TOSHIBA

Toshiba FD-4809 Service Manual

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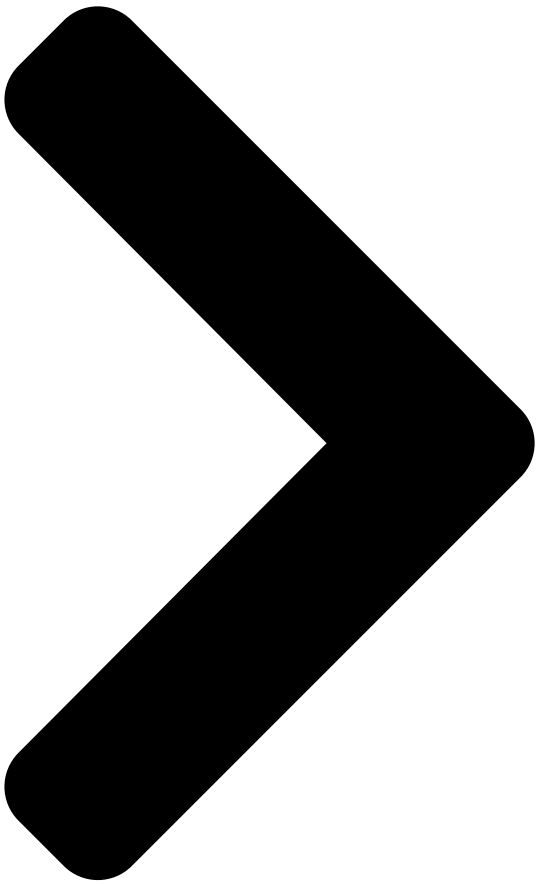

FILE NO. 2B0-9909

SERVICE MANUAL

TOSHIBA

CORDLESS TELEPHONE

FD-4809

PUBLISHED IN JAPAN, Nov., 1999

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Related Manuals for Toshiba FD-4809

Cordless Telephone Toshiba FD-9839 Service Manual

(64 pages)

Cordless Telephone Toshiba FT-8981 Service Manual

(52 pages)

Cordless Telephone Toshiba FT-6302 Owner's Manual

10 ch scanning (28 pages)

Cordless Telephone Toshiba FT-6603 Owner's Manual

10 channel scanning (23 pages)

Cordless Telephone Toshiba FT-6505 Owner's Manual

10 channel scanning (28 pages)

Cordless Telephone Toshiba FT-6604 Owner's Manual

10 channel auto scanning (20 pages)

Cordless Telephone Toshiba FT-7305 Owner's Manual

25 ch auto scanning (28 pages)

Cordless Telephone Toshiba FT-8001 A Owner's Manual

900mhz cordless telephone (21 pages)

Cordless Telephone Toshiba FT-7517 Owner's Manual

25 ch auto scanning (33 pages)

Cordless Telephone Toshiba FT-8808 Service Manual

(67 pages)

Cordless Telephone Toshiba FT-9305 User Manual

Cordless answering system (56 pages)

Cordless Telephone Toshiba FT-X988 Owner's Manual

Pcm 900 mhz digital cordless telephone with digital answering system (37 pages)

Cordless Telephone Toshiba FT-7807R Service Manual

(52 pages)

Cordless Telephone Toshiba FT-8959 Service Manual

(66 pages)

Cordless Telephone Toshiba AJXFT8009 User Manual

(21 pages)

Cordless Telephone Toshiba FT-3808BK Service Manual

(60 pages)

Summary of Contents for Toshiba FD-4809

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Page 3: Operating Controls

Charging contact BASE UNIT CONTROLS AND FUNCTIONS TONE/PULSE Switch DC in 9V Jack Dot matrix display LINE Modular Jack 900MHz CALLER ID FD-4809 Caller ID indication example Base Antenna Number of calls Cradle Date Time IN USE/CHARGE LED Caller's telephone number...

Page 4: Alignment Procedure

ALIGNMENT PROCEDURE Base Unit Transmitter Section BASE Unit Connections Test Point Power Meter DC IN 9V Jack AC 120V Adapter 60Hz Preset a) Remove the solder on the pattern (refer to the illust. below). b) Set the “TONE / PULSE” switch to PULSE. c) Connect the AC adapter to the base unit while pressing the “PAGE”...

Page 5 Receiver Section Connections BASE Unit RF SG Test Point DC Voltmeter DC IN Terminal 9V Jack AC 120V 60Hz Adapter Preset a) Remove the solder on the pattern (refer to the illust. below). b) Set the “TONE/PULSE” switch to PULSE. c) Connect the AC adapter to the base unit while pressing the “PAGE”...

Page 6 Handset Unit Transmitter Section Connection HANDSET Unit Power Test Point Meter J603 Battery Connector DC Power Supply DC 3.8V Preset a) Remove the solder on the pattern (refer to the illust. below). b) Connect DC power supply to battery connector on the handset unit. c) Turn the DC power supply On while pressing "...

Page 7 Receiver Section Connections HANDSET Unit RF SG Test Point J603 Discriminator DC Power Supply DC Voltmeter Battery Test Point Connector DC 3.8V Preset a) Remove the solder on the pattern (refer to the illust. below). b) Connect DC power supply to battery connector on the handset unit. c) Turn the DC power supply ON while pressing “...

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BLOCK DIAGRAMS Base Unit...

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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 & page does not ring. base is pressed, does the ringer on the handset ring? When the TEL SG is joined Check IC3 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 IC606. while in TALK MODE.

Page 14 3. The base and handset cannot be connected. Check whether the base Check IC4 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. Press “PAGE”...

Page 15 Press “3” key, check Check whether there is a Check whether there is Check IC602 and its whether deviation of the pulse data waveform at a pulse data waveform at peripheral circuit. TX data is app. ±23kHz C630. pin 40 of IC602. ~ ±45kHz 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 IC4 and its peripheral dial key of the handset. circuit. Check whether square waveform from pin 46 of IC4 is fed.

Page 17: Voice Cannot Be Transmitted To Other Party (Outgoing Call)

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, 3.3mV sine Check Q606 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, 86.9mV 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 OPEN OPEN OPEN OPEN OPEN OPEN OPEN OPEN OPEN OPEN OPEN OPEN OPEN OPEN OPEN OPEN 0.4-2.6 0.4-1.4 Float Float 1.2-1.6 1.2-1.6...

Page 20 Unit[V] Unit[V] Ref. No. PIN STBY TALK NOTE Ref. No. PIN STBY TALK NOTE OPEN OPEN 0.0/3.0 0.0/3.0 Pulse/Tone Pulse/Tone 0.3-0.5 0.3-0.5 Pulse Pulse OPEN OPEN OPEN OPEN 0.4-3.0 0.4-3.0 Pulse Pulse 0.2-2.8 0.2-2.8 Pulse Pulse 0.0-3.1 0.0-3.1 0.0-3.1 Pulse Pulse 0.0-3.1 Pulse...

Page 21 Handset Unit[V] Unit[V] Ref. No. PIN STBY TALK NOTE Ref. No. PIN STBY TALK NOTE OPEN OPEN 0.8-2.8 Pulse Pulse OPEN OPEN OPEN OPEN 0.0-2.8 Pulse OPEN OPEN OPEN OPEN OPEN OPEN OPEN OPEN 0.0-2.8 Pulse OPEN OPEN 0.0-2.8 Pulse 0.6-2.6 Float Float...

Page 22 Unit[V] Unit[V] Ref. No. PIN STBY TALK NOTE Ref. No. PIN STBY TALK NOTE OPEN OPEN 0.0-2.8 Pulse 2.8-3.0 Pulse 2.8-3.0 Pulse 2.8-3.0 Pulse 2.8-3.0 Pulse IC606 OPEN OPEN 0.0-2.8 0.0-2.8 Pulse 0.0-2.8 Pulse Pulse/Tone 0.0-3.0 0.0-3.0 Pulse Pulse 0.0-2.8 Pulse 0.0-2.8 Pulse...

Page 23: Semiconductor Lead Identification

SEMICONDUCTOR LEAD IDENTIFICATION Base Unit D2 : HZ33-2 D5 : LTL-16KPE D17 : RB500V D1 : DCC010 D3/D4/D7/D8/D9/D10 Cathode / Anode /D11/D12/D13/D16 : 1N4148 D14 : HZ7B1 Cathode Anode D15 : HZ5A1 Anode Anode Cathode Cathode Anode Cathode Q5/Q6/Q8 : 2SD471 Q1 : 2SC2714 D18 : HZK6C TA31161FN...

Page 24 Handset D616 : S1ZB20 D613 : RLS4148 D611 : DCC010 D608/D609/D610 : PG3822K D614/D615 : 1SS226 Cathode / Anode Cathode Anode Anode Cathode Cathode Anode Q604/Q606/Q607/Q609 /Q610/Q611/Q612 : 2SC1623 Q605 : 2SC2714 D619 : RB500V D617 : RB420D Q608/Q613 : 2SA812(M) Cathode Anode Cathode...

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 RC008363 GNBZ442428Z BUTTON, PUSH RC008361 GCAS342427Z CASE, BOTTOM RC008675 GCAS342704A CASE, TOP RC008315 HTML442330Z CHARGE TERMINAL C5191(PBP) RC002384 LFUT428079Z FOOT BUMPON SJ-5916 1.6T RC005526 GCAS456906Z HOOK RC008676 PLBB443467Z LABEL, BARCODE PAPER RC008317 PLBZ442784Z LABEL, INDICATION RC005180 PLBZ456717Z...

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

Page 32 Handset LOC. REF. PART NO. DESCRIPTION RC008371 RBLD442208Z BLIND

RC008460 GNBZ342417Z BUTTON, FUNCTION RC008690 GCAS242698Z CASE, FRONT RC008691 GCAS242699A CASE, REAR RC008342 HTML442336Z CHARGE TERMINAL C2680(BSP) RC008909 GCAS458501Z COVER, ANTENNA ELASTOMER RC008908 GCAS458500Z COVER, BATTERY RC008347 RCUM441150Z CUSHION, BATTERY MOLTPRENE,40x20x8 RC008348 RCUN442433Z CUSHION, SPEAKER...

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 30 -20+80 0+100...

Page 34 LOC. REF. PART NO. DESCRIPTION RC005210 BCMM811014Z CERAMIC M/L (1608) 100PF 50V J CH RC005210 BCMM811014Z CERAMIC M/L (1608) 100PF 50V J CH RC005210 BCMM811014Z CERAMIC M/L (1608) 100PF 50V J CH RC008731 BCXK311050Z CERAMIC M/L (2125) 1UF 16V Z F RC005204 BCML811025Z CERAMIC M/L (1608)

Page 35 LOC. REF. PART NO. DESCRIPTION C609 RC005204 BCML811025Z CERAMIC M/L (1608) 0.001UF 50V K B C611 RC005202 BCML311045Z CERAMIC M/L (1608) 0.1UF 16V K B C612 RC008296 BCSH901006Z TANTALUM CHIP 10UF 6.3V M C-122 C613 RC008296 BCSH901006Z TANTALUM CHIP 10UF 6.3V M C-122 C614 RC008296 BCSH901006Z TANTALUM CHIP...

Page 36 LOC. REF. PART NO. DESCRIPTION C659 RC008645 BCMN811514Z CERAMIC M/L (1608) 150PF 50V J RH C660 RC008646 BCMN812204Z CERAMIC M/L (1608) 22PF 50V J RH C661 RC003284 BCFZ901016Z ELECTROLYTIC 100UF 6.3V M C-258 C670 RC005276 BCML818225Z CERAMIC M/L (1608) 0.0082UF 50V K B C671 RC005208 BCML814725Z CERAMIC M/L (1608)

Page 37 LOC. REF. PART NO. DESCRIPTION IC603 RC008322 BDEY3882003 TK11130SCL IC604 RC008799 BDEY3181003 24LC16BT/SN IC605 RC008859 BDEY2927003 RH5RE32AA-T1 IC606 RC008678 BDDY0942001 UC2401 MB90562PFM-G-114-BND IC607 RC005074 BDEY2937003 RH5VL28CA-T1 JACKS RC003586 BJKY0803002 JK-803 A36-006-4910A 2P RC008658 BPGY0147002 PLUG PG-147 9218B-1-02A-T 2P RC001094 BJKY0234001 JK-234 DJ13-1 J601 RC008658...

Page 38 LOC. REF. PART NO. DESCRIPTION RC005311 BRFC160004Z CARBON FIXED CHIP 0 1/16W J RC005286 BRFC165644Z CARBON FIXED CHIP 560K 1/16W J RC005241 BRFC161034Z CARBON FIXED CHIP 10K 1/16W J RC005243 BRFC161054Z CARBON FIXED CHIP 1M 1/16W J RC008027 BRFC161234Z CARBON FIXED CHIP 12K 1/16W J RC008286 BRFC162744Z...

Page 39 LOC. REF. PART NO. DESCRIPTION RC008767 BRFC163344Z CARBON FIXED CHIP 330K 1/16W J RC005260 BRFC166834Z CARBON FIXED CHIP 68K 1/16W J RC005285 BRFC165634Z CARBON FIXED CHIP 56K 1/16W J RC005285 BRFC165634Z CARBON FIXED CHIP 56K 1/16W J RC005285 BRFC165634Z CARBON FIXED CHIP 56K 1/16W J RC008660 BRPA144744Z...

Page 40 LOC. REF. PART NO. DESCRIPTION R125 RC005241 BRFC161034Z CARBON FIXED CHIP 10K 1/16W J R198 RC008482 BRFC186804Z CARBON FIXED CHIP 68 1/8W J R199 RC008482 BRFC186804Z CARBON FIXED CHIP 68 1/8W J R611 RC005239 BRFC161014Z CARBON FIXED CHIP 100 1/16W J R612 RC005239 BRFC161014Z CARBON FIXED CHIP...

Page 41 LOC. REF. PART NO. DESCRIPTION R658 RC005240 BRFC161024Z CARBON FIXED CHIP 1K 1/16W J R659 RC005241 BRFC161034Z CARBON FIXED CHIP 10K 1/16W J R660 RC005240 BRFC161024Z CARBON FIXED CHIP 1K 1/16W J R666 RC005240 BRFC161024Z CARBON FIXED CHIP 1K 1/16W J R667 RC005281 BRFC162224Z CARBON FIXED CHIP...

Page 42 LOC. REF. PART NO. DESCRIPTION CRYSTALS RC003629 BQXY0542001 CRYSTAL QX-542 3.579545MHZ RC008659 BQXY0719001 CRYSTAL QX-719 4.096MHZ X601 RC008681 BQXY0723001 CRYSTAL QX-723 4.096MHZ OTHER ELECTRICAL PARTS AD901 RC005139 BADY0322001 AC ADAPTOR AD-322 HY-9022 AT481 RC008360 BATY0372001 ANTENNA AT-372 AT-37 B201 RC008697 AC618ZLBB RF MODULE (BASE) B501...

Page 43: Assembly Parts List

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 RC008696 AC618ZLBA MAIN PCB ASSEMBLY, BASE RC008698 AC618ZLPA MAIN PCB ASSEMBLY, HANDSET...

Page 44: Specifications

SPECIFICATIONS MEASUREMENT CONDITIONS 1. Standard Voltage :Portable Unit ..DC 3.8V ± 0.025V :Base Unit ..AC 120V ± 3V 60Hz 2. Temperature ± 5 3. Channel Portable(TX Frequency) Base(TX Frequency) 902.119024MHz 924.996683MHz 902.218927MHz 925.096585MHz 902.318829MHz 925.196488MHz 902.418732MHz 925.296390MHz 902.518634MHz 925.396293MHz 902.618537MHz 925.496195MHz...

Page 45 BASE UNIT RECEIVER UNIT NOMINAL LIMIT 1. Sensitivity 12 dB SINAD with CCITT Filter -110 < -104 2. Frequency Response (Ref:1kHz) 0.3kHz -2.0 -6.0~+2.0 3.0kHz -2.5 -6.5~+1.5 3. Distortion at 1 mV RF Input < 5 4. S/N ratio at 1 mV RF Input with CCITT Filter 50 <...

Page 46 PORTABLE UNIT RECEIVER UNIT NOMINAL LIMIT 1. Sensitivity 12 dB SINAD with CCITT Filter -110 < -104 2. Frequency Response (Ref:1kHz) 0.3kHz -4.0~+4.0 3.0kHz -4.0 -8.0~0 VOL. HAC 135~175 3. Audio Output Level VOL. HIGH 70~110 VOL. MEDIUM 30~70 VOL. LOW 20~40 4.