

Service
Service
Service

DS9600



Service Manual

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PHILIPS

A. GENERAL REQUIREMENTS

| | |
|-----------------------|--|
| Operating temperature | : between 5 °C and 45 °C |
| Storage temperature | : between -25 °C and +70 °C |
| Atmospheric pressure | : 96 K Pa ± 6 K Pa |
| Relative humidity | : between 40 and 80 % |
| Transmitted code | : RC5, RC6, and learnable format |
| Infrared wavelength: | : 950nm ± 50nm. |
| ESD | : with 8 kV applied to the outside, RC placed on grounded plane, no damage or functional failures. |
| Items not mentioned | : According UAW-422. |

B. ELECTRICAL REQUIREMENTS

| | |
|--|--|
| Nominal battery voltage | : 3.7 V (Li-Ion battery pack) |
| Operating voltage | : +4.2 @ 3.0 V (Li-Ion battery pack) : +5V (main adaptor) |
| Leakage current at nominal battery voltage (sleep mode) | : £ 5 mA. |
| Battery lifetime | : 2 hrs continuous use. |
| Transmitted intensity on axis at nominal battery voltage | : $^3 70\text{mW/Sr}$. |
| Total opening angle horizontal, vertical at nominal battery voltage | : $\pm 22.5^\circ \text{ le } ^3 12\text{mW/Sr}$. |
| Standby time | : 1 day |

C. PRODUCT DESCRIPTION

Maestro is a touchscreen LCD remote control with the following key characteristics:

- Colour active matrix touchscreen TFT LCD with white LED backlight (640x480, 16bit color)
- Backlight brightness control
- LCD refresh rate 60-80 Hz
- Back lighted hard buttons
- Innovative, customizable user interface
- Downloadable universal database
- Smart power management
- IR learning distance: 10...2.5cm @ +-40 degrees
- Learning frequency 17kHz -1MHz.
- Embedded Li-Ion battery with build-in recharger, 2100mAH capacity
- 16-bit Audio DA converter for CD-like sound quality
- USB device for connection with PC
- IEEE 802.11b/g WIFI module embedded
- Mono loudspeaker
- 64 MB Flash memory
- 64 Mbytes SDRAM
- 266MHz MX21 Dragonball processor.

MECHANICAL INSTRUCTIONS

Set Disassembly

1. Remove carefully the approbation sticker item 676 with the help of a label remover.



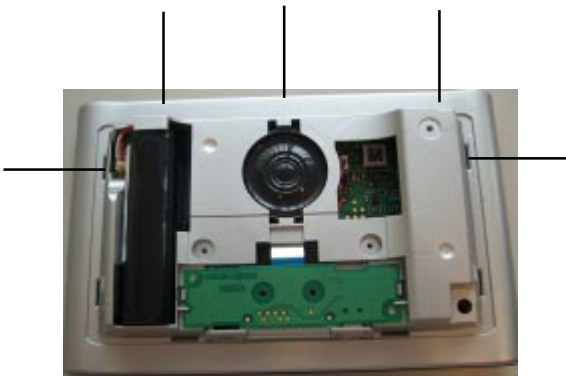
2. Remove one rubber feet item 07 on the right upper corner to make the screw accessible.



3. Remove 5 x screw (Torx screw M2x10).



3. Remove the bottompart cover item 20 by pulling it (bottom side) on the place as shown in the picture.



3. overview guide holes.
(for info only)

**Note that battery is accessible now for replacement !
for replacement see: Set re-assembly on page 3-2
it is recommended to order the battery (item 251) same
with a new approbation sticker (item 676) and new
rubber feets (item 07).**

Battery replacement set: 1 X item 251
1 X item 676
2 X item 07

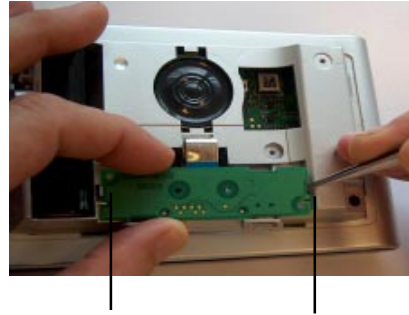
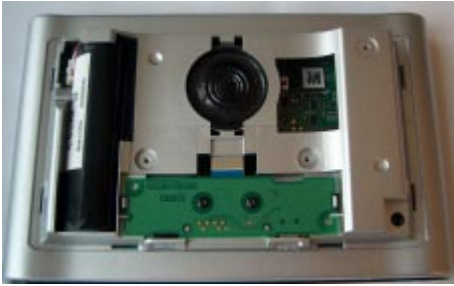


location of adhesive
Damper item 06

3. overview guideline.
(for info only)

MECHANICAL INSTRUCTIONS

Set Disassembly



4. Remove PB (item 1002) includes docking insert (item 22) by release the two "plastic snap hooks" as shown in the picture.



5a. Disconnect PB (item 1002) to release the flex-cable (unlock connector 1003 with the help of a pincet).



5b. Take battery out, disconnect battery plug (item 251) on connector 1701



5c. Remove 2 X screws (Torx screw M2X8) on the position as shown in the picture.



6. - Release bottompart (item 02) from toppart (item 01).
step 1: very important is to start up with one of the "sides" as shown in the picture.
- Put a sharp knife between toppart and bottompart and use this as a lever to separate the two parts.
- Important: push up the bottompart compared with the toppart to unlock the plastic snaps in the holes (bottompart).

MECHANICAL INSTRUCTIONS

Set Disassembly



7. - Release bottompart (item 02) from toppart (item 01).
step 2: continue with the "top" as shown in the picture.
- Put a sharp knife between toppart and bottompart and use this as a lever to separate the two parts.
 - Important: push up the toppart compared with the bottompart. to unlock the plastic snaps in the holes (bottompart).



8. - Release bottompart (item 02) from toppart (item 01).
step 3: continue with the "other side" as shown in the picture
- Put a sharp knife between toppart and bottompart and use this as a lever to separate the two parts.
 - Important: push up the bottompart compared with the toppart to unlock the plastic snaps in the holes (bottompart).



9. - Release bottompart (item 02) from toppart (item 01).
step 4: finally continue with the "under side" as shown in the picture.
- Put a sharp knife between toppart and bottompart and use this as a lever to separate the two parts.
 - Important: push up the toppart compared with the bottompart. (as shown in the picture).



10a. Disconnect the speaker plug (connector 1601).



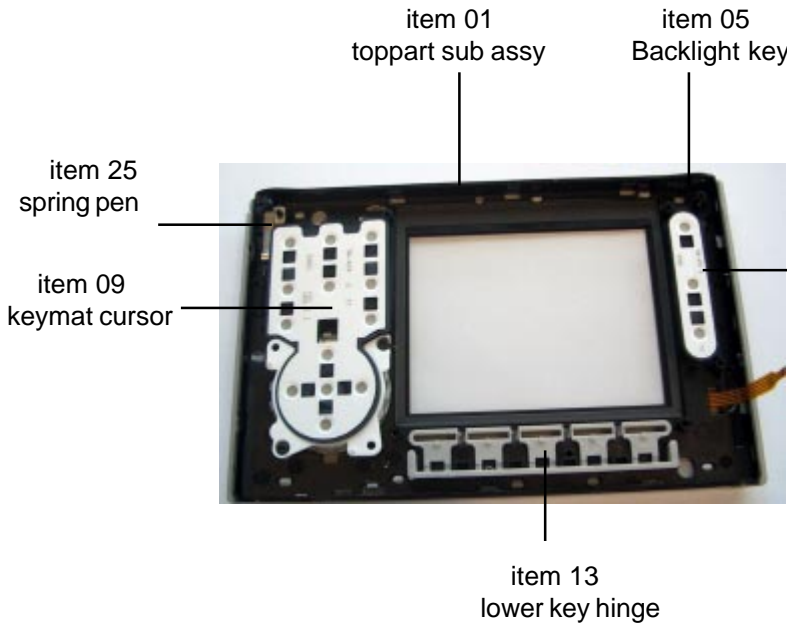
10b unlock connector 1402 with the help of a pincet and release the flex-cable from the touchscreen (item 10).

MECHANICAL INSTRUCTIONS

Set Disassembly



11. To release the PB (item 1001), remove 5 X screws (Torx M2X6) as shown in the picture.



12. Remove the following components from the topper sub assembly (item 01).

remove 2 X screw M2X4



Be carefully:
item 01 + item 10
toppart sub assy + touchscreen
preserve this subsam assy for the rest untouched!! don't remove anything else as mentioned in this list.

13. Remove the following components from the topper sub assembly (item 01)

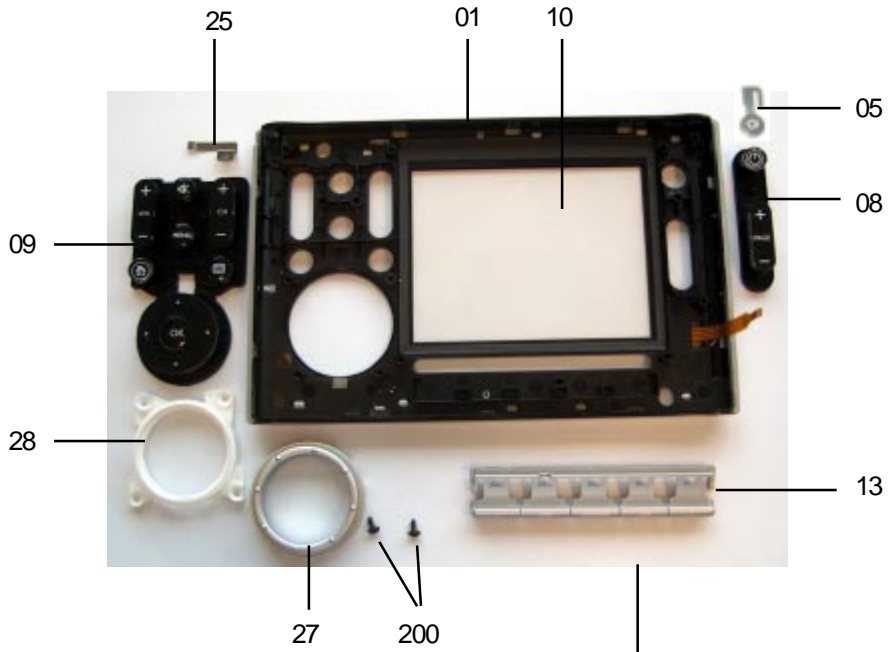
item 27
Cursor ring assy
TSU9600

item 28
Cursor holder
TSU9600

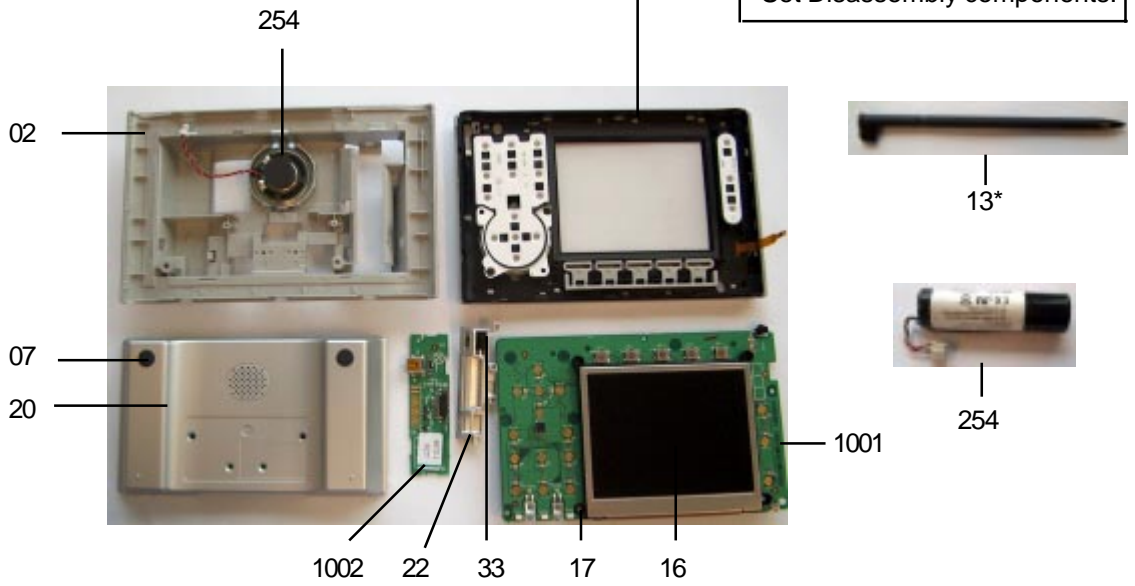
MECHANICAL INSTRUCTIONS

Set Disassembly

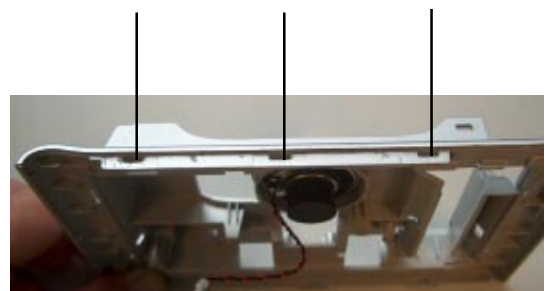
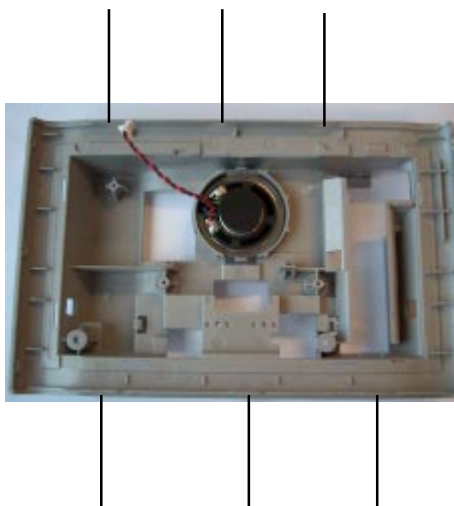
Overview mechanical toppart components.



Set Disassembly components.



Overview snap holes in bottompart.
(for info only)



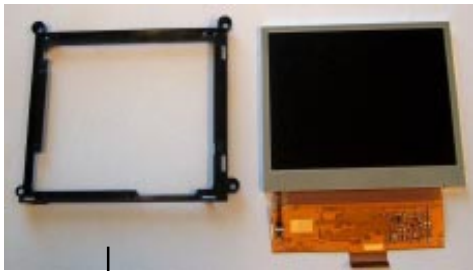
MECHANICAL INSTRUCTIONS

Set Disassembly and Re-assembly

Replacement off LCD module item 16

release the LCD bezel item 17 from PB 1001, push downwards to unlock the 4 plastic snaps in the snap holes as indicated in the picture.

release the flex cable from LCD item 16 to unlock the connector 1401 by till up the lid from connector 1401 (90 degrees), and take the LCD module out the LCD bezel(item 17).



item 17
LCD bezel

item 16
LCD module

For LCD re-assembling use the opposite sequence order and finally lock connector 1401 by pushing the lid from connector 1401 down again.

Replacement off touchscreen



item 01 + item10
service subsam touchscreen



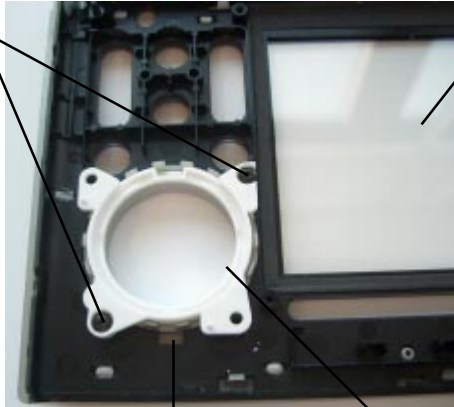
top

For service people, the toppart (item 01) same with the touchscreen (item 10) is already prepared as "subsam part" an can be ordered under the codenumber 3104 207 15620
In case of replacement follow the instructions Set Re-assembly on page 3-1

MECHANICAL INSTRUCTIONS

Set Re-assembly

add 2 X screw
M2X4



item 01
toppart sub assy
includes touchscreen
(item 10)

1. take toppart assy item 01
2. mount Cursor ring item 27
3. mount Cursor holder item 28
4. Add 2 X screw (Torx M2X4) on the position as shown in the picture

item 27
Cursor ring assy
TSU9600

item 28
Cursor holder
TSU9600

item 25
spring pen

item 09
keymat cursor

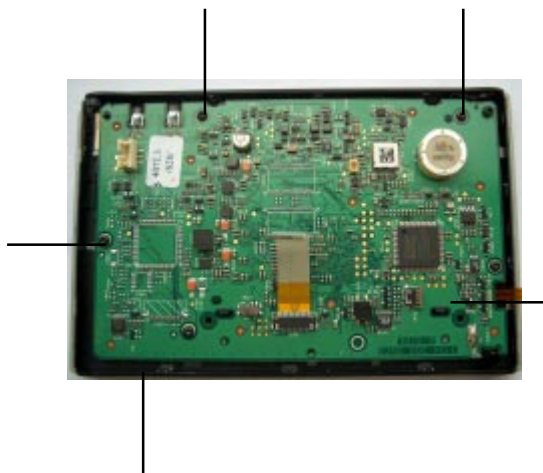


item 05
Backlight key

item 08
keymat stdby

5. mount spring pen item 25
6. mount keymat cursor item 09
7. mount keymat stdby item 08
8. mount lower key hinge item 13
9. mount Backlight key item 05 (as shown in the picture)

item 13
lower key hinge



10. mount PB item 1001 in the bottompart
11. add 5 X screws (Torx M2X6) on the position as shown in the picture. Note that these 5 screw holes on the PB are indicated with white circles (service painting).

MECHANICAL INSTRUCTIONS

Set Re-assembly

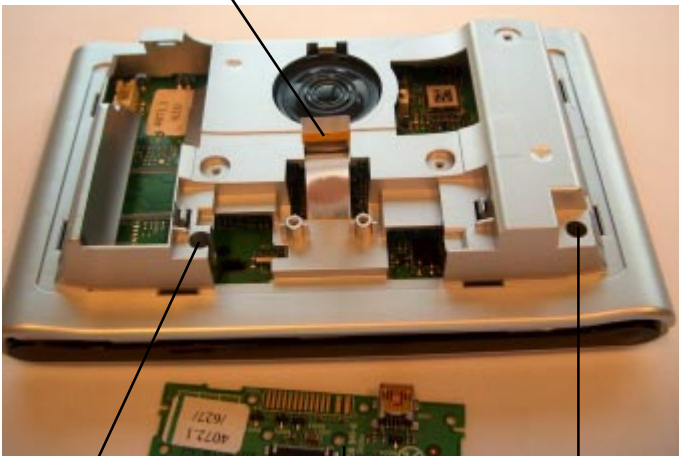


connect the speaker plug into connector 1601

- 12. take the bottompart item 02.
- 13. plug in the speaker plug (item 254) to connector 1601.
- 14. plug in the flex cable touchscreen into connector 1402.
- 15. lock connector 1402.

item 8000
flex cable

mount the flex cable from touchscreen into
connector 1402 and lock the connector.



screw

screw

- 16. place the bottompart to the toppart.
- 17. push the bottompart in such a way that the plastic snaps from the toppart are fixed into the snap holes from the bottompart.
- 18. add 2 X screw Torx M2X8 on the position as indicated in the picture.

PB item 1002



- 19. take PB item 1002.
- 20. take the flex cable item 8000 and put them into connector 1003 from PB item 1002.
- 21. lock connector 1003.
- 22. take battery item 251.
- 23. plug battery plug into connector 1701.
- 24. place battery in the battery holder position. Turn the battery until it's becomes in an mechanical free position (clamp free !), so that the battery can move (turn)a little bit.

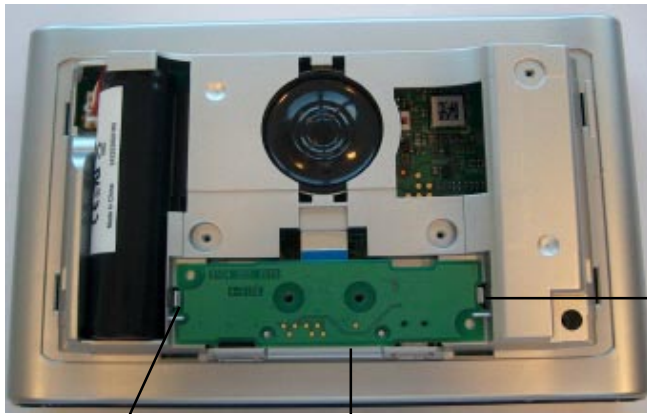
Battery
item 251

Docking insert
item 22

On-Off switch
item 33

MECHANICAL INSTRUCTIONS

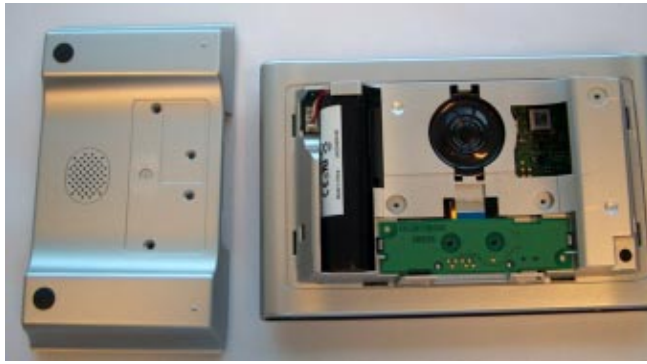
Set Re-assembly



25. place PB item 1002 same with Docking insert (item 22) includes On-Off switch (item 33) on the correct position between the two "snap hooks"
 Remark: Be sure that item 33 is in the same position as the position from switch 1706 located on PB item 1001

snap hook docking insert + On-Off switch

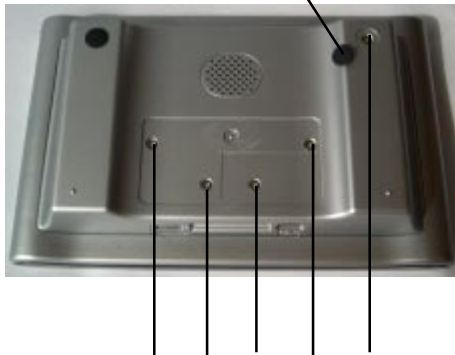
snap hook



26. place back the bottompart cover item 20.
 27. add 5 X screws (Torx M2X10).
 28. place a new rubber feet item 07 above the screw in the right upper corner.
 29. place new approbation sticker .

28. place a new rubber feet item 07 above the screw located in the right upper corner.

29. place (or replace) new approbation sticker item 676.

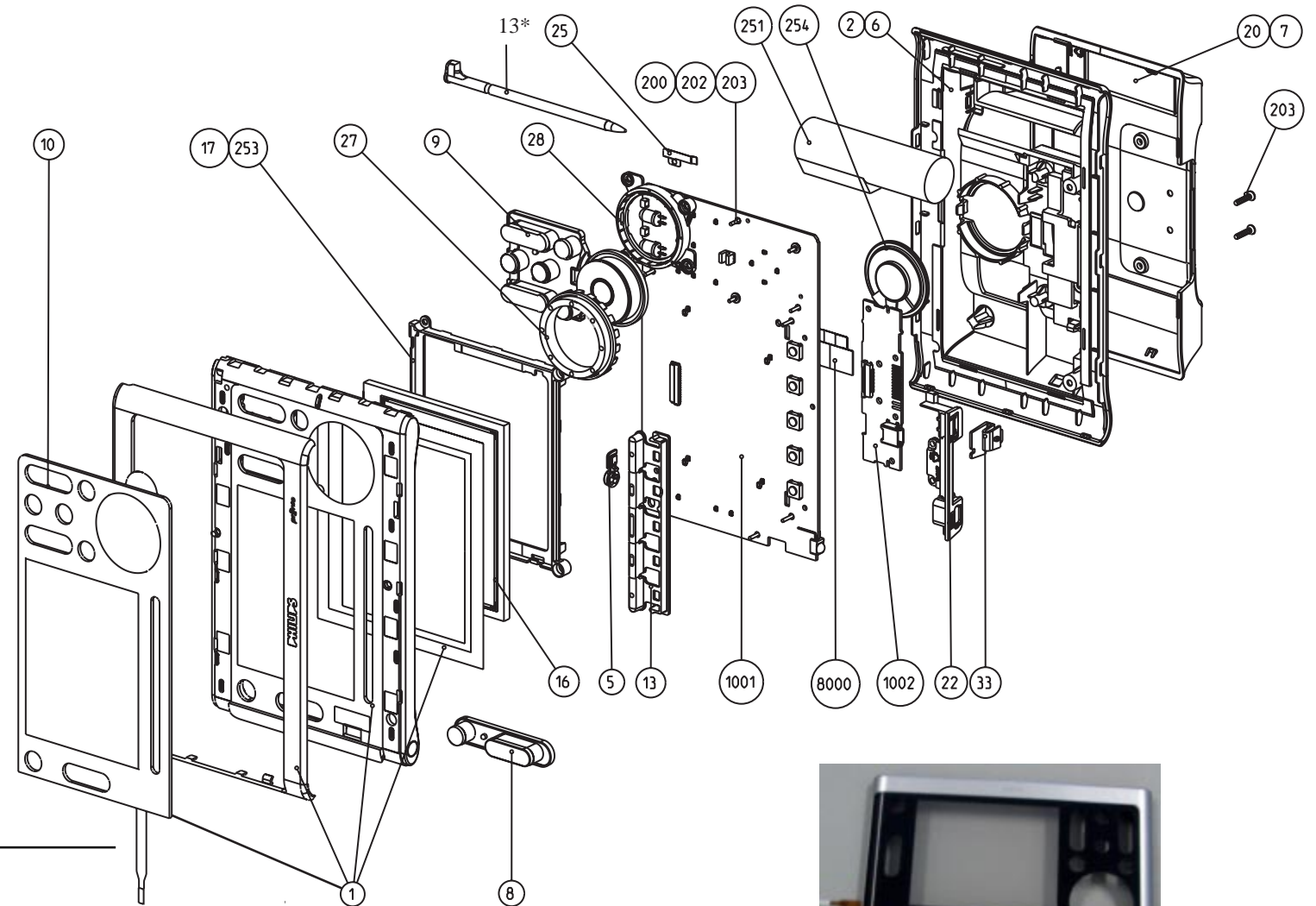


26. add 5 x screw (Torx screw M2x10)



PERSONAL NOTES:

EXPLODED VIEW



MECHANICAL & ELECTRICAL PART LIST

Mechanical parts

| | | |
|-----|----------------|-------------------------------|
| 1 | 3104 207 15620 | Service "subsam" touchscreen |
| 2 | 3104 207 81980 | Bottompart assy TSU9600 |
| 5 | 3104 207 82030 | Backlight key assy TSU9600 |
| 6 | 3104 204 22100 | Damper TSU9600 |
| 7 | 3139 224 20711 | Rubber feet DS4000- |
| 8 | 3104 207 82060 | Keymat stdby assy TSU9600 |
| 9 | 3104 207 82070 | Keymat cursor assy TSU9600 |
| 13 | 3104 207 82010 | Lower key hinge assy TSU9600 |
| 13* | 3104 204 21960 | Pen_TSU9600 |
| 16 | 9322 232 58682 | LCD module LS037V3DX01 |
| 17 | 3104 204 21940 | LCD bezel TSU9600 |
| 20 | 3104 207 81990 | Bottompart cover assy TSU9600 |
| 22 | 3104 207 82020 | Docking insert assy TSU9600 |
| 25 | 3104 201 24170 | Spring pen TSU9600 |
| 27 | 3104 207 82040 | Cursor ring assy TSU9600 |
| 28 | 3104 204 21930 | Cursor holder TSU9600 |
| 33 | 3104 204 22030 | On-Off swich TSU9600 |
| 676 | 3104 200 07120 | Approbation sticker |

Electrical parts

| | | |
|------|----------------|-----------------------------------|
| 251 | 2422 526 00183 | Battery pack LIP 3V7 2100mAH |
| 254 | 2422 264 00594 | Speaker includes wires and Damper |
| 1001 | 3104 207 15600 | PWB assy MAESTRO main |
| 1002 | 3104 207 15610 | PWB assy MAESTRO sub |
| 8000 | 3104 200 52600 | flex cable FFC20P/50/20/0.5B |

Note: Only the parts mentioned in this list are normal service parts

For more information:
E-mail: erik.gybels@philips.com



01 3104 207 15620 service "subsam" touchscreen



60 3140 117 69600 USB Cable



Battery replacement set:
1 X 251 2422 526 00186 Battery pack
1 X 676 3104 200 07120 Approbation sticker
2 X 07 3139 224 20711 Rubber feet



13* 3104 204 21960 Pen TSU_9600



254 2422 264 00594 Speaker

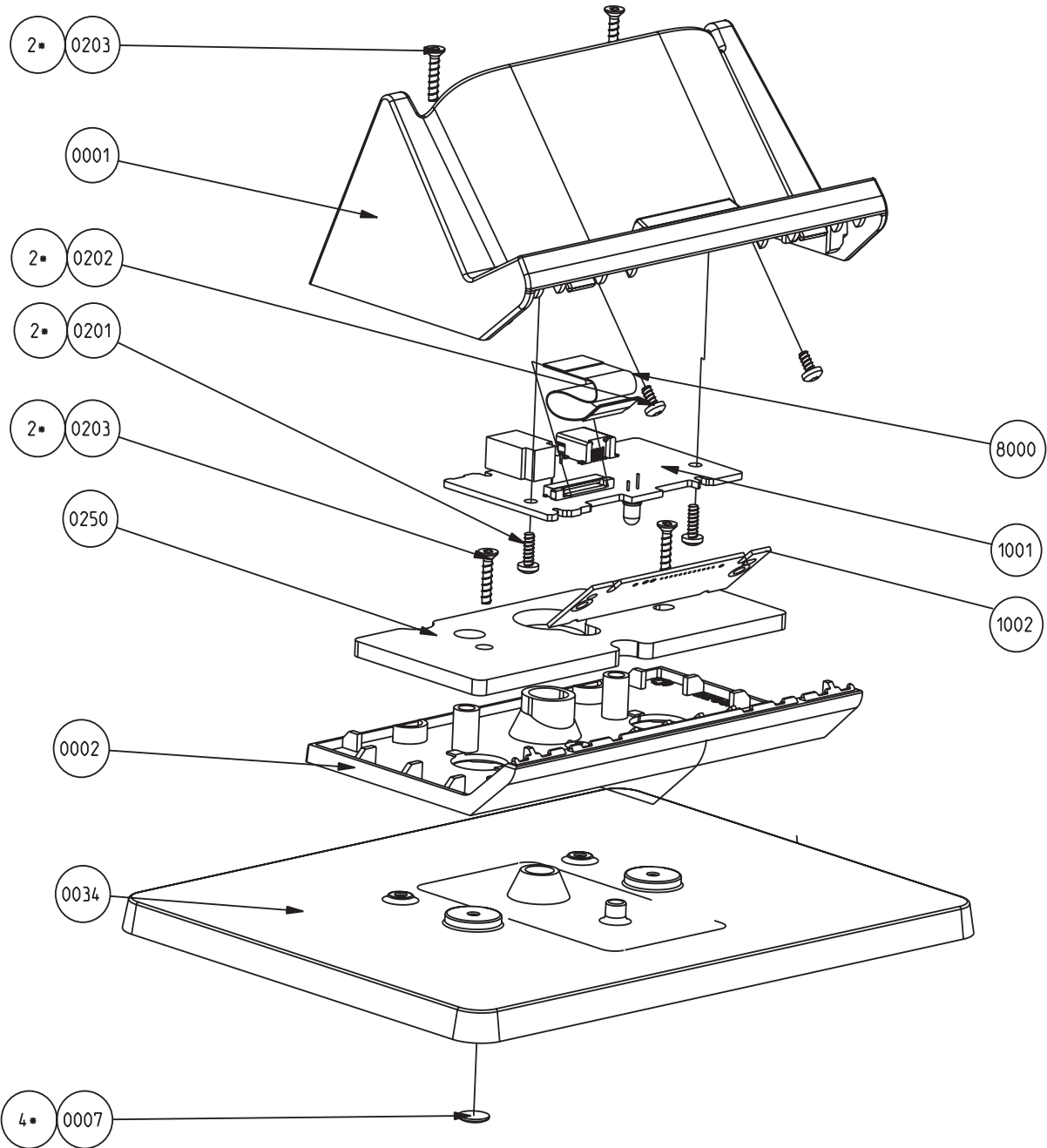


10 3140 118 33800 AC/DC Adaptor AY3192/00 only for /00
3140 118 33810 AC/DC Adaptor AY3192/05 only for /05
3140 118 33820 AC/DC Adaptor AY3192/17 only for /37
3140 178 30150 AC/DC Adaptor AY4108/75 only for /79

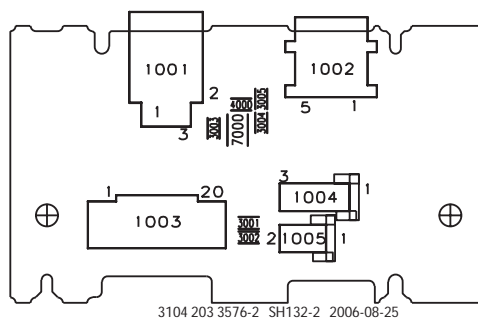
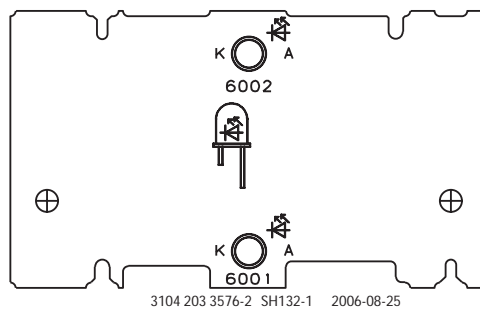
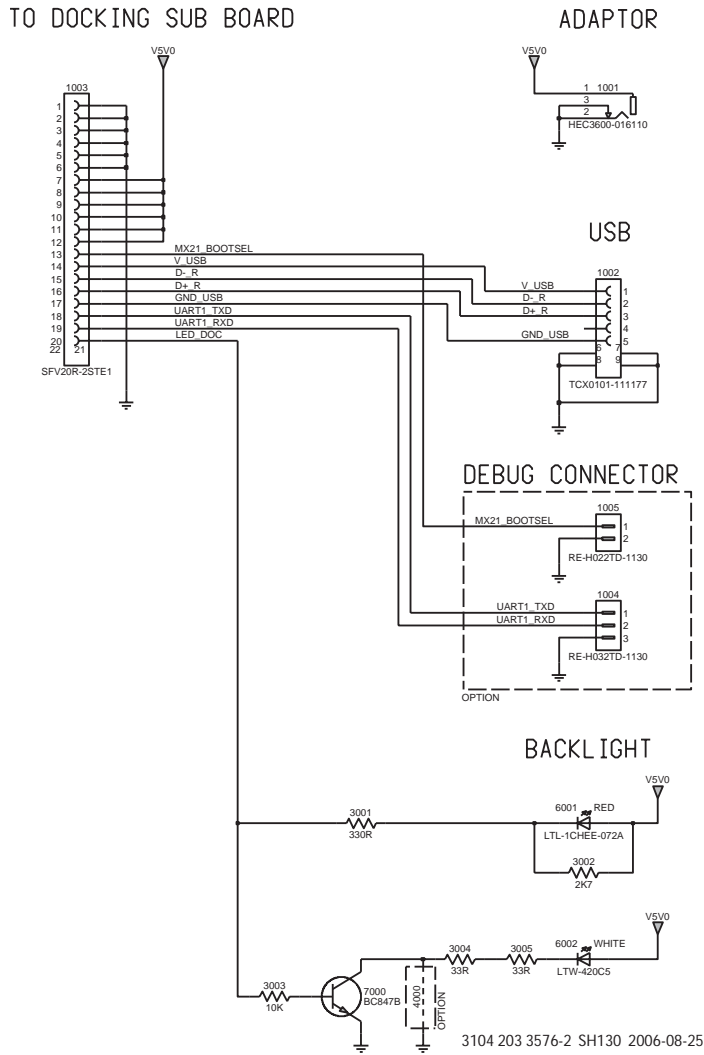


DOCKING STATION DS9600

EXPLODED VIEW - Docking Station DS9600

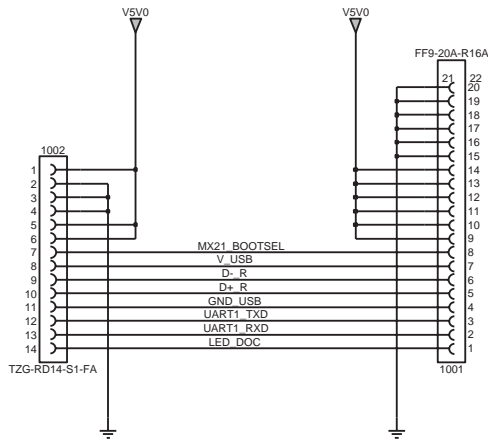


ELECTRICAL DIAGRAMS Docking Station DS9600

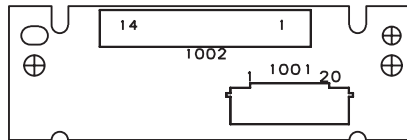


ELECTRICAL DIAGRAMS Docking Station DS9600

DOCKING CONNECTOR TO DOCKING MAIN BOARD

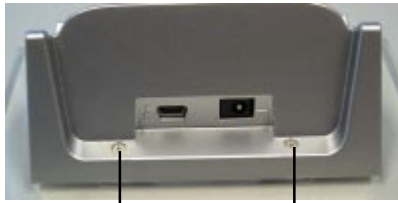


3104 203 3578-2 SH130 2006-08-25



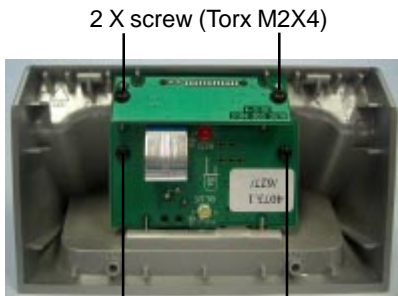
3104 203 3578-2 SH132 2006-08-25

MECHANICAL INSTRUCTIONS Docking Station DS9600 Set Disassembly



2 X screw (Torx M2X10)

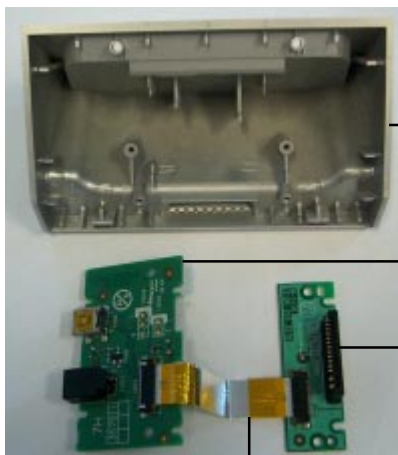
To release the Docking Station from the groundplate (item 34) remove 2 x screw as indicated in the picture.



2 X screw (Torx M2X4)

2 X screw (Torx M2X6)

Till up toppart, all PB's are accessible now
1. Remove 2 X screw (M2X4) for PB 1002
2. Remove 2 X screw (M2X6) for PB 1001

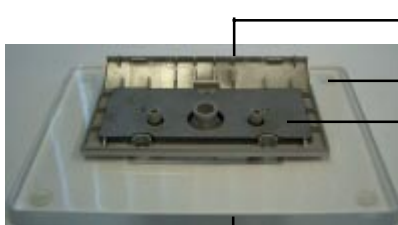


item 01 Toppart docking

item 1001 PB Docking main

item 1002 PB Docking sub

item 8000 Flex cable FFC20P/50/20/0.5B



item 02 PB Bottompart docking

item 07 Rubber feet (4 X)

item 250 Metal plate

2 X screw (M2X10)

item 34 Groundplate docking-TSU9600



item 682 Factory label

item 677 Approbation sticker

MECHANICAL & ELECTRICAL PART LIST - Docking Station DS9600

ELECTRICAL PARTS - MECHANICAL PARTS:

3104 207 15630 Service Docking station

Note: Only the part mentioned in this list is a normal service part

For more information :

E-mail: erik.gybels@philips.com

for information only! (no service parts):

| | | |
|------|------------------|-------------------------------|
| 01 | 3104 207 82090 | Toppart sub assy_TSU9600 |
| 02 | 3104 207 82100 | Bottompart dock. assy_TSU9600 |
| 07 | 3104 204 22110 | Rubber feet_TSU9600 |
| 34 | 3104 204 22070 | Groundplate docking_TSU9600 |
| 201 | 3104 200 40040 | Torx screw M2X6 |
| 202 | 3104 200 40030 | Torx screw M2X4 |
| 203 | 3104 200 40140 | Torx screw M2X10 |
| 250 | 3104 201 24180 | Metal plate DS9600 |
| 682 | 3104 200 80680 | Factory label |
| 677 | 3104 200 07130 | Approbation sticker |
| 1001 | 3104 207 40730?? | PB Docking main |
| 1002 | 3104 207 40750?? | PB Docking sub |
| 8000 | 3104 200 52600 | flex cable FFC20P/50/20/0.5B |