

TOSHIBA

Toshiba 21S23N Service Manual

1

2

Table Of Contents

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41

•

[Table of Contents](#)

•

Bookmarks

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Quick Links



COLOUR TELEVISION 21S23N

PRINTED IN UK. 2003 C

[Table of Contents](#)

[Next Page](#)

1
2
3
4
5

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[TV Toshiba 219X6M Owner's Handbook Manual](#)

Colour television ~11-sys tem (13 pages)

Summary of Contents for Toshiba 21S23N

[Page 1](#) http://bbs.520101.com FILE NO: 050-200247 TOSHIBA SERVICE MANUAL COLOUR TELEVISION 21S23N PRINTED IN UK. 2003 C...

[Page 2: Servicing Notices On Checking](#)

http://bbs.520101.com SERVICING NOTICES ON CHECKING 1. KEEP THE NOTICES 6. AVOID AN X-RAY As for the places which need special attentions, Safety is secured against an X-ray by consider- they are indicated with the labels or seals on the ing about the cathode-ray tube and the high cabinet, chassis and parts.

[Page 3: Table Of Contents](#)

http://bbs.520101.com CONTENTS SERVICING NOTICES ON CHECKING
..... A1-1 HOW TO ORDER PARTS A1-1 IMPORTANT
.....A1-1 CONTENTSA2-1 GENERAL SPECIFICATIONS
.....A3-1~A3-5 DISASSEMBLY INSTRUCTIONS 1.REMOVAL OF ANODE CAP
.....B1-1 2.REMOVAL AND INSTALLATION OF FLAT PACKAGE IC B2-1, B2-2
SERVICE MODE LIST

[Page 4: General Specifications](#)

http://bbs.520101.com GENERAL SPECIFICATIONS CRT Size / Visual
Size 21 inch / 544.5mmV System CRT Type NORMAL Deflection degree Magnetic Field BV/BH
+0.45G/0.18G Color System PAL/SECAM Speaker 2 Speaker Position Front Size 2.0 x4.7 Inch
Impedance Sound Output 5.0+5.0 W 10%(Typical) 4.0+4.0 W DDR SECAM...

[Page 5](#) http://bbs.520101.com GENERAL SPECIFICATIONS On Screen
Menu Display Menu Type Character Picture Contrast Brightness Color Tint (NTSC Only)
Sharpness Audio Bass Treble Balance BBE On/Off Stable Sound On/Off CH Tuning Manual Auto
CH Allocation Language Clock Set On Timer Set Off Timer Set Pin Code Registration Panel Lock...

[Page 6](#) http://bbs.520101.com GENERAL SPECIFICATIONS G-10
Remote Unit RC-EY Control Glow in Dark Remocon Format Custom Code 40-BF h Power Source
Voltage(D.C) UM size x pcs UM-4 x 2 pcs Total Keys Keys Keys Power Volume Up / + Volume
Down / - Previous Select Picture Menu...

[Page 7](#) http://bbs.520101.com GENERAL SPECIFICATIONS G-11
Features Auto Degauss Auto Shut Off Canal+ CATV Anti-theft(Back Up 30 Min.) Memory(Last
CH) Memory(Last Volume) Auto Search CH Allocation Just Clock Function Game Position CH
Label VM Circuit Full OSD Unitext Fastext Top Text Premiere Comb Filter Lines...

[Page 8](#) http://bbs.520101.com GENERAL SPECIFICATIONS G-13
Interface Switch Front Power (Tact Sw) System Select Main Power SW Sub Power Channel Up
Channel Down Volume Up Volume Down Rear AC/DC TV/CATV Selector Degauss Main Power SW
Indicator Power Stand-by Stand-by/ON Yes(Red) On Timer Yes(Green) Terminals Front...

[Page 9: Disassembly Instructions](#)

http://bbs.520101.com DISASSEMBLY INSTRUCTIONS 1. REMOVAL OF
ANODE CAP 3. After one side is removed, pull in the opposite direction to remove the other.
Read the following NOTED items before starting work. NOTE After turning the power off there
might still be a potential Take care not to damage the Rubber Cap.

[Page 10: Removal And Installation Of Flat Package Ic](#)

http://bbs.520101.com DISASSEMBLY INSTRUCTIONS REMOVAL AND
INSTALLATION OF When IC starts moving back and forth easily after desoldering completely,
pickup the corner of the IC using FLAT PACKAGE IC a tweezers and remove the IC by moving
with the IC desoldering machine.

[Page 11](#) http://bbs.520101.com DISASSEMBLY INSTRUCTIONS
INSTALLATION When bridge-soldering between terminals and/or the soldering amount are not
enough, resolder using a Thin- Take care of the polarity of new IC and then install the tip
Soldering Iron. (Refer to Fig. 2-8.) new IC fitting on the printed circuit pattern. Then solder each
lead on the diagonal positions of IC temporarily.

[Page 12: Service Mode List](#)

http://bbs.520101.com SERVICE MODE LIST This unit provided with the
following SERVICE MODES so you can repair, examine and adjust easily. To enter the Service
Mode, press both set key and remote control key for more than 2 seconds. Set Key Remocon
Key Operations Reset the user setting items (PICTURE, VOLUME, LANGUAGE and NICAM AUTO/...

[Page 13: When Replacing Eeprom\(Memory\) Ic](#)

http://bbs.520101.com WHEN REPLACING EEPROM (MEMORY) IC If a
service repair is undertaken where it has been required to change the MEMORY IC, the following
steps should be taken to ensure correct data settings while making reference to TABLE 1. CD CF

Table 1 Enter DATA SET mode by setting VOLUME to minimum.

[Page 14: Electrical Adjustments](#)

http://bbs.520101.com ELECTRICAL ADJUSTMENTS 1. ADJUSTMENT PROCEDURE 2. BASIC ADJUSTMENTS Read and perform these adjustments when repairing the 2-1: CONSTANT VOLTAGE circuits or replacing electrical parts or PCB assemblies. Place the set with Aging Test for more than 5 minutes. CAUTION Connect the digital voltmeter to TP501.

[Page 15](#) http://bbs.520101.com ELECTRICAL ADJUSTMENTS 2-6: FOCUS 2-10: BRIGHT CENT Receive a 70dB monoscope pattern. Receive the PAL black pattern*. (RF Input) Turn the Focus Volume fully counterclockwise once. Using the remote control, set the brightness and Adjust the Focus Volume until picture is distinct. contrast to normal position.

[Page 16](#) http://bbs.520101.com ELECTRICAL ADJUSTMENTS 2-13: TINT 2-15: Confirmation of Fixed Value (Step No.) Receive the NTSC color bar pattern. (Audio Video Input) Please check if the fixed values of the each adjustment items are set correctly referring below. Using the remote control, set the brightness and contrast to normal position.

[Page 17](#) http://bbs.520101.com ELECTRICAL ADJUSTMENTS PURITY AND CONVERGENCE 3-3: STATIC CONVERGENCE ADJUSTMENTS NOTE Adjust after performing adjustments in section 3-2. NOTE Receive the crosshatch pattern from the color bar Turn the unit on and let it warm up for at least 30 generator.

[Page 18](#) http://bbs.520101.com ELECTRICAL ADJUSTMENTS 4. ELECTRICAL PARTS LOCATION GUIDE (WIRING CONNECTION) CRT PCB TP803 J801 TP801 CP801 CD803 VR420 VR401 J701 CP803A FB401 CP401 AC IN TP501 R521 CP802A CD501 CP501 VR501 L503 SPEAKER CP1001 CP502 MAIN PCB...

[Page 19: Block Diagram](#)

http://bbs.520101.com BLOCK DIAGRAM VOL UP TU001 MICON W/T.TEXT VOL DOWN IC101 OECF006A Q102 SCL SDA CH UP LED DRIVE ON_TIMER Q103 KEY_IN CH DOWN LED DRIVE STANDBY LED ON TIMER P.CON+5V D103 STAND BY/P.ON MEMORY SDA 19 IF/CHROMA D101 IC199 AVDD1 V-DRIVE...

[Page 20: Printed Circuit Boards Main/Crt](#)

http://bbs.520101.com PRINTED CIRCUIT BOARDS MAIN/CRT (INSERTED PARTS) SOLDER SIDE CP101 D604 R445 VR420 VR401 CP001 R713 W087 CD803A J701 D402 CP803A D410 L711 Q702 C402 L710 R417 W057 R418 R712 Q701 R416 R410 C405 FB401 L713 R750 W853 W043 W023 L403 W020...

[Page 21](#) http://bbs.520101.com PRINTED CIRCUIT BOARDS MAIN/CRT (CHIP MOUNTED PARTS) SOLDER SIDE C759 R132 Q703 R728 R137 Q704 Q103 Q102 R738 R739 R104 R101 R102 R103 R107 C141 C109 C108 C105 R817 C102 C143 C112 C803 R811 R805 C111 C139 C101 C104 R106 R108...

[Page 22: Stereo](#)

http://bbs.520101.com PRINTED CIRCUIT BOARDS STEREO (INSERTED PARTS) SOLDER SIDE W007 W004 X901 S101 W001 W008 W002 W003 R905 R904 R907 R906 CP901 CP902 STEREO (CHIP MOUNTED PARTS) SOLDER SIDE R910 C921 C904 C914 C913 C944 C916 C946...

[Page 23](#) http://bbs.520101.com MICON/TUNER SCHEMATIC DIAGRAM TU001 TUWRF4EG-778F2 (MAIN PCB) LED DRIVE ON TIMER Q102 D103 KTA1504S_Y_RTK OS101 R137 RPM7138-H5 R104 R103 R102 R101 LED DRIVE STAND BY/P.ON LTL-1CHGE-002A Q103 D101 GREEN 2.2K 1.2K KTA1504S_Y_RTK R132 ACCESSORY TP001 SLR-342VCT32 CP001 UM-4 003P-2100 BT001 R03(AB)2PXGPI...

[Page 24](#) http://bbs.520101.com IF/CHROMA SCHEMATIC DIAGRAM (MAIN PCB) SIF BUFFER Q204 KTC3875S_Y_RTK R206 VIF PRE.AMP SAW FILTER L206 C204 C214 120P CH Q201 CF202_1 L204 VIDEO BUFFER KTC3881S-RTK Q202 0.27uH 0.001 B SAF38.9MAZ220Z 10uH R217 KTC3875S_Y_RTK CF201 C212 TPWA02B FROM/TO 21PIN/AV SW 0.01 B TUNER_V_OUT SCART_V_OUT2...

[Page 25](http://bbs.520101.com) http://bbs.520101.com 21PIN SCHEMATIC DIAGRAM (MAIN PCB) L713 10uH 0305 R712 C718 VIDEO OUT 75 1/4W C723 BUFFER R719 Q701 KTA1266 VIDEO SW IC IC702 NJM2234L SCART_C_IN W853 VIDEO IN Vin1 Vin2 Vin3 V.OUT GND C728 KANP C743 R733 FOR VCR L701 R702 L IN...

[Page 26](http://bbs.520101.com) http://bbs.520101.com DEFLECTION/CRT SCHEMATIC DIAGRAM (MAIN PCB) (CRT PCB) C629 CP802A B2013H02-5P CP802B B2013H02-5P 0.001 B FROM/TO IF/CHROMA R614 R602 CUT OFF CUT OFF G.OUT G.OUT G.OUT R.OUT R.OUT R.OUT B.OUT B.OUT B.OUT VAMP CP803A B2013H02-4P CP803B B2013H02-4P V-DRIVE IC IC401 TDA8174A V_OUT...

[Page 27](http://bbs.520101.com) http://bbs.520101.com POWER SCHEMATIC DIAGRAM (MAIN PCB) D526 30DF6-FC ICP502 R543 20P_3000 0.39 3W D506 R521 W847 1SS133 0.56 3W +B.ADJ 11.5 R524 TP501 PROTECTOR TEST RELAY SW D520 Q505 47K 1/4W TP502 TP503 C503 KTC3203_Y 30DF6-FC 100V EMERGENCY TO DEFLECTION/CRT Q509 C517_1 2SA1624...

[Page 28](http://bbs.520101.com) http://bbs.520101.com SOUND AMP SCHEMATIC DIAGRAM (MAIN PCB) FROM/TO 21PIN/AV SW CP901A IMSA-9130B-10 SCART_A_IN1_R SCART A IN1 R SCART_A_IN1_L SCART A IN1 L SCART_A_IN2_R SCART A IN2 R SCART_A_IN2_L SCART A IN2 L FRONT_AUDIO_R FRONT_V_IN FRONT_AUDIO_L SCART_A_OUT1_L SCART A OUT1 L SCART_A_OUT1_R...

[Page 29](http://bbs.520101.com) http://bbs.520101.com STEREO SCHEMATIC DIAGRAM (STEREO PCB) L905 10uH 0305 C905 R909 100P CH C906 R910 FROM/TO SOUND AMP 100P CH CP902 5.08 5.08 5.08 IMSA-9130S-10L S101 B901 P.CON+5V P.CON+5V B902 W4BRH3.5X6X1 P.CON+8V P.CON+8V W4BRH3.5X6X1 STEREO_RESET STEREO RESET DACM_R D_CTR_I/O_2 SOUND_L SOUND L SOUND_R...

[Page 30: Micon/Tuner](#)

<http://bbs.520101.com> WAVEFORMS MICON/TUNER IF/CHROMA 50µs 20µs 0.5µs 100mV 0.50V 1.00V 10ms 50µs 20µs 1.00V 100mV 1.00V 20µs 50µs 20µs 1.00V 0.50V 1.00V 0.2ms 20µs 20µs 1.00V 1.00V 1.00V 50µs 0.2ms 20µs 100mV 1.00V 100mV NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

[Page 31: 21Pin](#)

<http://bbs.520101.com> WAVEFORMS DEFLECTION/CRT 20µs 20µs 10ms 1.00V 1.00V 1.00V 10ms 20µs 10ms 10.0V 100mV 1.00V 20µs 10ms 20µs 1.00V 10.0V 200mV 21PIN 20µs 20µs 20µs 10.0V 1.00V 1.00V 20µs 20µs 20µs 1.00V 1.00V 5.0V NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

[Page 32: Sound Amp](#)

<http://bbs.520101.com> WAVEFORMS 2µs 0.2ms 200V 0.50V 0.50V 20µs 0.2ms 0.2ms 5.0V 0.50V 20µs 0.2ms 0.2ms 5.0V 100mV STEREO 0.2ms 20µs 0.2ms 0.50V 100mV SOUND AMP 0.2ms 0.2ms 200mV 0.50V 0.50V NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

[Page 33](http://bbs.520101.com) http://bbs.520101.com WAVEFORMS 0.2ms 200mV 0.2ms 200mV 0.2ms 200mV 0.2ms 200mV NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

[Page 34: Mechanical Exploded View](#)

<http://bbs.520101.com> MECHANICAL EXPLODED VIEW PCB110 (CRT PCB ASS'Y) PCB290 (STEREO PCB ASS'Y) 122 204 PCB010 (MAIN PCB ASS'Y)

[Page 35: Mechanical Replacement Parts List](#)

<http://bbs.520101.com> MECHANICAL REPLACEMENT PARTS LIST REF. NO. PART NO. DESCRIPTION A3L903G720 CABINET,FRONT ASSY 752WSAA006 PLATE,SHIELD 752WSAA008 SHIELD,CASE 752WSAA013 SHIELD,LID 752WSA0086 SHIELD,IC(30P,40P) 752WSA0087 SHIELD,IC 701UPJA106 CABINET,FRONT 741WUA0001 SPRING,EARTH 711WPAA080 PLATE,FRONT 713UPAA001 GUIDE,REMOCON 7235490022 BADGE,BRAND 735UPAA014 BUTTON,BASE 735UPBA014 BUTTON,FRAME 735UPBA013 BUTTON,POWER

[Page 36: Electrical Replacement Parts List](#)

http://bbs.520101.com ELECTRICAL REPLACEMENT PARTS LIST REF. NO. PART NO. DESCRIPTION REF. NO. PART NO. DESCRIPTION RESISTORS RESISTORS R003 R801R7271J 270 OHM 1/10W R421 R002T2393J 39K OHM 1/2W R004 R801R7271J 270 OHM 1/10W R422 R002T4224J 220K OHM 1/4W R005 R801R7823J 82K OHM 1/10W R423 R002T4224J...

[Page 37](#) http://bbs.520101.com ELECTRICAL REPLACEMENT PARTS LIST REF. NO. PART NO. DESCRIPTION REF. NO. PART NO. DESCRIPTION RESISTORS RESISTORS R638 R801R7222J 2.2K OHM 1/10W R910 R801R7101J 100 OHM 1/10W R639 R801R7392J 3.9K OHM 1/10W R1001 R002T4472J 4.7K OHM 1/4W R640 R801R7151J 150 OHM 1/10W R1003 R801R7102J...

[Page 38](#) http://bbs.520101.com ELECTRICAL REPLACEMENT PARTS LIST REF. NO. PART NO. DESCRIPTION REF. NO. PART NO. DESCRIPTION CAPACITORS CAPACITORS C422 P235W1474J 0.47 UF 100V MKT C724 E50HU2100M UF 16V C437 P4J7F3334J CMPP 0.33 UF 250V PMS C725 E02LU1101M 100 UF 10V C439 C0J7SL5K1J PF 500V SL...

[Page 39](#) http://bbs.520101.com ELECTRICAL REPLACEMENT PARTS LIST REF. NO. PART NO. DESCRIPTION REF. NO. PART NO. DESCRIPTION DIODES TRANSISTORS D101 0021721150 SLR-342VCT32 Q502 TNAAJ05003 COMPOUND TRANSISTOR KRC111SRTK D102 D97U05R11B DIODE,ZENER MTZJ5.1B T-77 Q503 TAAA1504SY TRANSISTOR,SILICON KTA1504S_Y_RTK D103 0021E5Q210 LTL-1CHGE-002A Q505 TCAT032034 TRANSISTOR,SILICON KTC3203_Y-AT D108...

[Page 40](#) http://bbs.520101.com ELECTRICAL REPLACEMENT PARTS LIST REF. NO. PART NO. DESCRIPTION RESISTOR SWITCHES RC....CARBON RESISTOR SW104 0504201T31 SWITCH,TACT SKHVBED010 SW106 0504201T31 SWITCH,TACT SKHVBED010 CAPACITORS SW107 0504201T31 SWITCH,TACT SKHVBED010 CC....CERAMIC CAPACITOR ! SW501 0530205016 SWITCH SDKVA30100 CE....ALUMI ELECTROLYTIC CAPACITOR VARIABLE RESISTORS CP....

[Page 41](#) http://bbs.520101.com TOSHIBA Information Systems (UK) Ltd Consumer Products Division, European Service Centre, Admiralty Way, Camberley, Surrey. GU15 3DT...