



Toshiba FT-8000 Service Manual

1	
Table Of Contents	
2	
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
42
43
44
45
46
47

--

•

[Table of Contents](#)

-

Troubleshooting

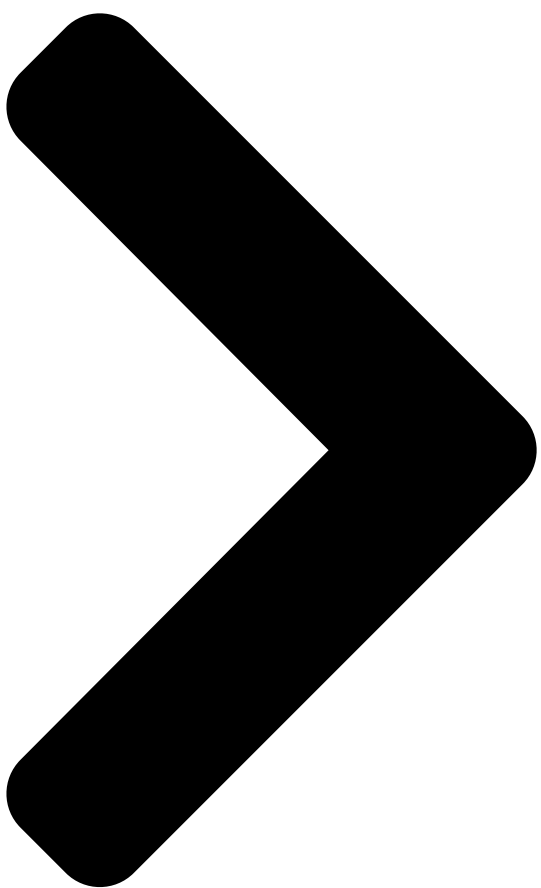
•

Bookmarks

--

[Download this manual](#)

Quick Links



FILE NO. 2B0-200006

SERVICE MANUAL

TOSHIBA

CORDLESS TELEPHONE

FT-8000

PUBLISHED IN JAPAN, Aug., 2000

[Table of Contents](#)

[Next Page](#)

1
2
3
4
5

Related Manuals for Toshiba FT-8000

[Laptop Toshiba FT 8000 Specification](#)

Tecra 8000 series (2 pages)

[Cordless Telephone Toshiba FT-8001 A Owner's Manual](#)

900mhz cordless telephone (21 pages)

[Cordless Telephone Toshiba FT-8006 Owner's Manual](#)

900mhz (20 pages)

[Cordless Telephone Toshiba FT8006BK Owner's Manual](#)

Toshiba ft8006bk: user guide (20 pages)

[Cordless Telephone Toshiba FT-8006A Service Manual](#)

(28 pages)

[Cordless Telephone Toshiba FT-8009 Service Manual](#)

(45 pages)

[Cordless Telephone Toshiba AJXFT8009 User Manual](#)

(21 pages)

[Cordless Telephone Toshiba FT-8801A Owner's Manual](#)

900mhz cordless telephone (37 pages)

[Cordless Telephone Toshiba FT-8981 Service Manual](#)

(52 pages)

[Cordless Telephone Toshiba FT-8508 Service Manual](#)

(71 pages)

[Cordless Telephone Toshiba FT-8958 Owner's Manual](#)

900mhz cordless telephone with digital answering system (76 pages)

[Cordless Telephone Toshiba FT-8901A Service Manual](#)

(59 pages)

[Cordless Telephone Toshiba FT-8939 Service Manual](#)

(62 pages)

[Cordless Telephone Toshiba FT-8959 Service Manual](#)

(66 pages)

[Cordless Telephone Toshiba FT-8989 Service Manual](#)

(66 pages)

[Cordless Telephone Toshiba FT-8259 Service Manual](#)

Cordless phone (60 pages)

Summary of Contents for Toshiba FT-8000

[Page 1](#) FILE NO. 2B0-200006 SERVICE MANUAL CORDLESS TELEPHONE FT-8000 PUBLISHED IN JAPAN, Aug., 2000...

[Page 2: Table Of Contents](#)

CONTENTS SAFETY PRECAUTIONS	1	OPERATING CONTROLS	2
ALIGNMENT PROCEDURE	3	BLOCK DIAGRAMS	7
DIAGRAMS	9	TROUBLESHOOTING HINTS	13
VOLTAGE CHART	20	SEMICONDUCTOR LEAD IDENTIFICATION	24
ELECTRICAL PARTS LOCATION	26	WIRING DIAGRAMS	

[Page 3: Operating Controls](#)

CH (channel) Button Charging contact Rechargeable Battery Pack(back) BASE UNIT CONTROLS AND FUNCTIONS PULSE/TONE Switch DC IN 9V Jack TEL LINE Jack CORDLESS TELEPHONE FT-8000 Hook Antenna IN USE IN USE/CHARGE LED CHARGE PAGE PAGE Button 900MHz COMP ANDOR NOISE REDUCTION...

[Page 4: Alignment Procedure](#)

ALIGNMENT PROCEDURE Base Unit Transmitter Section BASE Unit AF GEN. Test Point Power Connections Meter DC IN TEL Line 1kHz 138mV 9V Jack Jack Test Point Frequency Counter AC 120V Adapter 60Hz Deviation Meter Preset a) Connect the base RF unit to the base main unit. b) Set the "TONE / PULSE"...

[Page 5](#) Receiver Section Connections BASE Unit AC Voltmeter RF SG Dummy Load (600-ohm) TEL Line Test Point Jack DC Voltmeter DC IN 9V Jack Terminal AC 120V 60Hz Adapter Preset a) Connect the base RF unit to the base main unit. b) Set the "TONE/PULSE"...

[Page 6](#) Handset Unit Transmitter Section Connection HANDSET Unit AF GEN. Test Point Power Meter J601 Battery 1kHz 9mV MIC+Pin Connector Test Point Frequency Counter DC Power Supply Deviation Meter DC 3.8V Preset a) Connect the handset RF unit to the handset main unit. b) Connect DC power supply to battery connector on the handset unit.

[Page 7](#) Receiver Section Connections HANDSET Unit AC Voltmeter RF SG Dummy Load (150-ohm) Connector Test Point DC Power Supply J601 DC Voltmeter AF Terminal Battery of RT601 Connector DC 3.8V Preset a) Connect the handset RF unit to the handset main unit. b) Connect DC power supply to battery connector on the handset unit.

[Page 8: Block Diagrams](#)

BLOCK DIAGRAMS Base Unit...

[Page 9](#) Handset...

[Page 10: Schematic Diagrams](#)

SCHEMATIC DIAGRAMS Base Unit...

[Page 11](#) Handset...

[Page 12: Troubleshooting Hints](#)

TROUBLESHOOTING HINTS 1. The bell does not ring. See 2. The bell does not ring When the PAGE SW of the base is pressed, does the & page does not ring. ringer on the handset ring? When the TEL SG is joined Check IC4 and TEL network with the base to make bell circuit.

[Page 13](#) 2. The bell does not ring & page does not ring. Can the base and handset be See 3. The base and handset connected? cannot be connected. Press handset DIAL key When the key of the handset is Check IC604. while in TALK MODE.

[Page 14](#) 3. The base and handset cannot be connected. Check whether the base Check IC5 and its is able to set in the test peripheral circuit. mode 1. Check the TX POWER Check base RF unit. and the TX FREQUENCY on the base unit. Set the base in the test Check whether there is a Check RT3, R40, R68,...

[Page 15](#) Set the handset in the Check whether there is a Check RT603, R641, test mode 3, check 250 Hz data waveform at R642, R643, R644, whether deviation of the "MOD" of RF unit. R645 and C653. TX data is app. 8 kHz Dev.

[Page 16](#) 4. Cannot make a phone call (pulse). Can the base and handset See 3. The base and handset be connected? cannot be connected. While in TALK MODE, press Check IC5. dial key of the handset. Check whether square waveform from pin 13 of IC5 is fed.

[Page 17](#) 6. Voice cannot be transmitted to other party (outgoing call). Can the base and handset be See 3. The base and handset connected? cannot be connected. The 1 kHz, 9.0mV

sine Check Q604 and its wavefor m i s a p p l i e d t o peripheral circuit.

[Page 18](#) 7. The voice of the caller cannot be heard (incoming call). Can the base and handset be See 3. The base and handset connected? cannot be connected. The 1 kHz, 138mV sine Check the base TEL-line waveform is applied to TEL- circuit and REPLAY control line of the base, can the 1 kHz circuit.

[Page 19: Ic And Transistor Voltage Chart](#)

IC AND TRANSISTOR VOLTAGE CHART Base Unit Unit[V] Unit[V] Ref. No. PIN STBY TALK NOTE Ref. No. PIN STBY TALK NOTE NOISE NOISE NOISE SineWave SineWave 3.58MHz 3.58MHz SineWave SineWave 3.58MHz 3.58MHz 0.2-3.3 PULSE H/S mute 0/3.4 0/3.4 PULSE/TONE PULSE/TONE SineWave SineWave 10.1MHz 10.1MHz SineWave SineWave 10.1MHz 10.1MHz ClippedWave...

[Page 20](#) Unit[V] Ref. No. PIN STBY TALK NOTE NOISE NOISE NOISE w/o CHG...

[Page 21](#) Handset Unit[V] Unit[V] Ref. No. PIN STBY TALK NOTE Ref. No. PIN STBY TALK NOTE 0/SineWave SineWave 10.1MHz 10.1MHz 0/SineWave SineWave 3.58MHz 0/SineWave SineWave 10.1MHz 10.1MHz 3.6/SineWave SineWave 3.58MHz 3.58MHz 0-2.4 ClippedWave PULSE 455kHz 0-3.0 PULSE 0-2.6 SineWave PULSE 455kHz 0-2.6 PULSE 0-2.6...

[Page 22](#) Unit[V] Unit[V] Ref. No. PIN STBY TALK NOTE Ref. No. PIN STBY TALK NOTE 0-3.5 PULSE 0-0.6 PULSE Q612 IC605 0-1.3 PULSE 0-0.6 PULSE PULSE 0-0.7 PULSE BATT:3.8V BATT:3.8V Q613 BATT:3.8V BATT:3.8V 0-3.8 PULSE BATT:3.8V BATT:3.8V IC606 BATT:3.8V BATT:3.8V BATT:3.8V BATT:3.8V 0-0.7 PULSE Q601...

[Page 23: Semiconductor Lead Identification](#)

SEMICONDUCTOR LEAD IDENTIFICATION Base Unit D6 : MVR3338ST D1 /D4 / D9 / D10 : 1N4148 D3 : HZ33-2 D11 : HZ6B2 D13 : HZ4B1 Anode Cathode Cathode Anode Q1 : 2SC2714 Q7 / Q8 / Q11 : 2SD471 Q2 / Q4 / Q6 / Q9 : 2SC1623 Q3 / Q10 : 2SC2712 Q12 : 2SA812(M) B : Base...

[Page 24](#) Handset D608 : SML-310LT D601 / D602 / D605 / D606 : RLS4148 D607 : RB420D D603 / D604 : HZK6C Cathode Anode Cathode Anode Cathode Anode (open) Q601 : 2SC2714 Q602/Q604/Q605/Q606/Q607 /Q608/Q609/Q610/Q611/Q612/Q613 : 2SC1623 Q603 : 2SA812(M) B : Base E : Emitter C : Collector IC601...

[Page 25: Electrical Parts Location](#)

ELECTRICAL PARTS LOCATION Base Unit Main PCB...

[Page 26](#) Handset Main PCB...

[Page 27: Wiring Diagrams](#)

WIRING DIAGRAMS Base Unit...

[Page 28](#) Handset...

[Page 29: Exploded View And Mechanical Parts List](#)

EXPLODED VIEWS AND MECHANICAL PARTS LIST Base Unit MAIN PCB ASSY RF MODULE (BASE) ANTENNA...

[Page 30](#) Base Unit LOC. REF. PART NO. DESCRIPTION RC009453 GNBZ447684Z BUTTON, PUSH for FT-8000 RC009485 GNBZ448556Z BUTTON, PUSH for FT-8000G RC009470 GNBZ448596Z BUTTON, PUSH for FT-8000W RC009499 GNBZ464123Z BUTTON, PUSH for FT-8000T RC009447 GCAS347682Z CASE, BOTTOM for FT-8000 RC009478 GCAS348554Z CASE, BOTTOM for FT-8000G...

[Page 31](#) Handset RF MODULE (HANDSET) MAIN PCB ASSY...

[Page 32](#) Handset LOC. REF. PART NO. DESCRIPTION RC008346 RBLD442400Z BLIND for FT-8000 and FT-8000T PC RC008384 RBLD442649Z BLIND for FT-8000G RC008371 RBLD442208Z BLIND for FT-8000W RC009454 GNBZ447689Z BUTTON, FUNCTION (COMP) for

FT-8000 RC009486 GNBZ448562Z BUTTON, FUNCTION (COMP) for FT-8000G RC009471
GNBZ448602Z...

[Page 33: Parts List](#)

PARTS LIST PRODUCT SAFETY NOTE : Products marked with a have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice of this service manual. Don't degrade the safety of the product through important servicing. Symbol Symbol ±...

[Page 34](#) LOC. REF. PART NO. DESCRIPTION RC001810 BCAZ814796Z ELECTROLYTIC 4.7UF 50V M C-156 RC005202 BCML311045Z CERAMIC M/L (1608) 0.1UF 16V K B RC005206 BCML812225Z CERAMIC M/L (1608) 0.0022UF 50V K B RC001810 BCAZ814796Z ELECTROLYTIC 4.7UF 50V M C-156 RC001794 BCAZ111016Z ELECTROLYTIC 100UF 10V M C-156 RC008392 BCML811835Z...

[Page 35](#) LOC. REF. PART NO. DESCRIPTION RC000744 BCKB811025Z CERAMIC 0.001UF 50V K YB(B) RC003980 BCBH813304Z CERAMIC M/L (2125) 33PF 50V J CH C601 RC005216 BCMH813304Z CERAMIC M/L (1608) 33PF 50V J CH C602 RC008731 BCXK311050Z CERAMIC M/L (2125) 1UF 16V Z F C603 RC005202 BCML311045Z CERAMIC M/L (1608)

[Page 36](#) LOC. REF. PART NO. DESCRIPTION C653 RC005204 BCML811025Z CERAMIC M/L (1608) 0.001UF 50V K B C654 RC005202 BCML311045Z CERAMIC M/L (1608) 0.1UF 16V K B C655 RC005204 BCML811025Z CERAMIC M/L (1608) 0.001UF 50V K B C656 RC008296 BCSH901006Z TANTALUM CHIP 10UF 6.3V M C-122 C657 RC005205 BCML811035Z...

[Page 37](#) LOC. REF. PART NO. DESCRIPTION FT602 RC008280 BFLY0977001 CERAMIC FL-977 LTFS455B5 IC's RC009438 BDEY3972003 LA8634VU-TLM RC004870 BDEY2768003 MC3361CDR2 RC008277 BDEY2268001 PS2501-1 K RC009436 BDDY1079001 UC2535 MB89176PF-G-294-BND-U RC009439 BDEY3980003 XC61CC2802PR/XC61AC2802PR IC601 RC004870 BDEY2768003 MC3361CDR2 IC603 RC009438 BDEY3972003 LA8634VU-TLM IC604 RC009437 BDDY1080001 UC2536 MB89177PF-G-295-BND-U IC605 RC008322...

[Page 38](#) LOC. REF. PART NO. DESCRIPTION Q612 RC003031 BDBC1623648 DB-380 2SC1623-L6 T1B Q613 RC003031 BDBC1623648 DB-380 2SC1623-L6 T1B RESISTORS RC005252 BRFC163314Z CARBON FIXED CHIP 330 1/16W J RC005245 BRFC161834Z CARBON FIXED CHIP 18K 1/16W J RC008028 BRFC162724Z CARBON FIXED CHIP 2.7K 1/16W J RC005288 BRFC168244Z CARBON FIXED CHIP...

[Page 39](#) LOC. REF. PART NO. DESCRIPTION RC005240 BRFC161024Z CARBON FIXED CHIP 1K 1/16W J RC005240 BRFC161024Z CARBON FIXED CHIP 1K 1/16W J RC005256 BRFC164724Z CARBON FIXED CHIP 4.7K 1/16W J RC005240 BRFC161024Z CARBON FIXED CHIP 1K 1/16W J RC005283 BRFC162734Z CARBON FIXED CHIP 27K 1/16W J RC005240 BRFC161024Z...

[Page 40](#) LOC. REF. PART NO. DESCRIPTION R605 RC005245 BRFC161834Z CARBON FIXED CHIP 18K 1/16W J R606 RC008028 BRFC162724Z CARBON FIXED CHIP 2.7K 1/16W J R607 RC005288 BRFC168244Z CARBON FIXED CHIP 820K 1/16W J R608 RC005253 BRFC163324Z CARBON FIXED CHIP 3.3K 1/16W J R609 RC005241 BRFC161034Z CARBON FIXED CHIP...

[Page 41](#) LOC. REF. PART NO. DESCRIPTION R653 RC008029 BRFC163924Z CARBON FIXED CHIP 3.9K 1/16W J R654 RC005281 BRFC162224Z CARBON FIXED CHIP 2.2K 1/16W J R655 RC005240 BRFC161024Z CARBON FIXED CHIP 1K 1/16W J R656 RC005281 BRFC162224Z CARBON FIXED CHIP 2.2K 1/16W J R657 RC005247 BRFC162214Z CARBON FIXED CHIP...

[Page 42](#) BQXY0721001 CRYSTAL QX-721 10.1MHZ X602 RC008325 BQXY0709001 CRYSTAL QX-709 3.579545MHZ OTHER ELECTRICAL PARTS AD901 RC004930 BAY0368001 AC ADAPTOR for FT-8000/8000G AD-368 HY-9322 RC005139 BAY0367001 AC ADAPTOR for FT-8000W/8000T AD-367 HY-9384 AT251 RC009434 BATY0392001 ANTENNA for FT-8000 AT-392 AT-40 AT251 RC009476...

[Page 43: Assembly Parts List](#)

PACKING BAG(PORT.) MIRA MAT RC009344 WSLV444958Z SLEEVE ASSEMBLY PARTS LIST NOTE: Following part numbers are not available as replacement parts. Order parts necessary for repair or contact the Toshiba Factory Service Center. LOC. REF. PART NO. DESCRIPTION RC009430

[Page 44: Specifications](#)

SPECIFICATIONS MEASUREMENT CONDITIONS 1. Standard Voltage :Portable Unit ..DC 3.8V $\pm$ 0.025V :Base Unit ..AC 120V $\pm$ 3V 60Hz 2. Temperature :25°C $\pm$ 5°C 3. Channel FCC CH Portable(TX Frequency) Base(TX Frequency) 902.052464MHz 925.997470MHz 902.102465MHz 926.047470MHz 902.152465MHz 926.097470MHz 902.202465MHz 926.147470MHz 902.252465MHz...

[Page 45](#) BASE UNIT RECEIVER UNIT NOMINAL LIMIT 1. Sensitivity 12 dB SINAD with CCITT Filter -115 < -107 2. Frequency Response (Ref:1kHz) 0.3kHz -4.5 -8.5~-0.5 3.0kHz -7.5 -11.5~-3.5 3. Distortion at 1 mV RF Input < 5 4. S/N ratio at 1 mV RF Input with CCITT Filter 60 <...

[Page 46](#) PORTABLE UNIT RECEIVER UNIT NOMINAL LIMIT 1. Sensitivity 12 dB SINAD with CCITT Filter -115 < -107 2. Frequency Response (Ref:1kHz) 0.3kHz +5.5 +1.5~+9.5 3.0kHz -17.0 -21~-13 3. Audio Output Level VOL. HIGH 349~696 VOL. MEDIUM 175~349 VOL. LOW 98.3 69.6~139 4.