*DRAFT 26th September 2001*

Prada Staff Device & Charging Station
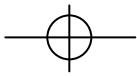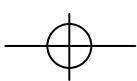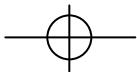
User Manual

Prada Staff Device & Charging Station
User Manual
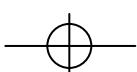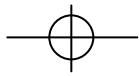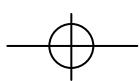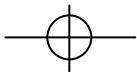
staff device

This section of the documentation covers the hardware aspects of the Prada Staff Device in the form of a standard platform for Prada's in-store sales tool.

It is intended for use initially as guidance for Prada's software implementation partner.

In the longer term, it is designed to be a source of reference for the in-store Prada IT support team.
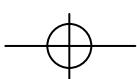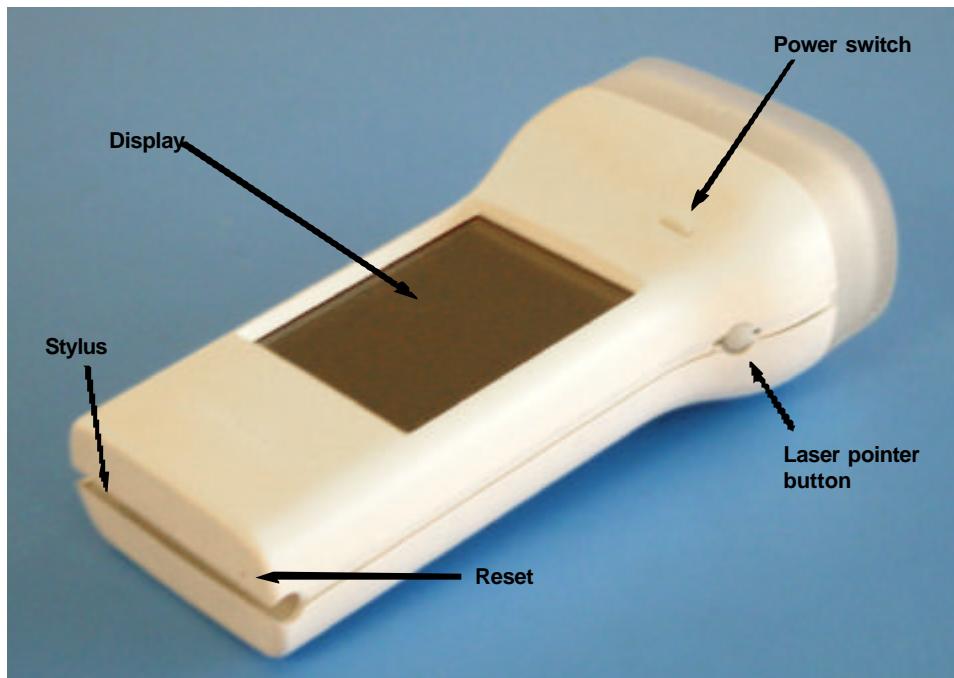
Looking at the outside of the device, the following features are accessible:

Power switch
This works just like the ON/OFF button on the standard PocketPC. Press (gently) once to switch on and again to switch off.

Laser pointer button
To operate the laser pointer, press and hold the laser pointer button. When released, the laser beam will switch off. WARNING, before operating, ensure that the device is pointing away from yourself, and not at anybody else. See notes later about laser safety.

Touch screen display
The display shows the user interface. To enable the display, switch the device on using the power switch mentioned above. If the display becomes dim (the backlight has switched off), tap on the screen once to re-enable the backlight.

Stylus and stylus retaining slot
The stylus is stored in the slot at the base of the device. It can be removed and used for more precise interaction with the touch screen display.

Reset hole
The small hole at the base of the device is for resetting the device, should a serious error occur. This will re-boot the processor unit, but will not remove data or applications from the device.

6 external features
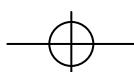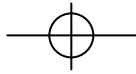
At the front of the device, there is a translucent rubber end section. Within this section are a number of clear transmission points:

Charging lamp
When the device is docked in its charging unit (see later), this blue lamp flashes to indicate charging is in progress. When the lamp is constantly on, then charging is complete.
If this lamp flashes during normal use, it is a warning that the batteries need to be charged.

Laser beam
Within the central cluster is the laser beam transmission hole. The light from the laser beam comes out of this point. Avoid looking into this hole with the laser beam activated. It is wise not to look into this hole at any time as it might be possible to accidentally press the laser beam button.

Infra-red port
the infra-red port is used to communicate with the device from a desktop PC. this may be needed when loading new software onto the device when first use.

There is also another hole within the central cluster that is not currently used.

Laser beam
WARNING. Do not stare into beam

Not used

Charging lamp

Infra-red port

Charging circuit

Laser

Laser power switch

Battery pack for laser and

Processor (inside)

Wireless network card

COMPAQ

Battery for expansion pack & network card

LCD screen (underside)

iPAQ main battery (inside)

Speaker
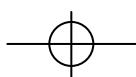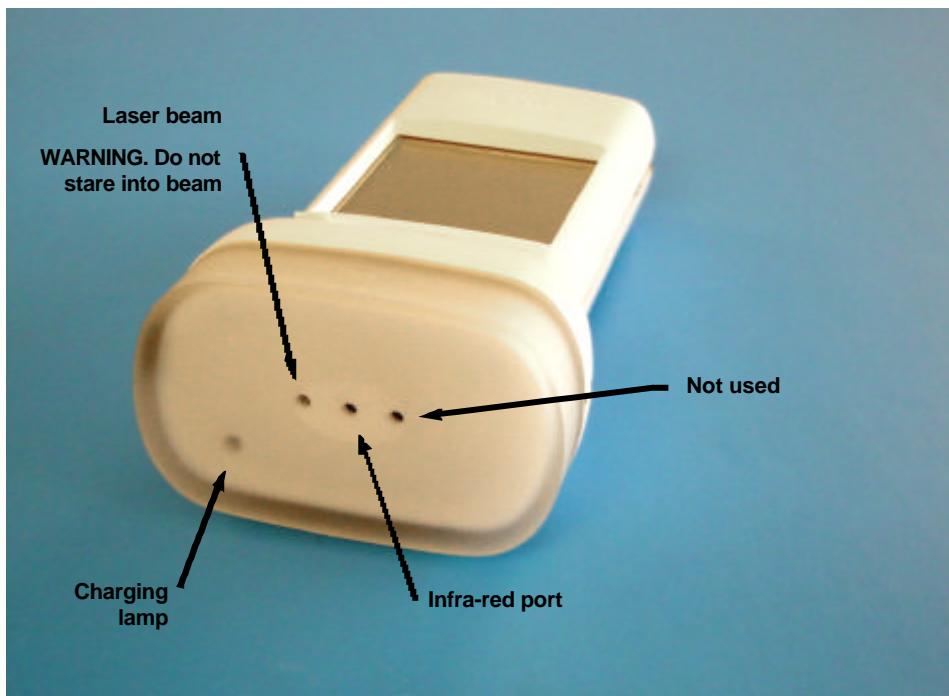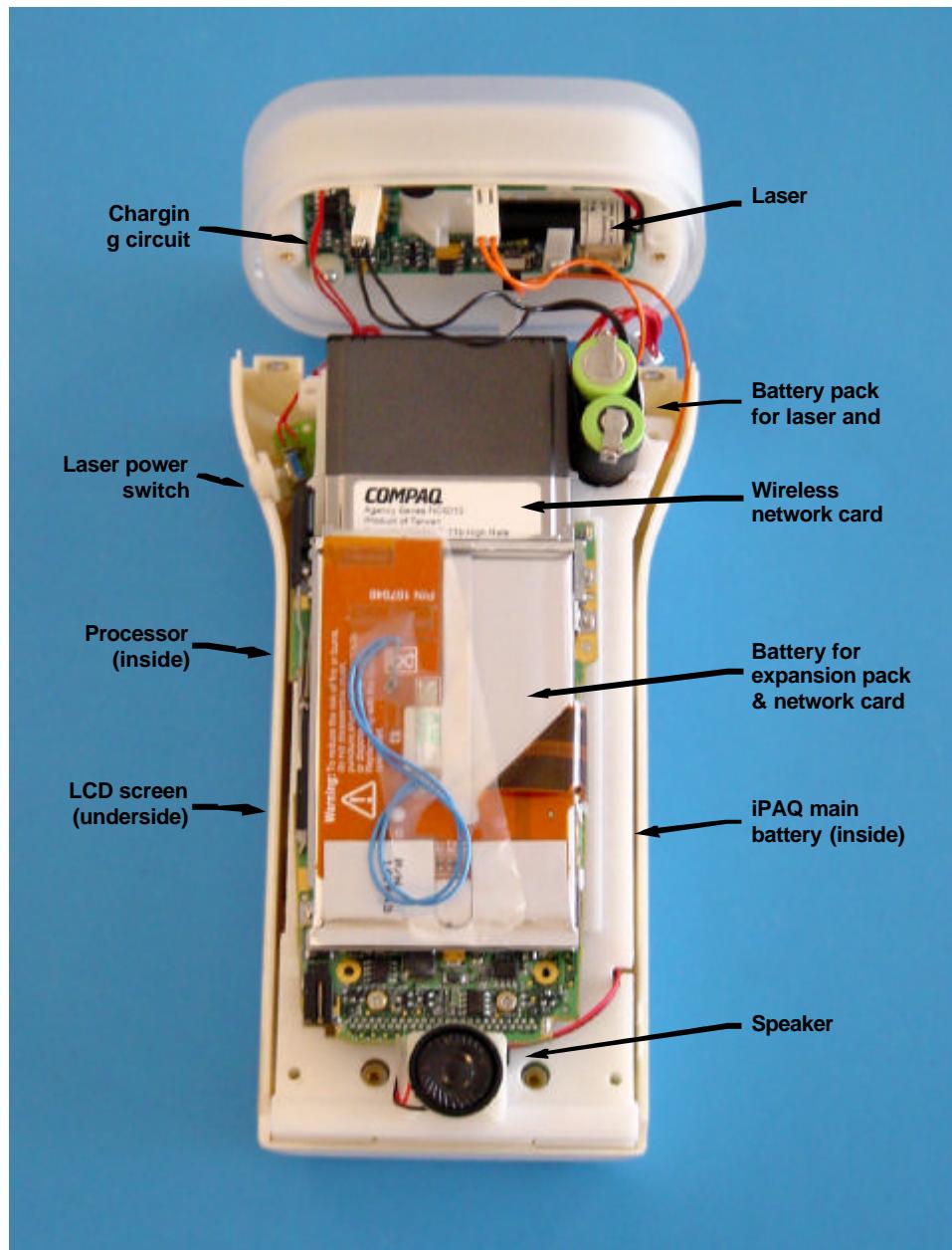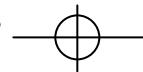
8 inside the case
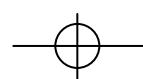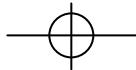
It is not envisaged that the staff device will be opened by staff, however it may be considered useful information to understand the internal components that create this product.
Inside the Prada staff device are a number of standard electronic components, as well as some custom made elements.

Processor
The processor component is a Compaq iPaq (model 3630) with 32MB RAM. This is mounted inside the chassis.
The main battery is mounted inside the chassis, providing power to the processor and LCD screen.

LCD screen
The display is mounted to the chassis inside the case.

Networking
The iPAQ expansion jacket provides the expansion slot and battery power for the network card.
The networking is provided by a wireless network card.

Laser unit
The laser pointer is a 1 mW Class II laser diode module.
The switch for the laser is located on the side of the case. This is a push to make switch. The laser will only operate whilst this switch is pressed.

RF ID Reader
The RF reader is a custom arrangement, including standard parts from IDSystems Ltd, OEM -185 scan module.

Charging circuit
The RF reader module and laser module are powered by a custom battery and charging control circuit.
Speaker
the speaker provides for any audio requirements that the software may

require.

The iPAQ and the expansion jacket components have been removed from their original casing so as to reduce overall size.

hardware components *9*

INPUT: 5V DC / 2A
CONTAINS Li-ION
RECHARGEABLE
BATTERY. DISPOSE
OF PROPERLY

REGISTERED DESIGN
MANUFACTURED BY IDEO

UL LISTED

FC COMPLIES WITH
FCC STANDARDS

PRADA STAFF DEVICE
MODEL NO. P01

CAUTION CLASS II LASER PRODUCT
LASER RADIATION DO NOT STARE INTO BEAM

PRADA
ASSEMBLED IN UK
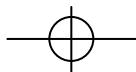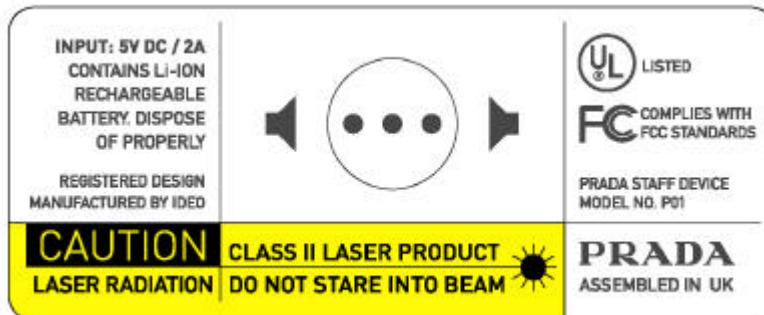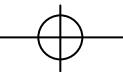
IMPORTANT: Laser Information

The laser pointer built into the staff device uses a Class II laser component.

Class II lasers emit visible laser light with power levels less than 1 mW radiant power and are capable of creating eye damage through chronic exposure.
The human eye blink reflex, which occurs within 0.25 seconds of exposure to the Class II laser beam, normally provides adequate protection.
It is possible however to overcome the blink response and stare into the Class II laser long enough to damage the eye. Young children, especially babies may not have the responses to look away from the beam..
Exposure to a couple of seconds of the laser beam will cause only temporary "spots" in front of the eyes, but should still be avoided. The power is great enough to damage the eye if someone stares directly into the beam for long enough.

Class II lasers are exempt from any formal control measures, but common sense precautions should be taken whenever the device is used.

It is essential that all staff using this device are trained on the safe use of the laser function.

To minimize risk of direct eye exposure, staff using this device should exercise these precautions:

* Do not look intentionally into the laser beam or at a specular reflection, regardless of its power.

* Never point the laser at another member of staff or public, especially at their eyes.

* Avoid pointing the laser at glass or other reflective surfaces where the beam could accidentally reflect into someone's eyes.

* When the laser is on, ensure you can see where the light spot terminates its path.

* Do not wave the device around with the laser on.

* Never leave the staff device unattended where a member of public could use it.

The staff device carries a laser warning label. Should this become damaged, unreadable or is removed, it should be replaced.

NOTE: The laser component uses the same battery power supply as the RF tag reader component. With extended use, this may reduce the amount of power and time

12
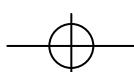
This section covers installation of software components onto the Staff Device. Although some components such as network drivers will be pre-installed before shipment.

The notes contained here are appropriate for dealing with small quantities of devices. However, a more structured installation process may be needed for larger quantities.

Should the network driver and other components need to be re-installed due to total power loss or other major failure, then the following steps can be taken to re-install the necessary driver.

When the Staff Device was first shipped, the network driver for the wireless LAN card was already installed. This was done in order to functionally test the networking hardware.

NOTE: The specific settings required for the intended environment may however need to be configured to work with the environment's networking architecture.

With a network driver installed and configured correctly, it would be possible to complete all further software installation via the network. However, it may be preferred to complete the installation via the infra-red port.

Connecting to a desktop PC
Ensure that Microsoft Activesync (v3.5) is installed and working correctly on the desktop PC.

Ensure that an active Infra-red port is available and that the Connection Settings use the Infra-red port as default.

Switch on the Staff device.

Use the stylus to navigate to 'Start:Programs:Connections' and tap on 'IR ActiveSync'.
Point to front of the Staff device at the Infra-red port on the desktop PC.

When prompted, connect as 'Guest'. It will not be necessary to set up partnerships with every device. It is also likely that the device will only need to be synchronized this one time for download of application data and drivers.

Network Card Driver
The WL110 network card requires drivers in order to operate.
Install the drivers by running the installer application on the desktop PC, 'setup.exe'.
The configuration of the network card drivers needs to be done, but this can wait until all other installations are complete.

This will cover the basic components as delivered, but other components will be required before the device is shipped to the end user.

Flash
If Flash is required for the final client application, then now is the time to install the Flash Player component.
Run the installer application on the desktop PC 'FlashPlayer4DR-SA-Installer.exe'.
If this is not the first time this installer has been run, the first time it will ask if you wish to remove all components. This is OK. Run the installer a second time and the components will be installed.

Client application
The client application should be installed.

Disconnect device
Disconnect the device from the PC.
Adjust network settings, other unique settings, and reset the device.
Launch the client application.

software configuration *11*
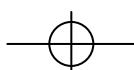
The following settings are suggested to be set as default for the iPaq, to prolong battery life with optimum usability. These items can be set in the registry and could be automatically set by installing registry values.

Start > Programs > Settings > System > Power
Check on battery power, Select turn off after 3 mins
Uncheck on external power

Start > Programs > Settings > System > Backlight
Battery Power tab
Check turn off backlight, Select after 30 sec
External Power tab
Check turn off backlight, Select after 1 min
Brightness tab
Check Med Bright

Start > Programs > Settings > Connections > PC
Uncheck Automatically synchronise when serial cable connected

Start > Programs > Settings > Wireless LAN Client > Edit Wireless Profiles > Edit Profile > Advanced tab
Check Card power management On.

Start > Programs > Wireless LAN Client > Menu bar: Tools
Untick Load/ Unload automatically

Start > Programs > Settings > Personal > Sounds & Reminders > Volume tab

Check events
Check Programs
Check Notifications (required for alarm function)

Start > Programs > Settings > Personal > Sounds & Reminders > Reminders tab

Uncheck display message
Uncheck flash light
Check play sound.

Start > Settings > System tab > Clock > Time tab
Set home to New York.
Set timezone to GMT-5 Eastern US.
Set date (not registry).
Set time (not registry).

Start > Settings > System tab > Clock > Alarms tab

Set daily alarm at time TBD.

Start > Settings > System tab > Regional Settings
Set region to English (United States).

Identification
Set User Name as 'staffDevice' (whatever device username is chosen).
Set password as 'devicePassword' (whatever device password is chosen).
Set Domain as 'sub.sub.domain' (whatever network domain is chosen).

Network information
Set IP address as '10.1.1.56' (whatever IP address is chosen - UNIQUE).
Set Subnet mask as '255.255.0.0' (whatever network subnet mask is required).
Set default gateway as '10.1.1.1' (whatever network gateway is required).
Set DNS as '10.1.1.254' (or whatever primary DNS is required).

The network settings will need to be defined and configured by your network services department.
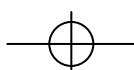
United States Federal Communications Commission Notice

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

The staff device contains the following radio emitting devices:

Compaq Wireless LAN PCMCIA card model WL110.
Device FCC ID: IMRWLPCE24H
Operating frequency 2.45 GHz

idSystems OEM 185 RFID scan module
Device FCC ID: ILPWARFIDHF
Operating frequency 13.5 MHz

Laser safety information
See Page 10.

Battery Safety
This device contains internal lithium polymer battery packs and nickel metal hydride batteries. To reduce the of fire or burns, do not disassemble, crush, puncture, short external contacts, dispose of in fire or water. Replacement should only be done by IDEO Europe.

13 Regulatory information *13*
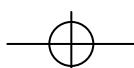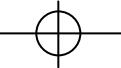
Compaq iPAQ
Compaq iPAQ model . . . . .HP3630 Pocket PC computer
Compaq P/N 170294-031
System RAM . . . . .32 MB
System ROM . . . . .16 MB (Flash memory)
Processor . . . . ARM SA1110
ROM Version . . . . .1.77.00 ENG
ROM Date . . . . .03/08/01 (8 March 2001)
OS Version . . . . .Windows CE 3.0
Battery type . . . . .Lithium Polymer
Battery capacity . . . . .950mAh at 4 V
Battery charging cycles . . . . .400 - 500
Battery charging time . . . . .2 hours
Display . . . . .Colour backlit TFT LCD
Resolution . . . . .240 wide by 320 tall
User input . . . . .Touchscreen only
Data upload method . . . . .ActiveSync through Infra Red port
US Approvals . . . . .UL Listed: E193626Agency series number PE2030

Compaq PCMCIA Card slot
Compaq iPAQ model . . . . .PC Card Expansion Pack
Compaq P/N 170338-B21
Compatible cards . . . . .Type II PC Cards compatible with the Pocket_PC
Battery type . . . . .Lithium Polymer
Battery capacity . . . . .950mAh at 4 V
Battery charging cycles . . . . .400 - 500
Battery charging time . . . . .2 hours
US Approvals . . . . .UL Listed: E193626Agency series number PE2036C

Wireless LAN feature
Compaq model . . . . .Wireless LAN PC Card WL 110
Compaq P/N 191808-B21
Wireless LAN standard . . . . IEEE 802.11b
Data security . . . . .128 bit
Power setting . . . . .TBC
FCC ID IMRWLPCE24H
US Approvals . . . . .Agency series NC5010
Operating Frequency 2.45GHz

RFID scanning
Product . . . . .ID systems RFID scan module
P/N OEM-185
Tag Compatibility . . . . .TBD
Read range . . . . .2-3 cm
iPAQ signal compatibility . . . . .TX, RX at 19200 baud
RFID battery . . . . .NiMH
RFID battery capacity . . . . .1200 mAh at 2.4V
RFID battery charging time . . . . .3.5 hours
RFID battery charging cycles 500

14 specifications
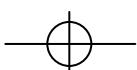
charging state LED indication . . . . .yes
Operating frequency 13.5MHz

Environmental
Operating temperature range . . . . .5°C to 40°C
Relative humidity(non-condensing) . . . . .20 to 90%

Chemical compatibility
water . . . . .yes
non-abrasive mild detergent . . . . .yes
Body oil and perspiration . . . . .yes

Mechanical
plastic moulding materials . . . . flame retardant UL approved
Removable pen to operate touchscreen . . . . .yes
Pen retention mechanism . . . . .yes

Electrical
Power input. . . . . .5 V regulated DC, 2A power supply
iPAQ power on/off push button . . . . .yes
Laser on/off push button . . . . .yes

Colour
External mouldings . . . . .white
Rubber cap . . . . .translucent
Pen . . . . clear
Buttons . . . . .TBD
Cleaning . . . . .Wipe clean only

Laser pointer
type . . . . .class II laser diode module
light wavelength . . . . .650 nm (red)
laser power output . . . .<1mW
beam shape . . . . .point
Laser activation . . . . .user operated push button (normally off)
operating voltage 3-5V
operating current . . . .<50 mA
US approvals . . . . .21 CFR 1040 for a class II laser

US Regulatory compliance
US Approvals . . . . 47 CFR 15 , 21 CFR 1005, 21 CFR 1040, UL 60950

Optimum power settings
iPAQ power save suspend time . . . . .3 minutes
iPAQ backlight setting . . . . .medium brightness
iPAQ backlight power save time . . . . .30 seconds
wireless LAN power save mode . . . . .TBD
wireless LAN transmit power setting . . . . .TBD
RFID scanning duty cycle . . . . .one scan every 5 seconds (TBC)
Staff trained to turn off device . . . . .required
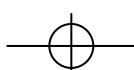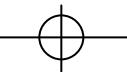
16
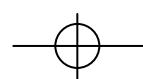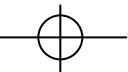
charging station

This section of the documentation covers the hardware aspects of the Prada Staff Device Charging Station.

It is intended for use initially as guidance for Prada's software and hardware installation partners.

In the longer term, it is designed to be a source of reference for the in-store Prada IT support team. and store manager.
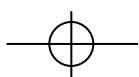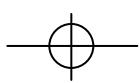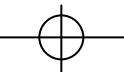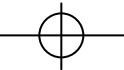
The charging stations can re-charge up to 24 staff devices at one time.

To operate, ensure that the charging station is plugged into the mains power outlet, and that the power switch at the rear is turned on.

Insert the staff device into one of the available slots, either way round.

You do not need to fill all available slots before charging can begin.

The blue lamp on the staff device will start to flash at a rate of one flash per second.

When charging is complete, the blue lamp will remain on steady.

The charging process from a fully drained device to fully charged will take about 3 hours.

For optimum battery performance, always fully re-charge the device before using.

Disconnect the charging station when not in use.

Mechanical

Devices supported per station 24
Flame retardant materials . . . . .yes
Weight . . . . .TBD Kg
Maximum incline during use . . . . .5 degrees

Electrical

Supply to each device . . . . 5V regulated DC at 2A
Switch mode power supply . . . . .UL approved
 . . . . .5V 50A (250W)
Mains power . . . . .110 - 240V AC
On/off mains power button . . . . .yes
Separate user replaceable fuse . . . . .TBD

Environmental

Temperature range . . . . .0° to 40°C TBD
Relative humidity(non-condensing) . . . . 20 to 90% TBD

Chemical compatibility

Chemical resistance . . . . .Body oil and perspiration
Cleaning . . . . .Wipe clean only

Regulatory compliance

US approvals . . . . .21 CFR 1040, 21 CFR 1005

specifications *19*
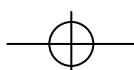
This section is not intended to be a complete problem solver, as many problems amy be associated with the client software, network settings, user understanding, and so on, but aims to give direction to some of the more common problems that might be encountered during normal operational use.

My Staff Device will not switch on
The most common reason for this is lack of power. Once the iPAQ's internal batteries have become drained, the unit will fail to switch on. There should still be a small amount of power left inside, to keep the data stored on the device safe, but it will not switch on.
To resolve this problem, place the device into its charging station and leave until fully re-charged. This will normally take about 4 hours.
If the staff device will not switch on, do not attempt to reset the device using the reset switch. This may drain the batteries to such a low level that data loss may occur.

The blue charging lamp is flashing slowly, but it is not in the charger.
This is a warning that the battery power to the RF reader and the laser needs to be charged. Put the device in the charging station and leave until fully re-charged

The backlight goes off
The backlight is normally configured so that it will go off after a period of no user interaction. To restore the backlight, tap the screen. The time taken for the backlight to automatically go off is determined by the settings in the operating system.
If the backlight will not come on, the battery probably needs charging. Put the

device in the charging station and leave until fully re-charged

The devices switches off
The device is normally configured so that it will switch off after a period of no user interaction. To switch the device back on, press the power button once. The time taken for the backlight to automatically go off is determined by the settings in the operating system.
If the device continues to switch off shortly after switching on, then the battery needs to be charged. replace the device in the charging trolley and fully re-charge.

The device is working but it will not scan any garment tags
This can happen if the battery for the laser component and the RF unit has become drained through use. The device needs to be charged before use to ensure all batteries are fully re-charged.

The device has no applications or networking software
The main battery may have become completely drained. The device will need to be re-configured by the IT support team

When I touch the screen, it doesn't seem to select the right functions
It is possible that over time, or due to extreme temperature conditions, the touch screen calibration could have lost its accuracy.
To solve this, the screen needs to be re-calibrated. This can be done by using the WindowsCE built-in system tools.
Select Start:Settings:System:Align Screen and following the on-screen instructions.

My device seems to have completely frozen
It is possible that the device can crash due to some system or client software error. To reset the device, use the special tool provided to reset the device. Insert the tool into the small hole at the bottom of the device and the operating system will re-

20 troubleshooting
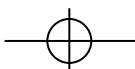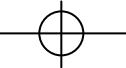
boot. This will take a few seconds.
After a re-boot, it will be necessary to
restart the client application.

I've dropped my device into some water
Wipe the device dry as much as possible.
with tissues. Allow to dry thoroughly for at
least 24 hours before switching on. Do not
force dry with any heating device.

My device has become dirty
The staff device (including the screen) can
be cleaned with a damp cloth and a small
drop of mild detergent. Wipe the device
gently with the cloth and dry afterwards
using a tissue. Do not immerse into water
or other liquids.

**I looked into the laser beam and now I
see spots before my eyes**
The spots should gradually disappear as
your eyes regain their normal use.
If symptoms persist, seek medical advice.
Do not stare into the laser beam.

My staff device is missing
If the device was switched on, there may
be a security risk.
There is also a risk that a child could
misuse the laser.
Inform the store IT manager and security.

**None of the staff devices seem to be
charging**
Check that the power supply to the
charging station is plugged into the 110v
power outlet.
Check that the fuse to the charging station
has not blown.

**Some of the staff devices have steady
blue lamps when charging, some are
flashing**
This is normal. Some devices will reach
the fully charged point before others,
depending on how discharged they were to
start with.

One of the staff devices will not charge
Try a different charging slot in case the

contacts are dirty.
Check that the charging contacts are clean
on the device.
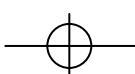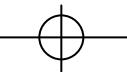
IDEO Europe
White Bear Yard
144a Clerkenwell Road
London EC1R 5DF
Tel: +44 (0) 207 713 2600
Fax: +44 (0) 207 713 2601

IDEO