MOTOROLA

Level 1 and 2 Service Manual

Model A008 / A6188+ GSM Dual Band Technology

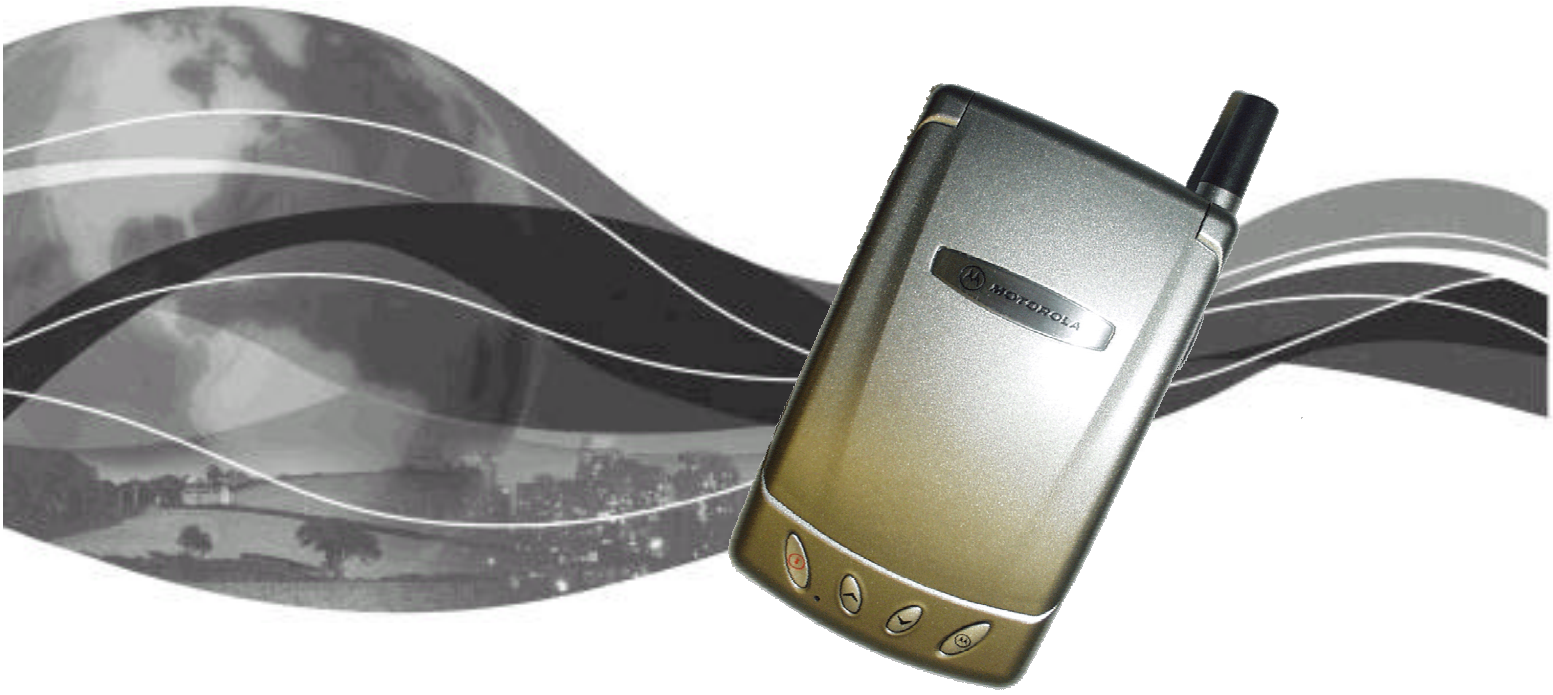


Table of Contents

Introduction 1
Product Identification 1
Product Names 1
Product Changes 1
Regulatory Agency Compliance 1
Computer Software Copyrights 2
About This Service Manual 2
Warranty Service Policy 3
Specifications 5
Product Overview 7
Features 7
Controls and Indicators 10
User Interface Flowcharts 13
Alert Modes 20
Battery Function 21
Operation 21
Tools and Test Equipment 23
Disassembly 24
Removing the Battery Door and Battery 24
Replacing the Battery and Battery Door 24
Removing the Back Housing 25
Replacing the Back Housing 27
Removing and replacing the External Keys 27
Removing the Transceiver Board 28
Replacing the Transceiver Board 30
Removing the Controller Board 31
Replacing the Controller Board 32
Removing and replacing the Keypad and Keypad Reflector 32
Removing and replacing the Antenna 34
Removing the Flip Assembly 35
Replacing the Flip Assembly 36
Removing and replacing the Lens 36
Removing the LCD Assembly 38
Replacing the LCD Assembly 41
Subscriber Identity Module (SIM) Cards and Security 43
Removing the SIM Card 43
Replacing the SIM Card 43
Manual Test Mode 43
Live SIM Card 44
Personality Transfer 44
Troubleshooting 46
GSM Test Commands 46
Troubleshooting Chart 47

Part Number Charts 48
Model Chart 48
Identity and Security 50
Related Publications 52
Exploded View Diagram 54
Exploded View Parts List 55
Housing-dependent Part Numbers 56
Accessories 56

Introduction

Motorola® Inc. maintains a worldwide organisation that is dedicated to provide responsive, full-service customer support. An international network of company-operated product care centres as well as authorised independent service firms service Motorola products.

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

Product Identification

The model number on the housing identifies Motorola products. 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 included in Product Family 38C Personal Communicators 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, and

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 Software Copyrights

The Motorola products described in this manual might include copyrighted Motorola computer software stored in semiconductor memories and other media. Laws in the United States and other countries preserve for Motorola, Inc. certain exclusive rights for copyrighted computer programs, including the exclusive right to copy or reproduce in any form the copyrighted computer software.

Accordingly, any copyrighted Motorola computer software contained in the Motorola products described in this manual cannot be copied or reproduced in any manner without the express written permission of Motorola, Inc.

Furthermore, neither the purchase of Motorola products nor your receipt of this manual (whether in connection with a purchase or otherwise) grants, either directly or by implication, estoppel, or otherwise, any license under the copyrights, patents or patent applications of Motorola, Inc., except for the normal, nonexclusive, royalty-free license to use that arises by operation of law in the sale of a product.

Additionally, use of the information in this manual other than in connection with an associated product purchased from Motorola Inc. requires express written permission of Motorola, Inc. In this regard, you may not use the information in this manual to create a software application for separate sale or license to others not in connection with the associated product purchased from Motorola, Inc.

About This Service Manual

Using this service manual and the many suggestions contained in it assures proper installation, operation, and maintenance of Product Family 38C Personal

Communicators. Refer any questions about this manual to the nearest Customer Service Manager.

Audience

This document provides assistance to service personnel in testing and repairing Product Family 38C communicators. Service personnel should be familiar with electronic assembly, testing, and troubleshooting methods, and with the operation and use of associated test equipment.

Use of this document 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.

Scope

The scope of this document is to provide the reader with basic information relating to Product Family 38C Personal Communicators, and also to provide

procedures and processes for repairing the units at Level 1 and 2 service centres including:

Unit swap out

Repairing of mechanical faults

Basic modular troubleshooting

Testing and verification of unit functionality

Initiate warranty claims and send any faulty modules to Level 3 or 4 repair centres.

Finding Information

The first three digits of the serial number identify a product family, unless covered by an extended warranty. Extended warranty products have two alphabetic characters in place of the first two digits of the family code. The first digit following the alphabetic code indicates the number of years the warranty period is in effect.

This Service Manual consists of the following sections:

Overview - Describes the features, specifications, and options.

Operation - Provides a theory of operation, describes message handling, and how to program the communicator, and a functional overview.

Disassembly - Procedures for removing and replacing assemblies and a troubleshooting chart.

Part Numbers - Provides diagrams and associated parts lists.

Conventions

Special characters and typefaces, listed and described below, are used in this publication to emphasise certain types of information.

	Note: Emphasises additional information pertinent to the subject manner
	Caution: Emphasises information about actions that may result in equipment damage.
	Warning: Emphasises information about actions that may result in personal injury.
Enter	Keys to be pressed are represented graphically. For example, instead of “Press the Enter Key”, you will see “Press
	Information from a screen is shown in text as similar as possible to what appears in the display. For example
Bold	Information that you need to type is printed in **boldface type**.

Revisions

Any changes that occur after manuals are printed are described in publication revision bulletins (*PMRs*). These bulletins provide change information that can include new parts listing data, schematic diagrams, and printed board layouts.

Warranty Service Policy

The product will be sold with the standard 12 months 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. Customer units that fail very early on after the date of sale are to be returned 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). The Motorola HTC centres will perform level 4 (full component) repairs.

Customer Support

Customer support is available through dedicated Call Centres and in-country help desks. Product Service training should be arranged through the local Motorola Support Centre.

Ordering Replacement Parts

Only centres authorised to carry out repairs can purchase spare parts. Orders for spare parts from hubs and Hi-Tech Centres should be placed with the regional Motorola Parts Distribution Centre.

Specifications

General Function	**Specification**
Frequency Range GSM Frequency Range DCS	880-915 MHz TX (with EGSM) 925-960 MHz RX 1710-1785 MHz TX 1805-1880 MHz Rx
Channel Spacing	200 kHz
Channels	174 GSM/374 DCS carriers with 8 channels per carrier
Modulation	GMSK at BT = 0.3
Transmitter Phase Accuracy	5 Degrees RMS, 20 Degrees peak
Duplex Spacing	45 MHz GSM 95MHz DCS 80MHz PCS
Frequency Stability	± 0.10 PPM of the Downlink frequency (Rx)
Operating Voltage	Full Rate PSU = 4.4V +/- 5% (During Charging = VBatt +/-5% 6.63V Mid Rate Charger = 5.9V +/- 0.3V CLA Supply = 4.4V Battery Operating Voltage = 2.85V(Radio Shut Down voltage) To 4.2V Max
Transmit Current	Typically 250 ma avg., 1.0A peak
Stand-by Current	Typically 7.0 ma (DRX2)
Dimensions	130mm x 46mm x 24.5mm
Size (Volume)	105cc with Batt
Weight	106g with Batt
Temperature Range	-10C to +55C

Transmitter

Function	***Specification***
RF Power Output	33 dBm ± 2dB GSM/ 30 dBm ± 2 dB DCS
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***
RF Level	-102 dBm
RX bit error rate (100 k bits)	< 2%
Channel Hop Time	500 microseconds
Time to Camp	Approximately 5-10 seconds

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 k bps
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 k bps

These specifications have not yet been finalised

Product Overview

The A008 (E MEA) A6188+ (Asia) is a GSM dual band (900/1800 MHz) GPRS product, and is an enhanced version of A6188. From this point onwards we will refer to this product as the A008. The A008 is mechanically very similar to the existing A6188 form factor with slight modifications made to the flip and front Housing to ensure a different look.
The display will be 320 x 240 pixels, 4 level gray scale ¼ VGA display. The display shall be 24 x 24 bitmap for Chinese Characters and 15 x 16 bitmap for English Characters. The line spacing has been modified for easier reading.

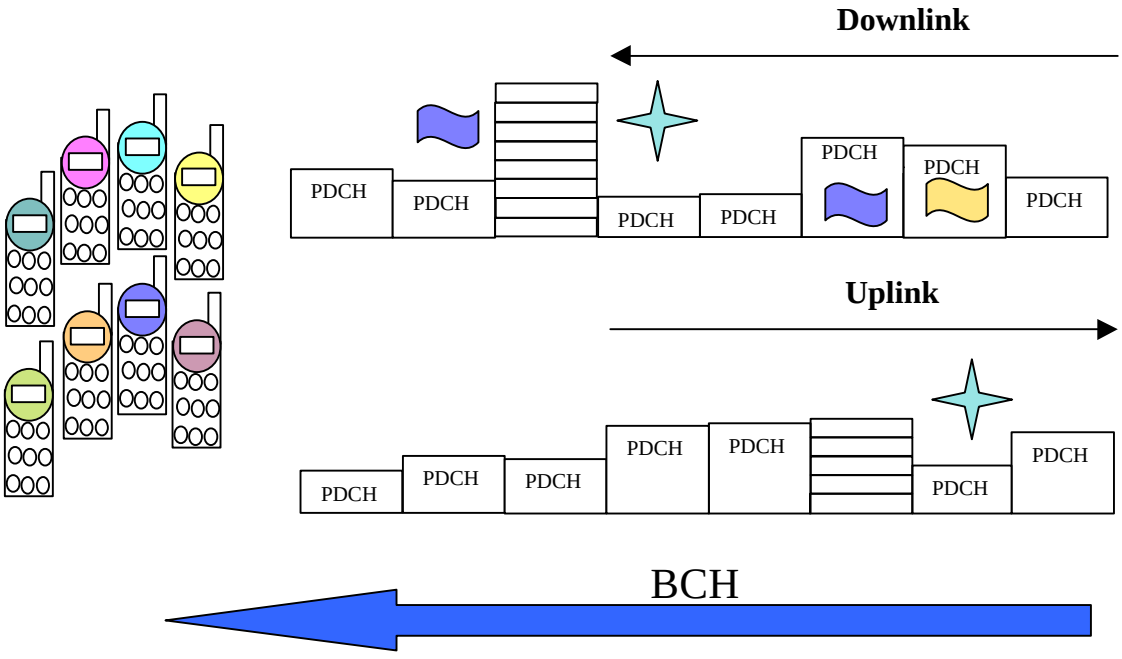
There will be 2 new Colours, Mica Grey, Summer Sky Blue/TT silver

In additional to the existing A6188 User Interface features the following features / applications will be available

GPRS – General Packet Radio service

GPRS (General Packet Radio Service) is a combination of HSCSD (High Speed Circuit Switched Data) and SMS (Short Message Service). It has a theoretical speed of 171.2kbps compared with 9.6kbps as today. A single user using all 8 uplink timeslots and all 8 Downlink timeslots could theoretically achieve this. The main purpose for GPRS is to give 'immediacy' to the customer i.e. to allow the customer access to data transfer as and when they need it.
Information will be carried across as IP from Internet sites etc…

For GPRS the Traffic Channel (TCH) now becomes the Packet Data Channel (PDCH)



As can be seen from the above drawing, up to 8 different users can occupy 1 single timeslot at any given time. The more Bandwidth that is required, the more channels are allocated by the network.

This extra timeslot allocation is only given when the network is not busy, and therefore dynamically maximises idle network resources. Also because much of the SMS messaging will now be carried over the GPRS system this will relive much of the SMS Centre loading.

Also the Uplink and Downlink are now completely separate channels in that we can now have an uplink only and downlink only channel allocated by the network.

GPRS is high bandwidth data split at source into separate but related data 'packets'. The information packets that a GPRS enabled phone is to receive, is addressed specifically for that phone using a TFI - Temporary Flag Indicator.

And although the phone will 'listen' to each timeslot of data but will only decode the information that is highlighted by a matching TFI.

By setting a USF – Uplink Status Flag on a Downlink timeslot, the mobile phone is instructed it can transmit on the next available uplink timeslot.

GPRS will support GSM 900 / 1800 / 1900 as well as TDMA technologies

For GPRS to operate the following must be available:

- Mobile phone must be of GPRS technology
- Network provider must support GPRS which includes a modified Infrastructure (Core Network)

GPRS can be set up manually through the UI or using the PC Tools programming equipment. The A008 will be a 1 up 2 down GPRS technology i.e. it supports 2 timeslots of Downlink information per Frame and 1 uplink slot.

E – Mail

- 5 mailboxes
- POP3, IMAP4, SMTP, MIME
- Text, Inkpad, V-Card attachment

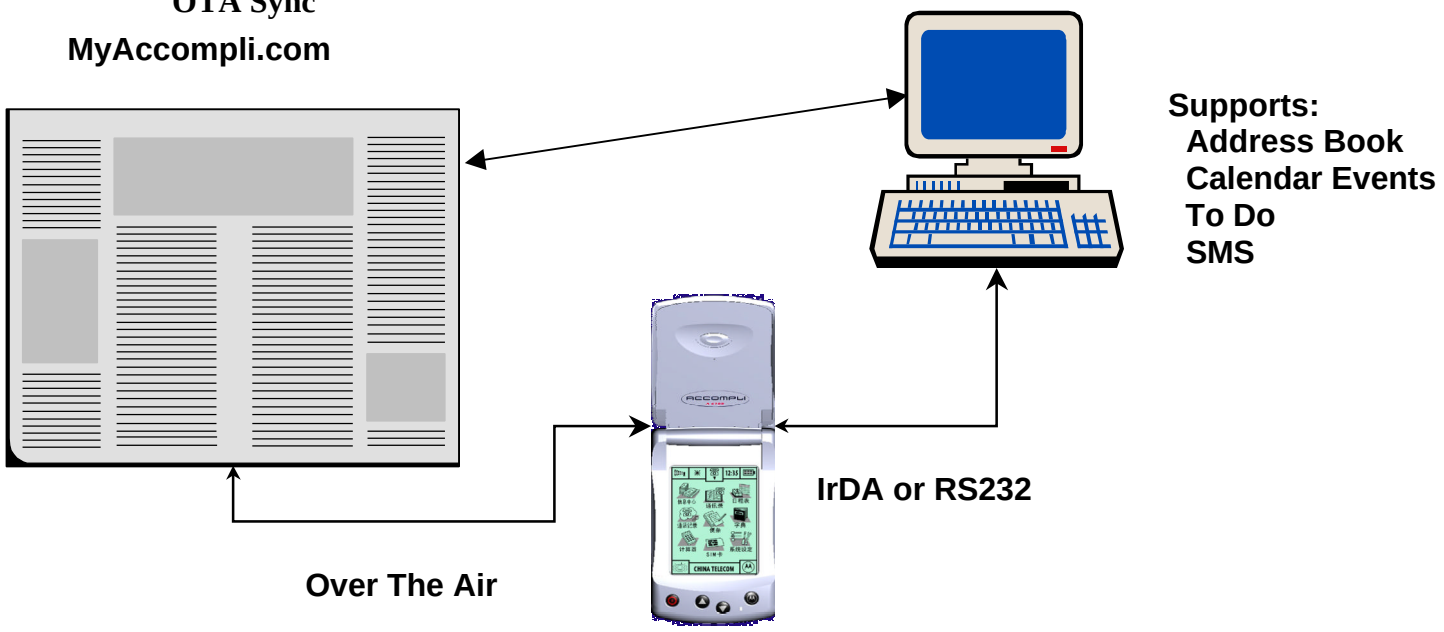
K-Java

K-Java is basically a protocol used to download applications to a device; there are 3 methods of achieving this.

1) Web to PC Synchronisation –
- Download application package to PC using standard Internet protocols
- Installation from PC to devices through cable or local wireless

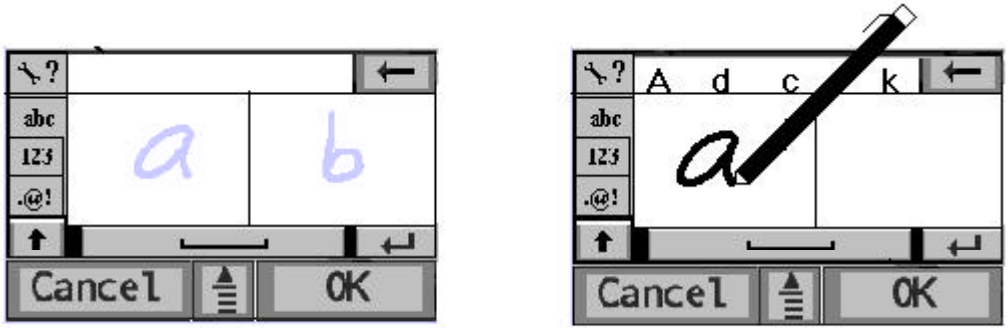
2) WAP / HTTP -
- Browse applications using WAP browser
- Download application package using http protocol

3) HTTP (end to End) -
- Browse applications with special-purpose Java service browser using http
- Download application package using http protocol



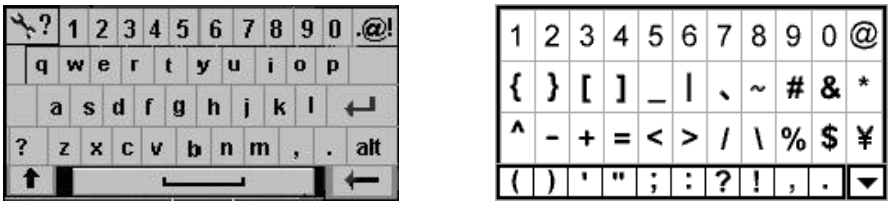
- SyncML based OTA TrueSync
- Enables A008 users to synchronize data to the Internet
- Enables associates to update your schedule over the air

Improved Hand writing recognition



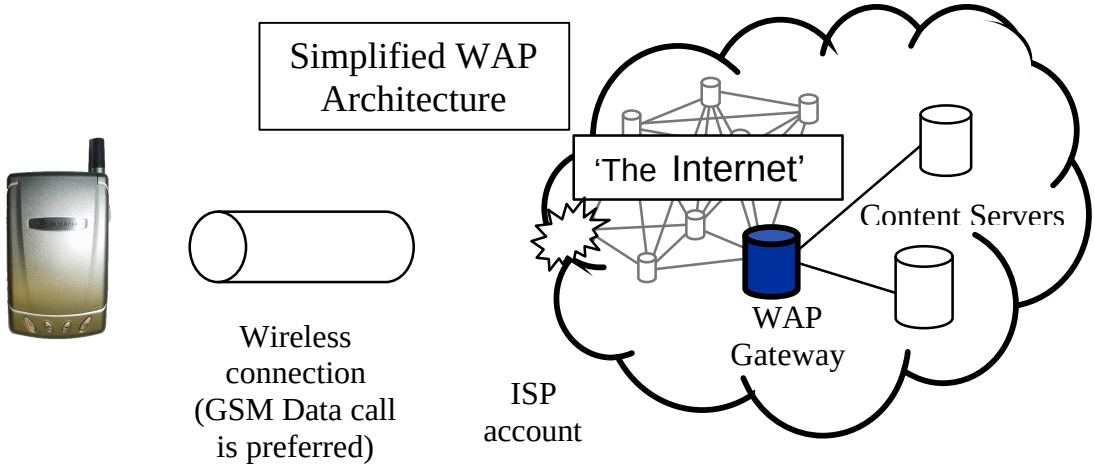
Compared to the original A6188. There are now 2 handwriting screens allowing successive letters to be entered whilst the system processes the previous action.

- European HWR based from Lexicus
- Initially supports Phase 1 EMEA languages
- Virtual Keypads available.



Virtual Keypad Symbol Keypad

WAP 1.1 (Wireless Application Protocol)



WAP Format is derived as follows

1. The request for information is made in WML (Wireless Mark-Up Language) derived from HTML.
2. Request is passed to WAP Gateway, which retrieves the information from the server in standard HTML (which is then filtered to WML) or if available WML format.
3. The information is then passed the cellular user, via the cellular network provider.

All settable parameters can be entered manually or programmed using *PC Tools*

For image download, the bitmap image will be downloaded as text and if the image is larger than the screen then only part of the image will be displayed

During browser mode, if incoming call is received then the browser will be paused with the user having the option to resume after the call.

Other Options covered within the Menu Chapter are:

- Address Book
- Recent calls
- Call Divert
- STK Option
- E-Mail
- Messages
- Turbo Dial
- Integration
- Instant messaging

Communicate Menu Option

- Text Notes
- Ink Notes
- Voice Notes
- Melody Composer
- To Do List
- Date Book

Annotate Menu Option

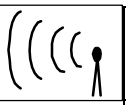
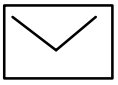
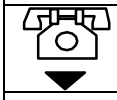
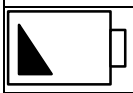
- Calculator
- Conversion Calculator
- Currency Calculator
- World Time
- Alarm Clock
- Dictionary

Extras Menu Option

- Truesync
- Games
- Receive IR
- Soft Modem

Tools Menu Option

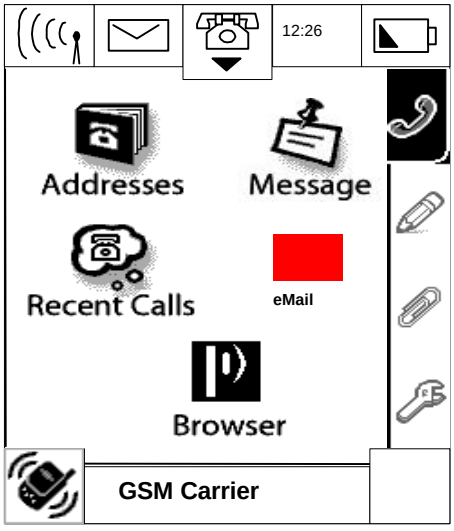
Controls and Indicators

	Shows user current signal strength
	Takes user to messages structure
	When Pressed brings up phone Keypad menu
12:20	Present Time
	Shows user present battery meter reading 1/3 – 2/3 or Full
b	STK access & User Information
	Takes user to Call Divert Sub Menu
	Informs user they are within ‘Communicate’ Menu
	When pressed brings up ‘Annotate’ Menu
	When pressed brings up ‘Extras’ Menu
	When pressed brings up ‘Tools’ Menu

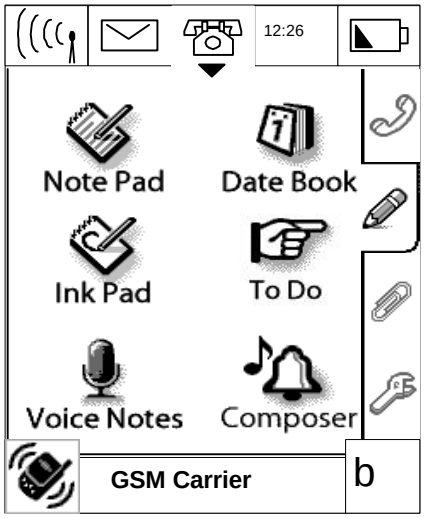
User Interface

The Menu Structure is broken down in to 4 Main Heading, each with Sub-Headings within.

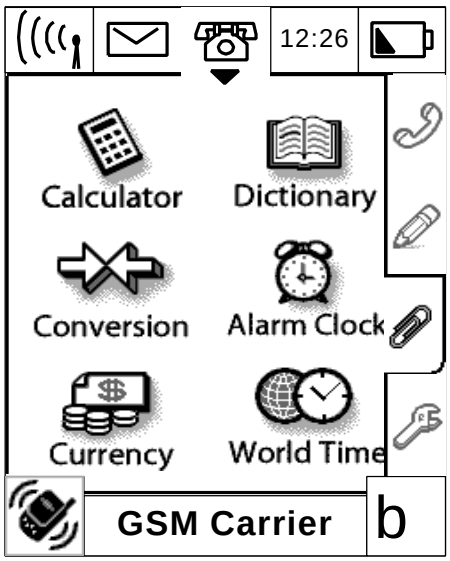
Communicate



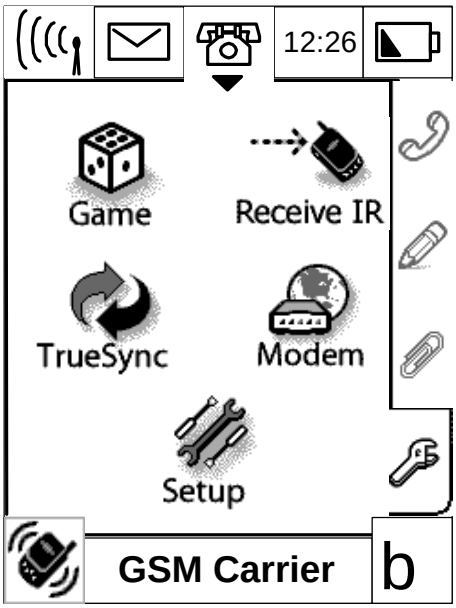
Annotate



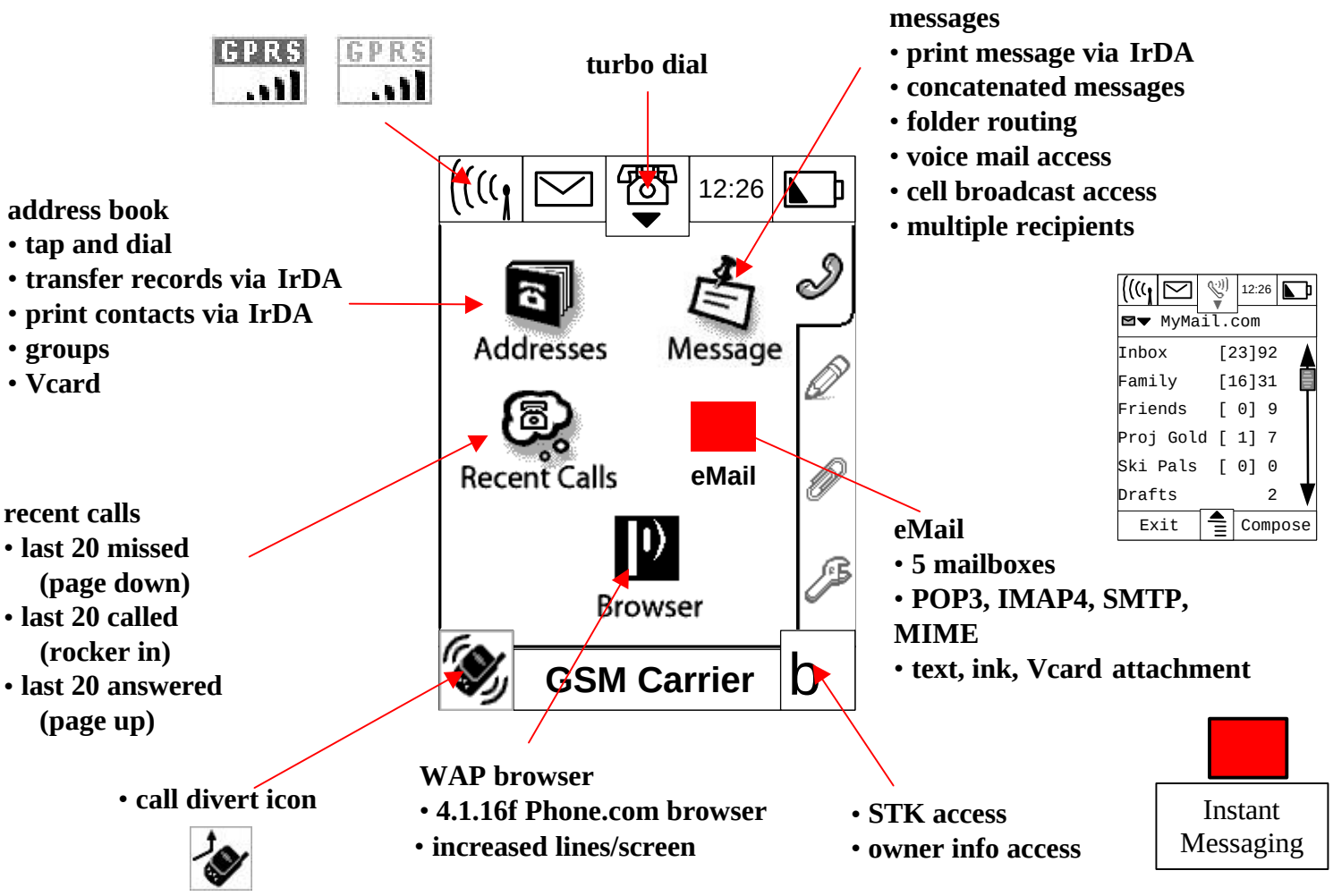
Extras



Tools



Communicate



address book
- **tap and dial**
- **transfer records via IrDA**
- **print contacts via IrDA**
- **groups**
- **Vcard**

messages
- **print message via IrDA**
- **concatenated messages**
- **folder routing**
- **voice mail access**
- **cell broadcast access**
- **multiple recipients**

recent calls
- **last 20 missed (page down)**
- **last 20 called (rocker in)**
- **last 20 answered (page up)**

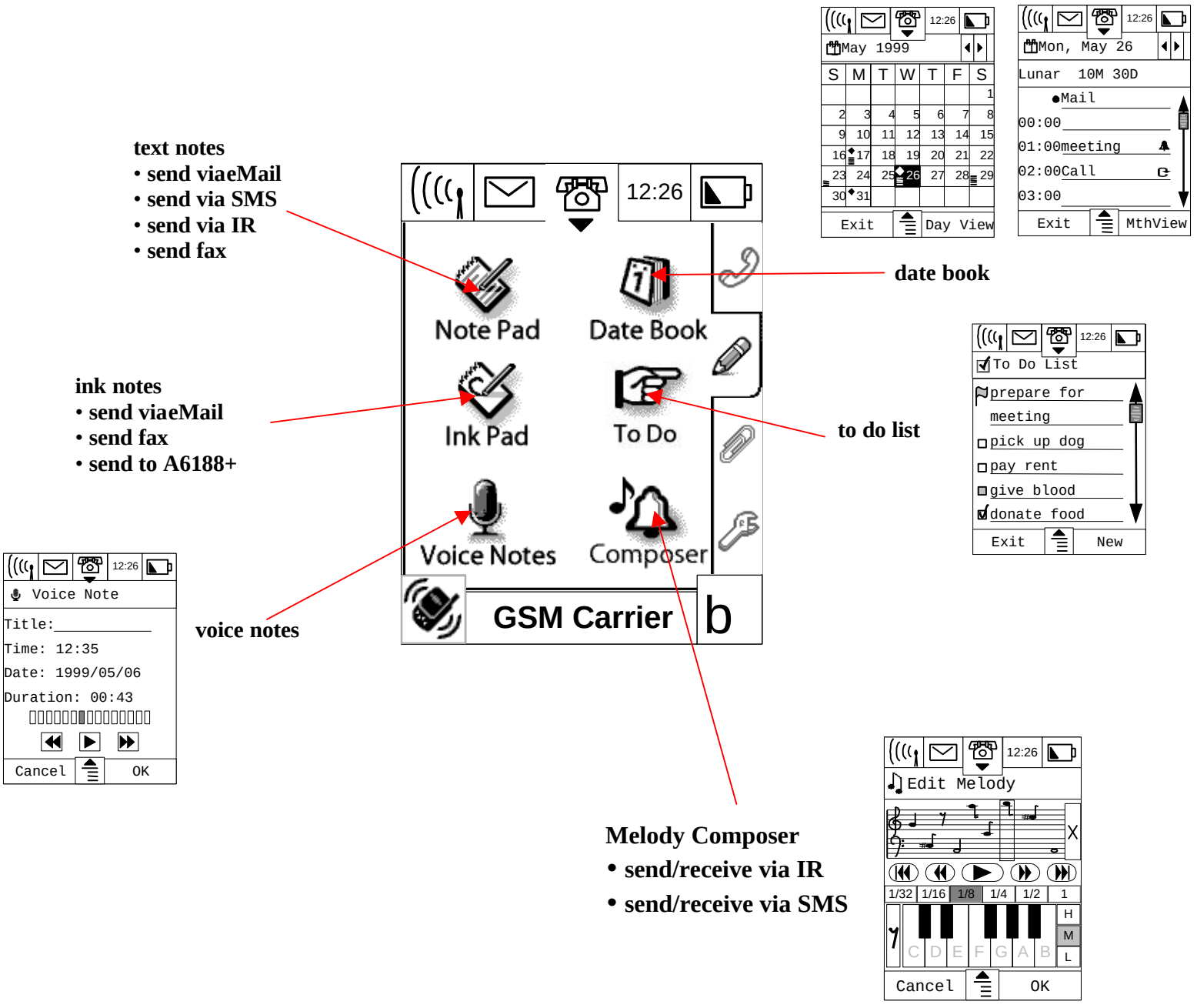
eMail
- **5 mailboxes**
- **POP3, IMAP4, SMTP, MIME**
- **text, ink, Vcard attachment**

- **call divert icon**

WAP browser
- **4.1.16f Phone.com browser**
- **increased lines/screen**

- **STK access**
- **owner info access**

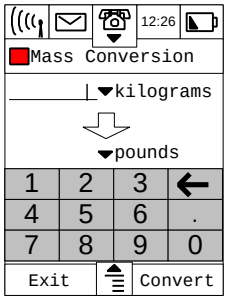
Annotate

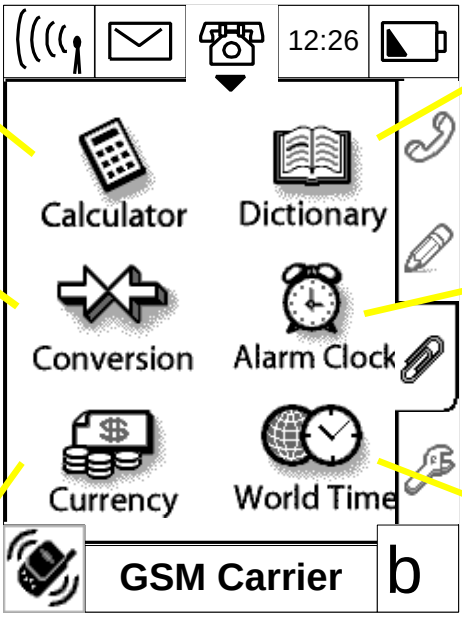

text notes
• send viaeMail
• send via SMS
• send via IR
• send fax
ink notes
• send viaeMail
• send fax
• send to A6188+
voice notes
date book
to do list
Melody Composer
• send/receive via IR
• send/receive via SMS
12:26
Note Pad
Date Book
Ink Pad
To Do
Voice Notes
Composer
GSM Carrier
May 1999
Exit
Day View
Mon, May 26
Lunar 10M 30D
Mail
00:00
01:00meeting
02:00Call
03:00
Exit
MthView
To Do List
prepare for meeting
pick up dog
pay rent
give blood
donate food
Exit
New
Voice Note
Title:
Time: 12:35
Date: 1999/05/06
Duration: 00:43
Cancel
OK
Edit Melody
1/32
1/16
1/8
1/4
1/2
1
H
M
L
C D E F G A B
Cancel
OK

Extras

calculator
- **basic**
- **scientific**

conversion calculator
- **mass**
- **length**
- **temperature**
- **area**
- **volume**

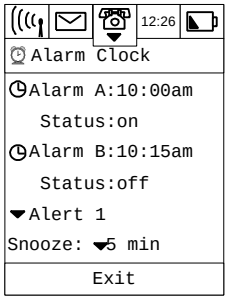




currency calculator
- **27 currencies**
- **conversion log**

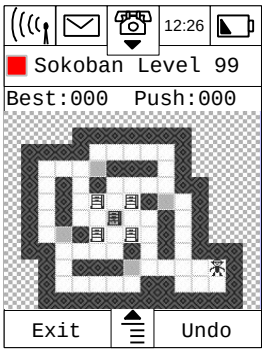
dictionary
- **Chinese-to-English**
- **English-to-Chinese**

alarm clock
- **2 alarms**
- **variable snooze duration**

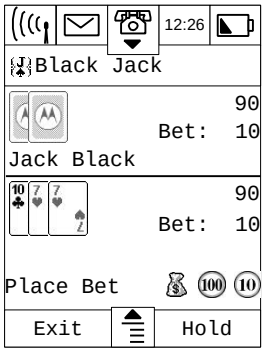


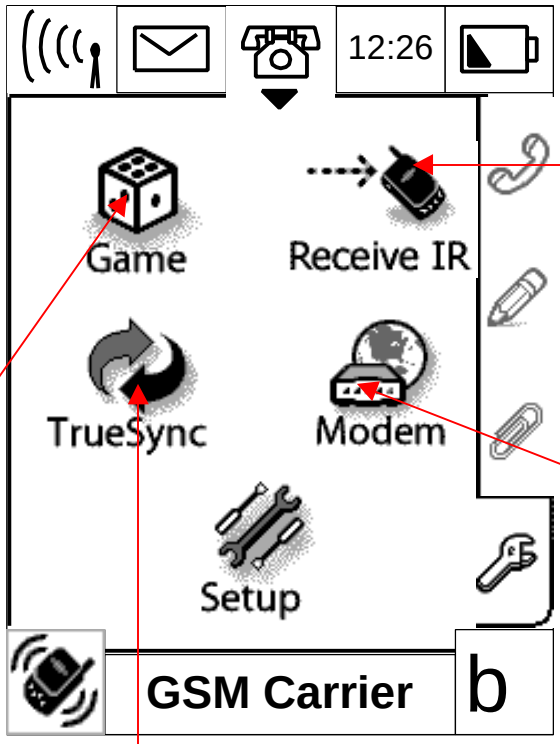
world time

Tools



Games
- **Blackjack**
- **Memory**
- **Sokoban**
- **Hua Rong Dao**
- **Connect five**





Receive IrDA

Soft Modem

Truesync
- **address book**
- **date book**
- **to do list**
- **text and ink notes**
- **backup all user data**

Disassembly

The Procedure in this section provides instructions for the disassembly of the A008. Special Tools used for the product are listed in the Test Equipment section, at the end of this disassembly procedure.

Removing the Battery Door

1. Remove the Battery door by pushing down on battery retaining catch and sliding battery door down and away from Antenna end of unit.

Removing the Battery

1. Press down on the top of the battery to compress the battery contacts
2. Pull up and away from rear Housing.

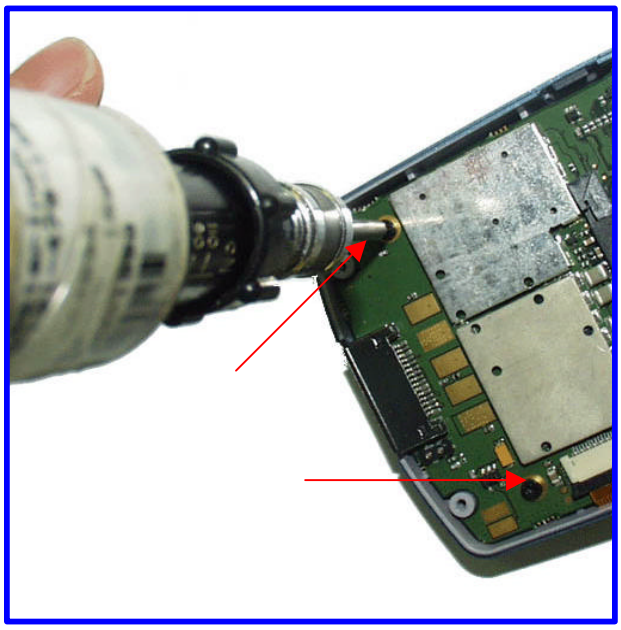
Remove Housing Screws

1. Remove the 4 retaining screws from the top and bottom of the rear housing. Use a T6 Torx driver.

Separate Front and Rear Housing

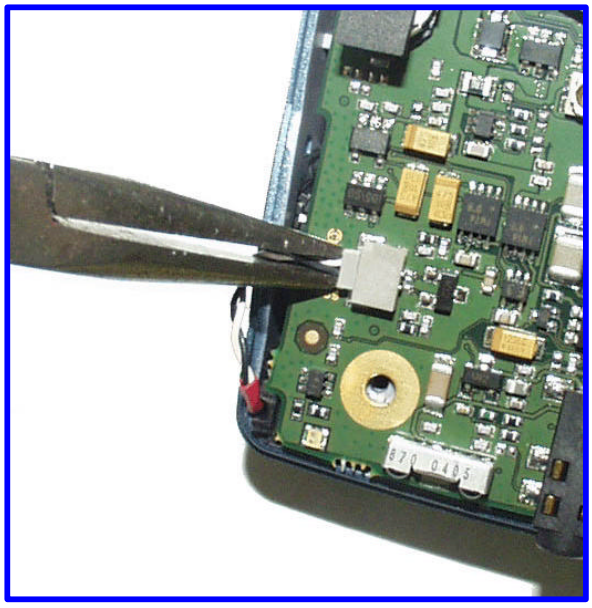
1. Slide a finger nail or a plastic tool between the front and back housing on either side of the phone
2. This will push back the retaining catches; the front housing can then be lifted up over the catches and the rear housing removed.

PCB Screw Removal



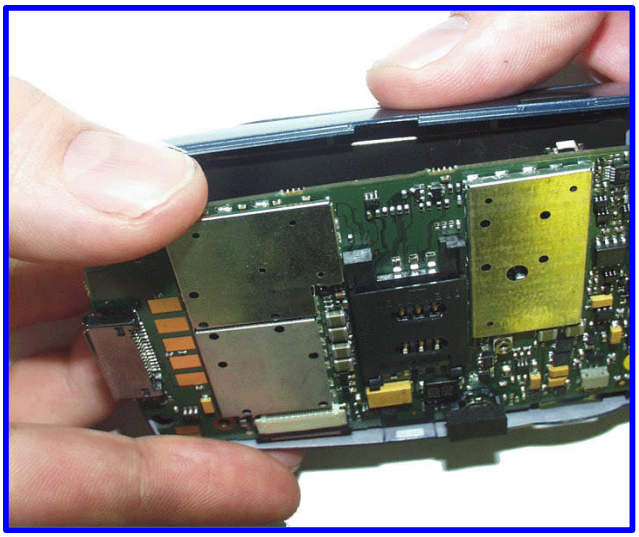
1. Remove the two PCB screws from the bottom of the housing using a T6 Torx driver.

Speaker Connector Removal



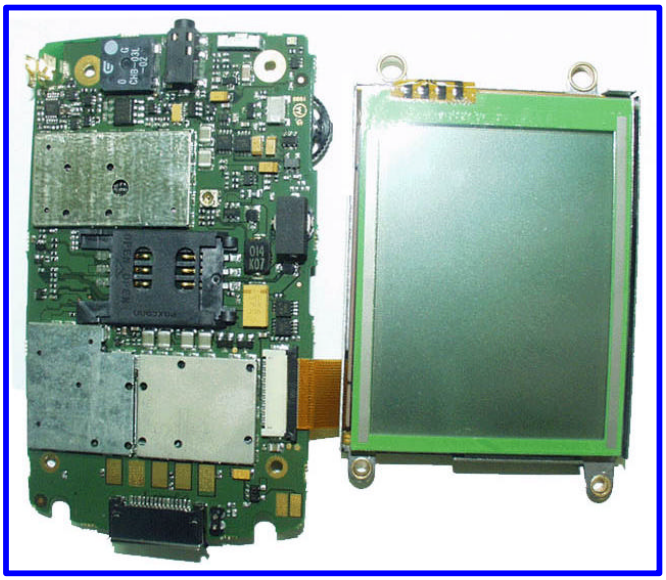
1. Very Carefully extract the 2 Pin speaker connector, using a pair of long nosed pliers.
2. These connecting wires are very susceptible to damage take extra care.

PCB / LCD Removal

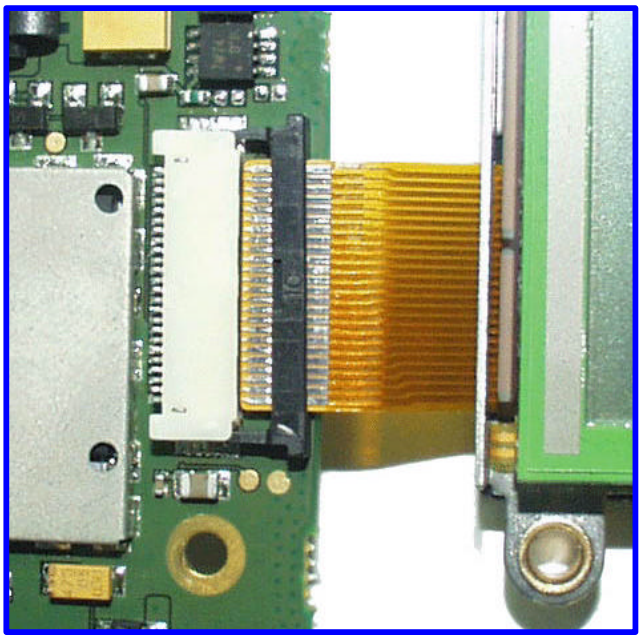


1. Rotate the front hosing, and allow the PCB to drop into the palm of the hand. If necessary use plastic tool to free PCB if at all stuck.

PCB / LCD and Flex Overview



LCD Flex removal

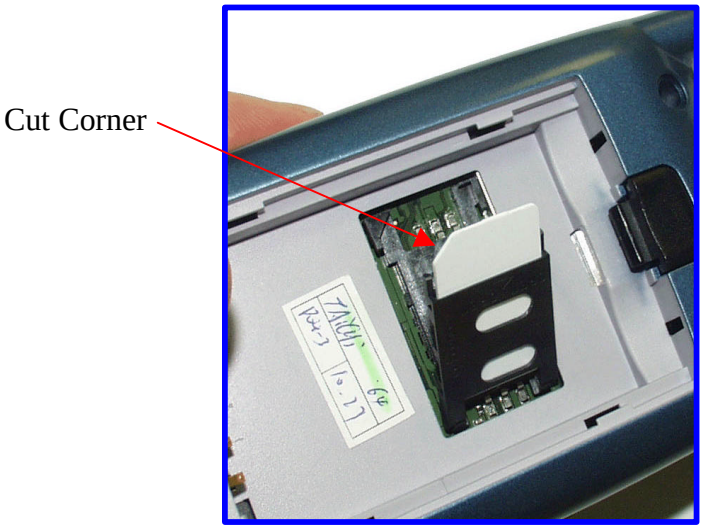


1. Using a plastic tool push the edges of the flex connector forward to release the flex.
2. Gently pull the LCD away from the connector keeping the flex in line with connector.

Subscriber Identity Module (SIM) Cards and Security

Removing the SIM Card

1. Remove the Battery Door and Battery as described in the Disassembly Procedure
2. Holding unit with antenna upwards push black SIM carrier to the right and pull upwards



Inserting the SIM card

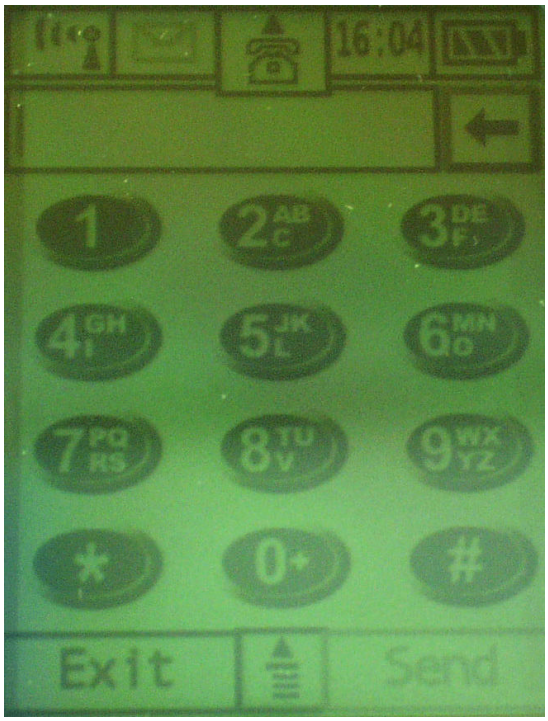
1. Locate the 1 cut corner of the SIM Card; slide the SIM fully into the carrier, gold contacts facing down towards the unit.
2. Push the carrier down and slide to the right

Manual Test Mode

The Aoo8 is equipped with a manual test mode capability. This allows service personnel to manually control electronic functions that would usually be initiated by the product's operating software. This is achieved by the user entering specific test mode commands.

To enter there test commands a GSM / DCS Test SIM card (Part Number 8102430Z04) must be used. See above for SIM Card entry procedure

To enter into test mode the unit should be powered up. Touch the Icon. This will bring up the phone keypad screen.



1. Touch and hold the virtual **#** key, for 3 – 4 seconds. This will initiate test mode.
2. To enter a test mode command, the following sequence must be followed:
A Soft Reset for Example

571 → **#** → **Send**

GSM Test Commands

Key Sequence	Test Function/Name
#(hold down for 2 seconds)	Enter manual test mode
01#	Exit manual test mode
07x#	Mute RX audio path
08#	Unmute RX audio path
09#	Mute TX audio path
10#	Unmute TX audio path
15x#	Generate tone
16#	Mute tone generator
19#	Display S/W version number of Call Processor
*19	Display S/W version number of Dragonball
20#	Display S/W version number of Modem
36#	Initiate acoustic loopback
37#	Stop test
38#	Activate Mini SIM
39#	Deactivate Mini SIM
43x#	Change audio path
47x#	Set audio volume
51#	Enable sidetone
52#	Disable sidetone
57#	Initialise non-volatile memory
58#	Display security code
58xxxxxx#	Modify security code
59#	Display lock code
59xxx#	Modify lock code
60#	Display IMEI
99#	Display all display pixels

15XX#

90#	Vibrator
91#	Ringer

36XX#

0 or Omitted	Full Rate
1	Enhanced Full rate
2	Half Rate

98#

20#	GSM 1800
21#	GSM 900
23#	Dual Band 900 / 1800

Personality Transfer

Personality transfer will be achieved using the Truesync application software.

Identity and Security

Each Motorola GSM Cellular Cassette will be labelled with various number configurations. The following information describes what these configurations mean.

MSN

The mechanical Serial Number (MSN) is an individual unit identity number and will remain with the unit throughout the life of the unit. The MSN can be used to log and track a unit on Motorola's EPPRS system.
The MSN is divided into 4 sections.

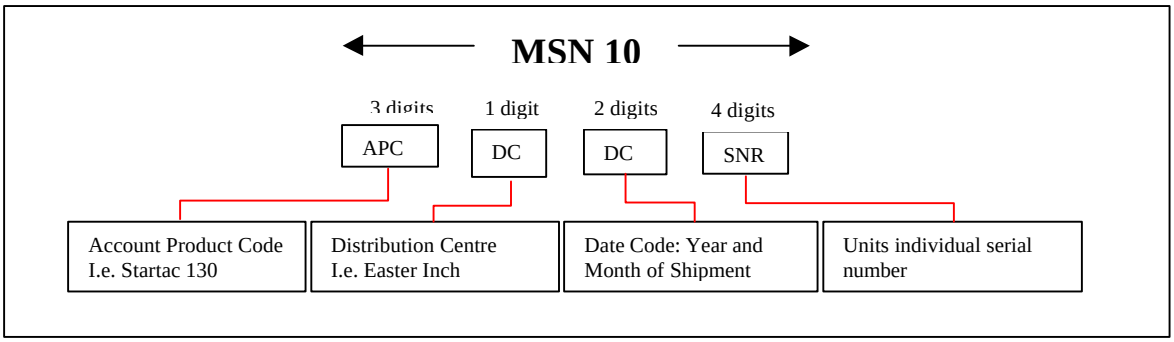


Figure MSN label breakdown

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 following figure gives a description of the make up of this number.

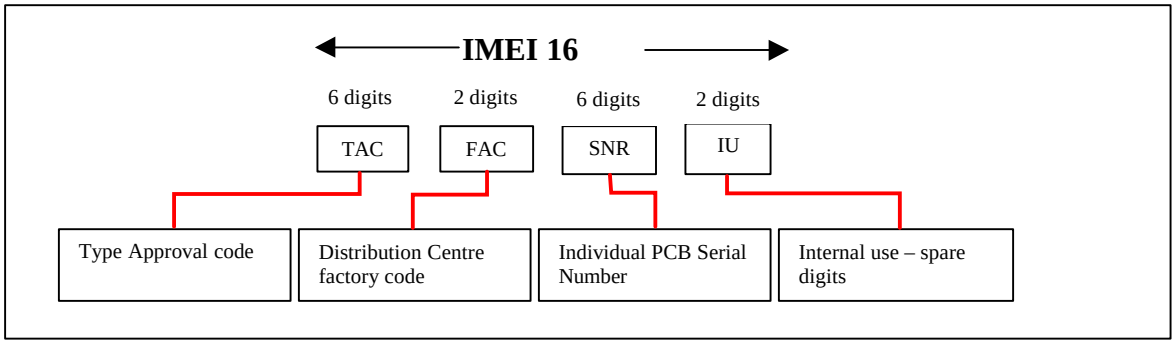
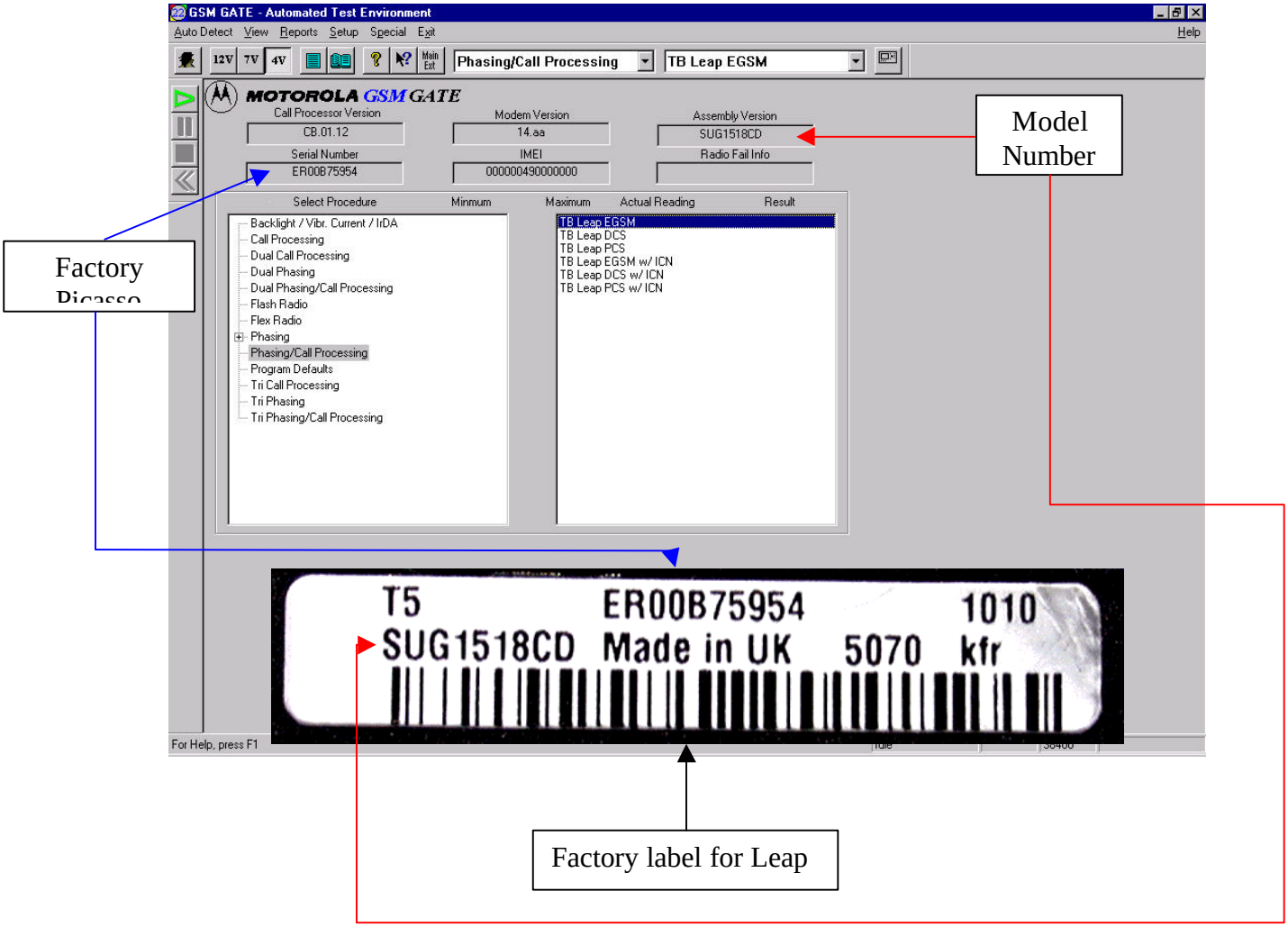


Figure IMEI label breakdown

Some other label number configurations that will be present will be: -
XCVR NUMBER: Identifies type of product. i.e. L7389i (Usually SWF number)

PACKAGE NUMBER: Determines type of equipment, mode in which it was shipped and language with which it was shipped.

Picasso Labelling



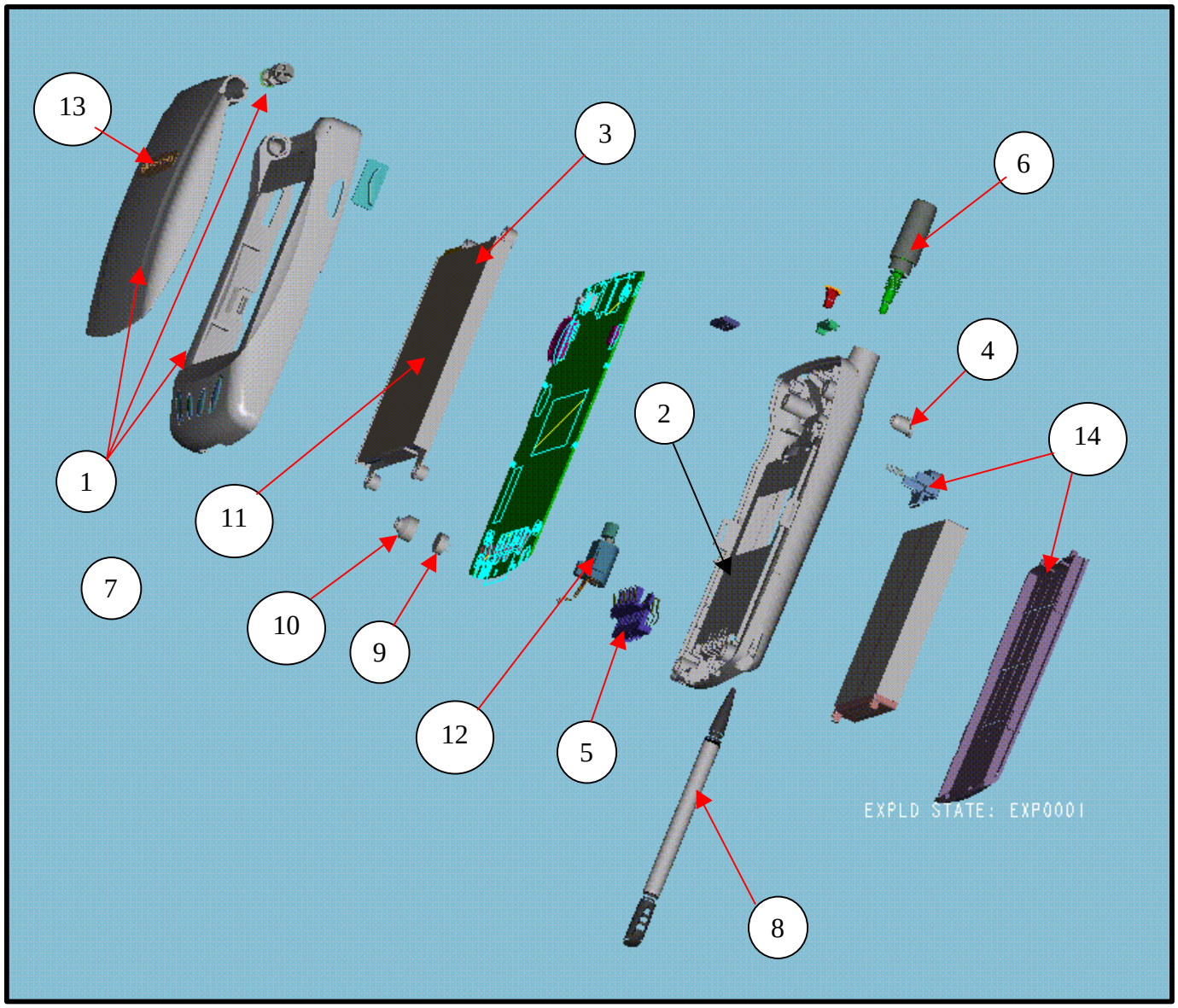
Picasso is the new factory tracking system. It is being implemented globally in all Motorola and out-sourcing manufacturing sites throughout 2000. For all field failures, Service currently records the MSN to validate the warranty period and record which site shipped the phone. By recording the Picasso number in addition to the MSN, we can perform the normal validations but also attribute all field failures back to original site, shift and line of manufacture.

Sales Model Numbers

SA0037A	A6188+, SCCD, Grey Mica, Full Package, PRC
SA0034A	A6188+, SCCD, Grey Mica, Full Package, HK Cellstar
SA0039A	A6188+, TCCD, Grey Mica, Simple Package, HK
SA0043A	A6188+, TCCD, Grey Mica, Simple Package, TW

* Initial release to Greater China only

Exploded View Diagram



Exploded View Parts List

CHYN4209A	1	Flip & Front Assembly, Grey Mica
0164617E05	2	Rear Housing, Grey Mica
CHHN4213A	3	LCD Module
7564435E01	4	Rubber Foot x2
3264662E01	5	Battery Pad
0164481E01	6	Antenna Assembly
0364579E01	7	Screw x6
0164027E01	8	Stylus Assembly
5009135L07	9	Microphone
0564533E01	10	Mic Grommet
5464580E01	11	LCD Protector
5964466E01	12	Motor Assembly
1364832E03	13	Logo A6188+, Grey Mica
CHYN4207A	14	Battery Door, Grey Mica

Accessories

Battery
· Lithium Ion Battery (Slim) ~800mAh (1 hour rapid charge)
· Label must meet all countries specific requirements
· Reuse A6188 battery

Battery Door
· Reuse A6188 Battery door but with A008 specific colours
– Mica Grey, TT Silver

Data Cable (Serial cable)
· Lever shifter for RS232 communication
· No PC card required. Cable hooks directly to RS232 port of PC
· Reuse A6188 Data cable

Travel Charger
· A Travel Charger similar to the existing SPN4604 but its plug should meet the PRC
National Standard, Hong Kong Safety requirements and respective regulatory and
Countries standard in EMEA and Brazil.
· Kramer charger reuse (SPN 4654A)
· Labels must meet all countries specific requirements.

Charger Base & Docking station (Cradle)
The Charger base & Docking Station should be able to
· Fast charge the battery inside the phone
· It should be able to charge a spare battery in the rear pocket
· Display the charging status of the battery inside the phone, a standalone battery,
and indicate data transfer
· The Transformer should be able to connect to the charger base Hirose socket
· Have True-Sync SW data transfer capability
· The front slot of the charger base should be able to hold the phone in upright
Position (docked) and if the serial cable is connected (between the Transformer
Hirose plug and the PC), it should be able to do all the communication with PC

· Labels must meet all the countries specific requirements
· Reuse A6188 Cradle. ID modification will not affect Cradle design

Vehicle Power Adapter
· Powers the phone and rapid charges the battery from vehicle' s cigarette lighter
Socket
· Reuse A6188 VPA

Silver Headset
· Hand free operation, walk and Talk.
· Reuse P7689 headset

Leather Holster
· Stylish leather holster. Prefer local source to reduce cost.
· Will not create problem to remove the stylus B, making and answer a call, and
operate with headset

Starfish True Sync CDROM Kit
· Able to support Win95/98/2K/NT and Palm (English)
· Recorded in a CDROM and bundle sales with Cradle
· Package comes in kit with proper packaging d Quick Start Up guides in English and
localised language support by the software.
· New CDROM kit since new features were added and with EMEA languages.

Plug
· Per the standard plug specified by each supported country.

Car Kit
· DSP easy install car kit.

Stylus
· Stylus A – Retractable and able to fit well in the fitting slot of A008 rear housing.
· Stylus B – Pen type that can fit in the Stylus pocket of the leather case.

SPN4830A	Cradle(Chinese)
SKN6133A	Sync Cable
SPN4654A	Travel Charger
SPN4659A	Travel Charger (UK Plug)
SYN7455A	UK Plug
SPN4604A	Travel Charger (US Plug)
SNN5713A	Battery (Chinese)
SNN5712A	Battery (English with CE) X2
CHYN4201A	Leather Case
AAYN4264A	Headsets
1364832E03	Logo A6188+, Grey Mica
CHYN4207A	Battery Door, Grey Mica
CHVN4103B	Truesync Kit
CHJN4219A	Manual, SC Version
SJN9785A	Manual, TC Version
SJJN4107A	Manual, English Version
5564831E01	Unit Box, PRC
5564831E02	Unit Box, TW
5664504E01	Pulp Tray, PRC+TW
5689407K01	Pulp Tray, HK
AAYN4290A	Sling with Stylus Pen
SYN9070A	DGT Label