

## SERVICE ADJUSTMENT

### PIF/AFT/AGC/+B ADJUSTMENT

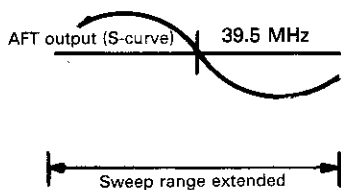
#### 1. VCO T204 for Picture

1. Apply 3V DC to ⑥ of IC200.
2. Measure and record voltage at pin ⑳ of IC200.
3. Apply carrier frequency of 39.5 MHz to pins ⑧ and ⑨ of IC200.
4. Adjust T204 to obtain same voltage value as step 2.

#### 2. AFT Adjust T205

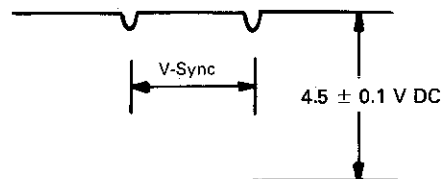
##### Coarse Adjustment

1. Connect sweep generator output to Tuner Test Point.
2. Apply 3V DC to pin ⑥ of IC200.
3. Connect response lead (containing 10k ohm resistor in series) to pin ⑯ of IC200.
4. Adjust T205 to align Picture marker (39.5 MHz) of S-curve with base line.



##### Fine Adjustment

1. Receive CH69 (Real CH mode)
2. Set AFT mode to Off
3. Connect DC voltmeter to pin ⑯ of IC200.
4. Adjust T205 to obtain 4.5V DC  $\pm$  0.1 V.



#### 4. RF AGC R219

1. Receive colour bar signal (signal strength: 53 dB).
2. Connect DC voltmeter to Test Point 201 (RF AGC).
3. Set AGC-VR (R219) to maximum position (memory).
4. Adjust R219 to obtain a voltage of 0.1V below maximum voltage (step 3).

#### 5. +B Adjustment R716

1. Receive monoscope pattern signal.
2. Set contrast control to maximum (100%) position and brightness control to centre position (50%).
3. Connect DC voltmeter to cathode of D601.
4. Adjust R716 to obtain a voltage of 150 V  $\pm$  0.5 V.

## SERVICE MODE

Most of the adjustments required by this TV set can be made through the Remote Control Unit or by means of the push buttons on the television itself.

The first step is to remove the rear cover and press the service button (S1401) found on the Video Unit (PWB-B). When in Service Mode "SHARP Software Service Ver" will appear on the screen.

The required adjustments can then be made from the Remote Control Unit. Having finalized the adjustments, the service button should be pressed again to restore the television to its normal function.

In Service Mode the Remote Control buttons change their function. The only buttons required are the following: +CH/-CH for movement in adjustment options menu; +V/-V are used to carry out an adjustment in said menu; ON/OFF is used to memorize a new adjustment.

Adjustment menu is as follows:

- |                           |  |
|---------------------------|--|
| 1. Horizontal Phase Shift | 11. Trapezoid 2                                  |
| 2. Blanking Phase Shift   | 12. Chroma-Luma Delay                            |
| 3. Vertical Phase         | 13. VCO adjust                                   |
| 4. Vertical Size          | 14. G2 adjustment (adj. by potentiometer in FBT) |
| 5. S-Correction           | 15. Cut Off Red                                  |
| 6. Vertical Symmetry      | 16. Cut Off Green                                |
| 7. Horizontal amplitude   | 17. Cut Off Blue                                 |
| 8. East/West 1            | 18. Drive Red                                    |
| 9. Trapezoid 1            | 19. Drive Green                                  |
| 10. East/West 2           | 20. Drive Blue                                   |

Adjustment Note:

The procedure for making adjustments to East/West and Trapezoidal Corrections is as follows:

- Set Horizontal Amplitude to minimum.
- Set East/West 2 to minimum.
- Set Trapezoid 2 to minimum.
- Adjust East/West 1.
- Adjust Trapezoid 1.
- Adjust East/West 2.
- Adjust Trapezoid 2.
- Adjust Horizontal Amplitude.

### 1. Horizontal Phase Shift

- a) Receive Philips pattern signal.
- b) When volume-up button is pressed, picture moves to the right, and horizontal blanking appears on r.h.s.
- c) When volume-down button is pressed, picture moves to the left, and horizontal blanking appears on l.h.s.
- d) Adjust the horizontal phase to obtain a position where no horizontal blanking appears on either side (fig. 1).

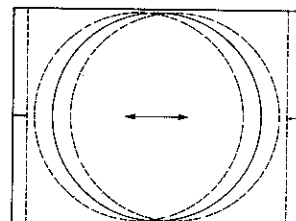


fig. 1

### 2. Horizontal Blanking Phase Shift

- a) Receive Philips pattern signal.
- b) When volume-up button is pressed, picture moves to the left.
- c) When volume-down button is pressed, picture moves to the right.
- d) Adjust the horizontal location to obtain picture centring (fig. 2).

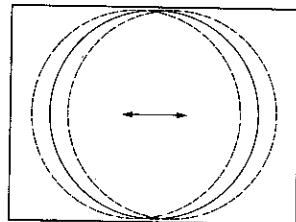


fig. 2

### 3. Vertical Phase

No adjustment required.

### 4. Vertical Size

- Receive Philips pattern signal.
- When volume-up button is pressed, vertical size of picture increases.
- When volume-down button is pressed, vertical size of picture decreases.
- Adjust the vertical size to obtain overscan (fig. 3).

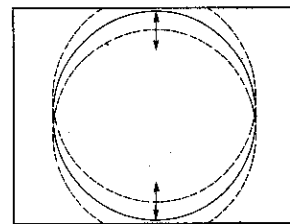


fig. 3

### 5. S-Correction

- Receive Philips pattern signal.
- When volume-up button is pressed, upper and lower scanning decreases, and centre scanning increases.
- When volume-down button is pressed, upper and lower scanning increases, and centre scanning decreases.
- Adjust the S-correction to obtain a balance between upper, lower and centre (fig. 4).

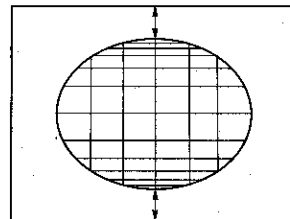


fig. 4

### 6. Vertical Symmetry

- Receive Philips pattern signal.
- When volume-up button is pressed, upper picture scanning decreases and lower picture scanning increases.
- When volume-down button is pressed, upper picture scanning increases and lower picture scanning decreases.
- Adjust the Vertical symmetry to obtain symmetrical scanning between upper and lower picture (fig. 5).

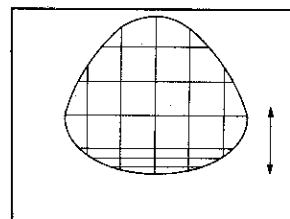


fig. 5

### 7. Horizontal Amplitude

- Receive Philips pattern signal.
- When volume-up button is pressed, horizontal scanning increases.
- When volume-down button is pressed, horizontal scanning decreases.
- Adjust the horizontal amplitude to obtain 9% overscan (fig. 6).

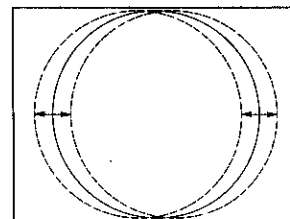


fig. 6

### 8. East/West 1

- Receive Philips pattern signal.
- When volume-up button is pressed, side pincushion changes from pincushion to barrel shape.
- When volume-down button is pressed, side pincushion changes from barrel to pincushion shape.
- Adjust the East/West 1 to obtain condition as in fig. 7.

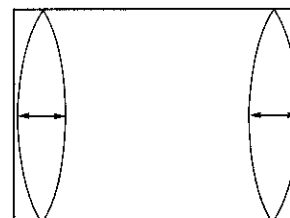


fig. 7

### 9. Trapezoid 1

- Receive Philips pattern signal.
- When volume-up button is pressed, side pincushion changes.
- When volume-down button is pressed, side pincushion changes.
- Adjust the Trapezoid 1 to obtain condition as in fig. 8.

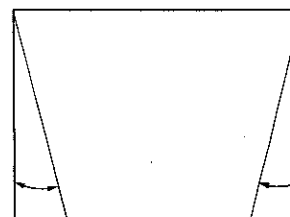


fig. 8

### 10. East/West 2

- Receive Philips pattern signal.
- When volume-up button is pressed, side pincushion changes.
- When volume-down button is pressed, side pincushion changes.
- Adjust the East/West 2 to obtain condition as in fig. 9.

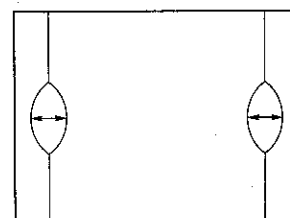


fig. 9