MOTOROLA

A630
Digital Wireless Telephone

GSM 900/1800/850/1900 MHz, GPRS

Contents

Introduction

Motorola$^®$ Inc. maintains a worldwide organization that is dedicated to provide responsive, full-service customer support. Motorola products are serviced by an international network of company-operated product-care centers as well as authorized independent service firms.

Available on a contract basis, Motorola Inc. offers comprehensive maintenance and installation programs which enable customers to meet requirements for reliable, continuous communications.

To learn more about the wide range of Motorola service programs, contact your local Motorola products representative or the nearest Customer Service Manager.

Product Identification

Motorola products are identified by the model number on a label usually located under the battery. Use the entire model number when inquiring about the product. Numbers are also assigned to chassis and kits. Use these numbers when requesting information or ordering replacement parts.

Product Names

Product names are listed on the front cover. Product names are subject to change without notice. Some product names, as well as some frequency bands, are available only in certain markets.

Product Changes

When electrical, mechanical or production changes are incorporated into Motorola products, a revision letter is assigned to the chassis or kit affected, for example; -A, -B, or -C, and so on.

The chassis or kit number, complete with revision number, is imprinted during production. The revision letter is an integral part of the chassis or kit number and is also listed on schematic diagrams and printed-circuit board layouts.

Regulatory Agency Compliance

This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions:

- This device may not cause any harmful interference
- This device must accept interference received, including interference that may cause undesired operation

This class B device also complies with all requirements of the Canadian Interference-Causing Equipment Regulations (ICES-003).

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Computer Program Copyrights

The Motorola products described in this manual may include Motorola computer programs stored in semiconductor memories or other media that are copyrighted with all rights reserved worldwide to Motorola. Laws in the United States and other countries preserve for Motorola, Inc. certain exclusive rights to the copyrighted computer programs, including the exclusive right to copy, reproduce, modify, decompile, disassemble, and reverse-engineer the Motorola computer programs in any manner or form without Motorola's prior written consent. Furthermore, the purchase of Motorola products shall not be deemed to grant either directly or by implication, estoppel, or otherwise, any license or rights under the copyrights, patents, or patent applications of Motorola, except for a nonexclusive license to use the Motorola product and the Motorola computer programs with the Motorola product.

About This Service Manual

Use of this manual assures proper installation, operation, and maintenance of Motorola products and equipment. It contains all service information required for the equipment described and is current as of the printing date. Refer questions about this manual to the nearest Customer Service Manager.

Audience

This manual aids service personnel in testing and repairing A630 telephones. Service personnel should be familiar with electronic assembly, testing, and troubleshooting methods, and with the operation and use of associated test equipment.

Scope

This manual provides basic information relating to A630 telephones, and also provides procedures and processes for repairing the phones at Level 1 and 2 service centers including:

- Unit swap out
- Repairing of mechanical faults
- Basic modular troubleshooting
- Testing and verification of unit functionality
- Initiate warranty claims and send faulty modules to Level 3 or 4 repair centers

Conventions

The following special characters and typefaces, are used in this manual to emphasize certain types of information.

Note: Emphasizes additional information pertinent to the subject matter.

Caution: Emphasizes information about actions which may result in equipment damage.

Warning: Emphasizes information about actions which may result in personal injury.

Keys to be pressed are represented graphically. For example, instead of "Press the Menu Key", you will see "Press ☰".

Information from a screen is shown in text as similar as possible to what displays on the screen. For example, ALERTS or ALERTS.

Information that you need to type is printed in **boldface type.**

Warranty Service Policy

The product is sold with the standard 12-month warranty terms and conditions. Accidental damage, misuse, and extended warranties offered by retailers are not supported under warranty. Non-warranty repairs are available at agreed fixed repair prices.

Out-of-Box Failure Policy

The standard out-of-box failure criteria applies. Return customer units that fail very early on after the date of sale to Manufacturing for root cause analysis, to guard against epidemic criteria. Manufacturing to bear the costs of early life failure.

Product Support

Customer's original units will be repaired but not refurbished as standard. Appointed Motorola Service Hubs will perform warranty and non-warranty field service for level 2 (assemblies) and level 3 (limited PCB component). Motorola High Tech Centers will perform level-4 (full component) repairs.

Customer Support

Customer support is available through dedicated Call Centers and in-country help desks. Product Service training is available through the local Motorola Support Center.

Parts Replacement

When ordering replacement parts or equipment, include the Motorola part number and description used in the service manual.

When the Motorola part number of a component is not known, use the product model number or other related major assembly along with a description of the related major assembly and of the component in question.

In the U.S.A., to contact Motorola, Inc. on your TTY, call: 800-793-7834.

Accessories and Aftermarket Division (AAD)

Order replacement parts, test equipment, and manuals from AAD.

U.S.A.	Outside U.S.A.
Phone: 800-422-4210	Phone: 847-538-8023
FAX: 800-622-6210	FAX: 847-576-3023

For EMEA spare parts call +44 131 479 1274.

For Asia spare parts call +65 648 62995.

Specifications

General Function	Specification
Frequency Range GSM 850	824-849 MHz Tx 869-894 MHz Rx
Frequency Range GSM 900	880-915 MHz Tx (with EGSM) 925-960 MHZ Rx
Frequency Range DCS 1800	1710-1785 MHz Tx 1805-1880 MHz Rx
Frequency Range PCS 1900	1850-1910 MHz Tx 1930-1990 MHz Rx
Channel Spacing	200 kHz
Channels	174 EGSM, 374 DCS
Modulation	GMSK at BT = 0.3
Transmitter Phase Accuracy	5 Degrees RMS, 20 Degrees peak
Duplex Spacing	45 MHz
Frequency Stability	± 0.10 ppm of the downlink frequency (Rx)
Operating Voltage	+3.2V dc to +5.5V dc (battery) +4.8V dc to +6.5V dc (external connector)
Transmit Current Drain	101-260 mA average talk current drain
Stand-by Current drain	5 mA (DRX2), 3.5 mA (DRX9) typical
Temperature Range	-10° C to +55° C (+15° F to +130° F)
Dimensions, with 780 mAh Li Ion battery	23.3 mm x 49.0 mm x 95.0 mm (1.09 inches x 1.93 inches x 3.74 inches)
Size (Volume)	100 cc (6.11 in^3), with battery
Weight	124 grams (4.37 oz), with battery

Battery Life, with standard 780 mAh Li-Ion Battery	Talk Time 260 to 500 minutes with Blue Tooth off
	      200 to 320 minutes with Blue Tooth on
	Standby time 160 to 200 hours with Blue Tooth off
	      155 to 200 hours with Blue Tooth on
	All talk and standby times are approximate and depend on network configuration, signal strength, and features selected. Standby times are quoted as a range from DRX=2 to DRX=9. Talk times are quoted as a range from DTX off to DTX on.

Battery Charge Time	4 hours to 90% of 780 mAh capacity
Alert volume	Max 95 dB @5cm, 0.5 Watts input

Transmitter Function	Specification
RF Power Output	33 dBm nominal GSM 850 / 900, 30 dBm nominal GSM 1800 / 1900
Output Impedance	50 ohms nominal
Spurious Emissions	-36 dBm from 0.1 to 1 GHz, -30 dBm from 1 to 4 GHz

Receiver Function	Specification
Receive Sensitivity	Better than -103 dBm
RX Bit Error Rate (100k bits) Type II	< 2%

Speech Coding Function	Specification
Speech Coding Type	Regular pulse excitation/linear predictive coding with long term prediction (RPE LPC with LTP)
Bit Rate	13.0 kbps

Speech Coding Function	Specification
Frame Duration	20 ms
Block Length	260 bits
Classes	Class 1 bits = 182 bits; Class 2 bits = 78 bits
Bit Rate with FEC Encoding	22.8 kbps

Product Overview

Motorola A630 telephone is small and lightweight global system for mobile communications (GSM) general packet radio service (GPRS) wireless application protocol (WAP)-enabled mobile phone. The A630 incorporates a new user interface (UI) for easier operation, allows short message service (SMS) text messaging, MMS, Email client, and includes personal information manager (PIM) functionality. The supported bands for the phone are:

• GSM850/EGSM900/GSM1800/GSM1900 MHz GPRS (Class 10)

A630 telephone supports GPRS and SMS in addition to traditional circuit switched transport technologies.

A630 telephone has a clam form factor. It has an externally viewable 96 x 48 pixel display for caller identification, date/time and external UI and external keypad for basic UI operations (menu browsing, phonebook, profiles etc.). When the flip is open, an internal 176 x 220 pixel display is visible. The speaker and the camera are both located in the flip. The bottom part of the clam contains the QWERTY keypad for advanced messaging, transceiver printed wired board (PWB), microphone, flex connection, external accessory connector (CE bus), smart button and volume buttons. The standard Lithium Ion (Li Ion) battery fits behind a removable back cover. Capacity of the standard battery is 780 mAh.

The phone accepts 3V mini subscriber identity module (SIM) cards which fit into the SIM holder underneath the battery. The antenna is an internal triple band antenna. There are two antenna versions, one for US market (850/1800/1900 MHz) and one for Europe market (900/1800/1900 MHz). Inexpensive direct connection to a computer or handheld device via RS232 or USB for data and fax calls, and for synchronizing phonebook entries with TrueSync® software, can be accomplished by using the optional data cable and soft modem.

Features

A630 telephone uses advanced, self-contained, sealed, custom integrated circuits to perform the complex functions required for GSM GPRS communication. Aside from the space and weight advantage, microcircuits enhance basic reliability, simplify maintenance, and provide a wide variety of operational functions.

Features available in this family of telephones include:
• GSM 850/900/1800/1900 MHz GPRS Class 10 (separate antenna versions for 850/1800/1900 and 900/1800/1900 MHz)
• Built in VGA Camera (640x480 pixels)
• 65K TFT Active Color Display
• External CLI Display (Transflective Reversed)
• Polyphonic Speaker
• Speaker Phone
• Bluetooth™
• Video Clip Playback
• 5MB User Memory

Speaker Dependant Voice Activation and Voice Note Recording

Voice tags can be used for voice dialing up to 20 phone numbers in the phone book and for creating up to 5 voice shortcuts for menu items. The phone must be "trained" by the voice tag being recorded into the phone's memory twice before it is recognized.

You can add voice tags to the phone's memory using the usual name addition methods (i.e., via the phone book menu structure or with the shortcut editor).

> ◗ *You cannot place or receive calls while adding voice tags to the phone's memory.*

> ◗ *Because the GSM standard does not provide the option to store voice tags onto the SIM card, voice tags are added to the phone's memory.*

A630 telephones also include a voice note recorder that allows up to 2 minutes of personal messages to be recorded. This feature has a complete set of record, playback, and management tools that make it easy to store and maintain a list of personal memos.

Wireless Access Protocol (WAP) 2.0 Compliancy

In the WAP environment, access to the Internet is initiated in wireless markup language (WML), which is derived from hypertext markup language (HTML). The request is passed to a WAP gateway which retrieves the information from the server in standard HTML (subsequently filtered to WML) or directly in WML if available. The information is then passed to the mobile subscriber via the mobile network.

The A630's microbrowser can be configured for baud, idle timeout, line type, phone number, and connection type.

> ◗ *Bitmap image data will be downloaded as text. If the image is larger than the screen, only part of the image will be displayed.*

> ◗ *When the user receives a call while in browser mode, the browser will pause and allow the user to resume after completing the call.*

SIM Application Toolkit™ - Class C

The SIM Application Toolkit is a value-added service delivery mechanism that allows GSM operators to customize the services they offer their customers, from the occasional user who requests sports news and traffic alerts, to a high call time business user who receives stock alerts and checks flight times. Operators can now create their own value-added services menu quickly and easily in the phone. The customized menu will appear as the first menu and may be updated over-the-air with new services when customers request them.

Caller Line Identification

Upon receipt of a call, the calling party's phone number is compared to the phone book. If the number matches a phone book entry, that name will be displayed. If there is no phone book entry, the incoming phone number will be displayed. In the

event that no caller identification information is available, the Incoming Call message is displayed.

User must subscribe to a caller line identification service through their service provider.

Other Features

Detailed descriptions of these and the other A630 features can be found in the appropriate A630 telephone user's guide listed in the "Related Publications" section towards the end of this manual.

General Operation

Controls, Indicators, and Input / Output (I/O) Connections

The A630 telephone's controls are located on the sides of the device, on the external keypad and QWERTY keypad. Indicators, in the form of icons, are displayed on the LCD (see Figure 3), and on the external display when the lid is closed. A630 phones have an audible alert transducer on the top and I/O connectors, consisting of a headset jack and an accessory port, located on the top and bottom of the phone. See Figure 1 and 2.


Game Keys

Game Keys

Enter Key

Menu Key

Shift Key

Space Key

Power & End Key
Turn phone on/off, end calls, exit menu system.

5-Way Navigation Key
Scroll through menus & lists, set feature values.

Send Key
Make & answer calls, view recently dialed calls list.

Left Soft Key
Perform functions identified by left display prompt.

Right Soft Key
Perform functions identified by right display prompt.

Figure 1. A630 Telephone Controls, indicators, and I/O (internal)
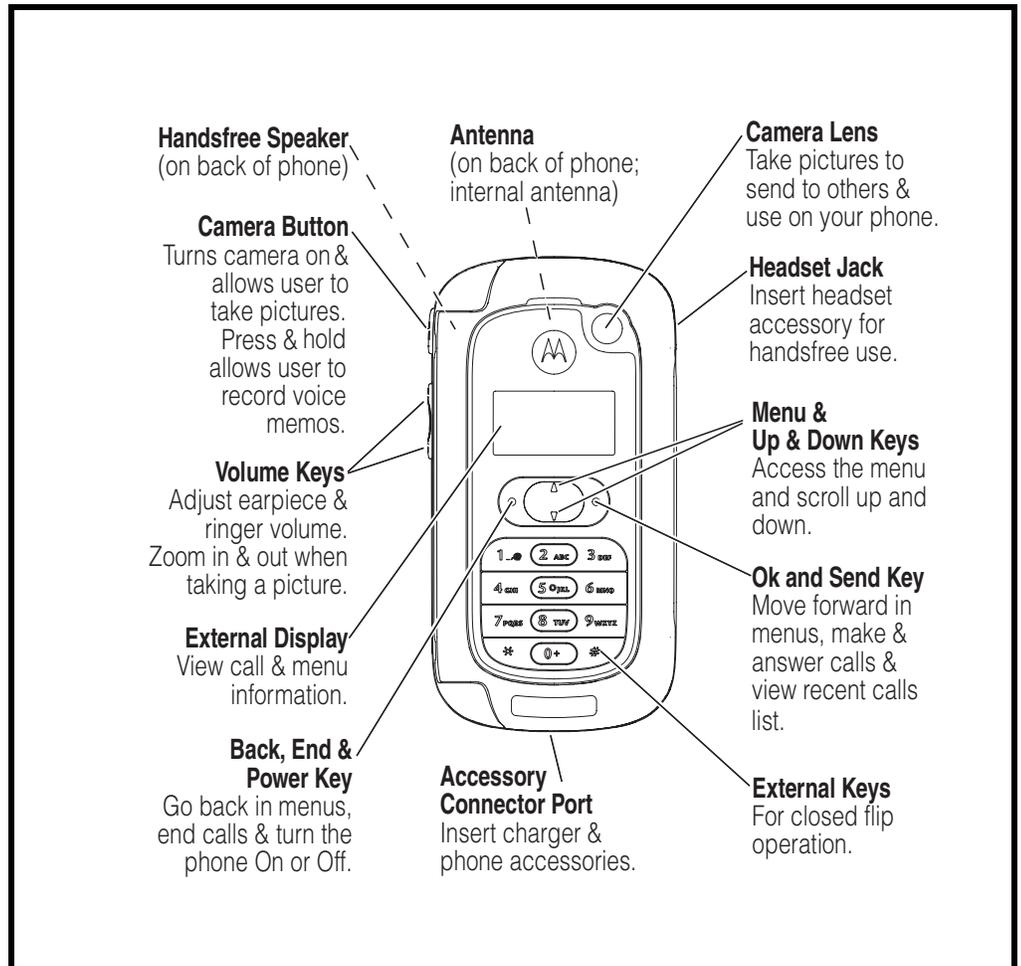
Figure 2. A630 Telephone Controls, indicators, and I/O (external)

Color Liquid Crystal Display (LCD)

The color LCD provides a 65K color backlit display for easy readability in all light conditions. The large bit-mapped 176 x 220 pixel display provides 7 lines of text, 1 line of icons, and 1 line of prompts.

Display zoom allows setting the phone's display to show either three lines or two lines of text plus soft key labels. Three lines of text display more information, while two lines increase text size for improved visibility.

Display animation makes the phone's menus move smoothly as the user scrolls up and down. Turn animation off to conserve the battery.
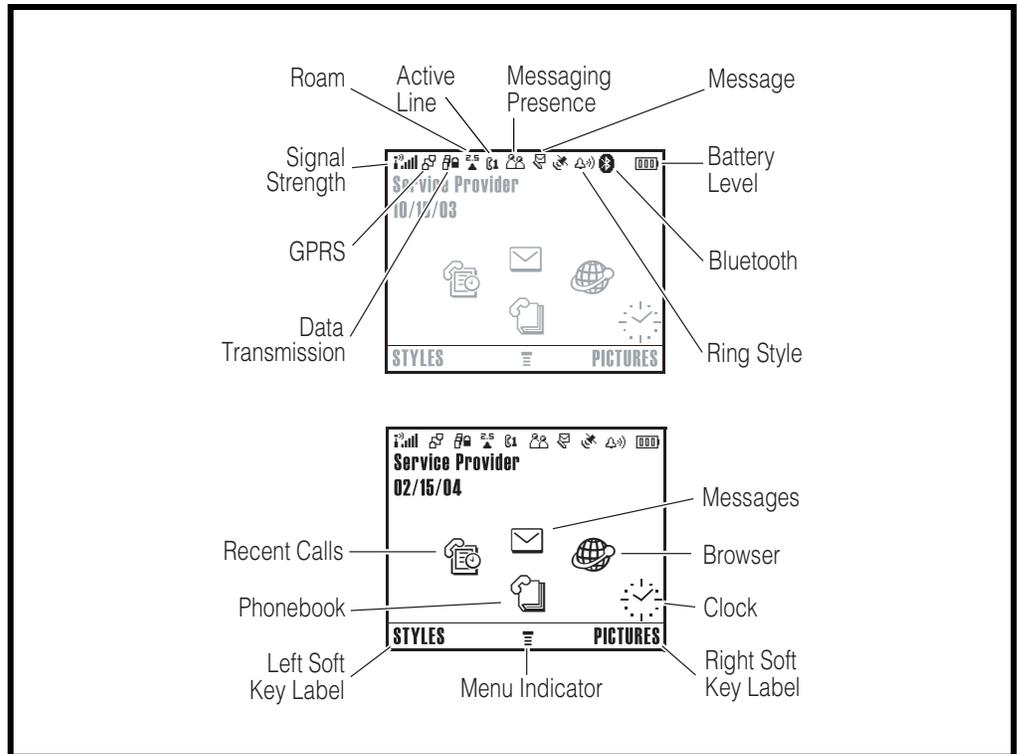

**Figure 3. A630 Icon Indicators (internal display)**
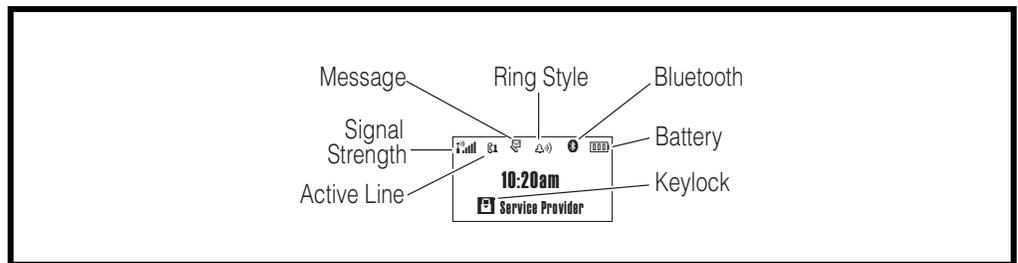
Figure 4. A630 Icon Indicators (external display)

➡ *Whether a phone displays all indicators depends on the programming and services to which the user subscribes.*

Figure 3 shows some common icons displayed on the LCD.

- **Signal Strength Indicator**. Shows the strength of the phone's connection with the network. Calls cannot be sent or received when the "no signal" indicator is displayed.
- **GPRS Indicator** Appears when the phone is using a high-speed General Packet Radio Service (GPRS) network connection. GPRS allows faster data transfer speeds.

- **Data Transmission Indicator** Shows connection and data transmission status.
- **Roam Indicator**. Appears when the phone uses another network system outside the user's home network. When leaving the home network area, the phone roams, or seeks another network.
- **Active Line Indicator** Shows the currently active phone line.
- **Messaging Presence Indicator** Appears when instant messaging is active.
- **Message Indicator** Appears when the phone receives a text message.
- **Battery Level Indicator**. Vertical bars show the battery charge level. Recharge the battery as soon as possible when the Low Battery warning message appears and the battery alert sounds..
- **Bluetooth Indicator.** Appears when a bluetooth connection has been established with another bluetooth device.
- **Ring Style Indicator.** Shows the current selected alert.

User Interface Menu Structure

Figure 5 shows the A630 telephone menu structure.

Main Menu

- Phonebook
- Recent Calls
  - Received Calls
  - Dialed Calls
  - Notepad
  - Call Times
  - Call Cost
  - Data Times
  - Data Volumes
- Messages
  - Create Message
  - Email Msgs
  - Message Inbox
  - Voicemail
  - Browser Msgs
  - Info Services
  - Quick Notes
  - Outbox
  - Drafts
  - MMS Templates
- Office Tools
  - SIM Apps
  - Calculator
  - Datebook
  - Shortcuts
  - Voice Records
  - Alarm Clock
  - Dialing Services
  - Mobile QQ
  - Chat
- Games & Apps
- Web Access
  - Browser
  - Web Shortcuts
  - Stored Pages
  - History
  - Go To URL
  - Browser Setup
  - Web Sessions
- Multimedia
  - Themes
  - Camera
  - Pictures
  - Sounds
  - MotoMixer
  - Videos
- Extras
  - IM
    - Log In
    - Offline Convs.
    - Offline Settings
    - Help
  - Settings
    - (go to following menu items)

Setting Menu

- Personalize
  - Home Screen
  - Main Menu
  - Color Style
  - Greeting
  - Wallpaper
  - Screen Saver
  - Quick Dial
- Ring Styles
  - Style
    - *Style* Detail
- Connection
  - Bluetooth Link
  - Sync
- Call Forward
  - Voice Calls
  - Fax Calls
  - Data Calls
  - Cancel All
  - Forward Status
- In-Call Setup
  - In-call Timer
  - Call Cost Setup
  - My Caller ID
  - Talk and Fax
  - Answer Options
  - Call Waiting
- Initial Setup
  - Time and Date
  - 1-Touch Dial
  - Display Timeout
  - Backlight
  - TTY Setup
  - Scroll
  - Language
  - Battery Save
  - Brightness
  - DTMF
  - Master Reset
  - Master Clear
- Phone Status
  - My Tel. Numbers
  - Active Line
  - Battery Meter
  - Other Information
- Headset
  - Auto Answer
  - Voice dial
  - Power-off Delay
  - Charger Time
- Car settings
- Network

- Security
  - Phone Lock
  - Lock Application
  - Fixed Dial
  - Call Barring
  - SIM Pin
  - New Passwords
- Java Settings
  - Java App Loader
  - Java System
  - Delete All Apps
  - App Vibration
  - App Volume
  - App Priority
  - App Backlight
  - Sett Standby App
  - DNS IP

Figure 5. Menu Structure

Alert Settings

A630 telephones include up to 32 preset alert tones and vibrations that can be applied to all alert events at the same time.

➤ *Pressing either volume key will mute the alert.*

Battery Function

Battery Gauge

The telephone displays a battery level indicator icon in the idle screen to indicate the battery charge level. The gauge shows four levels: 100%, 66%, 33%, and Low Battery.

Battery Removal

Removing the battery causes the device to immediately shut down and any pending work (for example, partially entered phone book entries or outgoing messages) is lost.

➤ *To ensure proper memory retention, turn OFF the phone before removing the battery. Immediately replace the old battery with a fresh battery.*

⚠ *If the battery is removed while receiving a message, the message will be lost.*

Operation

For detailed operating instructions, refer to the appropriate User's Guide listed in the Related Publications section toward the end of this manual.

Tools and Test Equipment

The following table lists tools and test equipment recommended for disassembly and reassembly of A630 telephones. Use either the listed items or equivalents.

Table 1. General Test Equipment and Tools

Motorola Part Number[1]	Description	Application
RSX4043-A	Torque Driver	Used to remove and replace screws
—	Torque Driver Bit T-6 Plus, Apex 440-6IP Torx Plus or equivalent	Used with torque driver
See Table 6	Rapid Charger	Used to charge battery and to power device
0180386A82	Antistatic Mat Kit (includes 66-80387A95 antistatic mat, 66-80334B36 ground cord, and 42-80385A59 wrist band)	Provides protection from damage to device caused by electrostatic discharge (ESD)
6680388B67	Disassembly tool, plastic with flat and pointed ends (manual opening tool)	Used during assembly/disassembly of device
6680388B01	Tweezers, plastic	Used during assembly/disassembly
—	Digital Multimeter, HP34401A[2]	Used to measure battery voltage
8102430Z04	GSM / DCS Test SIM	Used to enable manual test mode
0-00-00-40820[3]	A630 Domesheet Assembly Tool	Used to assemble EL + Domesheet

1. To order in North America, contact Motorola Aftermarket and Accessories Division (AAD) at (800) 422-4210 or FAX (800) 622-6210; Internationally, AAD can be reached by calling (847) 538-8023 or faxing (847) 576-3023.
2. Not available from Motorola. To order, contact Hewlett Packard at (800) 452-4844.
3. To order, contact AMS: AMS GmbH, Flensburg, Germany, phone +49 461 903 980, mail to sales@ams-fl.com.

Disassembly

The procedures in this section provide instructions for the disassembly of A630 telephones. Tools and equipment used for the phone are listed in Table 1, preceding.

Many of the integrated devices used in this equipment are vulnerable to damage from electrostatic discharge (ESD). Ensure adequate static protection is in place when handling, shipping, and servicing the internal components of this equipment.

Avoid stressing the plastic in any way to avoid damage to either the plastic or internal components.

Removing and Replacing the Battery Cover and Battery

All batteries can cause property damage and/or bodily injury such as burns if a conductive material such as jewelry, keys, or beaded chains touch exposed terminals. The conductive material may complete an electrical circuit (short circuit) and become quite hot. Exercise care in handling any charged battery, particularly when placing it inside a pocket, purse, or other container with metal objects.

1. Ensure the phone is turned off.
2. Press in the battery cover latch and lift the bottom end of the battery cover as shown in Figure 1.

Battery Cover

Battery Cover Latch
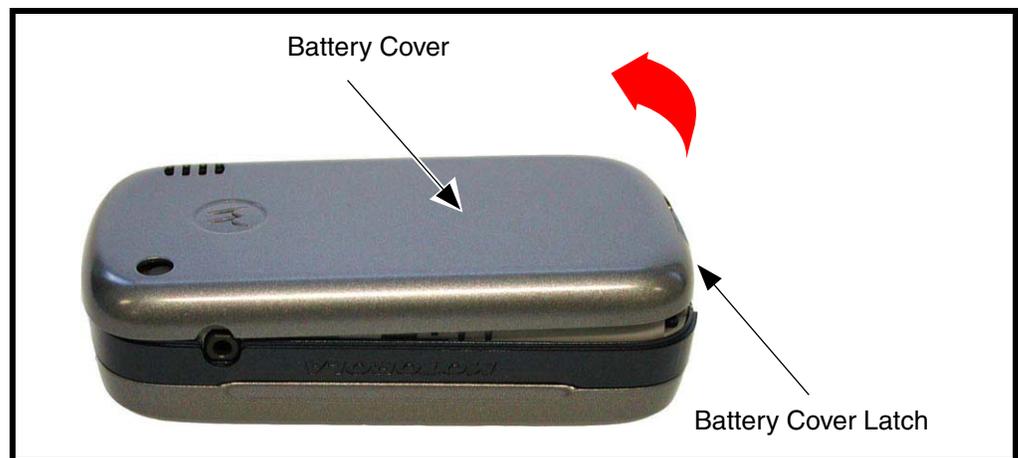
Figure 1. Removing the Battery Cover

3. Slide the battery cover and lift it completely off the phone.

4. Lift the end of the battery and remove it completely. See Figure 2.
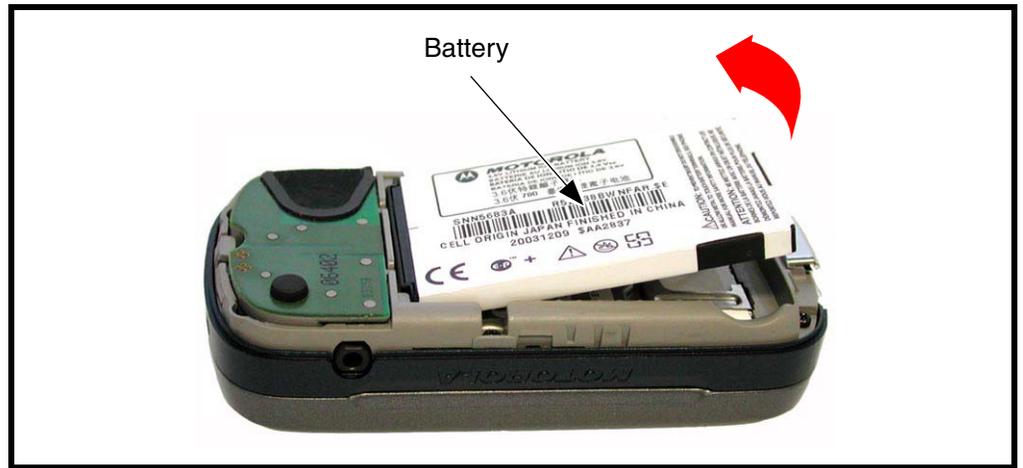
Battery

Figure 2. Removing the Battery

There is a danger of explosion if the Lithium Ion battery is replaced incorrectly. Replace only with the same type of battery or equivalent as recommended by the battery manufacturer. Dispose of used batteries according to the manufacturer's instructions.

5. To replace, align the battery with the battery compartment so the terminals on the battery match the battery contacts in the phone.
6. Insert the top of the battery into the battery housing, then press the bottom end of the battery down into the battery compartment.
7. Insert the ridge at the top of the battery cover into the top of the phone, then push the cover down to snap into place.

Removing and replacing the Subscriber Identity Module (SIM)

1. Remove the battery cover and battery as described in the procedures.
2. Remove the SIM from it's holder by sliding it in the direction of the arrow as shown in Figure 3.
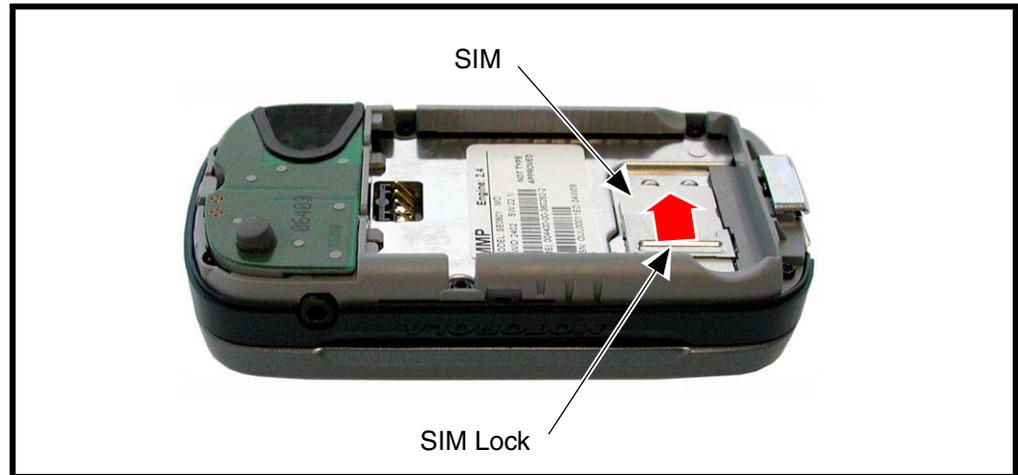
Figure 3. Removing the SIM

3. To replace, carefully slide the SIM into the SIM lock to its position in the socket, ensuring the cut corner of the SIM is in the same direction as the notch molded.
4. Replace the battery and battery cover as described in the procedures.

Removing and Replacing the Antenna / Audio Assembly

1. Remove the battery cover, battery and SIM as described in the procedures.
2. Use the disassembly tool to release the snaps which are holding the antenna / audio assembly in place. See Figure 4. .
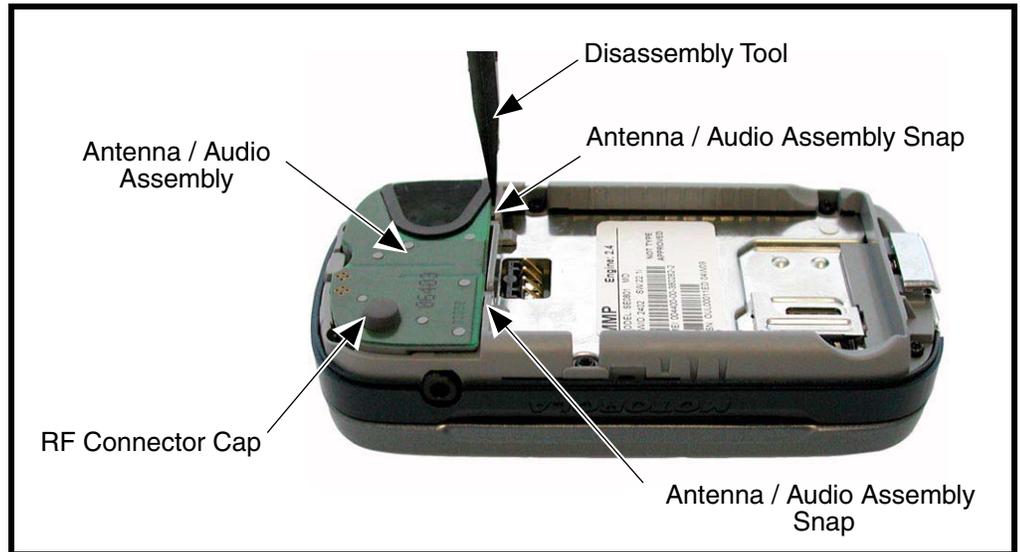
Figure 4. Removing the Antenna / Audio Assembly

3. When the antenna /audio assembly rises from its place, carefully lift it up.
4. To replace, place the two plastic protrusions in the holes on the top of the housing, press the antenna / audio assembly down until it snaps into place.
5. Insert the RF connector cap into its cavity if it is missing.
6. Replace the SIM, battery and battery cover as described in the procedures.

Removing and Replacing the Frame and the RF Shield Assembly

⚠ *This product contains static-sensitive devices. Use anti-static handling procedures to prevent electrostatic discharge (ESD) and component damage.*

1. Remove the battery cover, battery, SIM, and antenna / audio assembly as described in the procedures.
2. Using a Torx driver with a T-6 bit, remove the 6 screws. See Figure 5.
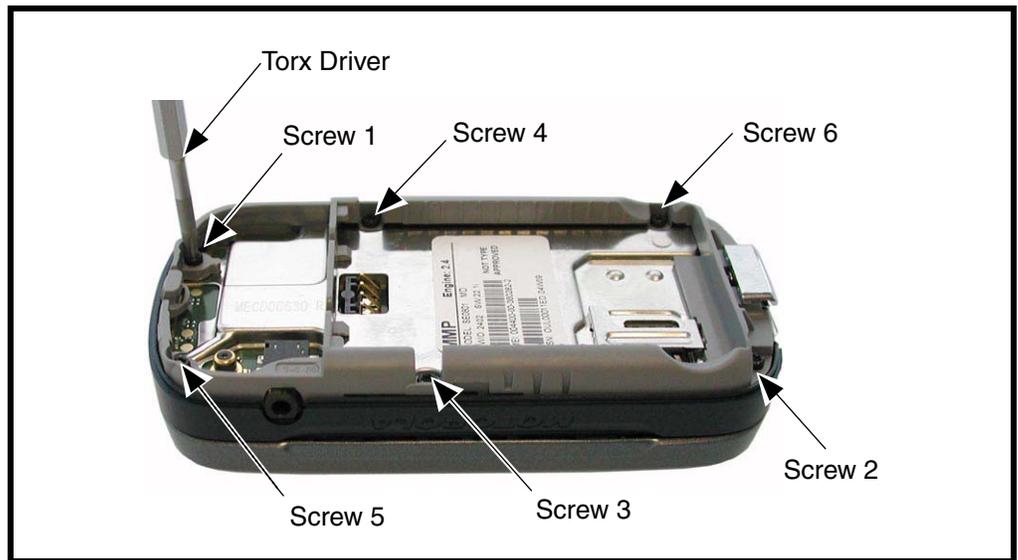
Figure 5. Removing the Frame and RF Shield Assembly Screws

3. Carefully lift the frame away. See Figure 6.
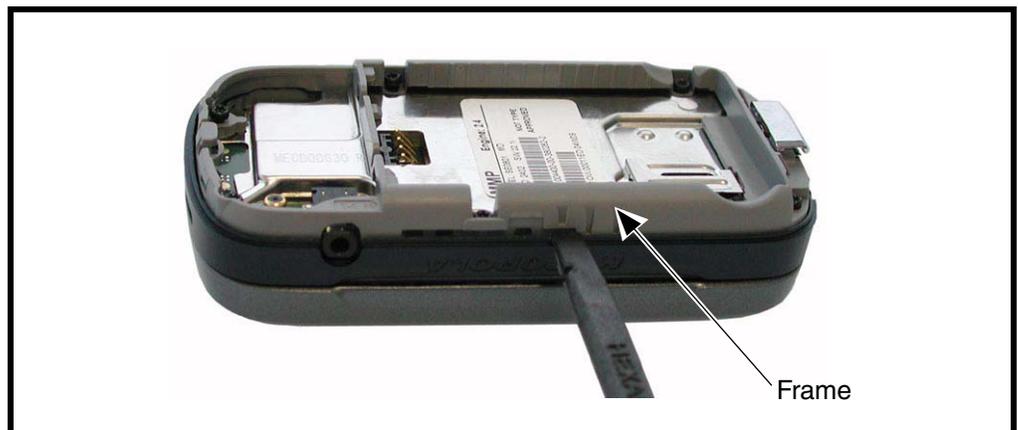
Figure 6. Removing the Frame

4. Carefully remove the RF shield assembly from the top of the PWB assembly. See Figure 7.
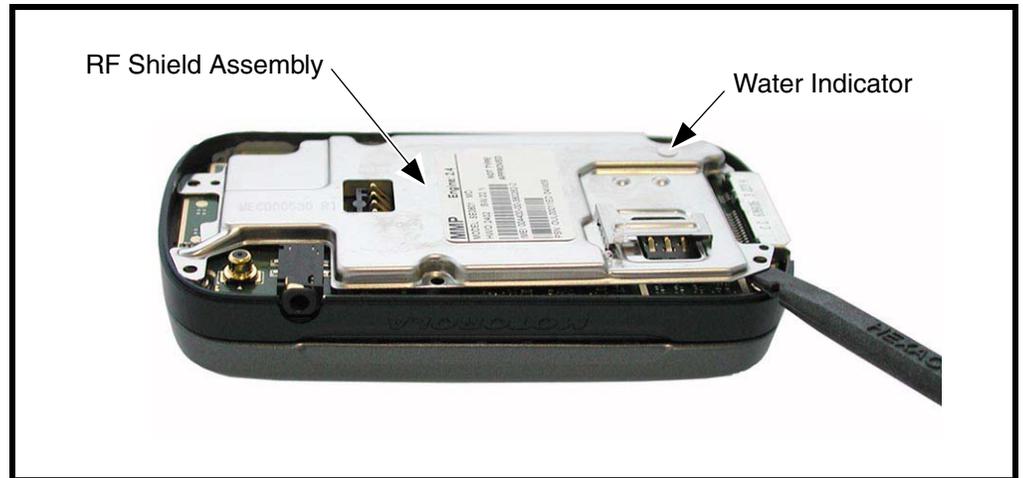
Figure 7. Removing the RF Shield Assembly

5. To replace, place the RF shield assembly onto the top of the PWB assembly, carefully align the screw holes in the RF shield assembly and PWB assembly.
6. Place the frame on the top of the RF shield assembly aligning the screw holes betweem the PWB assembly, RF shield assembly and the frame.
7. Insert the 6 Nyloc screws (see Figure 8) and use a Torx T-6 to tighten them to a torque setting of 12 Ncm (1.0 inch pounds) in the order shown in Figure 5. Do not over tighten.

Figure 8. Nyloc Screw

8. If missing, or damaged, replace the water indicator using tweezers, apply to the RF shield assembly in the position as shown in figure 7.
9. Replace the antenna / audio assembly, SIM, battery, and battery cover as described in the procedures.

Removing and Replacing the PWB Assembly, EL+ Domesheet Assembly and QWERTY Keymat

⚠️ *This product contains static-sensitive devices. Use anti-static handling procedures to prevent electrostatic discharge (ESD) and component damage.*

1. Remove the battery cover, battery, SIM, antenna / audio assembly, frame and RF shield assembly as described in the procedures.
2. Use the disassembly tool to carefully lift the edge of the PWB assembly (see Figure 9) to a 30 - 45 ° angle.
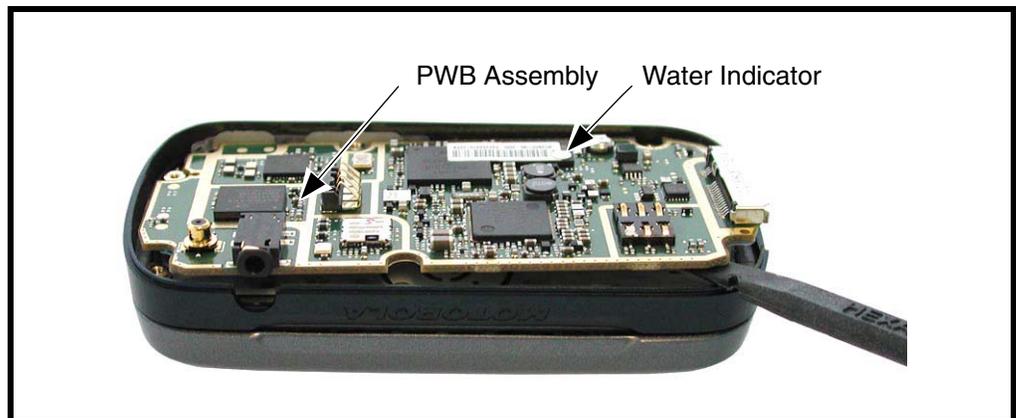
Figure 9. Lifting the PWB Assembly

⚠️ *The flexible printed cable (FPC) (flex) is easily damaged. Exercise extreme care when handling.*

3.   Carefully disconnect the board to board connector of the main flex from the PWB assembly with the flat end of the disassembly tool. See Figure 10.
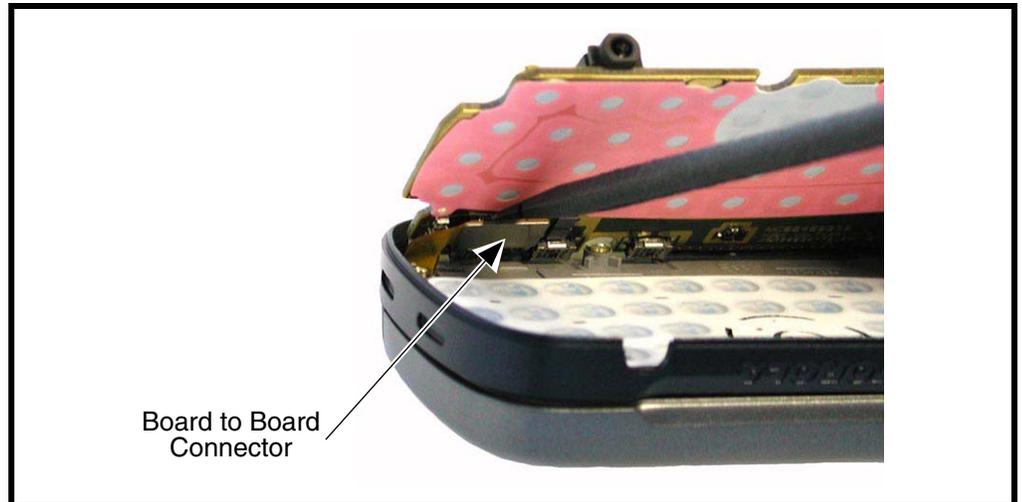
Figure 10. Disconnecting the Board to Board Connector

4.   Carefully lift the PWB assembly away.

5.   Carefully remove the EL+ Domesheet assembly from the PWB assembly with tweezers. There might be some remnants of the adhesive material on the PWB assembly, remove them all carefully. Be careful not to scratch the PWB assembly. See Figure 11.
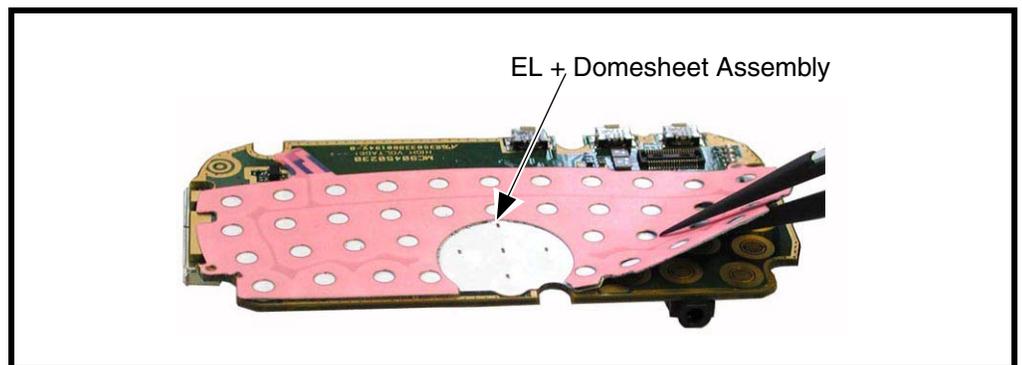
Figure 11. Removing the EL+ Domesheet Assembly

6. Use the disassembly tool to lift the edge of the QWERTY keymat. Lift the QWERTY keymat away from the housing. See Figure 12.
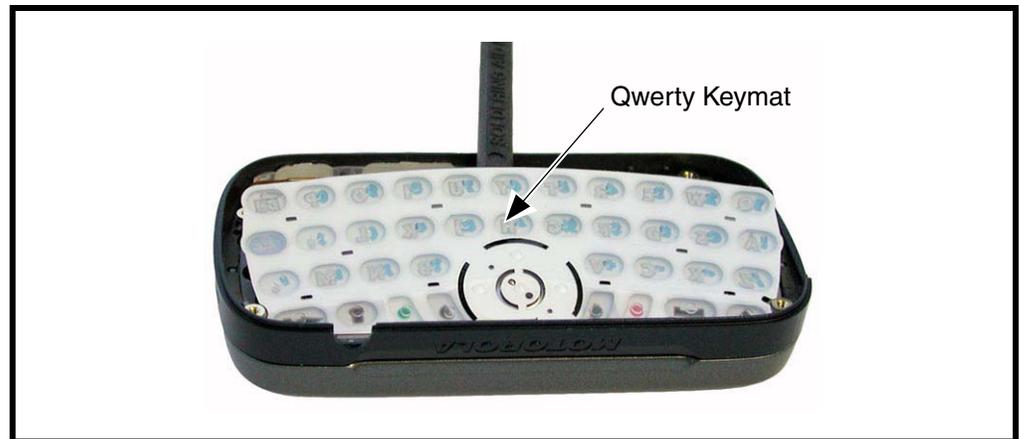
Figure 12. Removing the QWERTY Keymat

7. To replace, first remove the protection tape from the new EL+ Domesheet assembly. Position the EL + Domesheet assembly onto the EL + Domesheet assembly fixture, using the guiding pins for alignment. Avoid touching the adhesive. See Figure 13A.

8. Make sure that the PWB assembly surface is clean and dust-free. Place the
    PWB assembly carefully onto the fixture on the top of the domesheet adhesive.
    Press the PWB assembly down to attach the domesheet firmly. See Figure 13B.
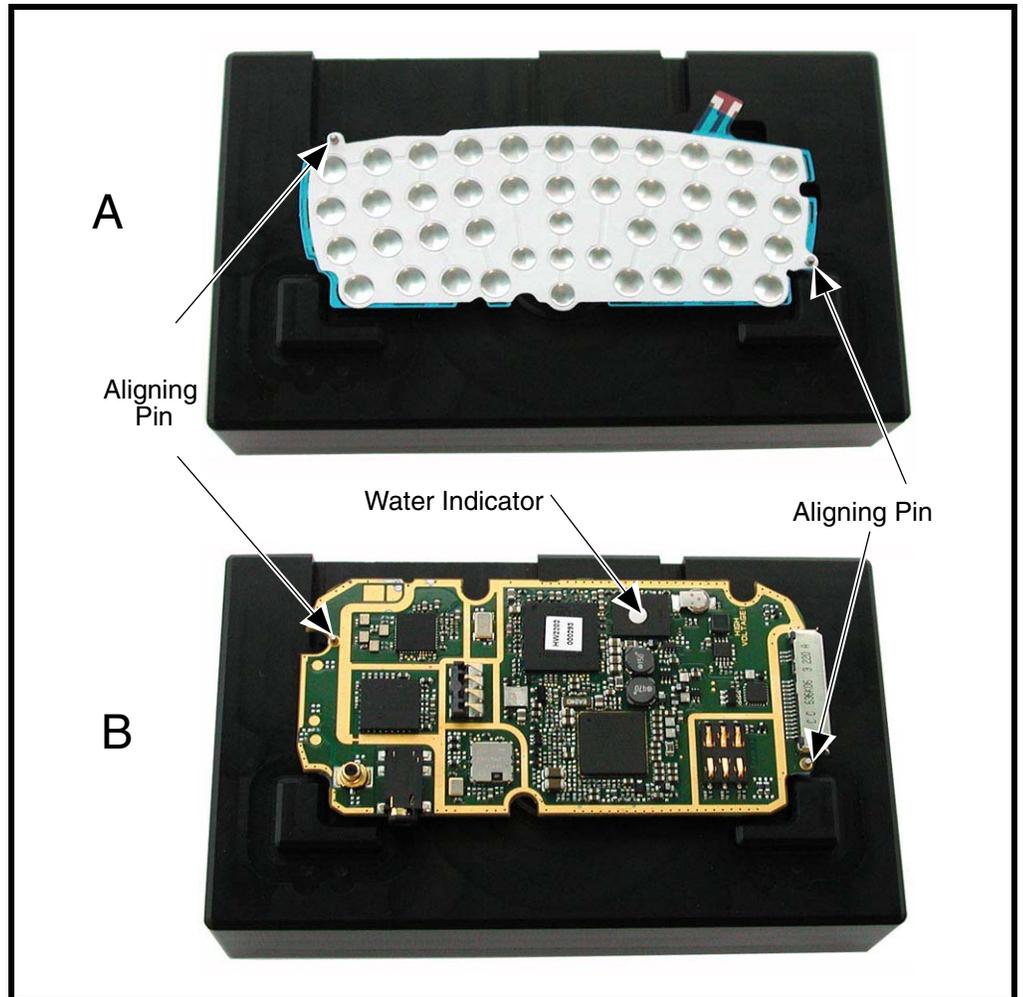
Figure 13. Replacing the EL/Domesheet

9. Take a water indicator with the tweezers and apply it on the PWB assembly.
10. Lift the PWB assembly out of the fixture.
11. Place the PWB assembly at a small angle into the housing so that you can
    connect the flex connector to the PWB assembly. Press the connector firmly
    against its mating connector with the flat end of the disassembly tool until it
    snaps into place.

12. Insert the keymat into the housing. Make sure that the small perforations are aligned with the pins in the housing and that the board to board connector remains connected.

▶ *Be sure the volume / smart buttons and camera button are correctly positioned in relation to the corresponding switches on the PWB assembly. Verify operation of the buttons after replacing the PWB assembly.*

13. Replace the RF shield assembly, frame, 6 screws, antenna / audio assembly, SIM, battery, and battery cover as described in the procedures.

Removing and Replacing the Microphone

1. Remove the battery cover, battery, SIM, antenna / audio assembly, frame, RF shield assembly, PWB assembly, EL + domesheet assembly and QWERTY keymat as described in the procedures.
2. Use the disassembly tool to gently pry the microphone out of its place in the B cover assembly. See Figure 14.
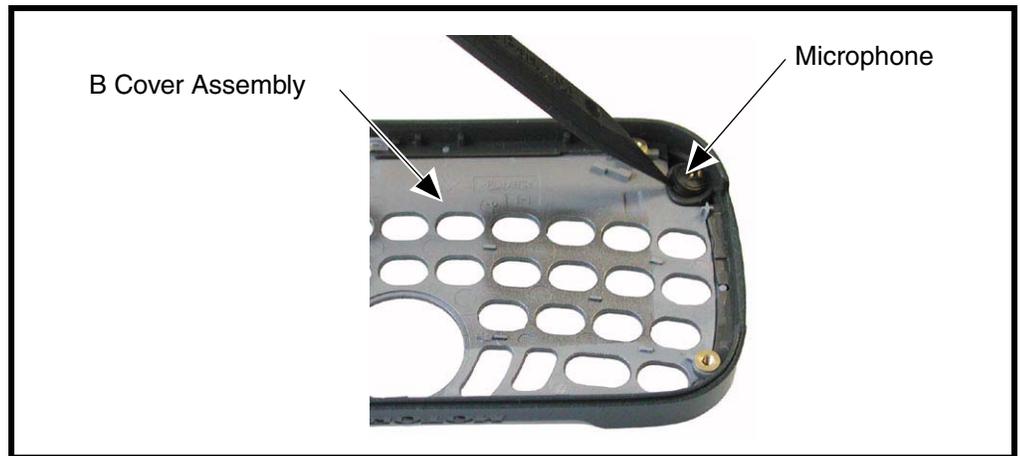
Figure 14. Removing the Microphone

3. To replace, carefully place the microphone into its socket on the B cover assembly. Be careful not to damage the microphone leads.
4. Replace the QWERTY keymat, EL + domesheet assembly, PWB assembly, RF shield assembly, frame, antenna / audio assembly, SIM, battery and battery cover as described in the procedures.

Removing and Replacing the A Cover Assembly

1. Open the flip, and hold the phone firmly in the hand. Use the disassembly tool to release the latches on the edge of the A Cover near the sharp corner. See Figure 15A.

⚠ *The small bridge between the two key holes in the A Cover Window is very fragile. Avoid touching it when holding the phone.*

⚠ *The A cover assembly is fastened with plastic latches. These are fragile and should be released with care.*

2.   Continue to release the latches on the long edge and the other corner as shown in Figure 15B.
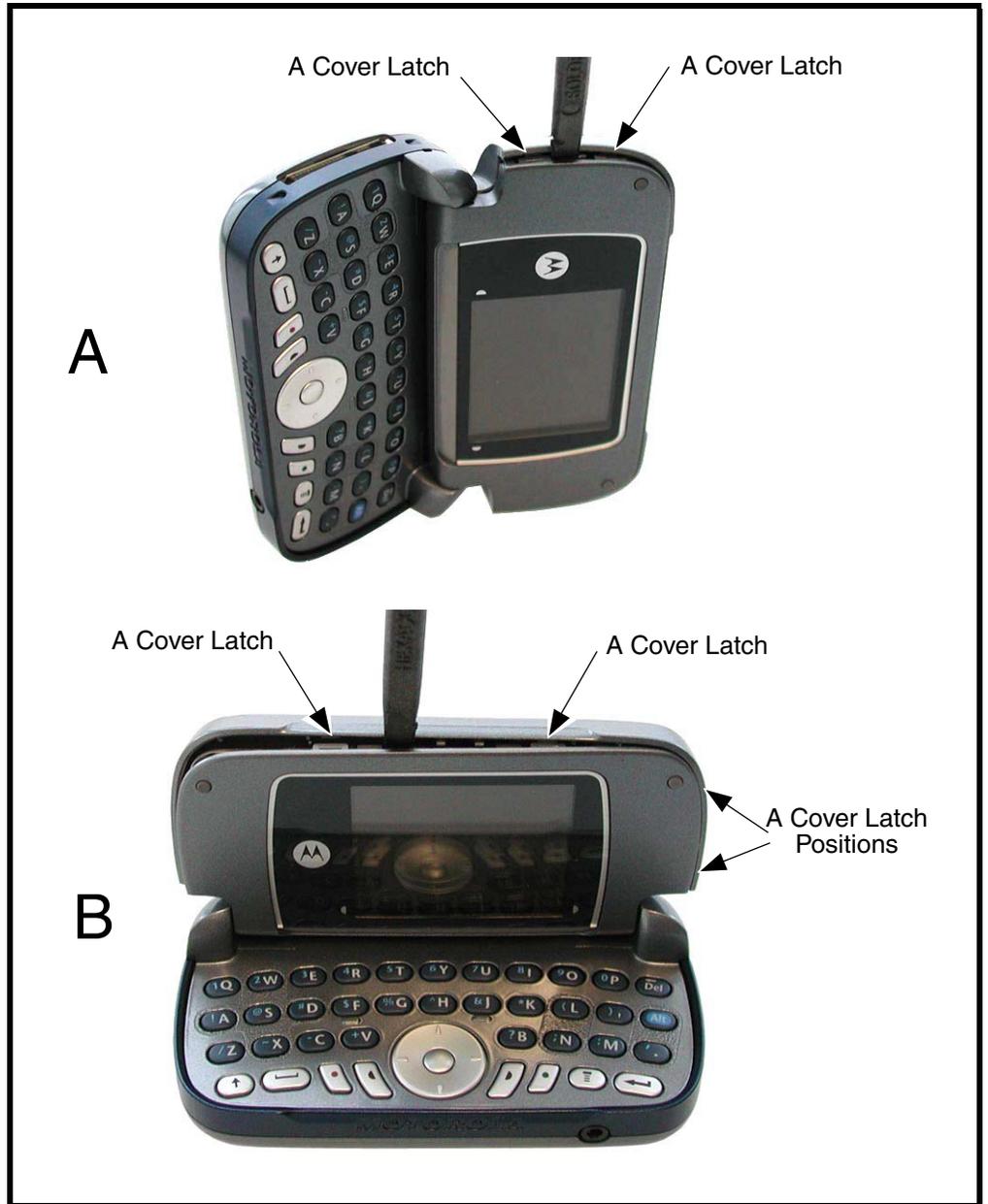
Figure 15. Removing the A Cover Assembly Part 1

3.   Carefully tilt the A cover totally open, until it is free from the Lid assembly.
      See Figure 15C.
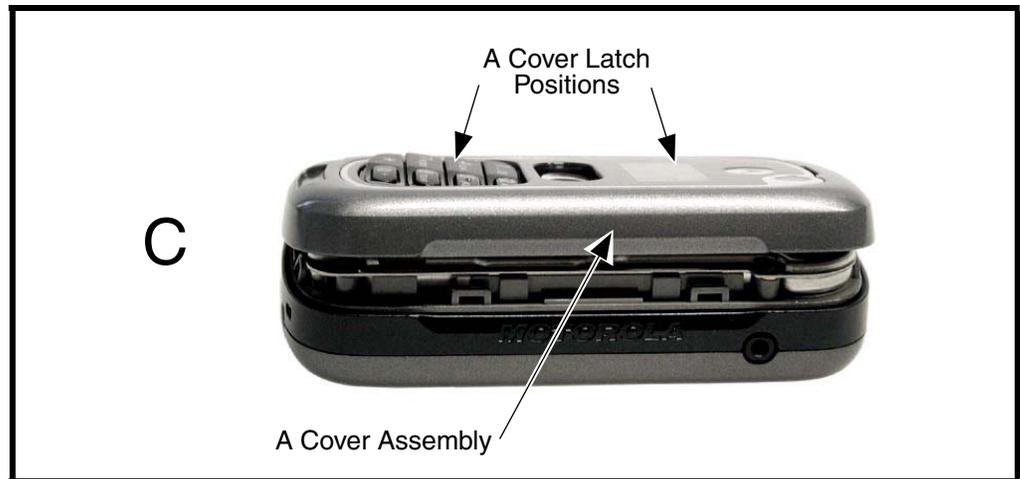
Figure 15. Removing the A Cover Assembly Part 2

4.   To replace, remove the inner dust protection tape carefully from the new A
      cover. Avoid touching the lense with your finger or a tool. Make sure that the
      lense is dust-free.
5.   Place the A cover flat onto the main metal frame. Make sure that the keymat
      is properly assembled by pressing the keys until you can hear the click from
      all the keys.
6.   Close the snaps on the hinge side of the A cover simultaneously keeping the
      keymat in place.
7.   Continue with the snaps close to the sharp corners, and finally the snaps on
      the long edge.
8.   Check that all the snaps are closed.

Removing and Replacing the Vibra, External Keymat Assembly and Main Metal Frame

1. Remove the A cover as described in the procedures.
2. Using the tweezers, lift the side of the external keymat assembly, and turn it 180 °. See Figure 16.
3. Unscrew the 4 main metal frame screws with a Torx T-6 screwdriver. See Figure 16.
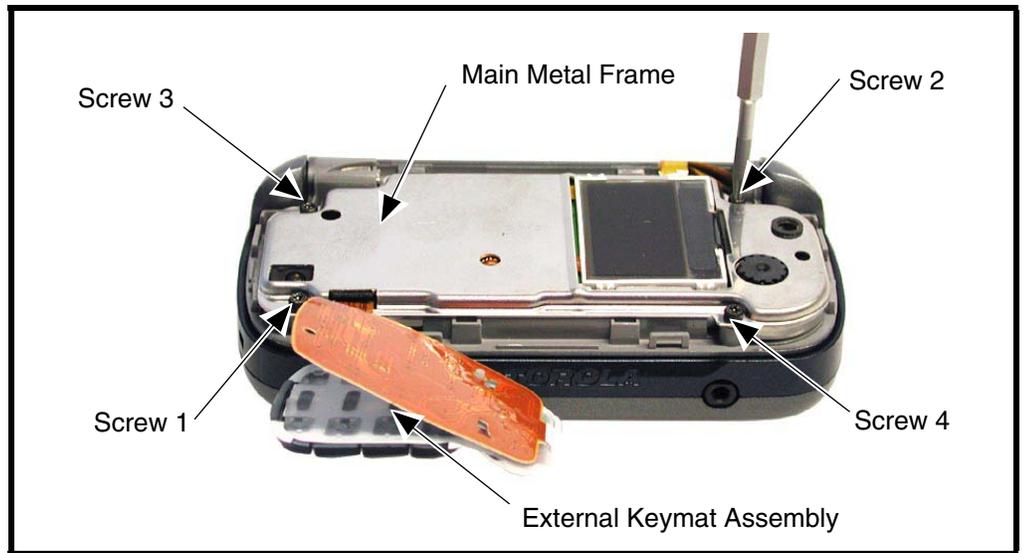
Figure 16. Removing the Main Metal Frame Screws

4. Using the disassembly tool, lift the side of the main metal frame, and turn it 180 °. See Figure 17A.
5. Remove the Vibra Host Assembly with the tweezers as shown in Figure 17A.

6.   Carefully use the disassembly tool to lift the end of the vibra as shown in Figure 17B, then lift it away from its housing. .
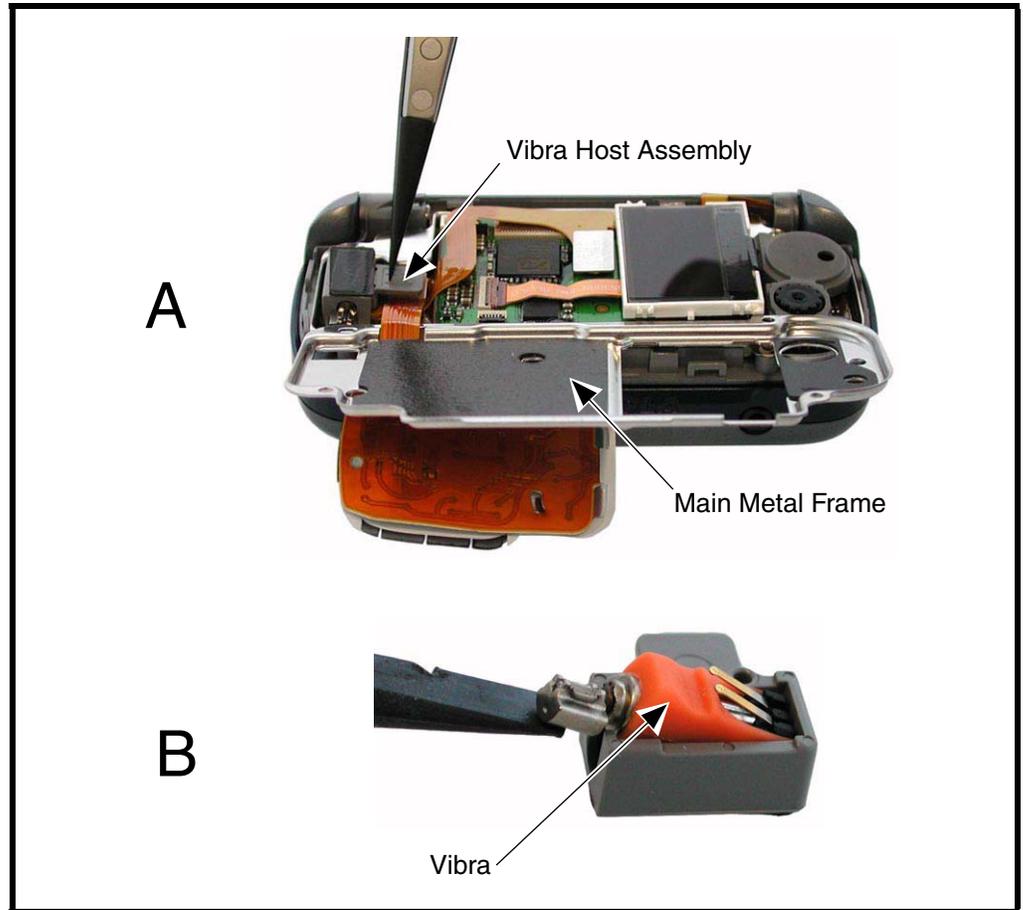
Figure 17. Removing the Vibra

7. Use the flat head of the disassembly tool to release the keymat flex connector from the main flex as shown in Figure18.

External Keymat Flex Connector

Main Metal Frame

External keymat Assembly
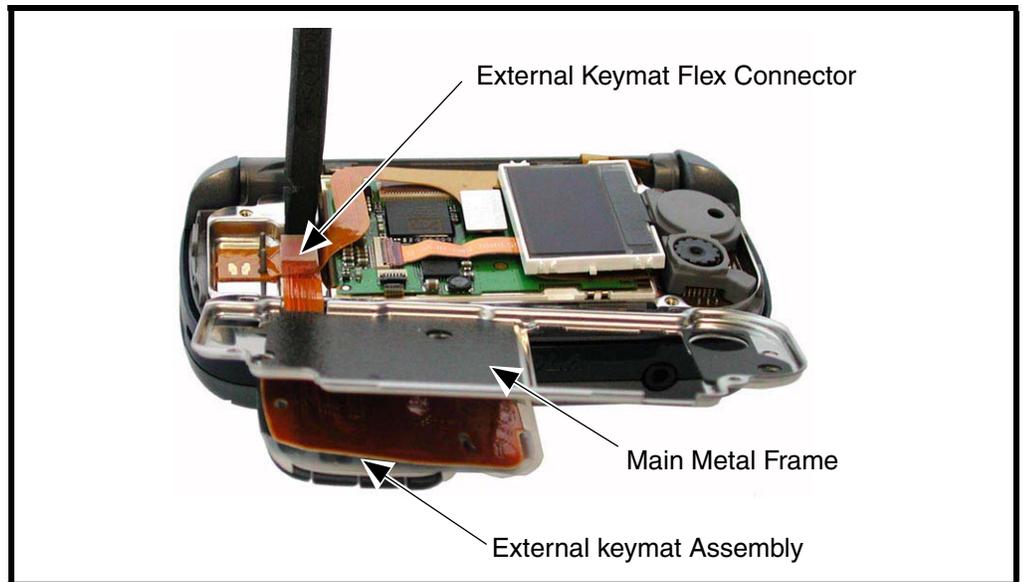
Figure 18. Removing the External Keymat Assembly, and Main Metal Frame

8. Slide the keymat flex through the slot in the main metal frame to free the main metal frame.
9. To replace, thread the keymat flex through the slot in the main metal frame.
10. Connect the keymat flex connector to its mating connector on the main flex.
11. Align the Vibra host assembly with the guiding pins and lower it into its position.
12. Rotate the main metal frame onto the top of the assembly. Align the screw holes with the holes in the other sheet metal part.
13. Insert and tighten the 4 screws to a torque setting of 12 Ncm (1.0 inch pounds) in the order shown in Figure16. Do not over tighten.
14. Rotate the external keymat assembly to its position on the main metal frame.
15. Replace the A cover as described in the procedures.

Removing and Replacing the External Display Assembly

1. Remove the A cover, vibra host assembly, external keymat assembly and main metal frame as described in the procedures.
2. Use the flat end of the disassembly tool to disconnect the ZIF connector of the external display flex as shown in Figure 19A.
3. Lift the external display assembly away. See figure 19B.
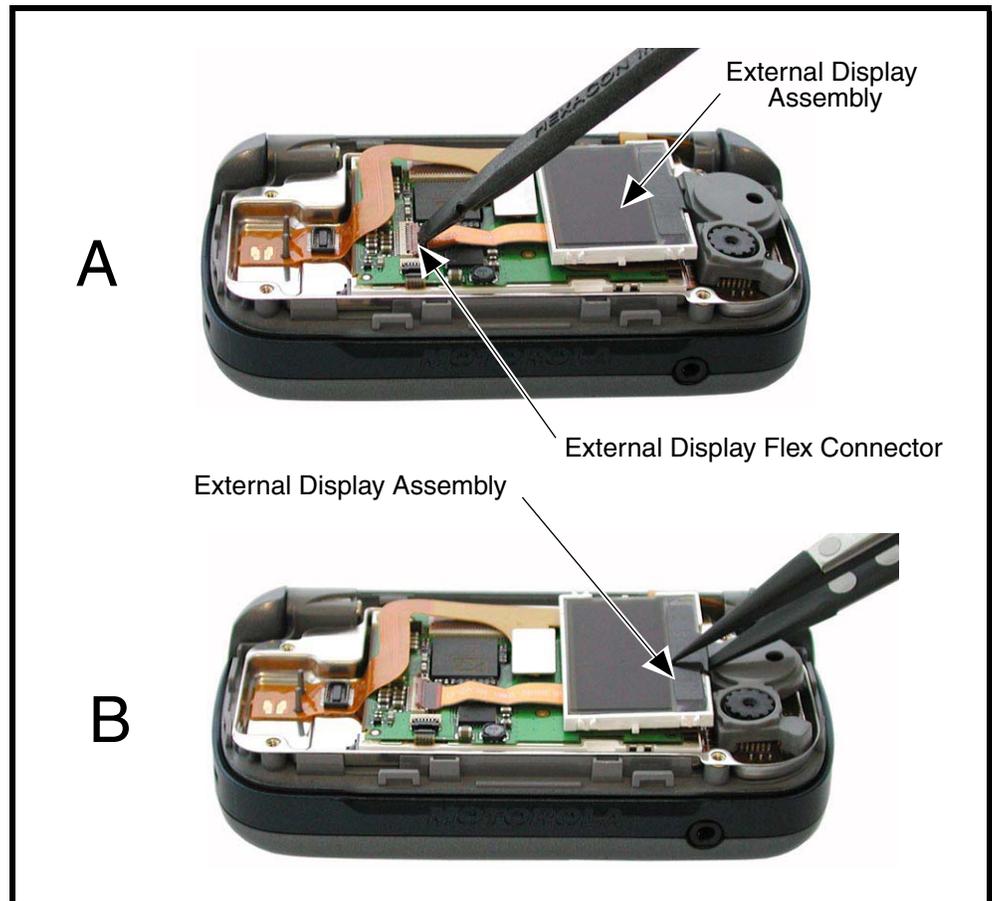
Figure 19. Removing the External Display Assembly

4. To replace, place the external display assembly to its position on the top of the color display. Press the external display assembly flex connector firmly against its mating connector with the flat end of the disassembly tool until it snaps into place.
5. Replace the external keymat assembly, main metal frame, vibra host assembly and A cover as described in the procedures.

Removing and Replacing the Receiver (Earpiece Speaker)

1. Remove the A cover, vibra host assembly, external keymat assembly, main metal frame and external display assembly as described in the procedures.
2. Use the tweezers, lift the plastic frame assembly out of its place as shown in Figure 20A.
3. Use the pointed end of the disassembly tool to push the receiver out of its housing as shown in Figure 20B.
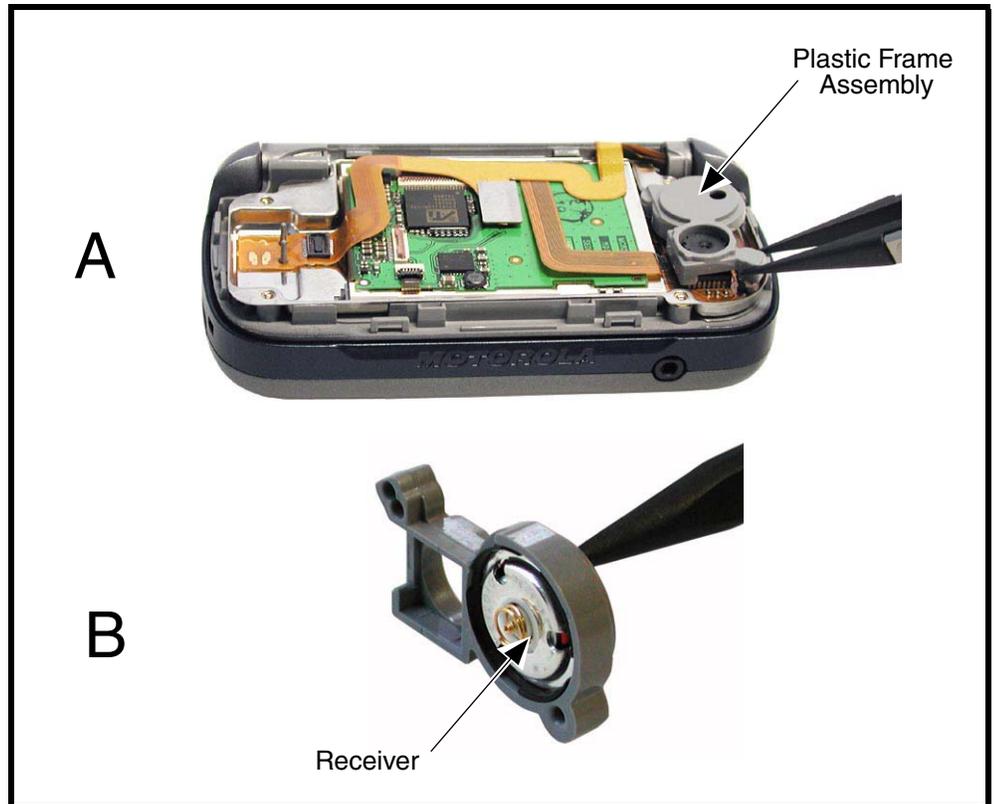
Figure 20. Removing the Receiver

4. To replace, carefully press the receiver into its housing. Be careful not to damage the receiver spring.
5. Align the plastic frame assembly with the guiding pins and slide it into its position.
6. Replace the external display assembly, external keymat assembly, main metal frame, vibra host assembly and A cover as described in the procedures.

Removing and Replacing the Camera Flex Assembly

1. Remove the A cover, vibra host assembly, external keymat assembly, main metal frame, external display assembly, and plastic frame assembly as described in the procedures.
2. Disconnect the board to board connector of the main flex from the color display. See Figure 21A.
3. Disconnect the ZIF connector of the camera flex. See Figure 21B.
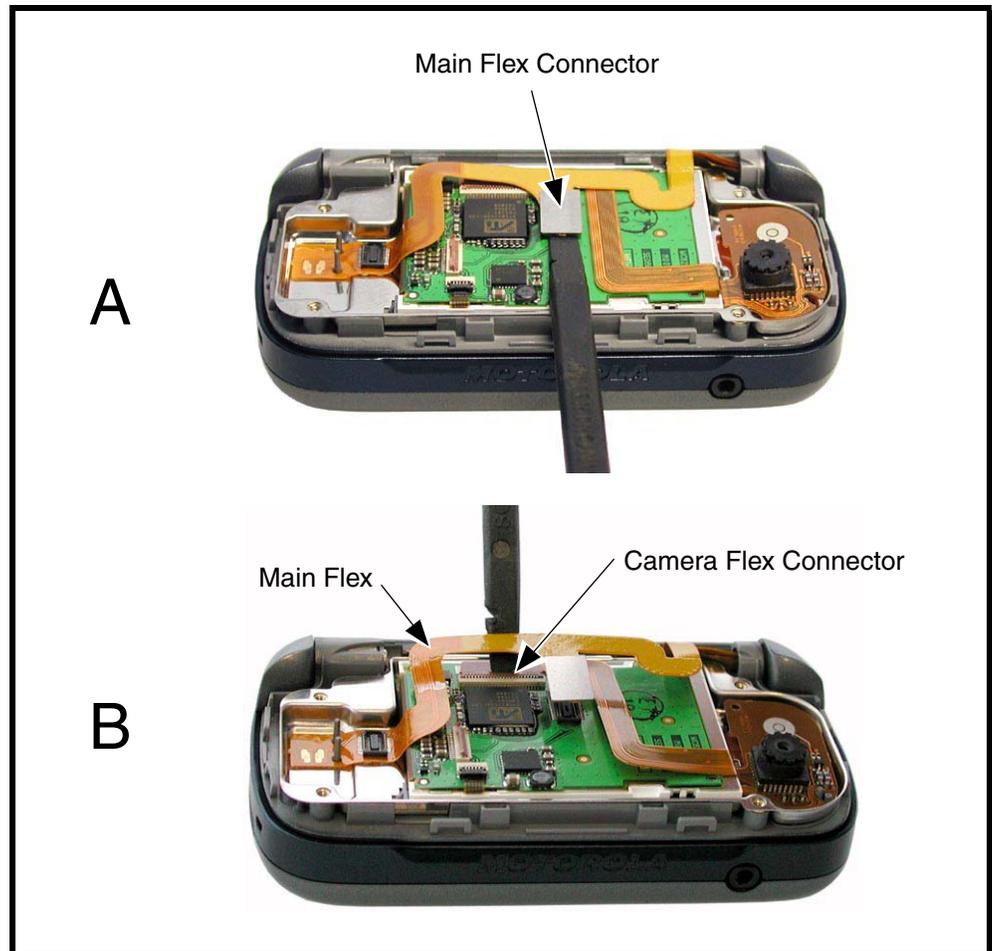
Figure 21. Removing the Camera Flex Assembly Part 1

4. Carefully pull the end of the camera flex out of its socket as shown in Figure 21C, then lift the complete camera flex assembly out of its housing. See Figure 21D.

Camera Flex

Camera Flex Assembly
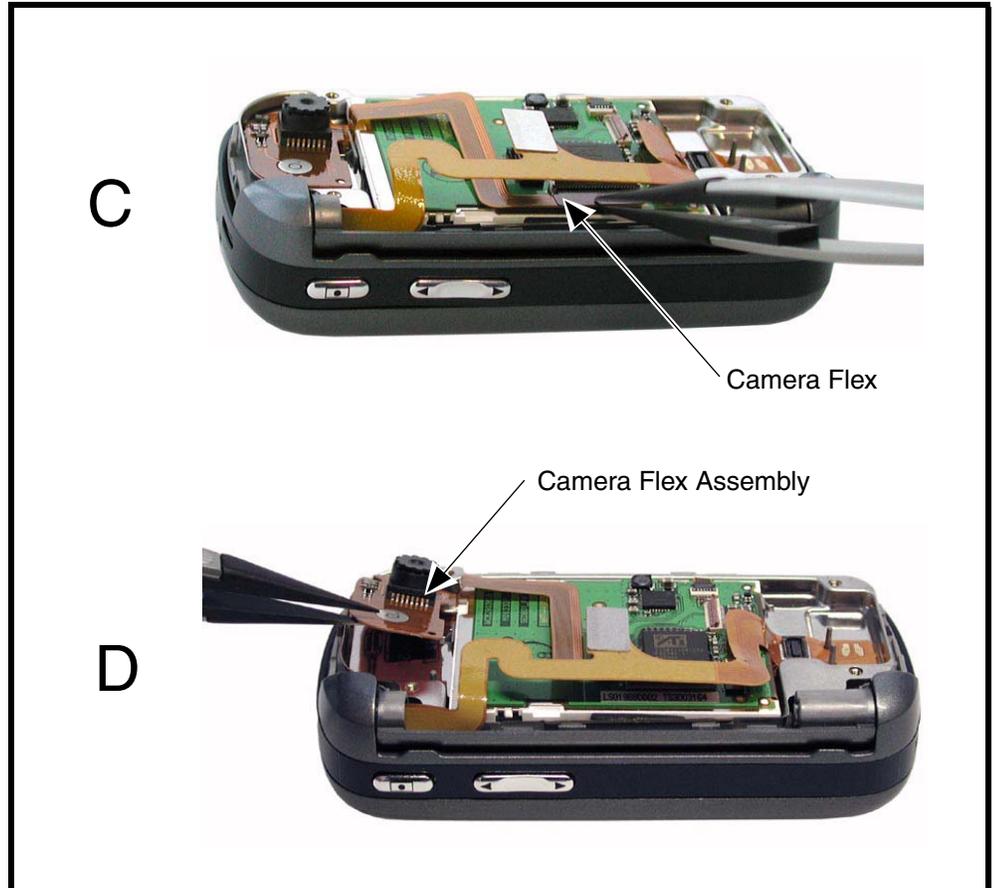
Figure 21. Removing the Camera Flex Assembly Part 2

5. To replace, connect the camera flex connector to its mating connector on the color display, then aligning the camera flex assembly with the 2 guiding pins and lower it into its position in the second metal frame.

6. Connect the board to board connector of the main flex to its mating connector on the color display.

7. Replace the plastic frame assembly, external display assembly, main metal frame, extrenal keymat assembly, vibra host assembly, and A cover as described in the procedures.

Removing and Replacing the Color Display and Second Metal Frame

1. Remove the A cover, ..., and camera flex assembly as described in the procedures.
2. Lift the color display away from the second metal frame. See Figure 22.
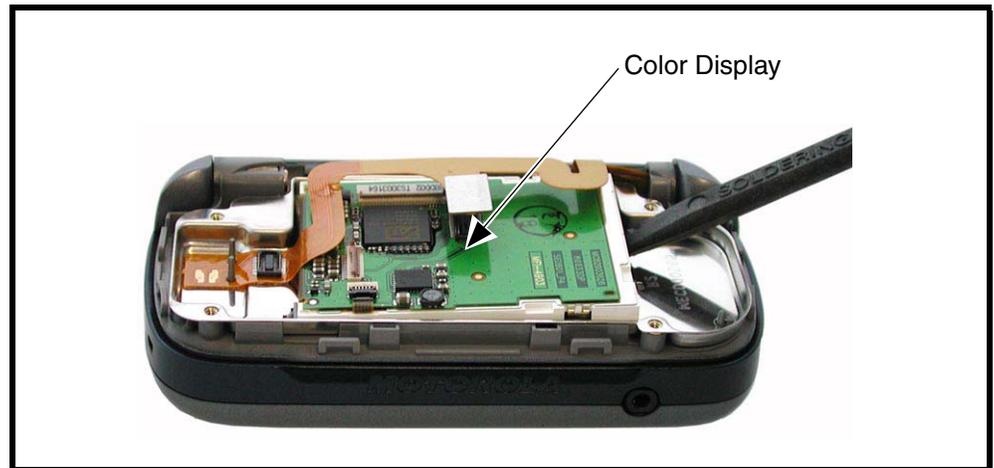
Color Display

Figure 22. Removing the Color Display

3. Carefully detach the main flex from the second metal frame as shown in Figure 23A, make sure the adhesive stays on the main flex. Avoid damaging the flex cable.

4. Carefully remove the second metal frame away from the lid assembly. See Figure 23B.
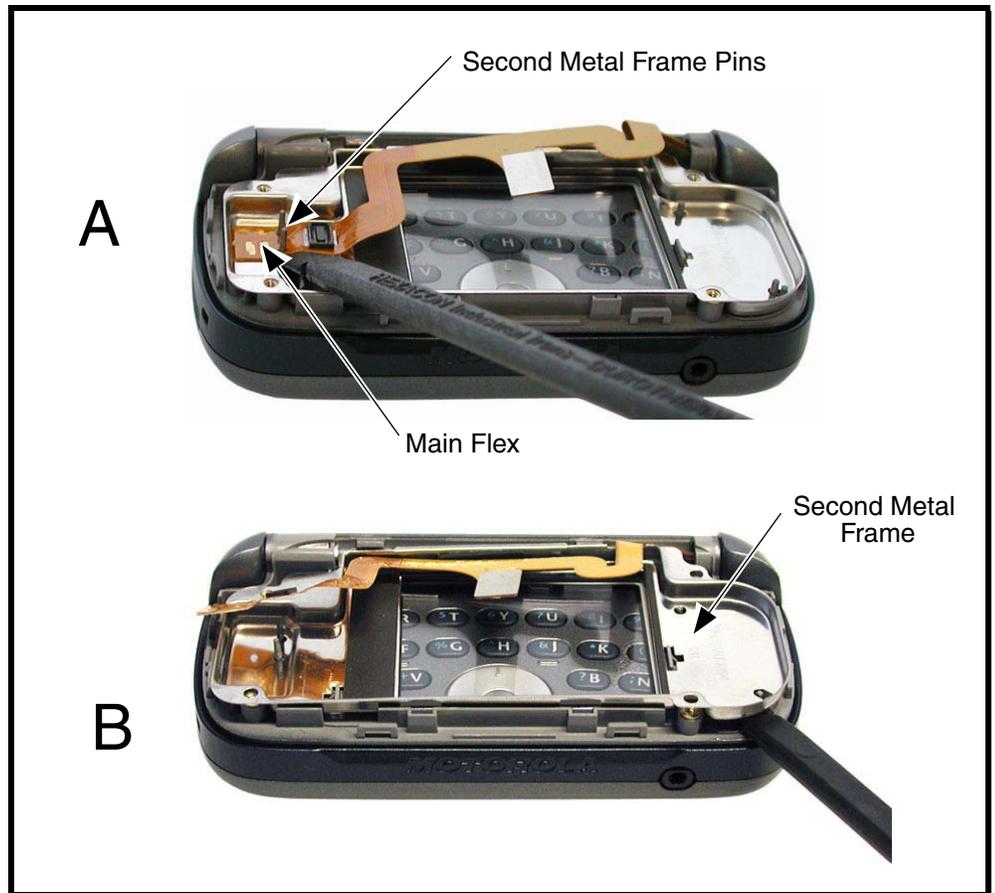
Figure 23. Removing the Second Metal Frame

5. To replace, place the second metal frame into the lid assembly, aligning the parts with the screw holes.
6. Attach the end of the main flex to the second metal frame with the adhesive, using the guiding pins for alignment.
7. Place the color display into its position in the second metal frame at an angle, hinge side first.
8. Replace the camera flex assembly, ..., and A cover as described in the procedures.

Removing and Replacing the Hinge Bushing, and B Cover Assembly

1. Remove the battery cover, battery... QWERTY keymat, A cover... and second metal frame as described in the procedures.
2. Release the lid assembly from the hinge by bending it with the hand. Press the lid from between the hinge corners and squeeze it at the same time. See figure 24..
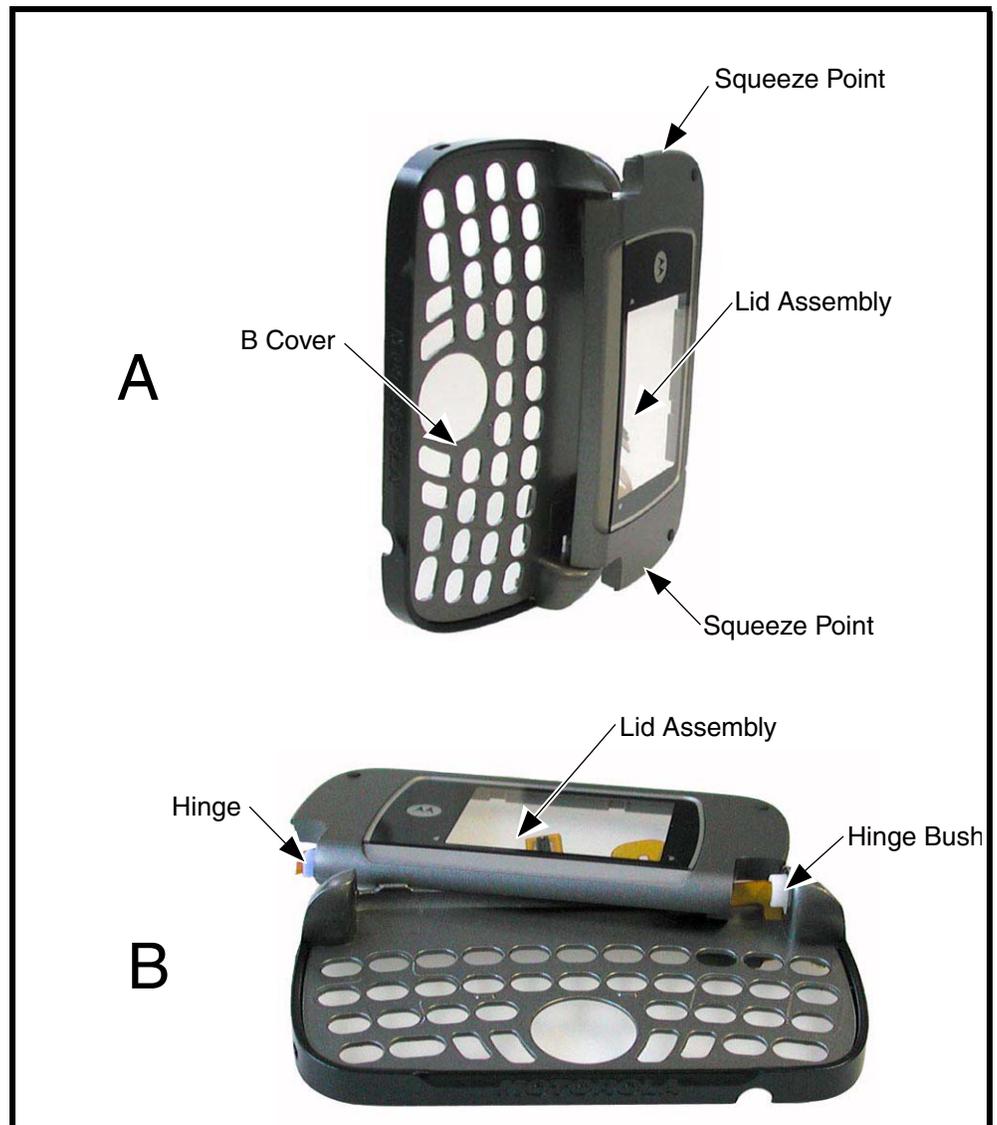
Figure 24. Releasing the Lid Assembly from B Cover

3.   Use the disassembly tool to push the rear end of the hinge bushing as shown
      in Figure 25A, then turn the B cover over, and pull the hinge bushing out with
      the tweezers. See Figure 25B.
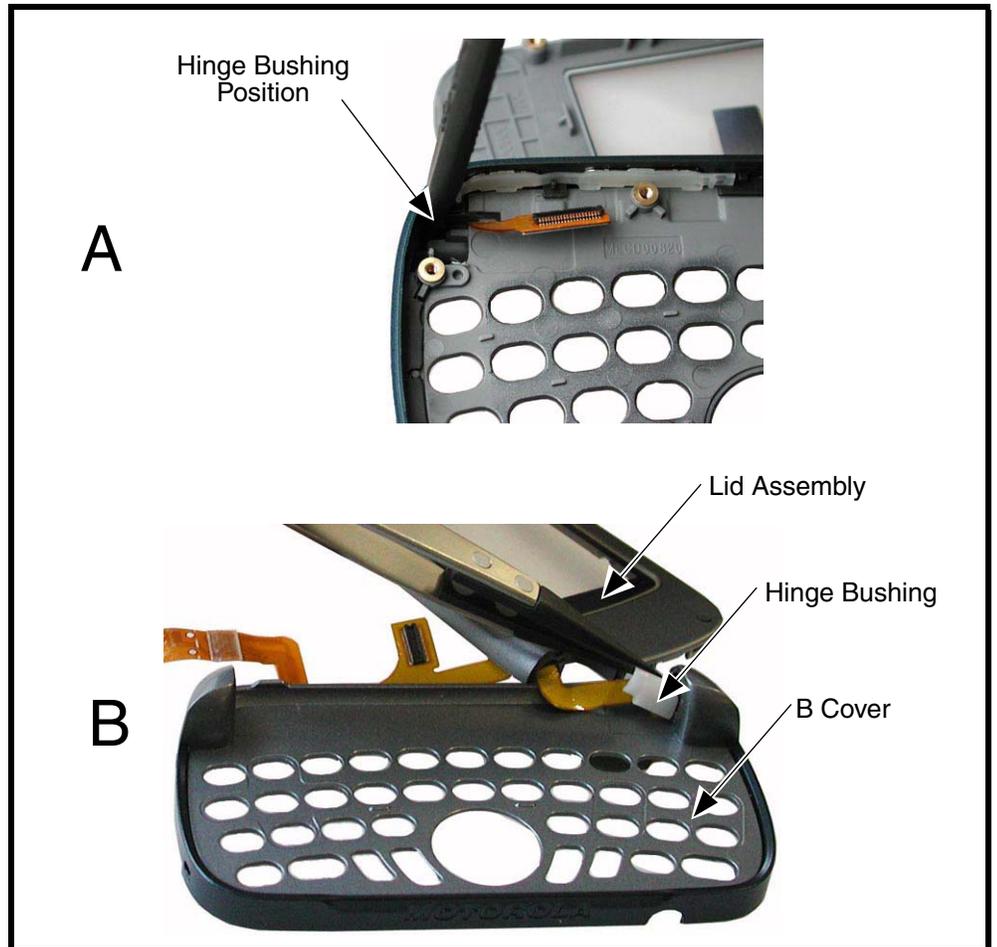
Figure 25. Removing the Hinge Bushing

4. Carefully slide the main flex cable through the slot in the B cover assembly to remove it from the B cover assembly. See Figure 26..
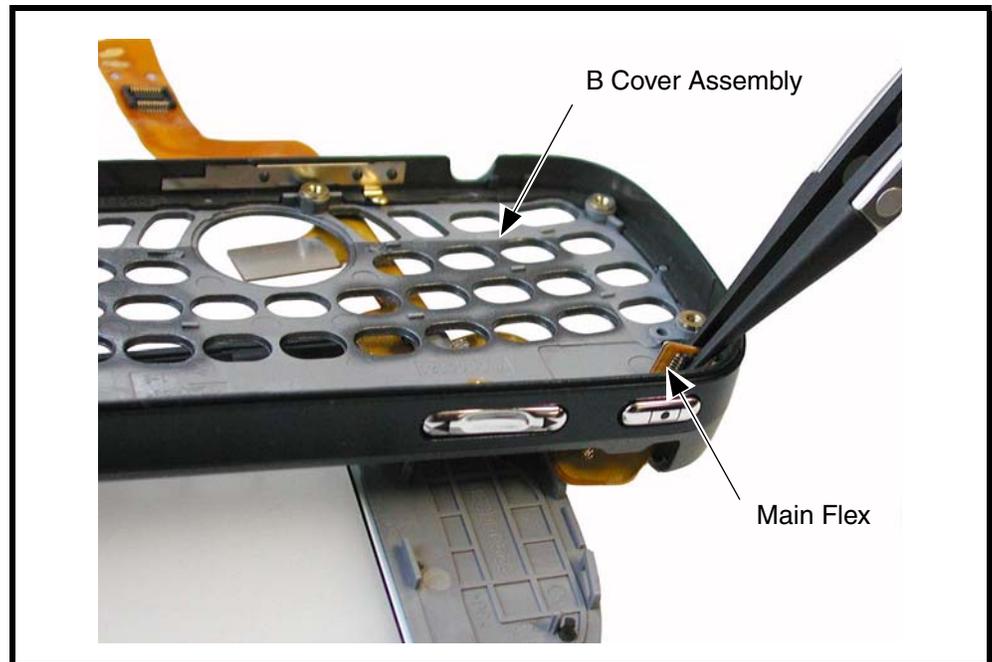
Figure 26. Removing the B Cover Assembly

5. To replace, thread the board to board connector end of the main flex through the slot in the B cover to its place.
6. Insert the hinge bushing into the slot in the B cover.
7. Push the lid assembly onto the hinge bushing.
8. Carefully bend the lid assembly to install the hinge side of the lid to the hinge tower on the B cover .
9. Replace the second metal frame... A cover ... battery, and battery cover as described in the procedures.

Removing and Replaing the Main Flex,   Lid Assembly, and Hinge

1. Remove the battery cover, battery ... and B cover as described in the procedures.
2. Carefully slide the shorter end of the main flex cable through the slot to remove it from the lid assembly. See Figure 27.
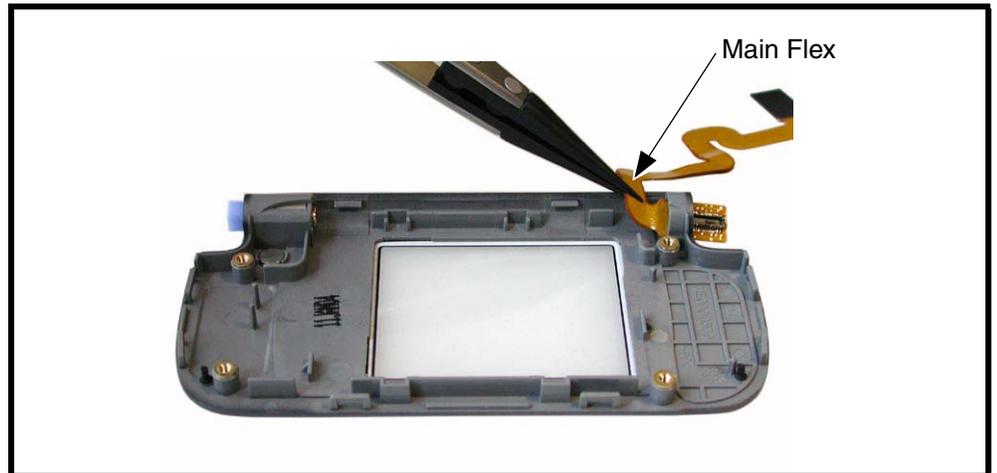
Figure 27. Removing the Main Flex

3. Use the disassembly tool to push the hinge out of the lid. See Figure 28..
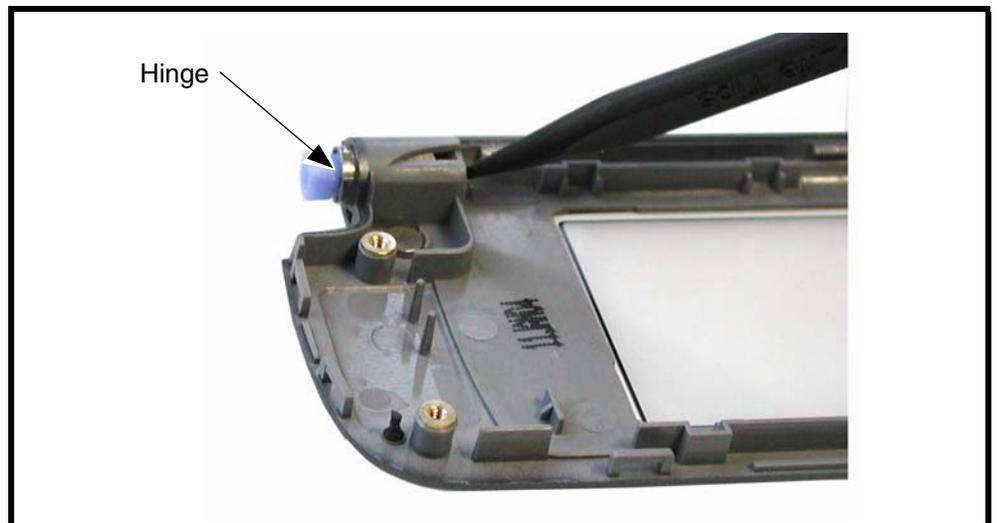
Figure 28. Removing the Hinge

4. To replace, insert the hinge into its socket in the lid.

5. Thread the board to board connector end of the main flex cable through the slot in the lid assembly into its place as shown in Figure 29.
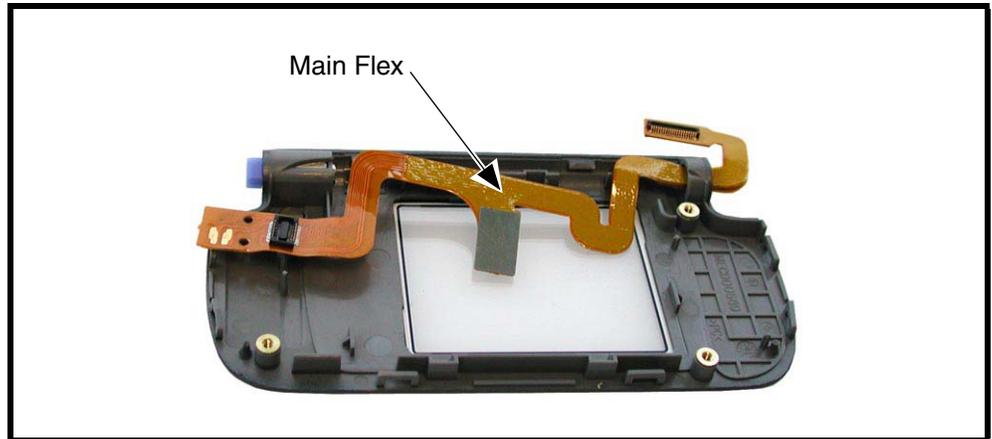
Figure 29. Threading the Main Flex

6. Replace the B cover, ... SIM, battery, and battery cover as described in the procedures.

Subscriber Identity Module (SIM) and Identification

SIM Card

A SIM is required to access the existing local GSM network, or remote networks when traveling (if a roaming agreement has been made with the provider).

The SIM contains:

- All the data necessary to access GSM services.
- The ability to store user information such as phone numbers.
- All information required by the network provider to provide access to the network.

Personality Transfer

A personality transfer is required when a phone is express exchanged or when the main board is replaced. Personality transfers reproduce the customer's original personalized details such as menu and stored memory such as phone books, or even just program a unit with basic user information such as language selection. A630 telephones use TrueSync® synchronization software to effect a personality transfer.

Identification

Each Motorola GSM device is labeled with a variety of identifying numbers. The following information describes the current identifying labels.

Mechanical Serial Number (MSN)

The Mechanical Serial Number (MSN) is an individual unit identity number and remains with the unit throughout the life of the unit.

The MSN can be used to log and track a unit on Motorola's Service Center Database.

The MSN is divided into 4 sections as shown in Figure 30.
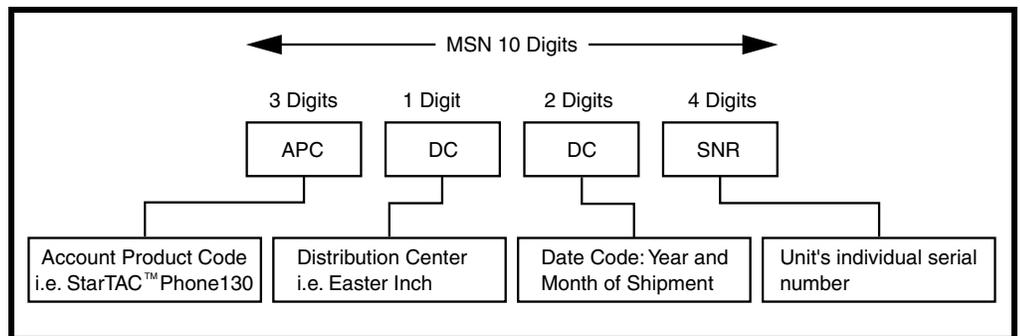
000807a

Figure 30. MSN Label breakdown

International Mobile Station Equipment Identity (IMEI)

The International Mobile station Equipment Identity (IMEI) number is an individual number unique to the PCB and is stored within the unit's memory.

The IMEI uniquely identifies an individual mobile station and thereby provides a means for controlling access to GSM networks based on mobile station types or individual units. The full IMEI structure is listed in Table 2.

Table 2. IMEI Number Breakdown

TAC	Serial Number	Check Digit
NNXXXX YY	ZZZZZZ	A

Where

TAC   Type Allocation Code, formerly known as Type Approval Code

NN   Reporting body identifier

XXXX   Type Identifier

YY   YY is set to 00 from 01/01/2003 until 31/03/2004

ZZZZZZ   Individual unit serial number

A   Phase 1 = 0.
Phase 2 = check digit defined as a function of all other IMEI digits

Other label number configurations present are:
- **TRANSCEIVER NUMBER**: Identifies the product type. Normally the SWF number. (i.e. V100).
- **PACKAGE NUMBER**: Identifies the equipment type, mode, and language in which the product is shipped.

Troubleshooting

Manual Test Mode

Motorola A630 telephones are equipped with a manual test mode capability. This allows service personnel to verify functionality and perform fault isolation by entering keypad commands.

To enter the manual test command mode, a GSM / DCS test SIM must be used.

1. Press ◎ to turn the phone OFF.
2. Remove the battery as described in the procedures.
3. Remove the customer's SIM card from the phone as described in the procedures.
4. Insert the test SIM into the SIM slot.
5. Replace the battery as described in the procedures.
6. Press ◎ to turn the phone ON.

Manual Test Mode Commands

Table 3. Manual Test Commands

Key Sequence	Test Function/Name	Remarks
<Menu>0HTCMD*	Enter manual test mode	
"End" Key	Exit manual test mode	
54*	Suspend	Required for all Test Mode Operations
0*0*0	Select tone 0	
0*0*1	Select tone 1	
0*0*2	Select tone 2	
0*0*3	Select tone 3	
0*0*4	Select tone 4	
0*0*5	Select tone 5	
0*0*6	Select tone 6	
0*0*7	Select tone 7	
0*0*8	Select tone 8	
0*0*9	Select tone 9	
0*1*X	Disable tone X	
3*0*1	Enable vibrator	
3*0*0	Disable vibrator	
5*0*0	Set audio level 0	
5*0*1	Set audio level 1	
5*0*2	Set audio level 2	
5*0*3	Set audio level 3	
5*0*4	Set audio level 4	
5*0*5	Set audio level 5	
5*0*6	Set audio level 6	
5*0*7	Set audio level 7	

Table 3. Manual Test Commands (Continued)

Key Sequence	Test Function/Name	Remarks
5*0*8	Set audio level 8	
5*0*9	Set audio level 9	
5*0*10	Set audio level 10	
5*0*11	Set audio level 11	
5*0*12	Set audio level 12	
5*0*13	Set audio level 13	
5*0*14	Set audio level 14	
5*0*15	Set audio level 15	
4*4*1	Enable vocoder loopback at enhanced full rate	
4*4*0	Disable vocoder loopback at enhanced full rate	
6*2*2*0*0	Set Audio Path. Int Mic, IntSpk, RX unmute, TX unmute	
6*4*6*0*0	Set Audio Path. Boom Mic, Boom Spk, RX unmute, TX unmute	
10*0*3	Set band GSM 900	
10*0*4	Set band DCS 1800	
10*0*5		
10*0*6	Set dual band GSM 900 / 1800	
10*1*0	Read band	3= GSM 4= DCS 5= PCS 6 =GSM/DCS
18*0	Initialize non-volatile memory (Master Reset)	
18*1	Initialize non-volatile memory (Master Clear)	
62*1*1[1]	Color display backlight ON	
62*1*0[1]	Color display backlight OFF	
55*2*001	Test Display. All pixels ON	
55*2*000	Test Display. All pixels OFF	
55*2*002	Test Display. Checkerboard pattern A	
55*2*003	Test Display. Checkerboard pattern B	
55*2*004	Test Display. Border pixels ON	
*#06#	IMEI Check	No Test Mode Required
Phone Set up --> Phone Status --> Other Information	Flex Version / Technology / S-W Version / Readiness Status	No Test Mode Required

[1] Leave field 3 blank

Troubleshooting Chart

Table 4. A630 Telephone: Level 1 and 2 Troubleshooting Chart

SYMPTOM	PROBABLE CAUSE	VERIFICATION AND REMEDY
1. Telephone will not turn on or stay on.	a) Battery either discharged or defective.	Measure the battery voltage across a 50 ohm (>1 Watt) load. If the battery voltage is <3.25 Vdc, recharge the battery using the appropriate battery charger. If the battery will not recharge, replace the battery. If the battery is not faulty, proceed to b.
	b) Battery connectors open or misaligned.	Visually inspect the battery connectors on both the battery and the telephone. Realign and, if necessary, either replace the battery or refer to a Level 3 Service Center for the battery connector replacement. If the battery connectors are not faulty, proceed to c.
1.1. Telephone will not turn on by pressing PWR button on the external keymat, but turns on by pressing PWR button on the Qwerty keymat.	c) External keymat assembly failure.	Replace with a known good ext. keymat assembly. Temporarily connect a +3.6 Vdc supply to the battery connectors. Press and hold the PWR button. If the unit turns on and stays on, disconnect the dc power source and reassemble with the new ext keymat assembly. If not proceed to f.
1.2. Telephone will not turn on by pressing PWR button on the Qwerty keymat but turns on by pressing PWR button on the external keymat.	d) Qwerty keymat defective.	Check to make sure that the Qwerty keymat is without mechanical damages. If damaged, replace with a new Qwerty keymat and verify that the fault has been cleared. If not proceed to e.
	e) EL+domesheet assembly defective.	Remove the PWB assembly. Check that the EL+domesheet is without mechanical damages and the connection between the EL+domesheet assembly and PWB assembly is correct. If not reassemble the original PWB with the new EL+domesheet assembly. Verify that the fault has been cleared. If the fault has not been cleared, proceed to f.
	f) One or more components on the PWB assembly are defective.	Remove the PWB assembly. Substitute with a known good assembly and temporarily reassemble the unit. Press and hold the PWR button; if the unit turns on and stays on, disconnect the dc power source and refer to a Level 3 Service Center for the SMD replacement.
2. Telephone exhibits poor reception or erratic operation such as calls frequently dropping or weak or distorted audio.	a) Antenna / audio assembly defective.	Remove the antenna / audio assembly and visually check that the antenna pogo pins are undamaged . If damaged, replace with the new antenna / audio assembly. If the fault is still present, proceed to b.
	b) One or more components on the PWB assembly are defective.	Temporarily replace the PWB assembly with a known good assembly. If the fault has been cleared, refer to a Level 3 Service Center for the SMD replacement.

Table 4. A630 Telephone: Level 1 and 2 Troubleshooting Chart (Continued)

SYMPTOM	PROBABLE CAUSE	VERIFICATION AND REMEDY
3. Color display is erratic, or provides partial or no display.	a) PWB assembly connections faulty.	Remove the A cover assembly from the unit, check the general condition of the flexible printed cable (main flex). If the flex is good, check that the flex connector is fully pressed down. If not, check the connector to the PWB connections. If a faulty connector, refer to a Level 3 Service Center for the SMD replacement. If the connector is not faulty, proceed to b.
	b) Color display defective.	Replace the color display with a known good display. If the fault has been cleared, reassemble with the new color display. If not proceed to c.
	c) One or more components on the PWB assembly are defective.	Temporarily replace the PWB assembly with a known good assembly. If the fault has been cleared, refer to a Level 3 Service Center for the SMD replacement.
4. External display is erratic, or provides partial or no display.	a) PWB assembly connections faulty.	Remove the A cover assembly from the unit, check the general condition of the flexible printed cable (display flex). If the flex is good, check that the flex connector is fully connected. If so, check the connector to PWB connections. If a faulty connector, refer to a Level 3 Service Center for the SMD replacement. If the connector is not at fault, proceed to b.
	b) External display assembly defective.	Replace the external display assembly with a known good assembly. If the fault has been cleared, reassemble with the new external display assembly. If not proceed to c.
	c) Color display defective.	Replace the color display with a known good display. If the fault has been cleared, reassemble with the new color display. If not proceed to d.
	d) One or more components on the PWB assembly are defective.	Temporarily replace the PWB assembly with a known good assembly. If the fault has been cleared, refer to a Level 3 Service Center for the SMD replacement.
5. Camera feature is erratic or not taking picture at all.	a) Camera flex assembly connection faulty.	Remove the A cover assembly from the unit, check the general condition of the flexible printed cable (camera flex assembly). If the flex is good, check that the flex connectors are fully connected to the color display. If so, check the connector to the PWB connections. If a faulty connector, refer to a Level 3 Service Center for the SMD replacement. If the connector is not at fault, proceed to b.
	b) Camera flex assembly defective.	Replace the camera flex assembly with a known good assembly. If the fault has been cleared, reassemble with the new camera flex assembly. If not proceed to c.
	c) Color display defective.	Replace the color display with a known good display. If the fault has been cleared, reassemble with the new color display. If not proceed to d.
	d) One or more components on the PWB assembly are defective.	Temporarily replace the PWB assembly with a known good assembly. If the fault has been cleared, refer to a Level 3 Service Center for the SMD replacement.

Table 4. A630 Telephone: Level 1 and 2 Troubleshooting Chart (Continued)

SYMPTOM	PROBABLE CAUSE	VERIFICATION AND REMEDY
6. Incoming call alert transducer audio distorted or volume is too low.	a) Antenna / audio assembly defective.	Replace the antenna / audio assembly with a known good assembly. If the fault has been cleared, reassemble with the new antenna / audio assembly. If not proceed to b.
	b) One or more components on the PWB assembly are defective.	Temporarily replace the PWB assembly with a known good assembly. If the fault has been cleared, refer to a Level 3 Service Center for the SMD replacement.
7. Telephone transmit audio is weak. (usually indicated by called parties complaining of difficulty in hearing voice).	a) Microphone defective.	Gain access to the microphone as described in the procedure. Disconnect and substitute a known good microphone. Place a call and verify the improvement in the transmit signal as heard by a called party. If good, reassemble with the new microphone. If the microphone is not at fault, reinstall the original microphone and proceed to b.
	b) One or more components on the PWB assembly are defective.	Temporarily replace the PWB assembly with a known good assembly. If the fault has been cleared, refer to a Level 3 Service Center for the SMD replacement.
8. Receive audio from receiver (earpiece speaker) is weak or distorted.	a) Connections to or from the PWB assembly defective.	Gain access to the PWB assembly as described in the procedures. Check the main flex and the flex connector from the flip assembly to the PWB assembly. If the flex is at fault, replace the flex. If the flex connector is at fault, proceed to d. If the connection is not at fault, proceed to b.
	b) Receiver defective.	Replace the receiver with a known good receiver. If the fault has been cleared, reassemble with the new receiver. If not proceed to c.
	c) Camera flex assembly defective.	Replace the camera flex assembly with a known good assembly. If the fault has been cleared, reassemble with the new camera flex assembly. If not proceed to d.
	d) One or more components on the PWB assembly are defective.	Temporarily replace the PWB assembly with a known good assembly. If the fault has been cleared, refer to a Level 3 Service Center for the SMD replacement.
9. Telephone will not recognize or accept SIM.	a) SIM defective.	Check the SIM contacts for dirt. Clean if necessary and check if the fault has been cleared. If the contacts are clean, insert a known good SIM into the telephone. Power up the unit and confirm that the SIM has been accepted. If the fault no longer exists, replace the defective SIM. If the SIM is not at fault, proceed to b.
	b) SIM connector defective.	Temporarily replace the PWB assembly with a known good assembly. If the fault has been cleared, refer to a Level 3 Service Center for the SIM connector replacement.
10. Phone does not sense when flip is opened or closed.	a) Magnet in the lid assembly missing or loose.	Check that the magnet is correctly in its position in the lid assembly. If not reassemble with the new lid assembly. Verify that the fault has been cleared. If the magnet is in its position, proceed to b.
	b) One or more components on the PWB assembly are defective.	Temporarily replace the PWB assembly with a known good assembly. If the fault has been cleared, refer to a Level 3 Service Center for the SMD replacement.

Table 4. A630 Telephone: Level 1 and 2 Troubleshooting Chart (Continued)

SYMPTOM	PROBABLE CAUSE	VERIFICATION AND REMEDY
11. Vibrator feature not functioning.	a) Vibra defective.	Replace the vibra with a known good one. Verify that the fault has been cleared and reassemble the unit with the new vibra. If the fault has not cleared, proceed to b.
	b) Connections to or from the PWB assembly defective.	Gain access to the PWB assembly as described in the procedures. Check the main flex and the flex connector from the flip assembly to the PWB assembly. Also check that the connection between the main flex and the vibra is correct. If the main flex is at fault, replace the flex. If the flex connector is at fault, proceed to c.
	c) One or more components on the PWB assembly are defective.	Temporarily replace the PWB assembly with a known good assembly. If the fault has been cleared, refer to a Level 3 Service Center for the SMD replacement
12. Internal Charger not working.	Faulty charger circuit on the PWB assembly.	Test a selection of batteries in the rear pocket of the desktop charger. Check the LED display for the charging indications. If these are charging properly, then the internal charger is at fault and refer to a Level 3 Service Center for the internal charger replacement.
13. Real Time Clock resetting when the standard battery is removed.	Lithium battery in the PWB may be depleted.	Refer service to a Level 3 service center for replacement.
14. No or weak audio when using the headset.	a) Headset plug not fully pushed home.	Ensure the headset plug is fully seated in the audio connector (jack). If the fault has not cleared, proceed to b.
	b) Faulty audio connector (jack) on PWB assembly.	Temporarily replace the PWB assembly with a known good assembly. If the fault has been cleared, refer to a Level 3 Service Center for the audio connector (jack) replacement.

Programming: Software Upgrade and Flexing

Contact your local technical support engineer for information about equipment and procedures for flashing and flexing.

Part Number Charts

The following charts are provided as a reference for the parts associated with A630 telephones.

Related Publications

Motorola A630 User's Guide, English

Motorola A630 Reference Guide, English

Exploded View Diagram
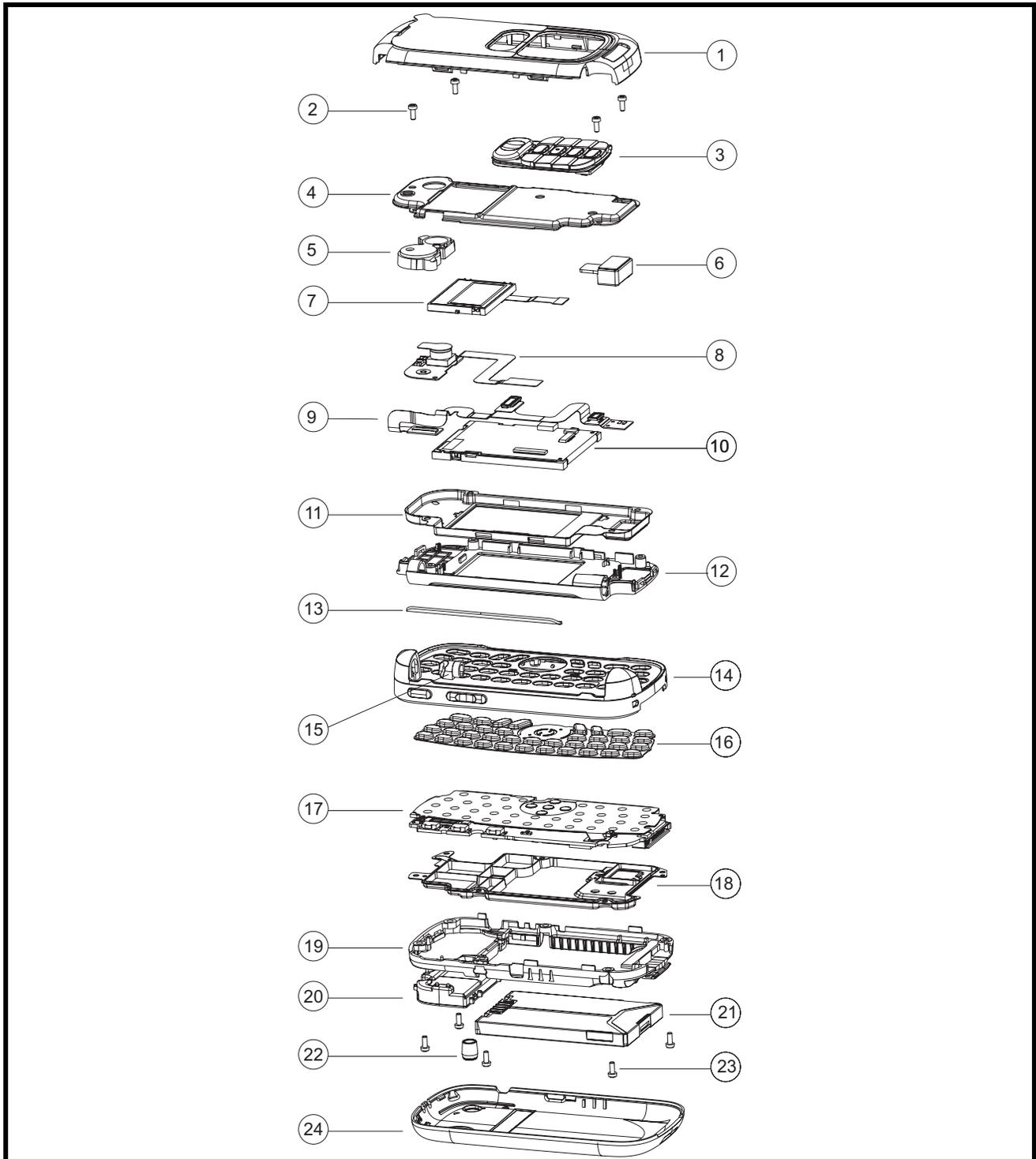
Figure 31. A630 Exploded view diagram

Exploded View Parts List

Table 5. Exploded View Parts List

Item Number	Part Number	Description	Note	Motorola Part Number
1	MC66978732	A Cover Assembly	Cingular	
	MC66978200	A Cover Assembly	T-Mobile	
2	MC77803311 or	Screws M1.6 x 4 or		
	MC77812436	Screws Nyloc M1.6 x 4		
3	MC69902323	External Keymat Assembly	Cingular	
	MC69902854	External Keymat Assembly	T-Mobile	
4	MC23176555	Main Metal Frame Assembly		
5	MC87527030	Plastic Frame Assembly		
6	MC66070355	Vibra Host Assembly		
7	MC31715284	External Display Assembly		
8	MC55412269	Camera Flex Assembly		
9	MC82903200	Main Flex		
10	MC67894327	Color Display		
11	MC70205620	Second Metal Frame Assembly		
12	MC60076965	Lid Assembly	Cingular	
	MC60075211	Lid Assembly	T-Mobile	
13		CO brand label	Motorola	1389858N01
		CO brand label	Cingular	1389858N02
		CO brand label	T-Mobile	1389858N03
		CO brand label	A630 Launch - NYC	1389858N04
		CO brand label	Burton Snowboarding	1389858N05
14	MC60974631	B Cover Assembly	Cingular	
	MC60972822	B Cover Assembly	T-Mobile	
15	MC77892166	Hinge Bushing		
16	MC66006932	QWERTY keymat		
17	MC06001780	PWB Assembly		
18	MC60769853	RF Shield Assembly		
19	MC70124750	Frame Assembly		
20	MC60323800	Antenna / Audio Assembly 850MHz	Cingular	
	MC61641415	Antenna / Audio Assembly 1900MHz	T-Mobile	
21	MC08302664	Battery		
22	MC67892195	RF Connector Cap	Cingular	
	MC67881512	RF Connector Cap	T-Mobile	
23	MC77812436	Screws Nyloc M1.6 x 6		
24	MC73485692	Battery Cover	Cingular	SYN0907A
	MC73482227	Battery Cover	T-Mobile	SYN1069A

There is a danger of explosion if the Lithium Ion battery pack is replaced incorrectly. Replace only with the same type of battery or equivalent as recommended by the battery manufacturer. Dispose of used batteries according to the manufacturer's instructions.

To order parts please use the following Link:

https://wissc.motorola.com/wissc_root/main/BrowserOK.html

(Password is Required)

For information on ordering parts please contact EMEA at +49 461 803 1638.

Accessories

Table 6. Accessories

Part Description	Part Number
Power Solution	
Battery Slim Li-Ion Ltd HiCap (820mAh)	SNN 5683
Battery Slim LiIon (740 mAh)	SNN5669A
Desktop Speaker (quill)	SPN5028A
Desktop Charger (Loon)	SPN5032B
Travel Charger (Flamingo)	SPN5037A
EURO	SPN5038A
UK / HK	SPN5039A
CHINA	SPN5040A
KOREA	SPN5042A
ARGENTINA	SPN5043A
BRAZIL	SPN5044A
AUSTRALIA	SPN5045A
INDIA	SPN5046A
NA - with Spanish labe	SPN5041
Travel Charger Linear U.S.	SPN4992A
Travel Charger Mid Rate U.S.	SPN4940D
Travel Charger Rapid U.S.	SPN5049A
BOC (Battery Only Charger)	CHPN4488A
In-Vehicle Solutions	

Bluetooth Car Kit
  US
  EMEA
  Asia
	S9642
	S9643
	S9642

Retractable Self Install Car Kit (Puck)	SYN9169B
Retractable Self Install Car Kit (Razorbill)	SYN0613A
Universal Phone Holder	SYN0828A
Professional Install Car Kit (Plover) HUC	S9950A SYN9991A
Vehicle Power Adapter	SYN7818A
Vehicle Power Adapter	SYN7818B
Vehicle Power Adapter (Gadwall)	SYN0707A
Audio & Connectivity	
Bluetooth Headset (Paladin)	SYN9826A
Bluetooth Headset (Hammer)	SYN9006B
Bluetooth Low Cost Headset (Genie)	CHYN4590A
Bluetooth Quadrant Speaker Phone	SYN0736A
Bluetooth Low cost Headset (Rip-Curl)	SYN9951A
FM Stereo Headset	SYN8609B
MP3 Player	98498
FM transmitter	SYN8609B

Table 6. Accessories (Continued)

Part Description	Part Number
Stereo Headset (Type A)	CHYN4516A
Retractable Headset (customizable)	SYN9050A
One Touch Headset	SYN9351A
One Touch Headset (black & silver)	SYN8419B
Mono Headset (black)	SYN8390B
Mono Headset (customizable)	SYN9350A
Mono Headset (silver)	AAYN4264B
Over the Ear Headset	SYN8908B
Neck Loop headset	SYN7875C
USB Data Cable	SKN6311B
Mobile Phone Tools (MPT) Phase II (Virtual Phone - II) - USB Cable + MPT (bulk) - MPT CD-ROM only (bulk) - MPT CD-ROM only (white box)	 S9752A SVN4776B S9753A
Bluetooth PC USB Adapter	SYN0717A