BULLETIN.014

SYNCHRO-PULSE CDT 350: CP34
CP34-52 MICROPROCESSOR BOARD

The GAIN adjustment of this board is factory set for a gain of 160, and normally should not be field adjusted.

However, if it is necessary to check this adjustment, the method below can be used.

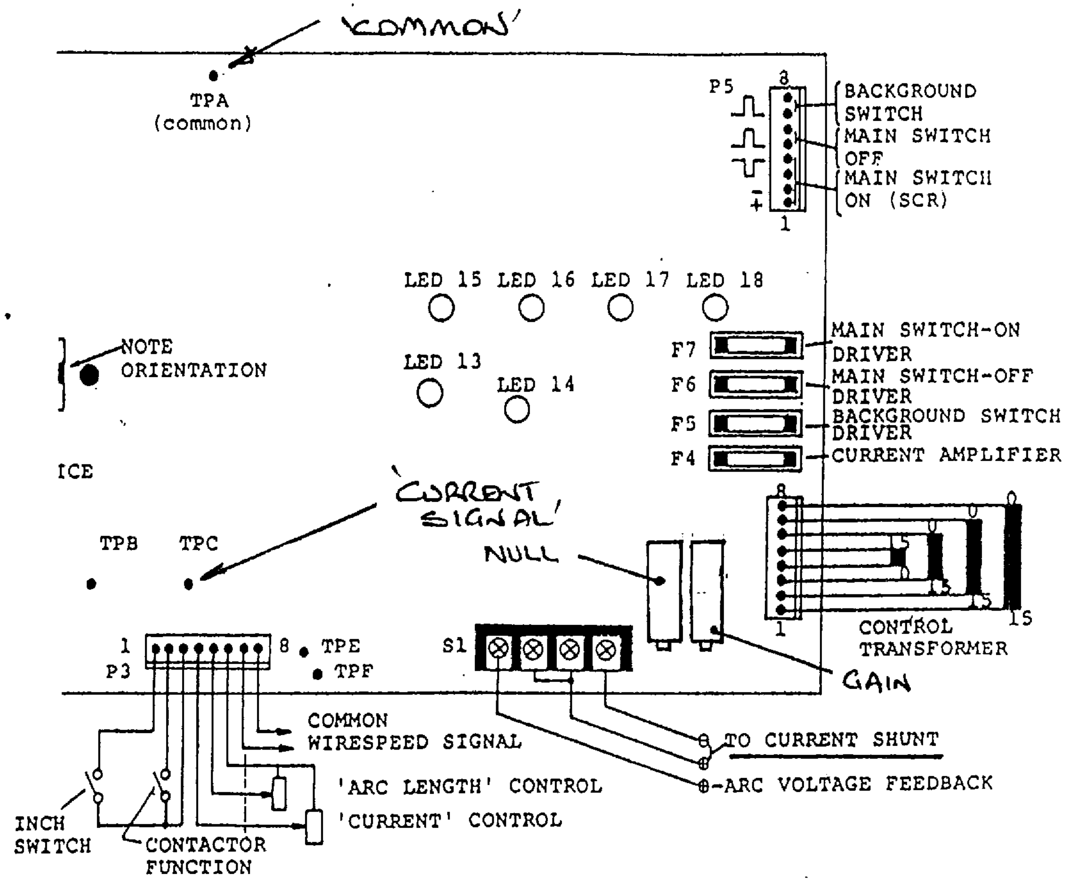
Before the gain is adjusted, check the Offset null with the following procedure.

OFFSET NULL

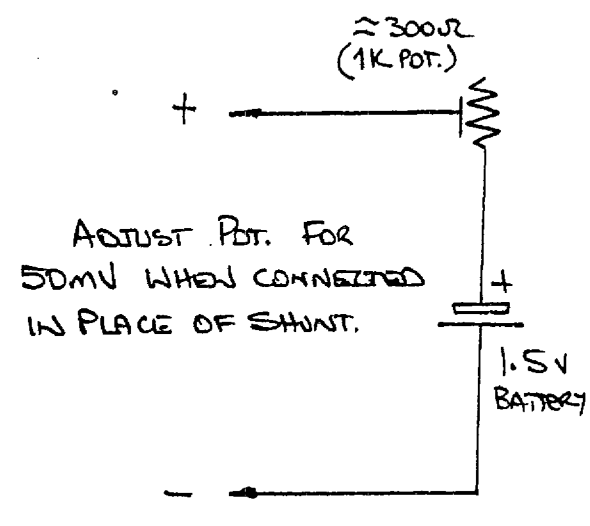
Adjust the NULL trimpot RV1 (null) such that while there is no welding current flowing through the current shunt, the output 'Current Signal', measured on Test Point C, referenced to 'Common' (Test Point A),is as close to zero millivolts as possible.

GAIN

1. Disconnect the shunt (twisted red and black wires) from terminal block S1.
2. In place of the shunt, connect a source of 50mV DC. Confirm this voltage using an accurate digital voltmeter. (A suitable battery-based circuit is shown on the following page).
3. With the same digital meter, check for 8.00 volts DC 'Current Signal' on Test Point C, reference to 'Common' (Test Point A).
4. If necessary, adjust the GAIN trimpot to establish 8.00 volts output.
5. Re-check the input has remained stable at 50 mV, repeat steps 3 and 4 if necessary.
6. Apply a small amount of glue or thick paint to the adjusting screw of the GAIN trimpot.



'COMMON'
TPA
(common)
P5
3
1
BACKGROUND SWITCH
MAIN SWITCH OFF
MAIN SWITCH ON (SCR)
LED 15
LED 16
LED 17
LED 18
LED 13
LED 14
NOTE ORIENTATION
F7
F6
F5
F4
MAIN SWITCH-ON DRIVER
MAIN SWITCH-OFF DRIVER
BACKGROUND SWITCH DRIVER
CURRENT AMPLIFIER
ICE
'CURRENT SIGNAL'
NULL
TPB
TPC
8
1
CONTROL TRANSFORMER
GAIN
1
8
P3
TPE
TPF
S1
COMMON
WIRESPEED SIGNAL
'ARC LENGTH' CONTROL
'CURRENT' CONTROL
INCH SWITCH
CONTACTOR FUNCTION
TO CURRENT SHUNT
ARC VOLTAGE FEEDBACK



≃ 300Ω
(1K POT.)
+
−
ADJUST POT. FOR 50mV WHEN CONNECTED IN PLACE OF SHUNT.
+
1.5V
BATTERY

50mV SOURCE