

**THE QUALITY OF
THIS MANUAL IS
THE BEST THAT
IS AVAILABLE**

MPC.

**For Service Manuals Contact
MAURITRON TECHNICAL SERVICES
8 Cherry Tree Rd, Chinnor
Oxon OX9 4QY
Tel:- 01844-351694 Fax:- 01844-352554
Email:- enquiries@mauritron.co.uk**

**SAISHO FST212T
AND
MATSUI 2180TT**

COLOUR TELEVISION RECEIVER

SERVICE MANUAL

SAISHO FST212T AND MATSUI 2180TT

COLOUR TELEVISION RECEIVER

C O N T E N T S

	PAGE/S
SPECIFICATIONS	1
ALIGNMENT INSTRUCTIONS	2 - 3
MAJOR COMPONENTS LOCATION GUIDE	4
BLOCK DIAGRAM	5
MAIN P.C. BOARD	6
SAISHO FST212T POTENTIOMETER P.C. BOARD MATSUI 2180TT POTENTIOMETER P.C. BOARD	7
POWER SWITCH P.C. BOARD T' TEXT P.C. BOARD CRT P.C. BOARD	8
CHASSIS SCHEMATIC DIAGRAMS	9 - 12
CABINET EXPLODED VIEW	13
STAND EXPLODED VIEW	14
REPLACEMENT PARTS LIST	15 - 22
SAISHO FST212T REPLACEMENT PARTS LIST DIFFERENCES	23
MATSUI 2180TT REPLACEMENT PARTS LIST DIFFERENCES	24

For Service Manuals Contact
MAURITRON TECHNICAL SERVICES
8 Cherry Tree Rd, Chinnor
Oxon OX9 4QY
Tel:- 01844-351694 Fax:- 01844-352554
Email:- enquiries@mauritron.co.uk

SAISHO FST212T AND MATSUI 2180TT

COLOUR TELEVISION RECEIVER

SPECIFICATIONS

PICTURE SIZE.....21 inch (51cm "V")

SYSTEM.....PAL-UK

FREQUENCY RANGE UHF.....21 - 69 ch, 470 -862 MHz

MAXIMUM SENSITIVITY UHF.....20 dB

INTERMEDIATE FREQUENCY:

Picture IF Carrier Frequency.....39.5 MHz

Colour Sub Carrier Frequency.....35.07 MHz

Sound IF Carrier Frequency.....33.5 MHz

SOUND INTERMEDIATE FREQUENCY.....6.0 MHz

MAXIMUM OUTPUT POWER.....2.0 W

10% THD OUTPUT POWER.....1.8 W

SPEAKER.....4 ohm

POWER SOURCE.....AC 240V

IMPORTANT

FOR THE SERVICE WORK ALWAYS USE MAINS ISOLATING TRANSFORMER,
CHASSIS IS LIVE.
(IRRESPECTIVE OF POLARITY OF MAINS PLUG.)

SAISHO FST212T AND MATSUI 2180TT

COLOUR TELEVISION RECEIVER

ALIGNMENT INSTRUCTIONS

SHUT DOWN CIRCUIT

When the high voltage rises, a simultaneous voltage increase will develop at terminal 10 of the Horizontal Output Transformer (FB401), and be applied to pin 26 of IC401. If excessive high voltage is produced, the increased voltage developed exceeds the rating of zener diode D404 causing the Horizontal Oscillator to stop functioning and the high voltage system to shut down.

VERTICAL SIZE ADJUSTMENT

Adjust the control (VR401) so that the picture fills the picture from top to bottom and is proportionate to the width.

RF AGC ADJUSTMENT

The RF AGC control is adjusted at the factory and rarely requires re-adjustment unless the received picture exhibits too much snow or the receiver lacks sensitivity. Some adjustment can be made by tuning in a weak snowy station and adjusting RF AGC for the least amount of snow. For a more accurate adjustment use the following procedure.

1. Inject the test pattern signal (80dB).
2. Adjust AGC pin of TV tuner (TP202) to 3.9V with VR201 control.

AFT ADJUSTMENT

1. Connect the output of the oscillator to the tuner pack TP.
2. Adjust L203 to keep constant DC voltage at TP201 with AFT ON and AFT OFF.

FOCUS ADJUSTMENT

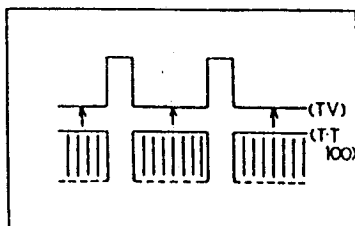
Adjust focus control on the flyback transformer for a defined picture.

SUB BRIGHT ADJUSTMENT

1. Receive the signal of Monochrome pattern.
2. Set the Contrast (VR101-2) control to maximum position.
3. Set the Brightness (VR101-1) control to minimum position.
4. Adjust the Sub Bright (VR601) control to obtain a dim white pattern on 25% of gray scale.

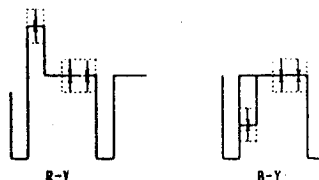
T' TEXT SUB BRIGHT ADJUSTMENT

1. Turn on the VCR when video signal does not put into the VCR.
2. Adjust the Brightness volume (VR101-1) so that the screen becomes black.
3. Connect TP802 to the oscilloscope. Check the black level.
4. Turn off the VCR and receive the monochrome pattern. Then, make the T' TEXT 100 appears on the screen.
5. Adjust VR102 so that the black level voltage in step 4 is equal to the black level voltage in step 3.



HUE DELAY ADJUSTMENT

1. Receive the signal of DEM pattern.
2. Connect dual oscilloscope to C616 and C617 hot side.
3. Set the color (VR101-3) control to maximum position.
4. Adjust waveform to straight line with VR603, VR604 and L604.



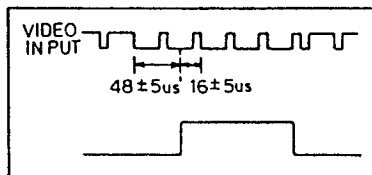
For Service Manuals Contact
MAURITRON TECHNICAL SERVICES
8 Cherry Tree Rd, Chinnor
Oxon OX9 4QY
Tel: 01844-351694 Fax: 01844-352554
Email: enquiries@mauritron.co.uk

CRYSTAL FREQUENCY ADJUSTMENT

1. Set the teletext recorder to the mix mode by the remote control.
2. Connect the 1pin of IC901 to 12V LINE.
3. Connect the resistor 5.6M ohm between 7pin of IC901 to 12V LINE.
4. Confirm the display of the mix mode to the Left or Right.
5. Adjust the TC901 so that teletext display will be stop.

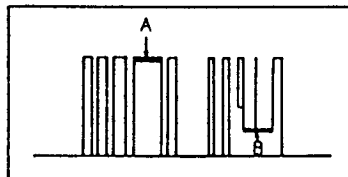
FIELD SYNC ADJUSTMENT

1. Input the color bar signal.
2. Connect the synchroscope to the 16pin of IC901 to 13pin of IC901.
3. Adjust the VR901 so that time interval becomes 48 us.



CLOCK COIL ADJUSTMENT

1. Put video signal in the video in from the wallpaper No.1.
2. Put video signal in the synchroscope ch2 from the wallpaper generator No.2.
3. Put video signal in the 18pin of IC901 from the synchroscope ch1.
4. Adjust the L902 to make the wave forms A and B be horizontally as the following illustration.



VIDEO IF ALIGNMENT

(Refer to Figure 1)

TEST EQUIPMENT CONNECTION

OSCILLOSCOPE Set AC-DC switch to AC position.

SWEEP-MARKER GENERATOR Connect H SCOPE and V SCOPE output cable from SWEEP-MARKER GENERATOR to H and V input connectors on the OSCILLOSCOPE, connect hot lead of SWEEP-MARKER OUTPUT cable to test point TP212 on PCB001; connect ground lead to chassis ground. Connect pick up SWEEP-MARKER INPUT cable to TP210; ground lead to chassis

COLOUR TELEVISION RECEIVER

ALIGNMENT INSTRUCTIONS

1. Connect 10K ohm variable resistor between TP211, B+ (12V) to ground.
Install AGC VR to prevent saturation in waveform, then adjust AGC VR for proper size of waveform. On the other hand, in case IF AGC voltage is supplied externally, adjust for proper size of waveform on condition that IF AGC voltage is within 10V and is gradually decreased.
2. Adjust L204 to obtain maximum amplitude of response curve at 39.5 MHz.
(Refer to Response Curve "A")
3. Connect a 100 ohm resistor between TP205 and TP206.
Re-connect hot lead of SWEEP-MARKER GENERATOR OUTPUT cable from TP212 to TV tuner TP.
4. Adjust L206 obtain maximum amplitude of response curve.
(Refer to Response Curve "B")
5. Disconnect the 10K ohm variable resistor and 100 ohm resistor from the circuit.
Disconnect COO4. (solder bridge)
6. Connect SWEEP-MARKER GENERATOR INPUT cable from IP210 to TP201.
7. Adjust L203 to place 39.5 MHz marker at reference line on response curve.
(Refer to Response Curve "C")
8. Re-connect COO4. (solder bridge)

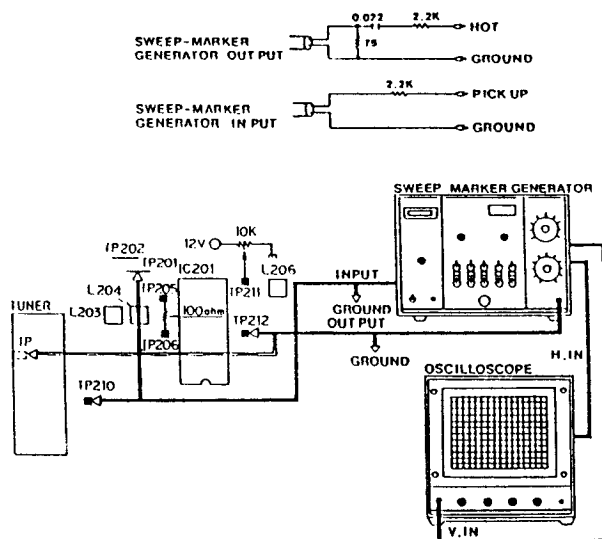
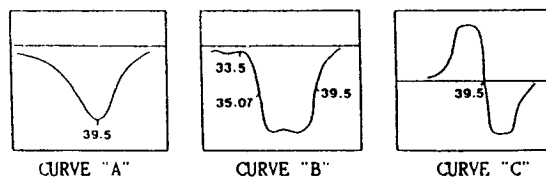
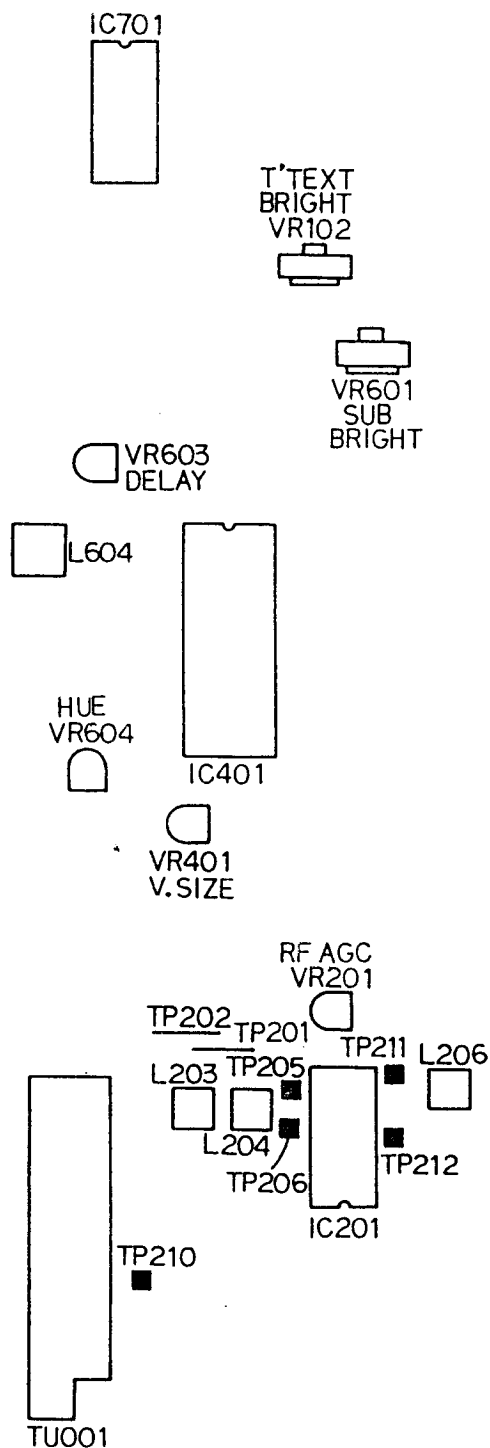


FIGURE 1

SAISHO TST212T AND MATSUI 2180TT

COLOUR TELEVISION RECEIVER

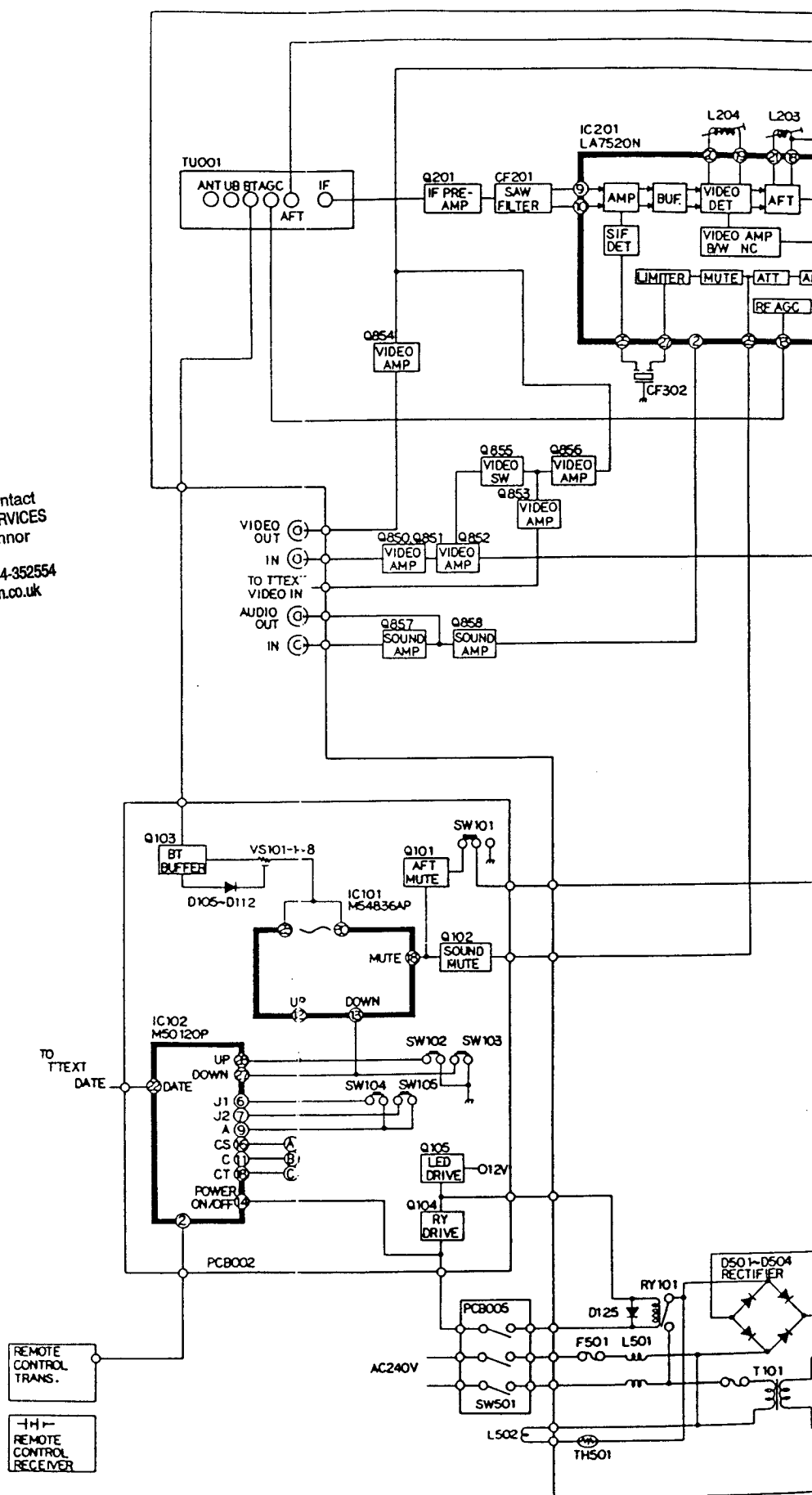
MAJOR COMPONENTS LOCATION GUIDE



FB401

For Service Manuals Contact
MAURITRON TECHNICAL SERVICES
8 Cherry Tree Rd, Chinnor
Oxon OX9 4QY
Tel:- 01844-351694 Fax:- 01844-352554
Email:- enquiries@mauritron.co.uk

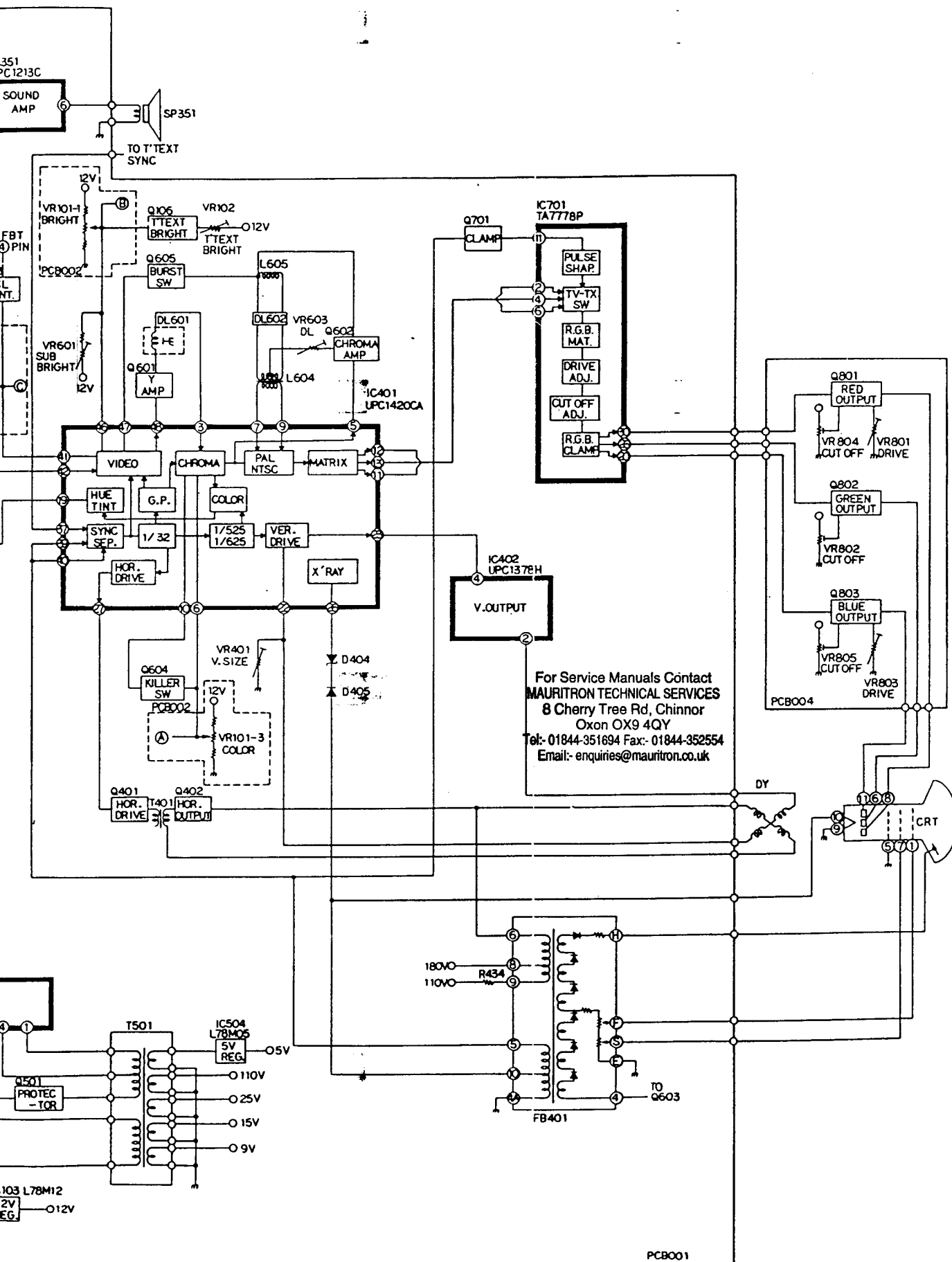
For Service Manuals Contact
MAURITRON TECHNICAL SERVICES
 8 Cherry Tree Rd, Chinnor
 Oxon OX9 4QY
 Tel:- 01844-351694 Fax:- 01844-352554
 Email:- enquiries@mauritron.co.uk



COLOUR TELEVISION RECEIVER

The schematic diagram illustrates the internal electronic components and their interconnections for a television set. The circuit is organized into several functional blocks:

- Tuner and Video Amplifier:** The tuner section (IC201 LA7520N) receives signals from the antenna (TU001) and processes them through various stages including IF pre-amplification, SAW filtering, and video detection. The video amplifier (IC101 M54836AP) then amplifies the video signal for output.
- Color Processor and Control:** The color processor (IC102 M50120P) handles color signals, including hue, tint, and sync separation. It also manages the horizontal and vertical drive signals for the display. The color control section includes a color killer (Q604) and a color control switch (VR101-3).
- Power Supply and Rectification:** The power supply section (IC501 STR58041) converts AC240V input into a regulated 12V output (IC103 L78M12) and a 5V output (IC504 L78M05). It includes a full-wave rectifier (D501-D504) and a filter capacitor (C501).
- Audio and Control:** The audio amplifier (IC351 UPC1213C) drives the speaker (SP351). The control section includes a remote control interface (IC103) and various control switches (SW101-SW105) for functions like mute, brightness, and contrast.
- Other Components:** The diagram also shows various other components such as capacitors (C1-C10), inductors (L1-L10), and transistors (Q1-Q10) that facilitate the signal flow and power regulation throughout the system.



For Service Manuals Contact
MAURITRON TECHNICAL SERVICES
 8 Cherry Tree Rd, Chinnor
 Oxon OX9 4QY
 Tel: 01844-351694 Fax: 01844-352554
 Email: enquiries@mauritron.co.uk

For Service Manuals Contact
MAURITRON TECHNICAL SERVICES
8 Cherry Tree Rd, Chinnor
Oxon OX9 4QY
Tel: 01844-351694 Fax: 01844-352554
Email: enquiries@mauritron.co.uk

