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SERVICE MANUAL

Repair for Cellular Telephone

AZALIS 288

LEVEL 1 / LEVEL 2



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SERVICE Manual

Last updates :

DATE	MODIFICATION	PAGE
02/05/2001	REVISION 1	
REVISION 2 : 23/07/2001	REVIEW OF RADIO TEST PLAN	PAGE : 18, 19, 20
REVISION 3 : 29/08/2001	SPECIFICS COMPONENTS FOR OPERATOR ADDED NOMENCLATURE	PAGE : 41, 42
REVISION 4 : 11/09/01	CHANGE CARACTERE "eeprom status"	PAGE : 15

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- Coupling system with shielded chamber.

or

- RF connector	- Part No. : 619052 (AMP)
- RF Cable SMA 3Ghz 0.5m	- Part No. : 168-4968 (RADIO SPARES)
- Modified battery cover	

6.0 TEST AND INSPECTION PLAN

The test plan is derived from the Product Test Reference of AZALIS 288.

6.1 User Interface Test

Use the Test SIM Card « SP »/ Production to test the transceivers as follows :

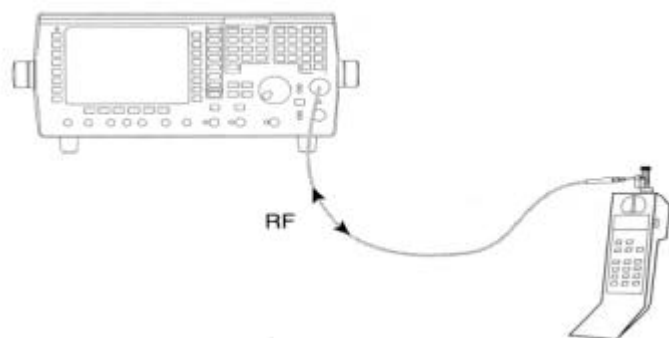
- ◆ On/Off button
- ◆ LCD Backlight
- ◆ Keyboard Test
- ◆ Buzzer Test
- ◆ Vibrator Test
- ◆ Audio Test
- ◆ Antenna Test
- ◆ LCD
- ◆ IMEI
- ◆ Tester Status/Eeprom Status

With a fast Charger connected with the PRODUCT's bottom connector , check the full scrolling from one mode to the next when charging IGN (Ignition) – Battery.

6.2 RF Test

The radio test must be performed with a Digital Radio Test Set connected to the RF connector with the specific RF cable.

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7.0 BEFORE STARTING

7.2 Description of the transceiver

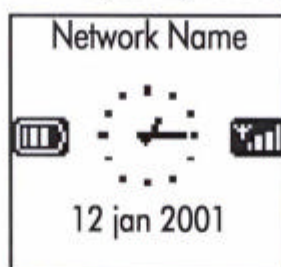
Discover your Phone



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7.1 Description of the display

The screen displays information regarding various functions of your phone.



Alarm clock

Your alarm clock is activated.



Silent

Your phone will not ring when receiving a call.



Vibrator

Your phone will vibrate when receiving a call.



Keypad lock

Protects the keys from being pressed accidentally.



SMS message

You have received a new message.



SMS full

Memory for messages is full. You must delete old messages before you can receive new ones.



Battery

One bar = low charge, 4 bars = full charge. If battery outline is flashing see Troubleshooting page 53.



Network

Y Network : your phone is connected to a network

Reception quality: the more bars are shown the better the reception is



Call Forward Unconditional to number

All your incoming voice calls are being forwarded to a number other than voice mail.



Call Forward Unconditional to voice mailbox

All your incoming voice calls are being forwarded to voice mail.



Home zone

A zone designated by your network operator. Subscription dependent.



Roaming

Displayed when your phone is registered to a network other than your own.



Voice Mail

You have received a new voice mail.

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7.3 Using the carousel

The carousel is a circular loop of icons displayed on the screen. These icons provide access to the different menus and sub menus used to operate your phone.

Access and tour the menu: 1. Press 

2. Press   to select a menu

3. Press **OK** to confirm

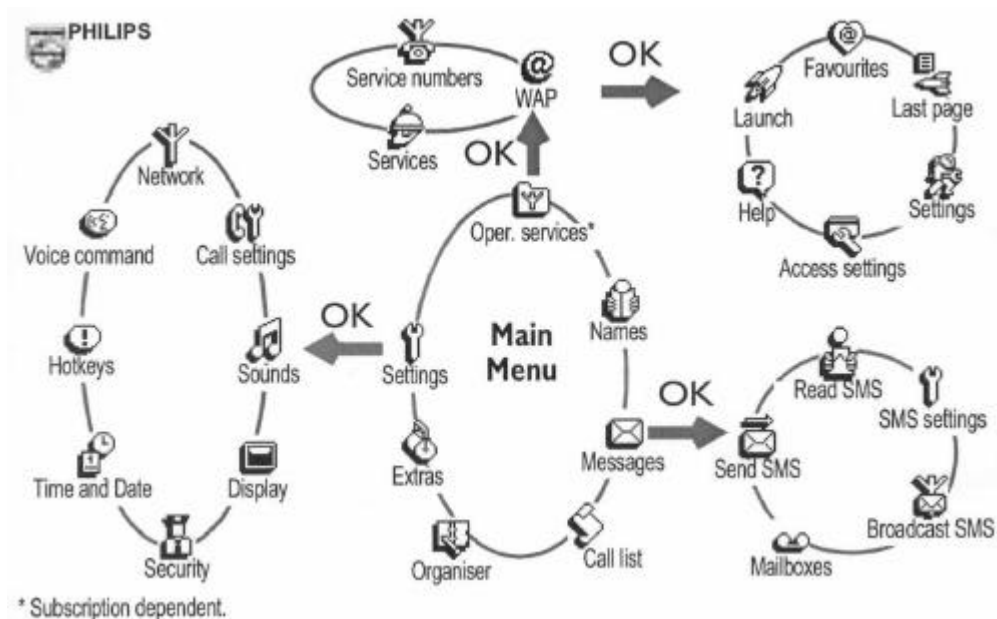
4. Press   to select a sub-menu

5. Press **OK** to confirm

Return to previous menu: Press **C**

Return to idle screen: Press 

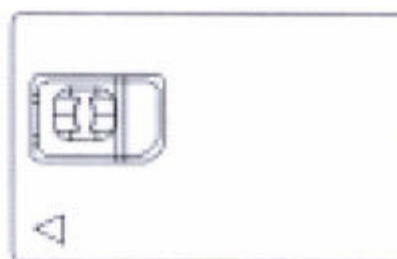
Visit our site and register on line @ <http://www.pcc.philips.com>



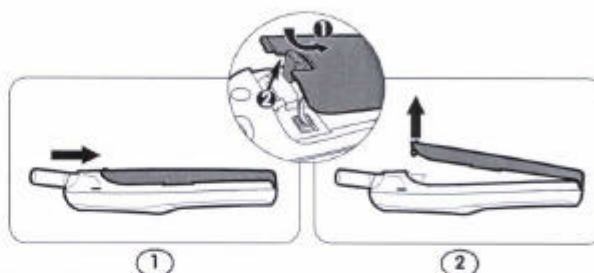
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7.4 Inserting the MICRO-SIM Card

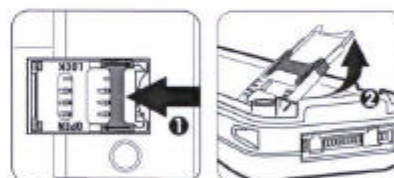
- 1 Remove the SIM card from your card.**



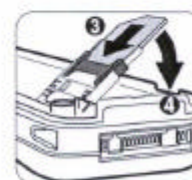
- 2 Remove the battery cover.**



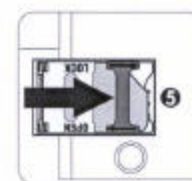
- 3 Push the metal retaining clip to the left and lift the cardholder.**



- 4 Slide the SIM card into its slot until it stops.**
Be careful that the clipped corner is in the identical position as on the drawing.



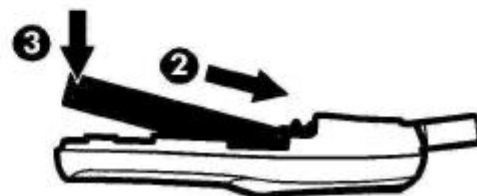
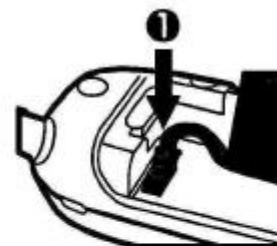
- 5 Close the cardholder and push the clip to the right.**



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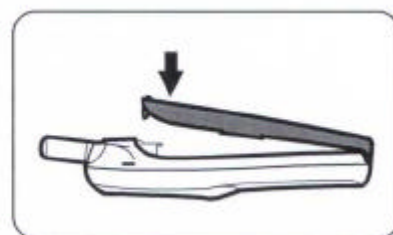
7.5 Inserting the Battery

- 1 Plug the connector into the socket. If you cannot plug the connector, try again reversing the plug.**
- 2 Tilt battery and press lightly against the battery latch.**
- 3 Press the battery downwards.**



7.6 Attach the battery cover

- 1 Hook the battery cover onto the hinges on the bottom of the phone.**
- 2 Press the top down until latch catches.**



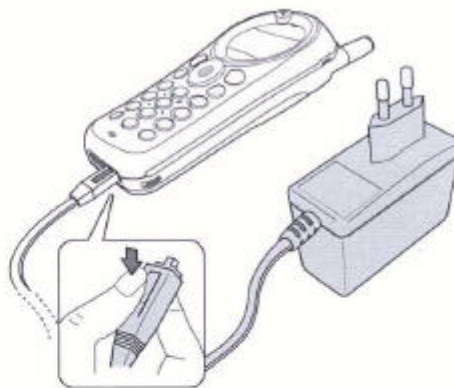
7.7 Removing the battery

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- 1 Remove the battery cover.**
- 2 Lift the bottom of the battery out of the phone and slide it out.**
- 3 Unplug the connector from its slot.**

7.8 Charging the battery

- 1 Plug the connector into the right socket at the base of the phone.**
- 2 Plug the transformer unit into an easily accessible AC power socket.**



NOTE

The only way to turn off the charger is to unplug it, so use an easily accessible AC power socket.



Bars moving ➡ battery is charging

Bars steady ➡ battery is fully charged

Battery outline flashing (see Troubleshooting page 53).

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If the battery is totally discharged, the battery icon will show and start scrolling 2 or 3 minutes only after connecting the charger.

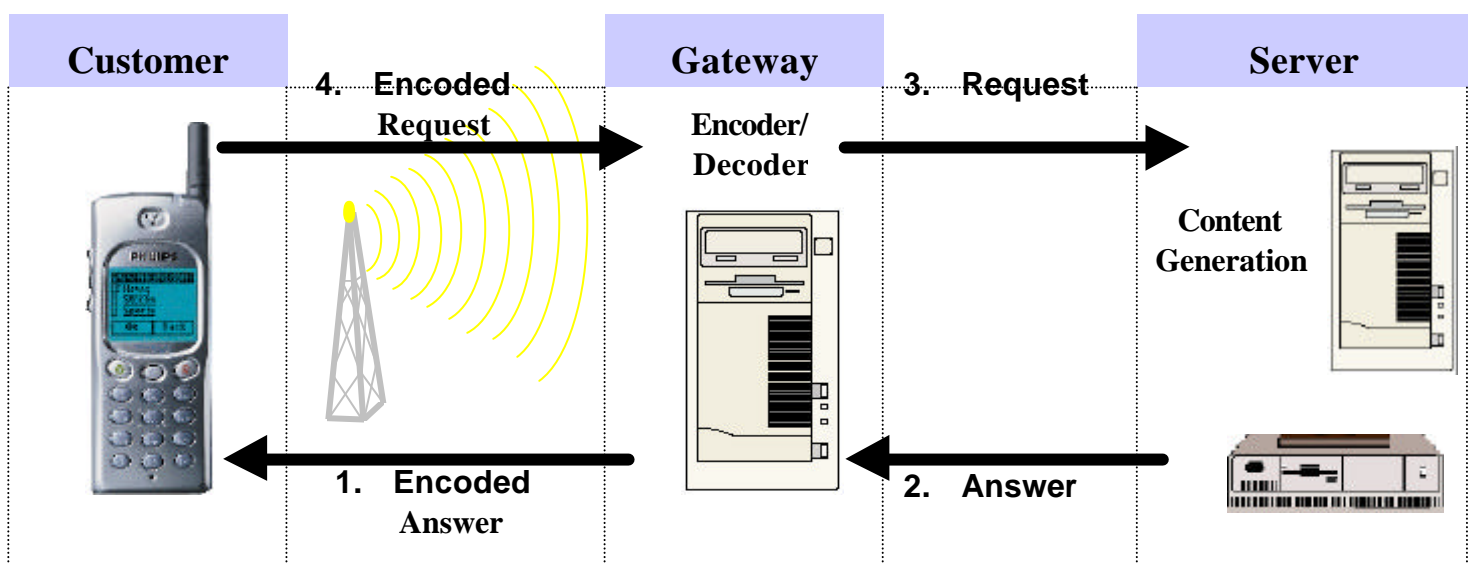
7.9 W@P Introduction

The purpose of W@p (Wireless Application Protocol) is to enable easy and fast delivery of relevant information and services to mobile users. However, mobile Internet does not mean navigating on the Internet with a wireless device but rather to access to some services in a mobile context.

The W@P architecture was designed to enable standard Internet servers to provide services to wireless devices. The W@P wireless protocol is based on Internet standards such as HTTP and TLS but has been optimized according to the constraints of the wireless terminals: low memory capacity, small screen size and of the network: limited bandwidth.

The W@P architecture is made up of 4 technological parts which are necessary for accessing W@P services on a mobile phone. These are:

- W@P navigator or browser
- Mobile operator network
- W@P gateway / W@P server
- Web server



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*** Subscription**

The customer has to contact his Network Operator to inquire about his subscription and the options he can subscribe to. Generally the customer just have to request his W@P access to his provider and he will not be charged for that.

*** W@P parameters**

Parameters have to be set in the mobile phone in order to access W@P services . However, there are two cases depending on the commercial offer:

* Transceiver sold via an operator package(with subscription included):

- Parameters cannot be accessed from the W@P settings menu of the mobile phone: The transceiver is W@P locked. The W@P connections will always be made from the operator W@P homepage and search engines will be available. The customer will have to ask for a password from his/her operator to unlock the W@P settings.

- Parameters can be accessed from the W@P settings menu of the mobile phone:
The customer changes the W@P parameters according to his/her own convenience.

* Retail transceiver(without subscription included):

- Phones are configured by the manufacturer with no W@P parameter. The end user has to ensure that the W@P functionalities and a data/fax options have been subscribed. The end user has also to set the W@P parameters by asking for them from his/her operator or by using parameters of another company (available on Internet, newspaper etc.)

Detailed parameters

Phone Number (or dial-up number) : to establish a connection with the Internet Service Provider

Login (or User Name) : if requested by your ISP

The password : if requested by your ISP

IP address for the Gateway : for communications between Internet Service Provider and Gateway
& Port Number (for a secure or non secure connection)

Home page address(or URL address): for communications between Gateway and Web server

Please note that it is important to respect small and capital letters according to your operator instructions. It is also possible that your provider does not require the Login and/or Password.

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8.0 TEST PROCEDURES

8.1 Initial Functional check for TCD 288AZALIS

- 8.1.1 Insert the Test Production Card into the SIM Reader at the back of the cellular phone and clip a charged battery on the phone.
- 8.1.2 Press the «ON» button for 2 seconds at least and the LCD will show a message which contains information of FA (Final Adjustment) status and 12NC.
- 8.1.3 Follow the instructions as mentioned below :

Step	Procedure	Observation
1	Press Key 1	Continue Buzzer signal
	Press Key 1 again.	Left corner displays 1 00
2	Press key 2 (Audio loop local effect)	"LocalEffect" " XX XX XX" " XX XX"
	Press key 2 again	Left corner displays 2 01
3	Press key 3 Audio loop test (Speak to Mic and listen echo from Speaker)	"AUDIO xx xx xx xx" "EEP xx xx xxxx "
	Press key 3 again	Left corner displays 3 02
4	Press key 4 Check for the Backlight function in the same time.	Backlight must be on

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	Press key 4 again	Left corner displays 4 03
5	Press Key 5 (Checkerboard test) Press Key 5 again	Checkerboard 1 pixel on Left corner displays 5 04
6	Press Key 6 (Inverted Checkerboard) Press Key 6 again	Checkerboard 2 pixel on Left corner displays 6 05

7	Press Key 7 Press key 7 again	All pixels are on Left corner displays 7 06
8	Press key 8 (Eeprom Status) Press Key 8 again	"EEPROM STAT" H-0003 – XXXX X : don't care L-2000-00-00 SimLk XXXXX (Sim lock Status) Left corner display 8 07
9	Press Key 9 Product information Compare information with label printed on back case Press key 9 again	"PROD INFO" "XXXXXXXXXX" (PN Number) VY made in Le Mans SA made in Singapore EO made in Shenzhen Left corner displays 9 08
10	Press key 0	"ADC MEASURES"

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	Press key 0 again	"XXXX XXXX" "XXXX XXXX" Left corner displays 0 09
11	Press * (IMEI Test) Compare IMEI with label printed on back case Press * again	"IMEI TEST" "XXXXXX/ 50 / XXXXXXXX" 06 made in Singapore 50 made in Le-Mans 69 made in China Left corner displays * 12
12	Press # (FA Status) Press # again	"FA/12NC" FA GOOD (Must be good) X XXXXXXXXXXXX (12NC) Left corner displays # 13
13	Press C Press C again	Key without Test Left corner displays C 15
14	Press the Left arrowhead (Melody Test) & vibrator Press Left again	User Melody should be heard and vibrations felt Left corner displays 0C
15	Press the Right arrowhead (Memory Test) Press Right again	"MEMORY TEST" "XXXXXXXX" "XXXXXXXX" "RAM OK" Left corner displays 0D
16	Press OK Press OK again	"PAGE" "SELECTION" "XX" Left corner display OK 0 ^E
17	Press @ Press @ again	Key without Test Left corner display @

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			14
18	Press MENU Press MENU again	"PAGE" "SELECTION" "XX" Left corner display Me 11	
19	Press Green button Press Green button again	"MANUAL TEST" "GOOD" "  Left corner displays OF	
20	Press Red button Press Red button again	"MANUAL TEST" "BAD" "  Left corner displays 10	

8.1.4 If any of these steps failed functional, please refer to Chapter 10.

8.1.5 Perform visual check on battery connectors, car kit connectors and casing. If corrosion or deform send to NSC for repair.

8.1.1 If the product is good, it is considered as a NFF (No Fault Found) product.

All the NFF products must be directly returned to the customer.

8.2 RF TEST

8.2.1 The Test SIM Card "SP" must be inserted in the phone before starting the tests.

8.2.2 Set the equipment as shown on the picture in chapter 6.2

8.2.3 Set losses in the offset field of the radio tester a -0,3 dBm for GSM band and -0.5 dBm for PCN band (when using wired test solution and Philips provided RF cable).

8.2.4 The following operations must be done:

- Synchronization/Registration
- Call set up from the mobile

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- Voice loopback (to check the sound quality)
- Call release
- Call set up from tester
- Call release from tester

8.2.5 The following parameters must be checked in TCH loop mode :

Emission parameters :

- Power level
- RMS phase error
- Peak phase error
- Frequency error
- Power ramping

Reception parameters :

- Rx level
- Rx quality
- BER (Byte Error Rate)
- FER (Frame Error Rate)

Generally the test sequences built inside the testers will be used to check the mobile. You must assess that the test sequences limits comply with the standard specifications.

8.2.6 Radio test plan

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Find below all the measurements which have to be done by test sequences.

Synchronization/Registration	To be checked
Call set up from the mobile	To be checked
Voice loopback (to check the sound quality)	To be checked
Call release	To be checked
Call set up from tester	To be checked
Call release from tester	To be checked
Dualband handover	To be checked

	Power level	Measurements	GSM Channels			DCS Channels		
			Low	Mid	High	Low	Mid	High
TX measurements	High level	Power level	X		X	X		X
		RMS phase error	X		X	X		X
		Peak phase error	X		X	X		X
		Frequency error	X		X	X		X
		Power ramping	X		X	X		X
		Timing advance			X			X
	Mid level	Power level	X		X	X		X
		RMS phase error						
		Peak phase error						
		Frequency error						
		Power ramping						
		Timing advance						
	Low Level	Power level	X		X	X		X
		RMS phase error						
		Peak phase error						
		Frequency error						
		Power ramping	X		X	X		X
		Timing advance						

	RF Level	Measurements	GSM Channels			DCS Channels		
			Low	Mid	High	Low	Mid	High
RX measurements	-80.0 dBm	Rx level	X		X	X		X
		Rx qual						
		BER (Byte Error Rate)	X		X	X		X
		FER (Frame Error Rate)						
	-102.0 dBm	Rx level	X		X	X		X
		Rx qual	X		X	X		X
		BER (Byte Error Rate)	X		X	X		X
		FER (Frame Error Rate)	X		X	X		X

BER Measurements on 104 frames = 8200 bits minimum

- ⚠ When using a wired test solution (via RF cable), don't forget that it is mandatory to measure the power level radiated by the antenna (powermeter recommended). It is the only way to ensure good contact between antenna and main board.

This warning doesn't apply when using an antenna coupler.

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8.2.7 GSM Specification (900 Mhz)

Test parameter	Channel	Level	Standard specifications	Typical values
EMISSION				
Phase Error RMS	1, 62, 124	5, 10, 15	0 to 5 degrees	-
Phase Error Peak	1, 62, 124	5, 10, 15	-20 to +20 degrees	-
Frequency Error	1, 62, 124	5, 10, 15	-90 Hz to +90 Hz	-
Power Ramping	1, 62, 124	5, 10, 15	Mask	Good
Modulation	1, 62, 124	5, 10, 15	Mask	Good
Switching Transients	1, 62, 124	5, 10, 15	Mask	Good
Timing Advance	1, 62, 124	5, 10, 15	+/- 1.00 bit	-
Power Reading				
Output Power Average	1, 62, 124	Level 19	5 +/- 5 dBm	5,3 dBm
	1, 62, 124	Level 15	13 +/- 3 dBm	13,3 dBm
	1, 62, 124	Level 10	23 +/- 3 dBm	23,3 dBm
	1, 62, 124	Level 5	33 +/- 2 dBm	32,1 dBm
RECEPTION				
Rx Level	1, 62, 124	-102 dBm	4 to 12	8
Rx Qual	1, 62, 124	-102 dBm	0 to 1	0
Rx Level	1, 62, 124	-80 dBm	26 to 34	30
Rx Qual	1, 62, 124	-80 dBm	0	0
TCH LOOP SENSITIVITY				
BER	1, 62, 124	-80 dBm	0%	0%
FER	1, 62, 124	-80 dBm	0%	0%
BER	1, 62, 124	-102 dBm	< 2.44%	-
FER	1, 62, 124	-102 dBm	0%	0%

Typical values of fluctuant measured data cannot be defined, so a " - " sign is used to signify it

If a phone is out of the specifications, it must be sent to the Repair Center.

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8.2.8 PCN Specification (1800 Mhz)

Test parameter	Channel	Level	Standard specifications	Typical values
EMISSION				
Phase error RMS	512, 700, 885	0, 5, 10	0 to 5 degree	-
Phase error Peak	512, 700, 885	0, 5, 10	-20 to +20 degree	-
Frequency Error	512, 700, 885	0, 5, 10	-180 Hz to + 180 Hz	-
Power Ramping	512, 700, 885	0, 5, 10	Mask	Good
Modulation	512, 700, 885	0, 5, 10	Mask	Good
Switching Transients	512, 700, 885	0, 5, 10	Mask	Good
Timing Advance	512, 700, 885	0, 5, 10	+/- 1.00 bit	-
Power reading				
Output Power	512, 700, 885	Level 0	30 +/- 2 dBm	29,1 dBm
	512, 700, 885	Level 5	20 +/- 3 dBm	20,3 dBm
	512, 700, 885	Level 10	10 +/- 4.0 dBm	10,3 dBm
	512, 700, 885	Level 15	0 +/- 5.0 dBm	2,5 dBm
RECEPTION				
Rx Level	512, 700, 885	-102 dBm	4 to 12	8
Rx Qual	512, 700, 885	-102 dBm	0 to 1	0
Rx Level	512, 700, 885	-80 dBm	26 to 34	30
Rx Qual	512, 700, 885	-80 dBm	0	0
TCH LOOP SENSITIVITY				
BER	512, 700, 885	-80 dBm	0%	0%
FER	512, 700, 885	-80 dBm	0%	0%
BER	512, 700, 885	-102 dBm	< 2.44%	-
FER	512, 700, 885	-102 dBm	0%	0%

Typical values of fluctuant measured data cannot be defined, so a " - " sign is used to signify it

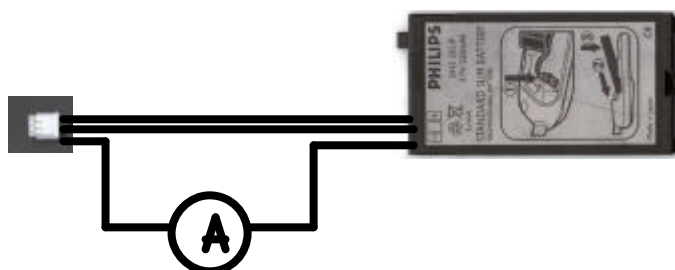
If a phone is out of the specifications, it must be sent to the Repair Center.

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8.3 Battery charging (IGN : Ignition) / Current consumption

8.3.1 Charger detection / Battery charging

- Plug the transformer unit into an easily accessible AC power socket.
- Insert the Test production Card in the mobile, plug a reference Battery with a multimeter added (see picture) for current measurement.



- Plug the connector of the charger into the right socket at the base of the transceiver
- The battery symbol should indicate the state of charge :

- Bars moving - means the battery is being charged.
- Steady - means the battery is fully charged.

If the battery is totally discharged, the battery icon will start scrolling 2 to 3 minutes only after being connected to charger.

- Unplug the charger

8.3.2 Current consumption

a) Check current_OFF :

When the mobile is OFF the current measured must be : $1.0 < I \text{ (mA)} < 0.0$

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b) Check Current_ON

- Turn the mobile on.

When the mobile is ON (backlight activated) the current measured must be : $75 < I \text{ (mA)} < 90$

After few seconds, when the backlight is OFF $8 < I \text{ (mA)} < 28$

c) Check Current_maximum

- Press on OK to activate Page selection. Press the Key 1 and then OK to select Page 1
- Press on Key 4 to select Antenna test. Press on the left arrowhead of the Compass Key as much times as necessary to reach level 5. (The mobile is now set at his maximum emission level)

When the mobile is emitting (backlight ON) the current measured must be : $200 < I \text{ (mA)} < 450$

- Remove the charger by unplugging the connector from the round socket at the base of the transceiver.
- Remove the battery.
- Push the metal retaining clip to the left and lift the cardholder
- Gently slide the card out away from the grooves of the Product

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8.4 W@P Test procedure

With regard to the mobile phones only four things can prevent the W@P applications to operate properly :

- The Mobile Phone is not W@P able
- Registration problem (W@P & data/fax options should be needed depending on the operator)
- A bad configuration (wrong W@P parameters)
- The mobile has a deficient Radio part.

So that's why to solve W@P problems the following process must be observed.

- Ensure about the W@P capability of the mobile phone.
- Interrogate the customer regarding his operator registration.
- Check with the customer that all the needed parameters are stored in the phone memory
(a quick test has to be performed to check memory reliability)
- Perform a functional and a radio test of the mobile phone.

The W@P Test procedure as to be performed only if the customer complains about W@P applications.

8.4.1 Functional and radio test

Before starting the W@P procedure it must be assumed that the functional test and the radio test have been done successfully.

(Refer to chapters 8.1 & 8.2)

8.4.2 W@P parameters settings (to be checked using the Operator Simcard)



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Press OK to access the menu

Press the Compass key left or right to find W@P and

Press the Compass key left or right to find Access Settings and

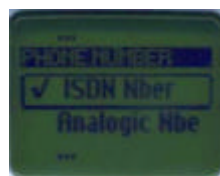
Phone number parameter:

This parameter is the phone number required to perform a data transmission to the Internet Service Provider (ISP) and given by the operator. ISP use either analogue or numeric interfaces to connect to the subscriber. If the operator uses a digital interface but the phone number is set in the analogue area of the phone, data connection will fail (and vice versa).

The phone number is set as follows:



Press OK to set the phone number



Turn the Compass key left or right to select ISDN or Analogue and press OK



Enter the phone number and press OK

Login parameter:

This parameter is provided by the operator and is set as follows:



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Press OK to
set the login

Enter the login and
press OK

Password parameter:

This parameter is provided by the operator and is set as follows:



Press OK to
set the
password

Enter the password
(when a password has been
recorded once, only some keys-
appears when going back again in
this menu)

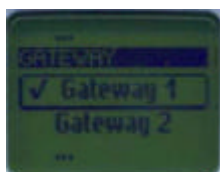
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Gateway parameter (IP):

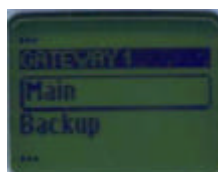
An IP address is used to recognize computers connected to a network. It is made up of 4 * 3 digits (8 bits) and separated by points. Each computer has its own IP address. For W@P application, IP address is used to access the gateway. This parameter is provided by the operator and is set as follows:



Press the OK
to set the
gateway (IP)



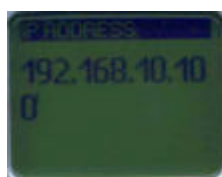
Two gateways
can be
selected by
using the



Select main or
back up and
press OK



Select IP Address
and press OK



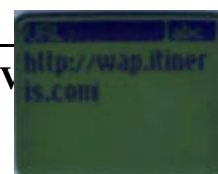
Enter the IP parameter
And press OK

Home page parameter (URL):

This parameter is a string of characters (ASCII) used to identify the protocol (eg: HTTP), the location of the server (eg: WAP.Philips.com), the port number (optional if = 80) and the access path (eg:/glossair/glossair.htm).The end user can use the operator's home page or set up another one in the mobile phone. The URL can be set as follows:

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or in part is prohibited without the written
consent of the copyright owner.**

VY-V



Press OK to

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Enter the home address
And press OK

8.4.3 W@P Application launch

The phone is now ready to access to the W@P Gateway. Please launch the W@P application to ensure it works properly.

8.4.4 Memory reliability

After recording the W@P parameters :

- Turn off the mobile
- Remove the battery
- Wait 5 seconds
- Clip the battery again
- Turn on the mobile
- Check that the parameters still present.

8.4.5 W@P Error messages

Error messages may be displayed on the mobile phone screen. Some of these are listed next:

Network not responding:

This error message is displayed for various problems, such as:
Network cannot be reached (not enough reception bars).
Login and/or password are wrong.
Subscription does not allow W@P access

Server not responding:

Could be due to:

Bad IP address (gateway parameter).

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Internet server is not enabled:

Could be due to:

Bad IP address (gateway parameter).

Not acceptable:

Could be due to:

Bad home page address (URL)

An internal gateway error prevents the gateway from fulfilling your request:

Could be due to:

Bad home page address (URL)

PROCEED http://phone.com

Could be due to:

Bad home page address (URL)

Error content exit size XXXX bytes:

Could be due to:

Too much data are coming to the phone.
Operator dependent.

Try later:

Could be due to:

Network cannot be reached (not enough reception bars).
Busy network.

Bitmap error:

Could be due to:

The content is not W@P; the image can not be displayed.

Note: The phone can not be switched off with ON/OFF key when W@P application is used. **It has not to be considered as a bug.**

8.4.6 W@P Exchange criteria

Exchanges for W@P problems should be **extremely rare** because the chances of having a defective mobile phone is small compared to the misuse of the customers. W@P is a software application and must be considered as such. From a hardware point of view, the Flash memory may have to be changed if W@P parameters cannot be saved but the probability of encountering this problem is near to zero.

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The mobile phone has to be considered as a defective one only if the memory test or the functional & radio tests are wrong.

The points which have to be checked carefully with the customers are listed next:

- * W@P parameters (phone not W@P locked) → These parameters are very critical. If a letter, a sign or a number is wrong, W@P connection will fail.
- * Covered area → The end user should access W@P services with only 1 reception bar. In practice, it is assumed that more than 2 bars are required. For testing purpose, the help desk/ASC/NSC operator will have to ask the end user to test the phone in a well covered area (minimum of 3 bars).
- * WAP phone → A WAP phone is mandatory in order to access W@P services. However, the subscription is operator dependent.
- * Call barring → Call barring has to be cancelled (menu: outgoing/data calls)
- * Hourglass icon → If the end user can see the transmitting icon (after the hourglass icon) on the mobile phone, it means Internet access was successful. Hence, the mobile phone is working correctly.
- * Roaming → If the end user is in a foreign country, he may not be able to use the W@P feature or may have to change the W@P parameters (for example, use the analogue number instead of the ISDN one). The customer has to contact his/her operator for further information.
- * Number of attempts → W@P services may be accessed after several attempts depending on the covered area or the network status (busy). Obviously, this is not a case for exchange and the help desk/ASC/NSC operator will have to make sure that the end user has tried several times before diagnosing the problem.
- * Impossible to display W@P pages → A W@P page may be displayed on the mobile phone screen of a competitor and not by the Philips transceiver. The help desk /ASC/NSC operator will have to explain that the W@P navigators are different. Sometimes, contents of particular pages can be decoded by a navigator and not by another (idem for Netscape and Internet Explorer).

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9.0 ASSEMBLY / DISMANTLEMENT PROCEDURES

During dismantlement and assembly operations, an antistatic bracelet must be used.

9.1 Dismantlement

- 9.1.1 Take the product, remove the battery cover and the battery itself.
- 9.1.2 Remove the SIM card
- 9.1.3 Remove the screws



- 9.1.4 Open the Front Cabinet



To remove the Front Cabinet: Push on the side and lift the

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The Keyboard releases in the same time than the Front Cabinet

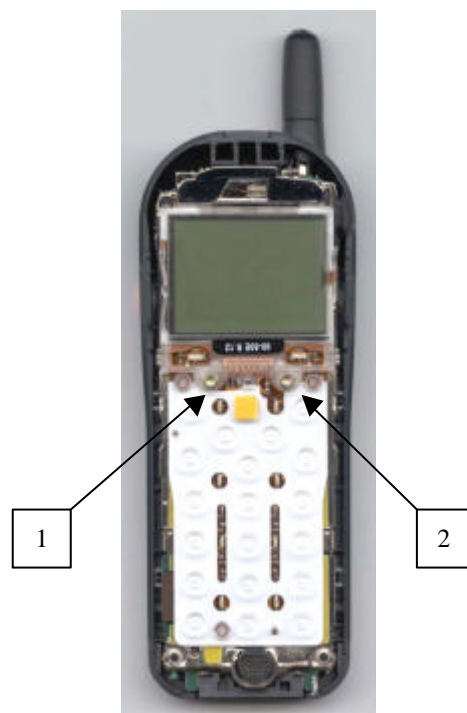


9.1.5 Remove the LCD Module



Unscrew the 2 screws
M1,6*5,5mm
(golden screws)

and then Remove the LCD

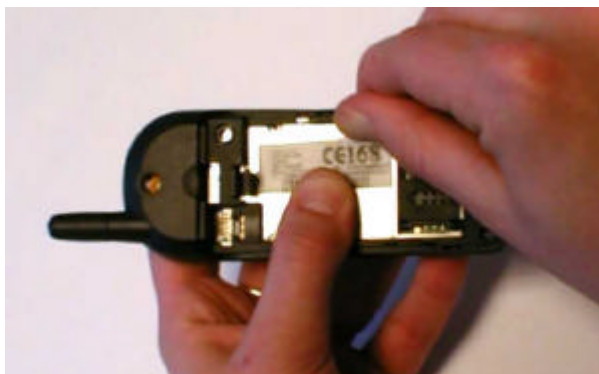
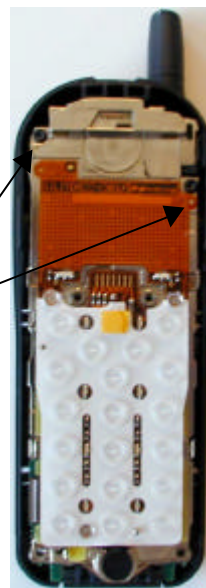


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9.1.6 Remove the SUBSET from the Rear Cabinet

Unscrew the 2 Screws M1,6*11 mm

2 Black Screws

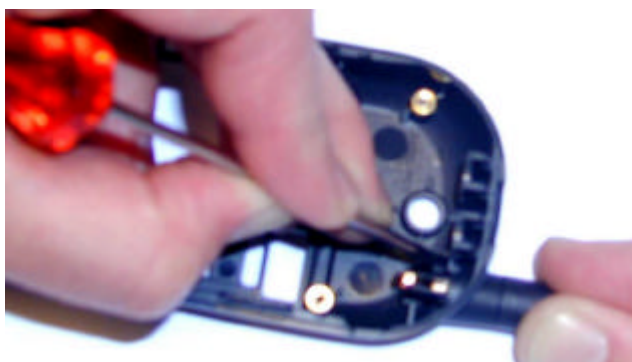


Release the clips while pressing on the Subset with your thumb.

Remove the Subset from the Rear Cabinet

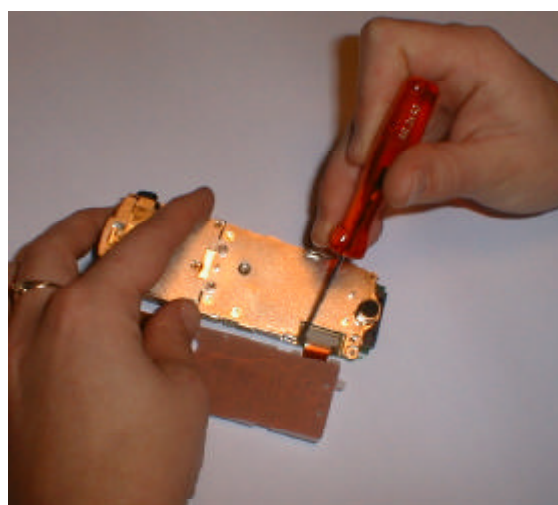
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Remove the Antenna



9.1.7 Remove the Keypad

Detach the Keypad from the Front Shielding



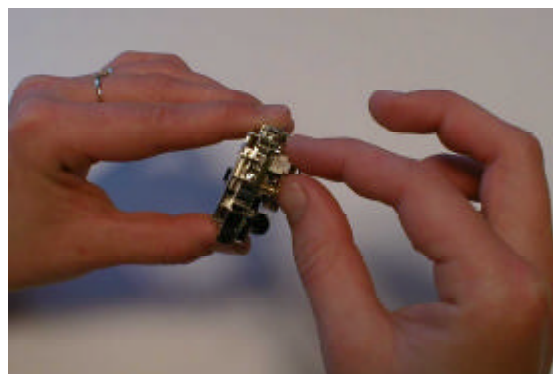
Unlock the Keypad CONNECTOR and detach the Keypad from the Main board.

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9.1.8 Remove the Vibrator

Unplug the Vibrator's CONNECTOR from its slot.

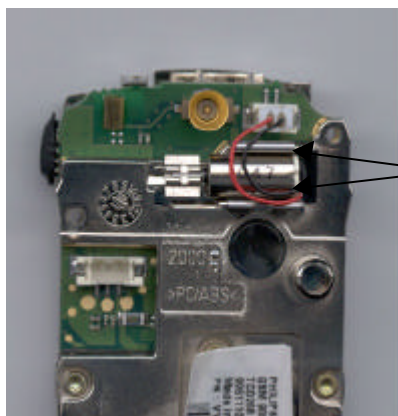
Detach the Vibrator Assembly from the Rear Shielding



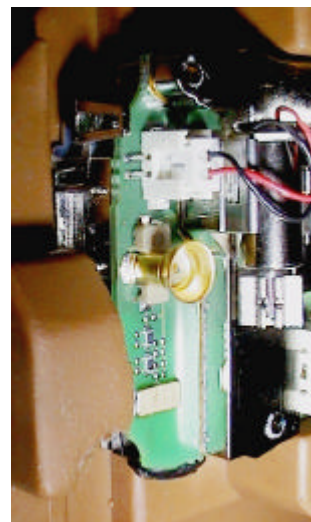
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9.2 Assembly

9.2.1 Set the Vibrator



Vibrator support catches PCBA



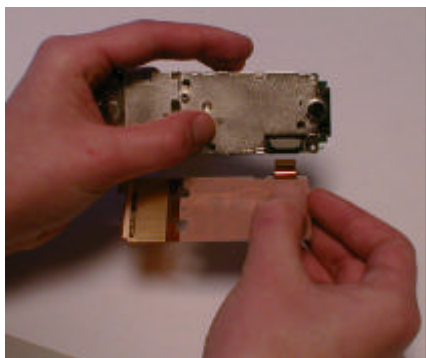
Take a Vibrator. Set it and attach it on the Rear Shielding

Take the vibrator's Connector, arrange the Wires

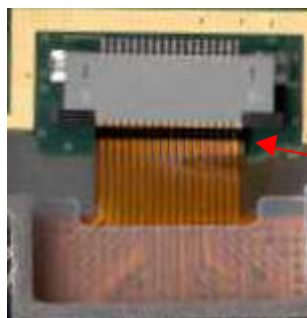
Plug the Connector in its slot.

9.2.2 Set the SUB KEYPAD

Take a Sub Keypad, insert the tongue in the connector until the black line.

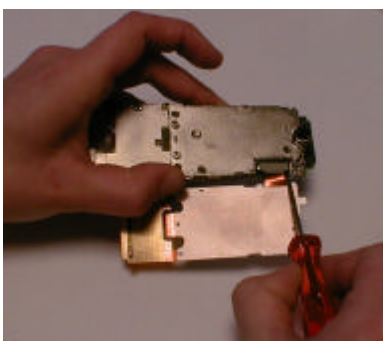


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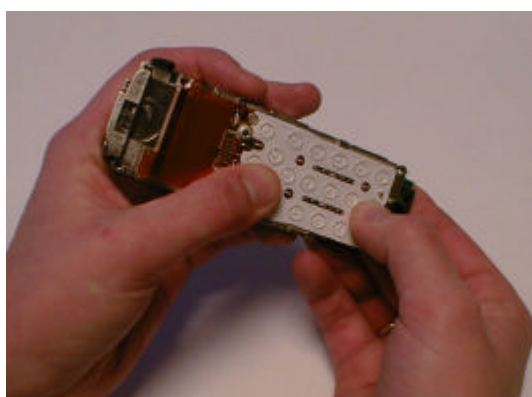


Black Line

Lock the ZIF connector.



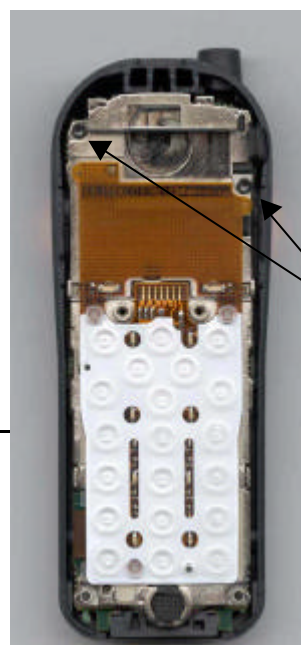
Herd up the Sub Keypad, fasten the 2 tips



9.2.3 Set the SUBSET in the Rear Cabinet

Set the Subset in the Rear Cabinet

Screw the 2 Screws M1,6*11 mm (black screws)



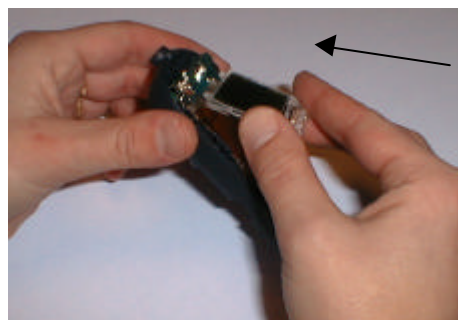
2 Black Screws

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9.2.4 Set the LCD Module

Set the LCD in Its location



Screw the 2 Screws M1,6*5,5 mm (golden screws)

2 Screws



9.2.5 Set the KEYBOARD and the FRONT CABINET

Before closing the product blow on the LCD and inside the Font cabinet with an ionizing gun in order to remove any dust

Take Front Cabinet in your left hand.

Set the Keyboard in the Front Cabinet

Take the Transceiver in your right hand

Insert the Catch located at the Transceiver's top into the Front Cabinet and close the Covers.

Insure of the good fastening of the plastic parts.



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9.2.6 Close the PRODUCT

Tighten the 2 screws at the bottom of the mobile by using a 0,6 torx screwdriver. When using an electrical screwdriver respect the Torque strength (0,2N/m +/- 0.02).



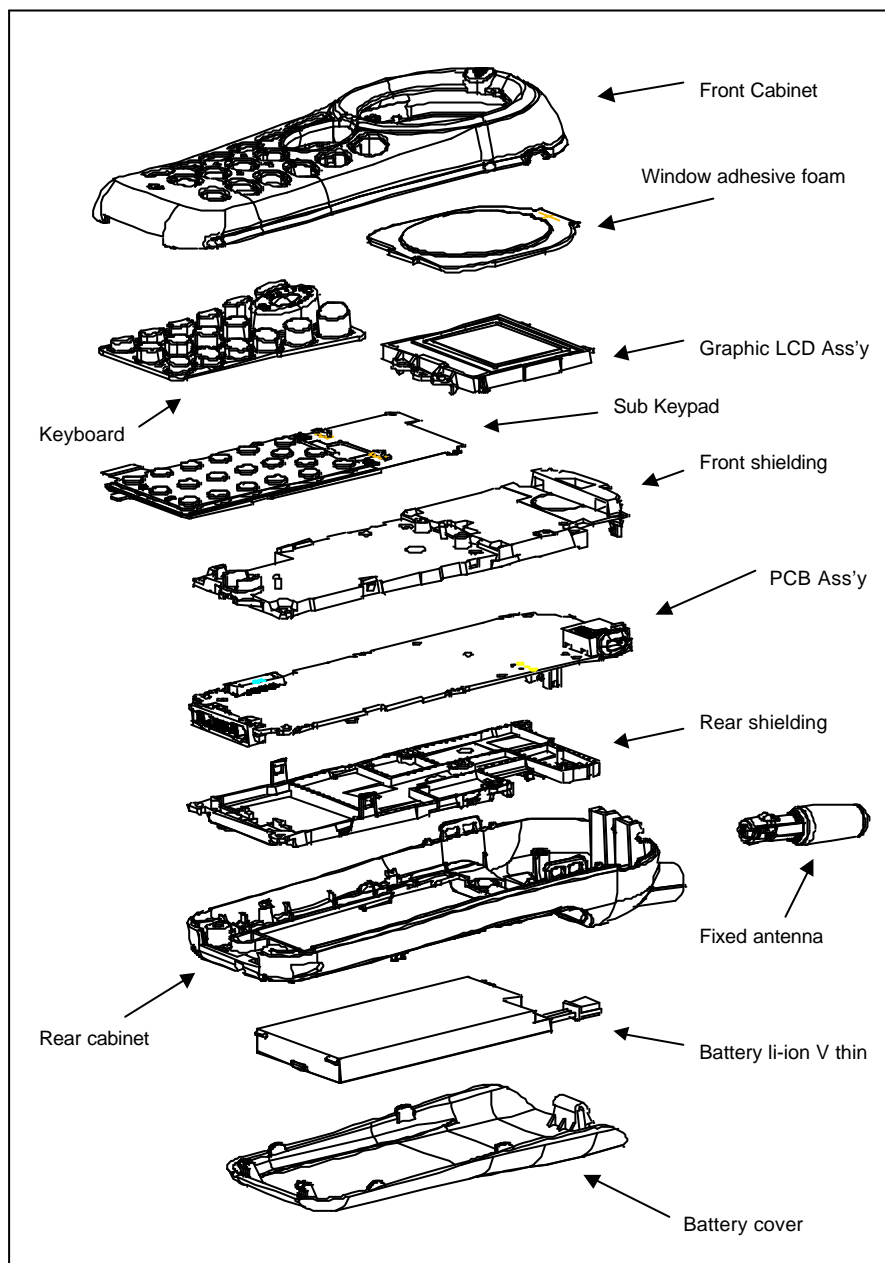
9.2.7 Attach the ANTENNA

Fasten the antenna.



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9.3 Exploded view of the transceiver



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10.0 SOLUTIONS IN CASE OF PROBLEMS DURING THE TESTS

Under no circumstances the phone have to be disassembled to fix a defect detected during the test procedure on level 1.

10.1 The phone does not switch on.

- Check the tactile feeling of the "ON/OFF" button.
- Remove the battery. Check that both the contacts of the phone and those of the battery are not damaged.
- Clean the contacts.
- Plug the battery again, making sure that it is securely fitted. Charge the mobile until the icon has stopped flashing. Then unplug from the charger and attempt to switch the mobile on.

If it still does not switch on, try to fix the the mobile. If the failure can't be found out then send the mobile for repair.

10.2 Charge does not start or no detection of the charger.

- Check the charger contacts for dust or missing pins.
- Check the mobile connector.
- Remove the battery. Check that both the contacts of the phone and those of the battery are not damaged.
- Check the charger individually with a reference mobile. If the charger works properly try to charge the customer mobile with a reference battery.

If neither of the battery and the charger can be incriminated, send the mobile for repair.

10.3 The display shows "No SIM card. Please insert your SIM card." or "SIM FAILURE"

- If the SIM card cannot be inserted, check for any foreign part and try to remove it.
- Check the SIM Card connector. All the contacts must be at the same level. Make sure that there is no dust on the connector contacts and the SIM card contacts. If the SIM Card connector is defective change it.
- If the test SIM card can be detected but the message "SIM Failure" remains on the customer's card, his card must be damaged. Ask him to contact his network operator.

Otherwise send the mobile for repair

10.4 Display problems

Contrast, icons and matrix of the display can be checked with the test SIM card by pressing keys "5", "6" and "7". If everything works in test configuration that means that a phone setting is disabled or does not suit well. It can be solved in the phone menu.

Otherwise send the mobile for repair

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10.5 Buzzer problems

Buzzer tone can be checked with the test SIM card by pressing key "1" and "Left arrowhead".

- If it does not sound properly send the mobile for repair.

10.6 No sound in Loudspeaker

The sound from the loudspeaker can be checked with the test SIM card by pressing key "3".

- Check the microphone and the earpiece, If the failure cannot be found out, send the mobile for repair.

10.7 Communication problems

- Sound quality can be checked in audio loop test (sound distortion, whistling, echo, ...)
- If the mobile passes the radio tests successfully, we can assume that the phone works properly. The customer must check the coverage area of his network operator or that he does not use the phone in a radio shadow (outside the coverage area, in a tunnel or between tall buildings, ...)
- If the mobile does not pass the radio tests, send the mobile for repair.

10.8 Defective antenna

- If the antenna is broken or curved => replace it (if removable)

10.9 Keyboard problems

- The keyboard can be checked with the test SIM card.
- If a key or a row does not respond, check the keyboard, change it if necessary. If the failure cannot be found out, send the mobile to repair.

10.10 Problems to send SMS messages

Check the Center number. It may be empty or wrong.

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11.0 RECOMENDED PAR LIST – TCD288 AZALIS

11.1 Common parts – out of warranty

REFERENCE	DESIGNATION	POSITION	REPAIR LEVEL
4311 258 75761	Battery li-Ion V thin	9240	1
4311 258 75431	Fast Charger Europ XENIU	9265	1
4311 254 38281	Bat cover Vthin bla assy	0105	1
4339 006 10191	User manual English V23	0260	1
4311 257 61241	Fixed Antenna	0400	1
4339 007 50033	Rear Housing V thin ass'y	0103	2
4311 258 75213	KEYBOARD ass'y	0122	2
4311 250 40372	VIS M 1,6X11	0181	2
4311 250 40421	VIS M1,6x8 TORX 6+	0170	2
2422 033 00367	Con CCM03-3514	1500	2
4311 258 75165	Graphic LCD ASS'Y	1710	2
4339 004 40102	KEYPAD E. BLUE V23	0110	2
4339 004 40112	KEYPAD C.SILVER V23	0110	2
4339 007 50173	FRONT HOUSING E.BLUE V23	0103	2
4339 007 50183	FRONT HOUSING C.SIL V23	0103	2
4339 007 50143	BEZEL E.BLUE V23	0150	2
4339 007 50153	BEZEL C.SILVER V23	0150	2

11.2 SPECIFIC PARTS – Out of Warranty

→ France

OPERATOR	REFERENCE	DESIGNATION	POSITION	LEVEL
Telecom				
V 23 Infusio	4311 257 55241	Bezel C.Silver V23 orange	0150	2

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→ Germany

OPERATOR	REFERENCE	DESIGNATION	POSITION	LEVEL
Ving Interkom				
	4311 257 55431	C Silver LOOP Bezel Assy	0150	2

11.3 Common parts – in warranty

REFERENCE	DESIGNATION	POSITION	REPAIR LEVEL
4311 258 75165	Graphic LCD ASS'Y	1710	2
4311 258 75194	VIBRATOR ASS'Y	1710	2

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ANNEX 1

PHILIPS CONSUMER COMMUNICATIONS
 Customer Services
 New Product & Measurement



An iris code is 4 digits with the following description :

Condition code
 1-Constant
 2-Intermittent
 3-Two hours after switch on

IRIS REPAIR CODING SYSTEM

The code '1000' is used for No Fault Found

1	2	3	4	5	6	7	8
CONDITION	NO ACTION	LEVEL	QUALITY	NOISE	PHYSICAL PROBLEMS	SPECIAL FUNCTIONS	OTHER CONDITIONS
1	117 Power problem 118 Short battery life 119 Does not switch on 11B Switch and/or recurrent 11X Other Row Sup problem	121 Charging problem Does not charge battery	136 Display function problem Character pool absent No backlight		156 Damaged plug or socket 158 Defective aerial 16G Broken LCD 16X Other Physical damage	171 General function problem 171 Faulty clock function 17B Faulty memory function 17F WGP function not operable	185 Special requirements 186 Upgrade to be done only 18Z Symptom not available
2	21A No reception Drop calls	220 Reception level problem	231 Transmission problem No omission 234 No call in & no answer Handset & Base ¹	240 Hoarse or distorted audio 244 Echo		277 Special communication problem 277 No dial tone 27B No buzzing ring 27S No registering	
5	51B No audio	521 Audio level problem Low and/or loud			544 General problem with answering instructions ¹	57A Poor special audio function Handset/Car problem ¹	
6	61B No mechanical Vibrator not operable 61D Photocompass key not operable			64B Mechanical noise Foreign parts inside			
7	71B No data processing operation 71S No keyboard operation 71F No power on key ¹	721 Faulty data processing Change on Ab calls ² 72S Contact your dealer ²	73B Excessive Battery ²			774 Special data processing function problem 774 Damaged CLU ¹ 77S Tail update failure ²	791 SIM card problem 791 SIM blocked ² 792 IVIS Failure ² 793 Data not read SIM card 79S SIM Error 48cc

¹ In France, special code for contract products

² In Rest, special code for Carrier returns

REV 02 - JULY 2000

POC/VY/660VIRIS CODE TABLE/001/UN/CH/CTA

Each returned product must have an IRIS code to identify the failure.