



**CONTROL CIRCUIT P.C. BOARD**

R101 200 Ω	R137 1 K Ω	R173 47 Ω	C101 .02 MFD	D101 1A 400V	L101 33 mH
R102 68 K Ω	R138 1 K Ω TRIMMER	R174 150 Ω	C102 50 MFD	D102 1A 400V	
R103 330 Ω	R139 70 K Ω TRIMMER	R175 4.7 K Ω	C103 .1 MFD	D103 1A 400V	
R104 330 Ω	R140 1.5 K Ω	R176 1 K Ω	C104 .022 MFD	D104 1A 400V	
R105 47 K Ω	R141 270 Ω	R177 4.7 K Ω	C105 .047 MFD	D105 1A 400V	
R106 33 K Ω	R142 4.7 K Ω	R178 100 K Ω	C106 .047 MFD	D106 1A 400V	
R107 15 K Ω	R143 2.2 K Ω	R179 100 K Ω	C107 .047 MFD	D107 1A 400V	
R108 6.8 K Ω	R144 2 M Ω	R180 50 K Ω TRIMMER	C108 .18 MFD	D108 1A 400V	
R109 1 K Ω	R145 4.7 K Ω	R181 56 K Ω	C109 .1 MFD	D109 1A 400V	
R110 680 Ω	R146 330 Ω	R182 330 Ω	C110 .22 MFD	D110 1A 400V	
R111 1.5 M Ω	R147 200 Ω	R183 2.7 K Ω	C111 .18 MFD	D111 1A 400V	
R112 390 K Ω	R148 470 K Ω	R184 680 Ω	C112 6 MFD	D112 1A 400V	
R113 330 Ω	R149 10 K Ω	R185 470 Ω	C113 .047 MFD	D113 1A 400V	
R114 22 K Ω	R150 1.3 K Ω	R186 1 K Ω	C114 .022 MFD	D114 1A 400V	
R115 1 M Ω	R151 15 K Ω	R187 10 K Ω	C115 .022 MFD	D115 1A 400V	
R116 22 K Ω	R152 22 K Ω	R188 15 K Ω	C116 .27 MFD	D116 1A 400V	
R117 22 K Ω	R153 6.8 K Ω	R189 6.8 K Ω	C117 2 MFD	D117 1A 400V	
R118 50 K Ω TRIMMER	R154 27 K Ω	R190 220 K Ω	C118 .02 MFD	D118 1A 400V	
R119 6.8 K Ω	R155 82 K Ω	R191 68 K Ω	C119 .02 MFD	D119 1A 400V	
R120 1.5 K Ω	R156 82 K Ω	R192 68 K Ω	C120 .02 MFD	D120 1A 400V	
R121 470 Ω	R157 1.5 K Ω	R193 68 K Ω	C121 .02 MFD	D121 1A 400V	
R122 2.2 K Ω	R158 1.8 K Ω	R194 1 M Ω	C122 .02 MFD	D122 1A 400V	
R123 2.2 K Ω	R159 220 K Ω	R195 220 K Ω	C123 .02 MFD	D123 1A 400V	
R124 270 Ω	R160 2.2 K Ω	R196 220 K Ω	C124 .01 MFD	D124 1A 400V	
R125 680 Ω	R161 470 Ω	R197 270 Ω	C125 .47 MFD	D125 1A 400V	
R126 1 K Ω TRIMMER	R162 4.7 K Ω	R198 150 K Ω	C126 4.7 MFD	D126 1A 400V	
R127 2.2 K Ω	R163 70 K Ω TRIMMER	R199 22 K Ω	C127 10 MFD	D127 1A 400V	
R128 4.7 K Ω	R164 2.2 K Ω	R200 100 K Ω	C128 1.8 MFD	D128 1A 400V	
R129 27 K Ω	R165 2.2 K Ω	R1101 20 K Ω TRIMMER			
R130 3 K Ω	R166 1 K Ω	R1102 15 Ω			
R131 47 K Ω	R167 47 K Ω	R1103 47 K Ω			
R132 47 K Ω	R168 1 M Ω	R1104 82 K Ω			
R133 68 K Ω	R169 4.7 Ω	R1105 1 K Ω			
R134 2.2 K Ω	R170 330 Ω	R1106 1 K Ω			
R135 2.2 K Ω	R171 4.7 K Ω	R1107 47 K Ω			
R136 1.8 K Ω	R172 4.7 K Ω	R1108 15 Ω			

**FIRING CIRCUIT P.C. BOARD**

R301 - R306 250 Ω	D301 - D306 1A 1000V
R307 - R309 1.5 K Ω	D307 - D309 1A 400V
R310 - R317 82 Ω	D310 - D311 1A 1000V
R318 - R321 1 K Ω	D312 - D313 1A 400V
R322 - R327 150 Ω	D314 - D315 1A 400V
R328 - R333 210 Ω	D316 - D317 1A 400V
R334 - R339 150 Ω	D318 - D319 1A 400V
R340 - R342 1.5 K Ω	D320 - D321 1A 1000V
R343 - R345 470 Ω	D322 - D323 1A 400V
R346 - R348 27 K Ω	
R349 - R351 100 K Ω TRIMMER	
R352 - R354 270 Ω	
R355 - R357 27 K Ω	
R358 - R363 5.1 Ω	
R364 - R366 330 K Ω	
C301 - C302 15/200V	
C303 - C307 .022/25V	
D301 - D306 1A 1000V	
D307 - D309 1A 400V	
D310 - D311 1A 1000V	
D312 - D313 1A 400V	
D314 - D315 1A 400V	
D316 - D317 1A 400V	
D318 - D319 1A 400V	
D320 - D321 1A 1000V	
D322 - D323 1A 400V	
DZ301 - DZ303 20V 1W	
LED1 - LED9 RED LT. EMIT. DIODE	
TP1 - TP3 TRANSIENT SUPPRESSOR	
QU301 - QU303 2N6027	
SCR1 - SCR6 380 A 500 V	
QU101 2N6027	
SCR101 4A	
X101 QUAD OP AMP	

**COMPONENTS NOT ON P.C. BOARD**

R1 10K Ω POT.
R2 30R 100W
C7 .05 × .05 MFD.
F1 5A FUSE
ICR INPUT STARTER
ZCR FAULT PROTECTION RELAY
3CR CURRENT ACTIVATED FEED SW.
4CR OUTPUT PILOT RELAY
SW1 INPUT POWER
SW2 ELECT. POLARITY
SW3 OUTPUT CONTROL
SW4 WELDING MODE
T1 MAIN POWER TRANS.
T2 CONTROL TRANS.

**SNUBBER AS'LY.**

R11 - R16 47 Ω, 2W.
C11 - C16 .68 MFD.
C17 - C22 .15 MFD.

**OUTPUT SNUBBER AS'LY.**

R10 27 Ω, 2W.
C10 1 MFD.

**NOTES**

N.A. EITHER JUMPERS, DIODES, OR SOME COMBINATION OF BOTH MAY BE PRESENT.

N.B. CIRCLED CONNECTION PIN NOS. ON FIRING BOARD INDICATE THE SMALLER OF THE TWO MOLEX CONNECTORS.

N.C. CONTROL CIRCUIT CONNECTORS ARE DESIGNATED A, B & C FROM TOP TO BOTTOM AS MOUNTED IN MACHINE. PINS ARE NUMBERED ACCORDINGLY.

N.D. REED SWITCH CLOSURES WHEN OUTPUT CURRENT FLOWS.

N.E. OPTIONAL METERS AND MULTI-PROCESS SWITCH NOT SHOWN. SEE WIRING DIAGRAM.