# ALIGNMENT PROCEDURE AND OPTION SETTING

**Entering SERVICE mode**
Service mode is entered by selecting the "mute" remote key and local "down" simultaneously with the sharpness DAC set to Minimum and programme position 99 selected.
Service mode 2 is selected by pressing the Recall remote key while in service mode 1.
**Service mode navigation**
- Up /Down remote keys                          **:**cycle through the service items available.
- -/+ remote keys                               **:**Decrement/Increment the values within range.
- TV/AV                                         **:**Store the current data.
- 0 – 7 digit keys                              **:**Toggle bits 0-7 in option byte (service mode 2).

| Order | Item | Range |
|-------|------|-------|
| 1 | Cut off (VG2) | LED ON , LED OFF |
| 2 | Vertical slope | 0-63 |
| 3 | Vertical Shift | 0-63 |
| 4 | Vertical amplitude | 0-63 |
| 5 | Horizontal shift | 0-63 |
| 6 | Red Cut | 0-63 |
| 7 | Green Cut | 0-63 |
| 8 | Red Drive | 0-63 |
| 9 | Green Drive | 0-63 |
| 10 | Blue Drive | 0-63 |
| 11 | AGC | 0-63 |
| 12 | Sub-Colour | 0-63 |
| 13 | Sub-Brightness | 0-63 |

**Sub-Colour:**      Set sub-colour to 16.

**Sub-Brightness**:  Set sub-colour to 33.

**G2 alignment**:    Before entering into service mode, recall the nominal picture setting :remote key "N".
                     From this setting, increase brightness by 11 steps and reduce sharpness to minimum.
                     Tune a colour bar signal on Prg 99 and enter into SVC mode. In SVC mode , select "G2" item and press – or + remote key to control software disable vertical deflection. The user must then adjust G2 voltage on FBT, to find the point where LED is ON. Press – or + remote key to return to normal SVC mode.

**White balance**:   - Select a dark picture and adjust Red Cut and Green Cut to the desired colour temperature.
                     - Select a bright picture, set Blue Drive to 32 and adjust Red Drive, and Green Drive to the desired colour temperature.

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# ALIGNMENT INSTRUCTIONS

## Microcontroller configuration : Service mode

To switch the TV set into service mode please see instruction below.

1 - Select pr. number 91

2 - Adjust sharpness to minimum and exit all menu.

3 - Quickly press the key sequence : **RED - GREEN - menu**

To exit SERVICE menu press **menu** key or **Std By** key.

In Service Mode press *"OK"* to stop the microcontroller i.e. the I2C bus is free and the set can be controlled by external equipment. Press *"OK"* again to allow the microcontroller to control the set again

## Microcontroller configuration :

Tuner Option

| Option | Tuner maker |
|--------|-------------|
| DW | DAEWOO / SAMSUNG |
| PH1 | PHILIPS ( Video  processor AGC ) |
| PH2 | PHILIPS (tuner internal  AGC ) |

System Option

| Option | System |
|--------|--------|
| TF | PAL – B/G |
| TK | PAL – SECAM B/G-D/K |
| TU | PAL I/I |
| TA | PAL – SECAM B/G-L/L' |

## TV set Alignment

**1 - G2 alignment**

- Set TV in NORMAL I mode
- TV in AV mode without video signal ? Black screen.
- TV preset with WP Red, WP Green and WP Blue equal to 32.
- TV preset with Black R, Black G equal to 8.
- Adjust screen volume ( on FBT ) such that the highest cathode cut-off voltage measured on CRT board, is Vcut-off ± 5V.

| Screen size | Vcut-off |
|-------------|----------|
| 14″ | 115 V |
| 20″ & 21″ | 125 V |

**2 - White balance**

- Select a dark picture and adjust Black G and Black R to the desired colour temperature.
- Select a bright picture and adjust WP Red, WP Green, WP Blue to the desired colour temperature.