14. P4428 CAMERA ELECTRICAL SETUP PROCEDURE

Items in square brackets are the differences for the new SMT boards

1. Before switching on turn G1 pot RV111 anti-clockwise [clockwise] and pedestal pot RV110 clockwise [anticlockwise]. Select pan mode. Turn flicker suppressor off by setting RV212 fully anticlockwise.

2. Switch camera on and note current consumption, if greater than 500mA after the target discharge period suspect a fault.

3. Set line flyback to 10µs, measure on Q100 tag [TP103] adjust RV100.

4. Set trailing edge of blanking to lead flyback by 3½µs, measure on Q211 gate [TP111] adjust RV117.

5. Check G2 ≈ 170V (Measure on D103)
   Check G4 ≈ 130V (Measure on socket P108)
   Check G3 ≈ 80V (TP105) Adjust using RV109
   Check heater voltage on P 104 pins 3 to 6 [or across 8.7V and R200] and change R200 if required to achieve 5.9 -6.0V across the Pevicon heater.

6. Open circular blanking (RV206).

7. Set beam current to 4µA using RV111 (G1). Measure using a 3.5mm jack socket on the scan board and 50µA meter.

8. Set pedestal by setting head amp output to 175mV measured at R219/R220 [TP6] on the video board adjust RV110 on Scan board.

9. Centralise circular image with alignments and horizontal shift controls RV102, RV103 and RV101. Set vertical amplitude of image with RV112 and horizontal amplitude with L100 [Horizontal adjustment requires change to number of turns on coil] to obtain a circular target of 38 to 42µs width.

10. Focus G2 aperture spot in centre of picture using RV116.

11. Recheck the setting of G3 and items 7 to 10 above as these are interactive.

12. Reduce circular blanking sizeRV206 and adjust circle shape RV207 (monitor raster set to 3:4 ratio). The circle should be 34.7µs wide and 15.8ms or 13.4ms high (625/525 TV systems respectively)

13. Check video at L201 [TP5] and adjust the shading controls to achieve as flat a signal as possible, in both line and field rates (RV202, RV205 field and RV203,RV201 line).

14. Switch to chop mode and set video signal to 1.3V measuring at L201 [TP5] on the video board adjusting RV204.

15. Switch to Pan mode and set video signal to 1.3V measuring at L201 [TP5] on the video board adjusting RV200. [No longer required].

16. Turn on flicker suppressor with RV212.

17. Set period of clock pulse to 43µs measured on pin 11 of V214 [pin 3 of IC13] adjusting RV209.

18. Adjust RV212 to minimise vertical patterning.

19. Open circle (RV206) until top and bottom of stored area is visible. Centralise stored area (RV211). In the case of a 525 line camera only the top stored area will be visible, so RV211 maybe set fully clockwise. Reset circle.

20. Switch camera to chop mode and adjust RV210 to the centre of the range where there is no picture noise. [Switch camera to chop, no adjustment required]

21. Adjust RV208 to give minimum flicker.

22. Switch to pan mode. Check "park" position of shutter blade. Switch to chop, check output of sensor is approximately 3V measured at R173 [or TP113].

23. Check sensor output is locked to field rate and swings below 2V and above 6V measured at R173 [or TP113]. Select R170 for an error pulse of 0 to 2ms on V108.5 [TP112].

24. Switch to pan. Check operation of iris and adjust sensitivity using RV118.

25. Adjust internal monitor scans and shifts (RV119, L101 RV108 and RV104), for a circular and central image.

26. Adjust brightness and contrast of internal monitor (RV107 and RV106).

27. Check and adjust optical focus by moving yoke assembly. Check yoke rotation.

28. Check LED battery indicators. Adjust RV115 for offset and R114 for range [no adjustment]. Rail drop out point should be below 9.2V.

29. Check overall quality of picture and mechanical assembly.