PHILIPS Consumer Communications Centre du Mans	Service Repair Support	VY-V-640-204 Page : 1 of 42 Langue : EN Date : 09/21/01

SERVICE MANUAL

Repair for Cellular Telephone

Fisio 311

LEVEL 1 / LEVEL 2

PHILIPS Consumer Communications Centre du Mans	Service Repair Support	VY-V-640-204 Page : 2 of 42 Langue : EN Date : 09/21/01

SERVICE Manual

Last updates :

DATE	MODIFICATION	PAGE
07/09/00	REVISION 1	
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PHILIPS Consumer Communications Centre du Mans	Service Repair Support	VY-V-640-204 Page : 3 of 42 Langue : EN Date : 09/21/01

CONTENTS

PHILIPS Consumer Communications Centre du Mans	Service Repair Support	VY-V-640-204 Page : 4 of 42 Langue : EN Date : 09/21/01

1.0   PURPOSE

This document establishes the functional test and inspection procedures for the first level service repair of the FISIO 311 transceiver.

2.0   SCOPE

The test plan is applicable to all levels of service repair of the FISIO 311 transceiver.

3.0   REFERENCE

None.

4.0   GLOSSARY/ACRONYM LIST

Window or Bezzel	Protective plastic over the LCD display
SW	Software
PN	Hardware Configuration of the Mobile
CN	Matrix for Types of SW used on the different hardware
HW	Hardware
ASC	Authorized Service Center
NSC	National Service Center
Test SIM Card	Used for functionality of PHILIPS Mobile Phones
Test SIM Card « SP »	SIM Card used to simulate the user interface and enable radio tests

5.0   TEST EQUIPMENT AND TOOLS

Equipment / Tools
- Production Test SIM Card   - Part No. : 4311 255 00781
- Test SIM Card « SP »   - Part No. : 4311 255 00782
- Digital Multimeter   - Recommended Model : Fluke
                                      Specification with current reading in mA.
- Digital Radiocommunication Tester.

-    Coupling system with shielded chamber.
Or
-    RF Cable   - Part No.: 941-555-1(AMP)
                    (No mechanical adaptation provided by Philips.)

PHILIPS Consumer Communications **Centre du Mans**	**Service Repair Support**	**VY-V-640-204** **Page : 5 of 42** **Langue : EN** **Date : 09/21/01**

6.0   TEST AND INPECTION PLAN

The test plan is derived from the Product Test Reference of FISIO 311.

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 (to measure the radiated power level. Not necessary when using an antenna coupler)
- 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. The mobile has to be set on the antenna coupler inside the shielded chamber.
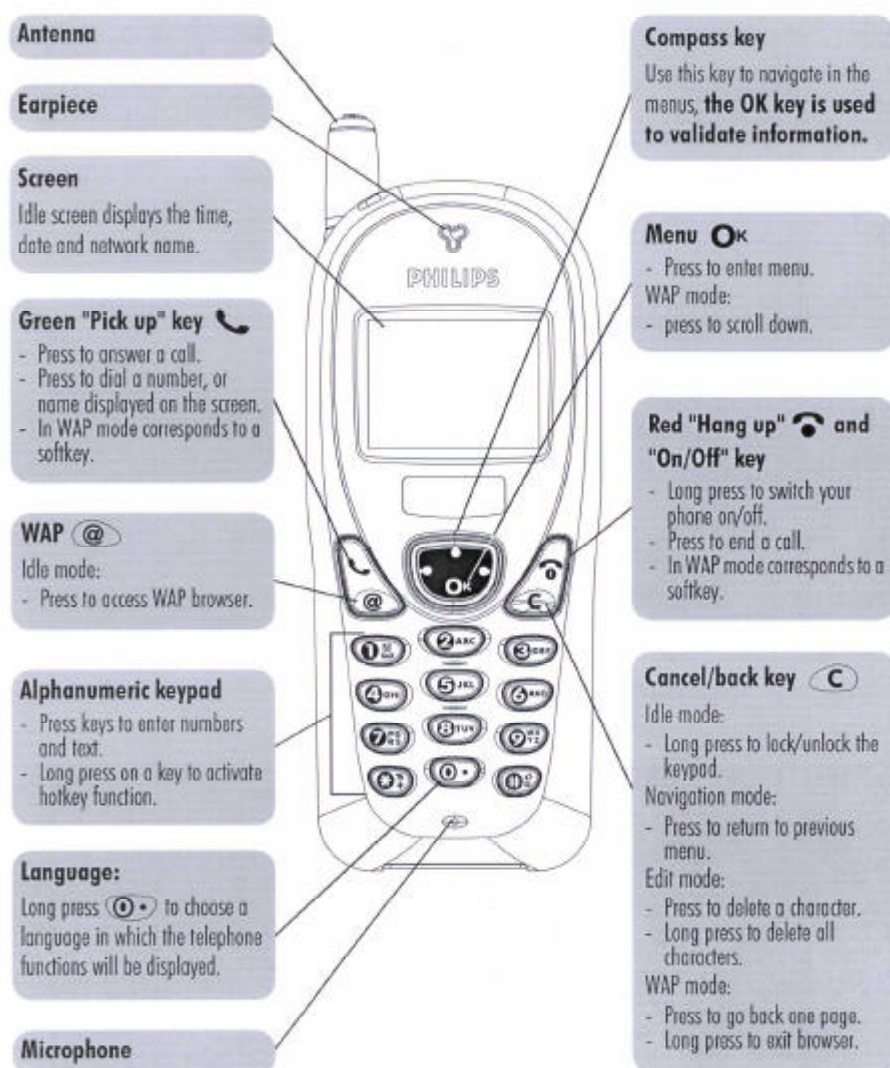
PHILIPS Consumer Communications Centre du Mans	Service Repair Support	VY-V-640-204 Page : 6 of 42 Langue : EN Date : 09/21/01

7.0　BEFORE STARTING

7.1　*Description Of The Transceiver*

Discover your Phone

Antenna

Earpiece

Screen
Idle screen displays the time, date and network name.

Green "Pick up" key 📞
- Press to answer a call.
- Press to dial a number, or name displayed on the screen.
- In WAP mode corresponds to a softkey.

WAP @
Idle mode:
- Press to access WAP browser.

Alphanumeric keypad
- Press keys to enter numbers and text.
- Long press on a key to activate hotkey function.

Language:
Long press ⓪• to choose a language in which the telephone functions will be displayed.

Microphone

Compass key
Use this key to navigate in the menus, **the OK key is used to validate information.**

Menu OK
- Press to enter menu.
WAP mode:
- press to scroll down.

Red "Hang up" 📞 **and "On/Off" key**
- Long press to switch your phone on/off.
- Press to end a call.
- In WAP mode corresponds to a softkey.

Cancel/back key ⓒ
Idle mode:
- Long press to lock/unlock the keypad.
Navigation mode:
- Press to return to previous menu.
Edit mode:
- Press to delete a character.
- Long press to delete all characters.
WAP mode:
- Press to go back one page.
- Long press to exit browser.

PHILIPS Consumer Communications **Centre du Mans**	**Service Repair Support**	**VY-V-640-204** **Page : 7 of 42** **Langue : EN** **Date : 09/21/01**

7.2 Description Of The Display

The screen displays information regarding various functions of your phone.
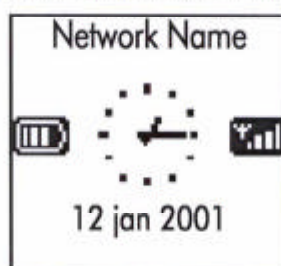
Alarm clock
Your alarm clock is activated.

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

.ıll 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.

| PHILIPS Consumer Communications Centre du Mans	Service Repair Support	VY-V-640-204 Page : 8 of 42 Langue : EN Date : 09/21/01

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.
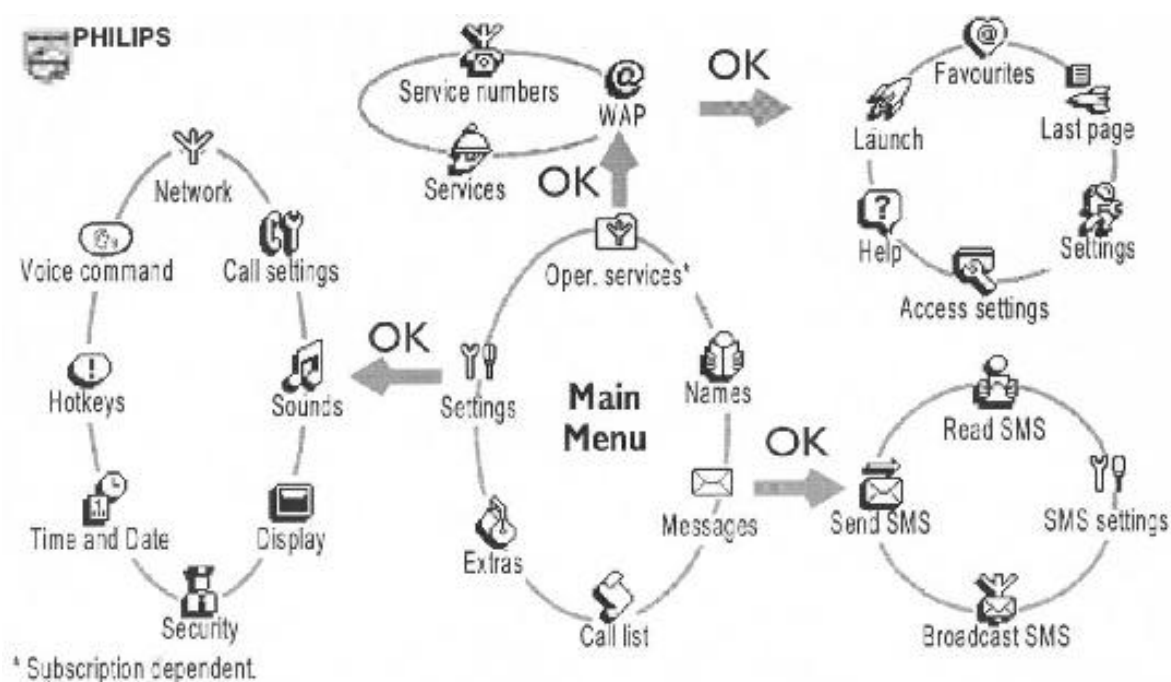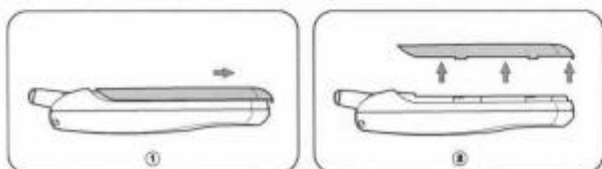
PHILIPS Consumer Communications Centre du Mans	Service Repair Support	VY-V-640-204 Page : 9 of 42 Langue : EN Date : 09/21/01

7.4   Inserting The MICRO-Card

1 Remove the SIM card from your card.
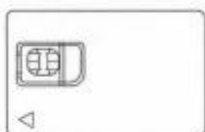
2 Remove the battery cover.

3 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.

7.5   Inserting The Battery

1 Plug the connector into the socket. If you cannot plug the connector, try again reversing the plug.
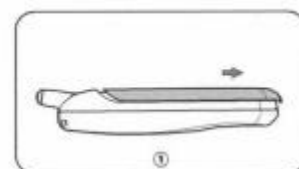
2 Slide the battery in its housing.

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.

PHILIPS Consumer Communications Centre du Mans	Service Repair Support	VY-V-640-204 Page : 10 of 42 Langue : EN Date : 09/21/01

7.7   Removing The Battery

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 25).

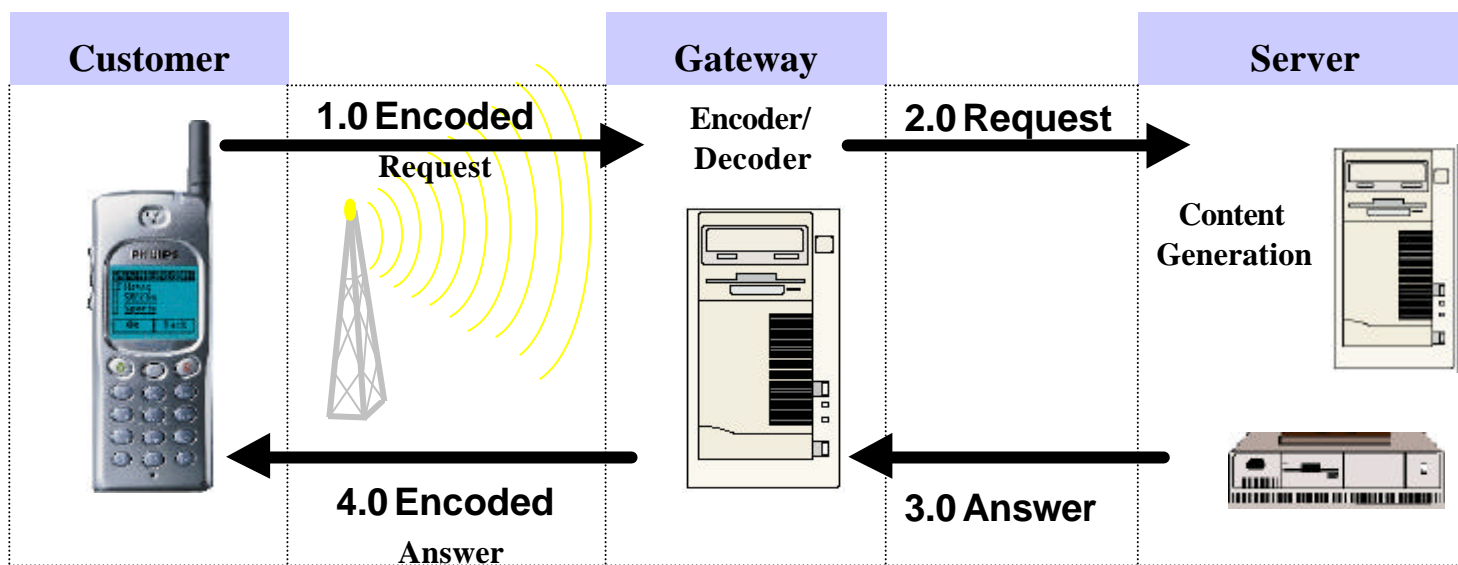|		
PHILIPS Consumer Communications **Centre du Mans**	**Service Repair Support**	**VY-V-640-204** **Page : 11 of 42** **Langue : EN** **Date : 09/21/01**

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

Customer	Gateway	Server
1.0 Encoded **Request**	Encoder/ Decoder **2.0 Request**	**Content** **Generation**
4.0 Encoded **Answer**	**3.0 Answer**	

* 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.

PHILIPS Consumer Communications Centre du Mans	Service Repair Support	VY-V-640-204 Page : 12 of 42 Langue : EN Date : 09/21/01

* 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.

PHILIPS Consumer Communications Centre du Mans	Service Repair Support	VY-V-640-204 Page : 13 of 42 Langue : EN Date : 09/21/01

8.0   TEST PROCEDURES

8.1   Initial Functional Check for Fisio 311

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

PHILIPS Consumer Communications Centre du Mans	Service Repair Support	VY-V-640-204 Page : 14 of 42 Langue : EN Date : 09/21/01

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-XXXX-XX-XX(No Digit "1" or "2" allowed) L-XXXX-XX-X 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" "XXXXXXXX" (PN Number) "XXXXXXX" VY made in Le Mans SA made in Singapore EO made in Shenzhen Left corner displays 9 08
10	Press key 0 Press key 0 again	"ADC MEASURES" "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"** " XXXXX/ 50 / XXXXXX" 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 XXXXXXXXXXX (12NC) Left corner displays # 13

PHILIPS Consumer Communications **Centre du Mans**	**Service Repair Support**		**VY-V-640-204** **Page : 15 of 42** **Langue : EN** **Date : 09/21/01**

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" "XXXXXXX" "XXXXXXX" "RAM OK" $>$ Left corner displays 0D
16	Press OK Press OK again		"PAGE" "SELECTION" "XX" Left corner display K 0E
17	Press @ Press @ again		Key without Test Left corner display @ 14
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.

PHILIPS Consumer Communications **Centre du Mans**	**Service Repair Support**	**VY-V-640-204** **Page : 16 of 42** **Langue : EN** **Date : 09/21/01**

8.2   RF Test

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

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

8.2.3   Set RF losses as following (tested with antenna coupler):

	Channel	RX	TX			Channel	RX	TX
900 MHz	63	5,0	5,2		**1800 MHz**	598	27,0	13,0
	3	4,0	3,2			512	23,0	10,0
	62	5,0	5,2			700	27,0	13,0
	123	6,0	4,1			884	19,0	16,7

8.2.4   The following op erations must be done:

- Synchronization/Registration
- Call set up from the mobile
- 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
- Timing Advance

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 and defined test plan.

PHILIPS Consumer Communications Centre du Mans	Service Repair Support	VY-V-640-204 Page : 17 of 42 Langue : EN Date : 09/21/01

8.2.6   Radio test plan

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	-85.0 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.

PHILIPS Consumer Communications Centre du Mans	Service Repair Support	VY-V-640-204 Page : 18 of 42 Langue : EN Date : 09/21/01

8.2.7   GSM Specification (900 Mhz)

Test parameter	Channel	Level	Standard specifications
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
Modulation	1, 62, 124	5, 10, 15	Mask
Switching Transients	1, 62, 124	5, 10, 15	Mask
Timing Advance	1, 62, 124	5, 10, 15	+/- 1.00 bit
Power Reading			
Output Power Average	1, 62, 124	Level 19	5 +/- 5 dBm
	1, 62, 124	Level 15	13 +/- 3 dBm
	1, 62, 124	Level 10	23 +/- 2 dBm
	1, 62, 124	Level 5	33 +/- 2 dBm
RECEPTION			
Rx Level	1, 62, 124	-102 dBm	4 to 12
Rx Qual			0 to 1
Rx Level	1, 62, 124	-85 dBm	21 to 29
Rx Qual			0
Rx Level	1, 62, 124	-60 dBm	46 to 54
Rx Qual			0 to 0
TCH LOOP			
SENSITIVITY			
BER	1, 62, 124	-85 dBm	0%
FER	1, 62, 124	-85 dBm	0%
BER	1, 62, 124	-102 dBm	< 2.44%
FER	1, 62, 124	-102 dBm	0%

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

PHILIPS Consumer Communications Centre du Mans	Service Repair Support	VY-V-640-204 Page : 19 of 42 Langue : EN Date : 09/21/01

8.2.8   PCN Specification (1800 Mhz)

Test parameter	Channel	Level	Standard specifications
ÉMISSION			
Phase error RMS	512, 700, 885	0,5,10	0 to 5 degree
Phase error Peak		0,5,10	-20 to +20 degree
Frequency Error		0,5,10	-180 Hz to + 180 Hz
Power Ramping		0,5,10	Mask
Modulation		0,5,10	Mask
Switching Transients		0,5,10	Mask
Timing Advance		0,5,10	+/- 1.00 bit
Power reading			
Output Power		Level 0	30 +/- 2 dBm
		Level 10	10 +/- 4.0 dBm
		Level 15	0 +/- 5.0 dBm
RECEPTION			
Rx Level	512, 700, 885	-102dbm	4 to 12
Rx Qual		-102dbm	0 to 1
Rx Level	512, 700, 885	-85dbm	21 to 29
Rx Qual		-85dbm	0
Rx Level	512, 700, 885	-60dbm	46 to 54
Rx Qual		-60dbm	0
TCH LOOP			
SENSITIVITY			
BER	512, 700, 885	-85dbm	0%
FER	512, 700, 885	-85dbm	0%
BER	512, 700, 885	-102dbm	2.44%
FER	512, 700, 885	-102dbm	0%

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

PHILIPS Consumer Communications **Centre du Mans**	**Service Repair Support**	**VY-V-640-204** **Page : 20 of 42** **Langue : EN** **Date : 09/21/01**

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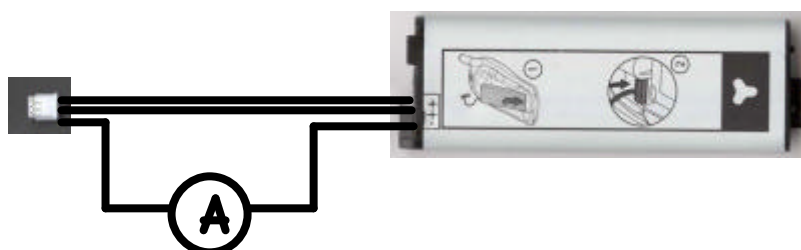
- Plug the connector of the charger into the right socket at the base of the transceiver
The battery symbol should indicate the state of charge :

- 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.

After few seconds a charge current of $400 < I \text{ (mA)} < 600$ have to be observed

- Unplug the charger

8.3.2   Current consumption

a) Check current_OFF :

When the mobile is OFF the current measured must be : $0.05 < I \text{ (mA)} < 0.23$

PHILIPS Consumer Communications **Centre du Mans**	**Service Repair Support**	**VY-V-640-204** **Page : 21 of 42** **Langue : EN** **Date : 09/21/01**

b) Check Current_ON

- Turn the mobile on.

When the mobile is ON (backlight activated) the current measured must be : $100 < I (mA) < 150$

This measurement has to be operated during first seconds after switch on.

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 : $270 < I (mA) < 370$

- Remove the battery.

- Gently slide the card out away from the Product

PHILIPS Consumer Communications Centre du Mans	Service Repair Support	VY-V-640-204 Page : 22 of 42 Langue : EN Date : 09/21/01

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)

Press OK to access the menu	Press the Compass key left or right to find Access settings and press OK	Several W@P configurations can be stored. Select one	Press the Compass key left or right to find Change and press OK

PHILIPS Consumer Communications **Centre du Mans**	**Service Repair Support**	**VY-V-640-204** **Page : 23 of 42** **Langue : EN** **Date : 09/21/01**

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:
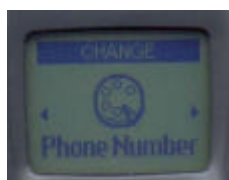
Press OK to set the phone number
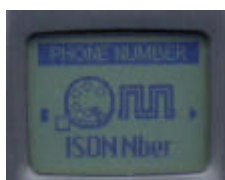
Turn the Compass key left or right to select ISDN or Analogue and press OK
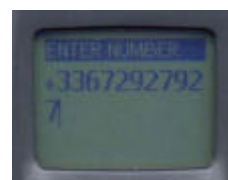
Enter the phone number and press OK

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

Press OK to set the login
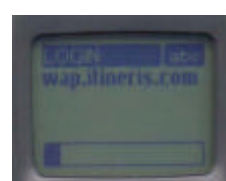
Enter the login and press OK

PHILIPS Consumer Communications **Centre du Mans**	**Service Repair Support**	**VY-V-640-204** **Page : 24 of 42** **Langue : EN** **Date : 09/21/01**

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)

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 parameter)
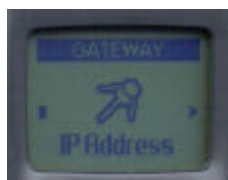
Select IP Address
and press OK
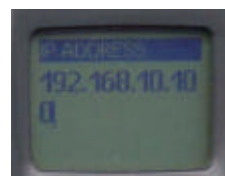
Enter the IP parameter
And press OK

PHILIPS Consumer Communications Centre du Mans	Service Repair Support	VY-V-640-204 Page : 25 of 42 Langue : EN Date : 09/21/01

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:

Press OK to
set the home
page
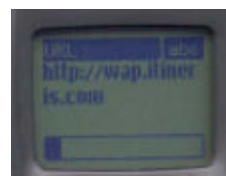
Enter the home address
and press OK

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.

PHILIPS Consumer Communications **Centre du Mans**	**Service Repair Support**	**VY-V-640-204** **Page : 26 of 42** **Langue : EN** **Date : 09/21/01**

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).

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.**

PHILIPS Consumer Communications **Centre du Mans**	**Service Repair Support**	**VY-V-640-204** **Page : 27 of 42** **Langue : EN** **Date : 09/21/01**

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.

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).

PHILIPS Consumer Communications Centre du Mans	Service Repair Support	VY-V-640-204 Page : 28 of 42 Langue : EN Date : 09/21/01

# 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 4 screws

9.1.4   Open the Front Cabinet

Insert a plectrum. Make it slide so as to release the clips

Separate the cabinets

PHILIPS Consumer Communications Centre du Mans	Service Repair Support	VY-V-640-204 Page : 29 of 42 Langue : EN Date : 09/21/01

After opening

Remove the Gasket LCD

9.1.5   Remove the subset for the rear cabinet

Use the plectrum to separate the subset and the Rear
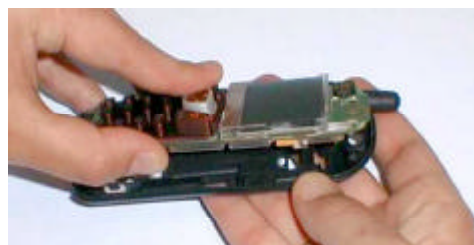
Take the subset away

PHILIPS Consumer Communications Centre du Mans	Service Repair Support	VY-V-640-204 Page : 30 of 42 Langue : EN Date : 09/21/01

9.1.6   Remove the vibrator

Remove the vibrator

9.1.7   Remove the antenna

Press with a screwdriver to
release the antenna

Pull out the antenna

PHILIPS Consumer Communications **Centre du Mans**	**Service Repair Support**	**VY-V-640-204** **Page : 31 of 42** **Langue : EN** **Date : 09/21/01**

9.1.8   Remove the LCD
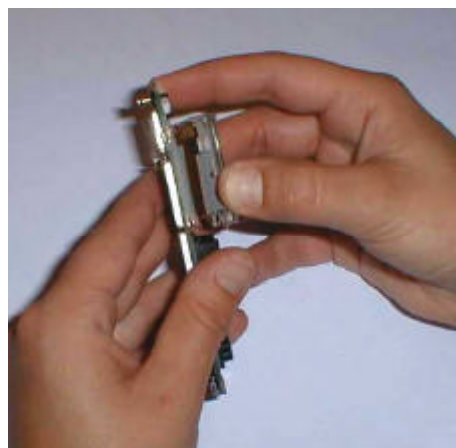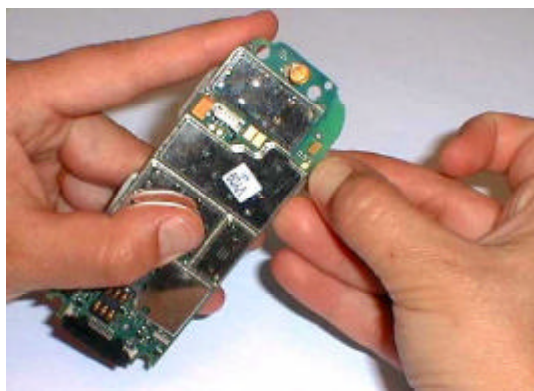
9.1.9   Remove the Keypad

Detach the Keypad from the Main Board

Remove the keypad with the mylar

PHILIPS Consumer Communications Centre du Mans	Service Repair Support	VY-V-640-204 Page : 32 of 42 Langue : EN Date : 09/21/01

9.2   Assembly

9.2.1   Assembly of the Front cabinet

Set the Earpiece

Set the microphone

Set the keypad
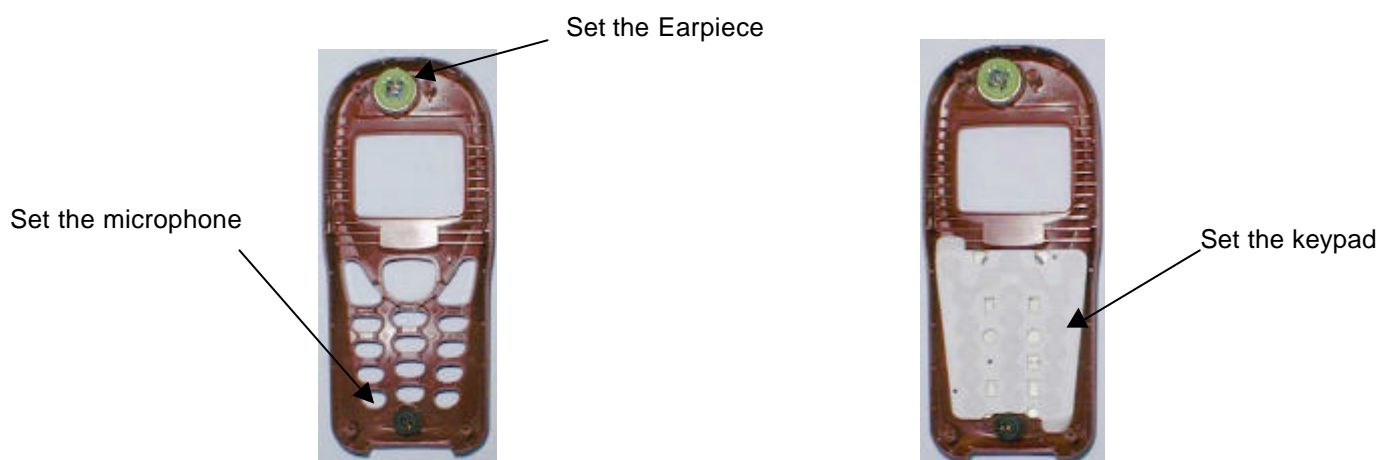
9.2.2   Set the LCD Module
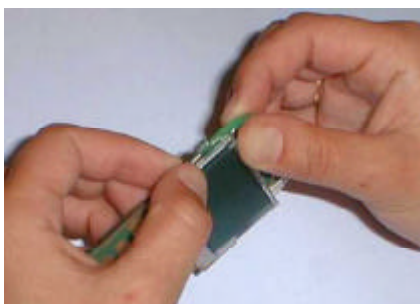
Ensure that both clips are fastened

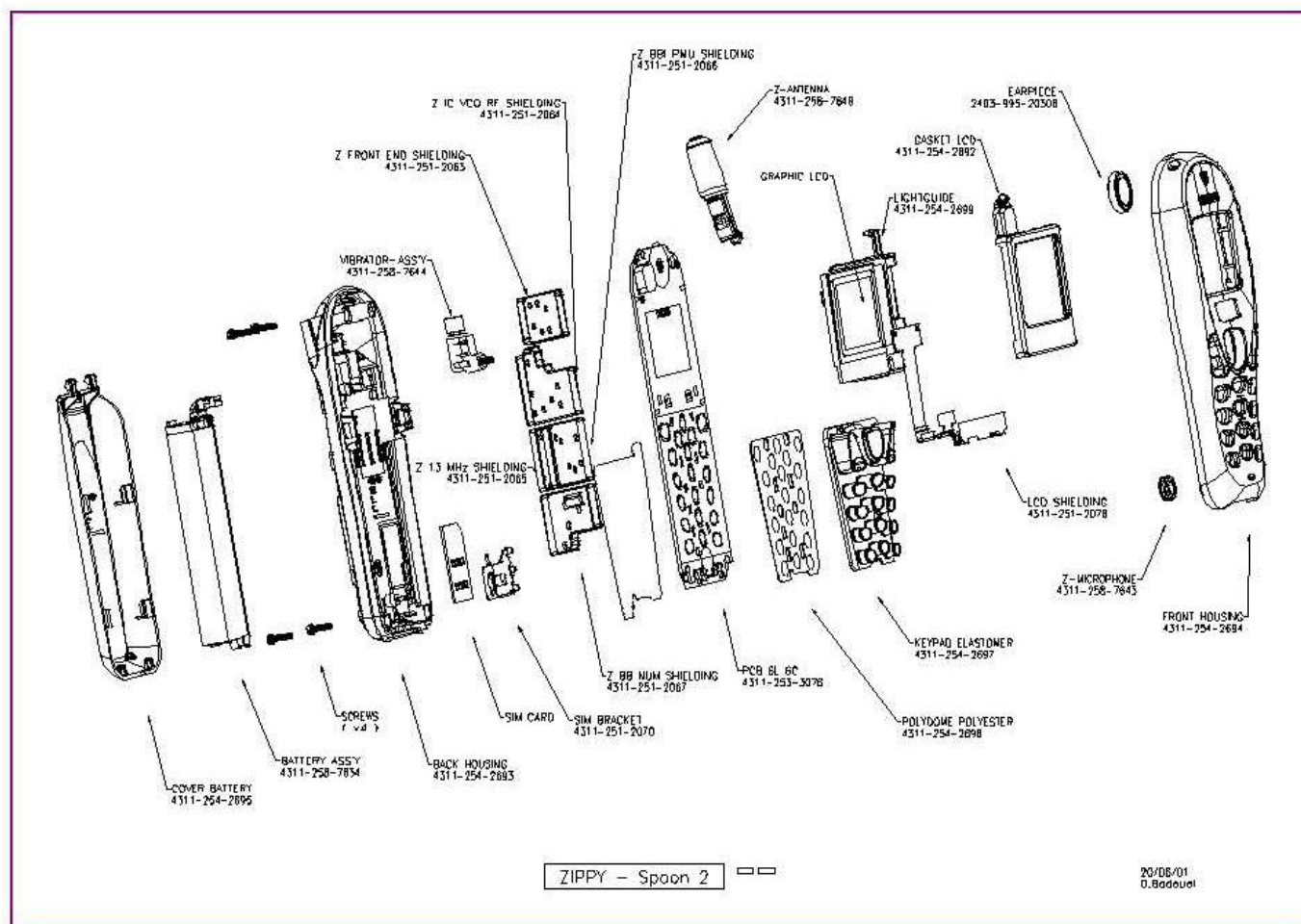| PHILIPS Consumer Communications Centre du Mans	Service Repair Support	VY-V-640-204 Page : 33 of 42 Langue : EN Date : 09/21/01

9.2.3   Set the antenna on the Rear Cabinet

9.2.4   Set the vibrator in the Rear Cabinet

Insert the vibrator

9.2.5   Set the subset in the Rear Cabinet

Press on Main board

On both sides to ensure that
the clips are will fastened
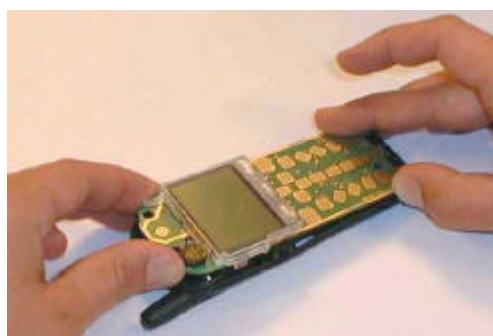
9.2.6   Set the LCD Gasket

Place the LCD Gasket

PHILIPS Consumer Communications **Centre du Mans**	**Service Repair Support**	**VY-V-640-204** **Page : 34 of 42** **Langue : EN** **Date : 09/21/01**

9.2.7   Close the Product

Remove the keypad protection

Use the ionizing gun to remove any dust form PCB. If needed, use isopropylic Alcohol to clean copper areas.

Set down the subset in the
Front Cabinet.
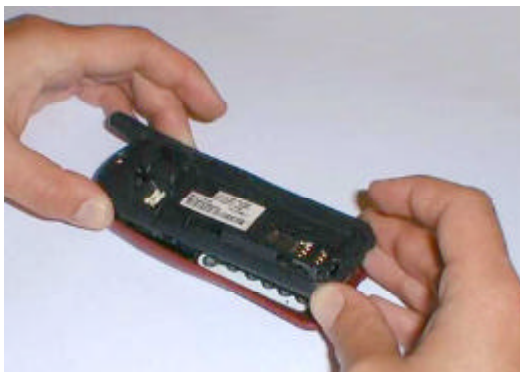
PHILIPS Consumer Communications Centre du Mans	Service Repair Support	VY-V-640-204 Page : 35 of 42 Langue : EN Date : 09/21/01

Tighten the 4 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).

Stick the Label

PHILIPS Consumer Communications **Centre du Mans**	**Service Repair Support**	**VY-V-640-204** **Page : 36 of 42** **Langue : EN** **Date : 09/21/01**

9.3 Exploded view of the transceiver

| PHILIPS Consumer Communications

Centre du Mans | Service Repair Support | VY-V-640-204
Page : 37 of 42
Langue : EN
Date : 09/21/01 |

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 connectors of the phone and those of the battery are not damaged.
- Clean the connectors.
- 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 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. (refer to chapter 8.3)

- Check the charger contacts for dust or missing pins.
- Check the mobile connector.
- Remove the battery. Check that both the connectors 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

PHILIPS Consumer Communications Centre du Mans	Service Repair Support	VY-V-640-204 Page : 38 of 42 Langue : EN Date : 09/21/01

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.

PHILIPS Consumer Communications Centre du Mans	Service Repair Support	VY-V-640-204 Page : 39 of 42 Langue : EN Date : 09/21/01

11.0 RECOMENDED PART LIST CT2888   FISIO311

11.1   Common Parts - Out Of Warranty

REFERENCE	DESIGNATION	POSITION	REPAIR LEVEL
4311 258 76343	Battery Zippy EMEA	9240	1
4311 258 74376	STD Charger EUROPE Friwo	9265	1
4311 254 38032	Cover Battery Spoon	0105	1
4311 255 50591	Label FISIO 311 SILVER	0235	1
4311 255 50602	Label Fisio 311 GOLD	0235	1
4311 256 07001	User Manual UK Z10-WAP	0260	1
4311 257 54913	Back Housing Spoon	0104	2
4311 250 40461	Screw Autoforming	0176	2
4311 254 26923	Gasket LCD Z10	0180	2
4311 258 76481	Fixed Antenna Z10	1708	2
4311 254 38573	FRONT HOUSING S2 CHI BLUE	0103	2
4311 258 60816	kEYBOARD S2 CHINE BLUE	0110	2
4311 254 38023	Front Housing S2 Black	0103	2
4311 258 60546	KEYBOARD S2 Black	0110	2
4311 254 38293	Front Housing S2 Warm red	0103	2
4311 258 60806	KEYBOARD S2 WARM RED	0110	2
4311 254 38584	FRONT HOUSING PAINT MBLU	0103	2
4311 258 60936	kEYBOARD MnB Wap EUROPE	0110	2
4311 254 38594	FRONT HOUSING OCEAN BLUE	0103	2
4311 258 60926	kEYPAD S2 OCEAN BLUE	0110	2
4311 254 38603	FRONT HOUSING S2 LIGHTGOLD	0103	2
4311 258 60916	kEYPAD S2 LIGHT GOLD	0110	2

PHILIPS Consumer Communications Centre du Mans	Service Repair Support	VY-V-640-204 Page : 40 of 42 Langue : EN Date : 09/21/01

11.2   Specific Parts - Out Of Warranty

FRANCE

REFERENCE	DESIGNATION	POSITION	REPAIR LEVEL
4311 256 07011	User Manual FR Z10-WAP	0260	1

ITALY

REFERENCE	DESIGNATION	POSITION	REPAIR LEVEL
4311 256 07041	User Manual IT Z10-WAP	0260	1
4311 256 09491	User Manual IT Zippy Voice	0260	1

UK

REFERENCE	DESIGNATION	POSITION	REPAIR LEVEL
4311 255 51141	User Manual CELLNET Z10	0260	1
4311 258 74386	STD Charger UK Friwo	9265	1
4311 255 51201	User Doc Pay&GO Z10		1

SPAIN

REFERENCE	DESIGNATION	POSITION	REPAIR LEVEL
4311 256 07081	User Manual SP Z10 WAP	0260	1

PHILIPS Consumer Communications Centre du Mans	Service Repair Support	VY-V-640-204 Page : 41 of 42 Langue : EN Date : 09/21/01

NETHERLAND

REFERENCE	DESIGNATION	POSITION	REPAIR LEVEL
4311 256 07031	User Manual NL Z10-WAP	0260	1
4311 256 07011	User Manual FR Z10-WAP	0260	1

11.3 Common parts – in warranty

REFERENCE	DESIGNATION	POSITION	REPAIR LEVEL
4311 258 76333	Graphic LCD Z10 TECDIS	1710	2
2403 995 20349	Earpiece 13MM + Gasket	1730	2
2422 549 44727	Microphone C KUF4323-01	1740	2

PHILIPS Consumer Communications Centre du Mans	Service Repair Support	VY-V-640-204 Page : 42 of 42 Langue : EN Date : 09/21/01

ANNEX 1