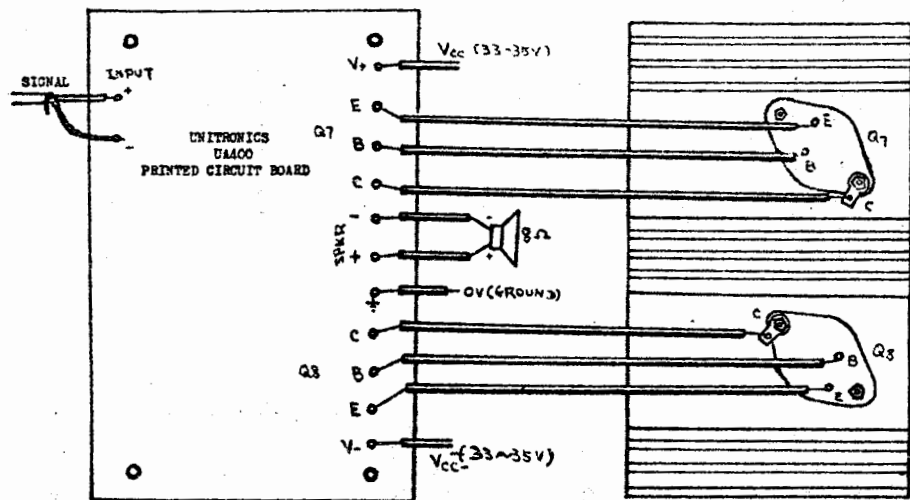
UNITRONICS POWER SUPPLY MODEL P AC



A.C. CONNECTIONS FOR VARIOUS VOLTAGE (but not for single A.C. supply TX.)

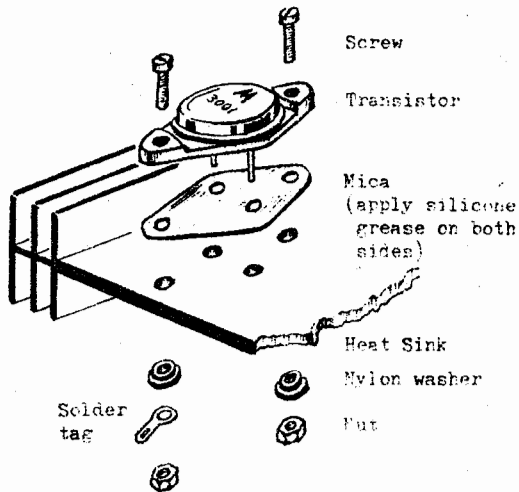


UNITRONICS



COMPLETE PRINTED CIRCUIT BOARD INTERCONNECTINGS

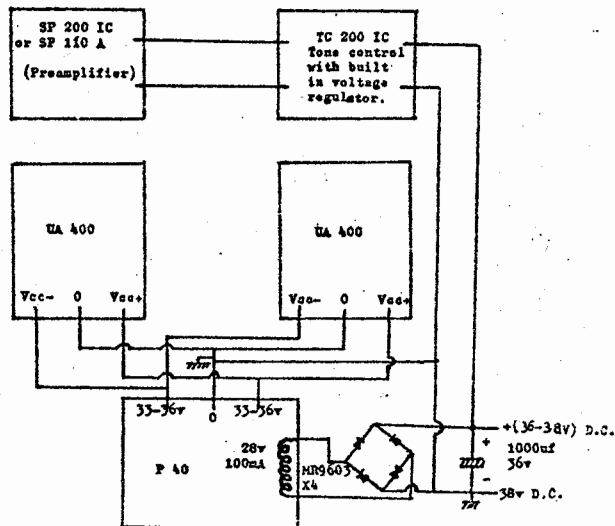
**UNITRONICS**



Power transistor mounting procedure

Wiring between power amplifiers, preamplifier, power supply.

ALTERNATE 1

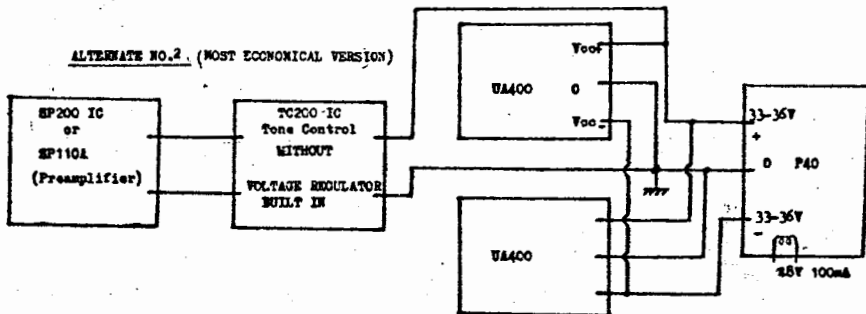


This configuration provides smallest hum, best regulation and lowest intermodulation distortion due to interference of power amplifier and preamplifier.

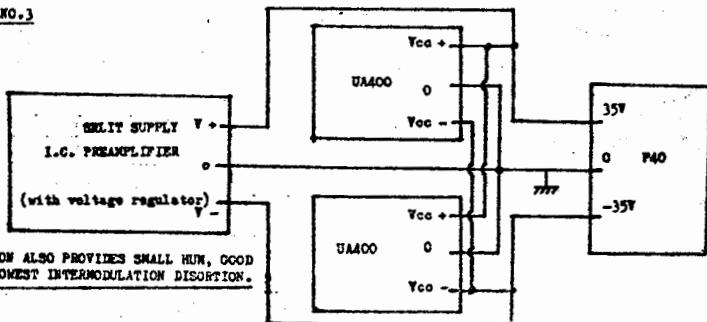
**UNITRONICS**



ALTERNATE NO.2 (MOST ECONOMICAL VERSION)



ALTERNATE NO.3



THIS CONFIGURATION ALSO PROVIDES SMALL HUM, GOOD REGULATION AND LOWEST INTERMODULATION DISTORTION.

**UNITRONICS**