

User Manual

NCR Orderman Base Station4 Model 7777-RBS

Version 01.04



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User Manual
NCR Orderman Base Station4
Model 7777-RBS
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Version 01.04

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Note: For further questions about operating the device, contact your Orderman partner.



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1 General information

This manual is intended for use with the NCR Orderman Base Station4 (OBS) Model 7777-RBS. The "NCR Orderman Base Station4" is used for radio transmission, and forms the connecting link between the Orderman handheld radio units and the PC-based POS systems.

In this manual, we refer to the "NCR Orderman Base Station4" as the "OBS".

1.1 Warranty

All warranty claims must be addressed to your local Orderman contractual partners.

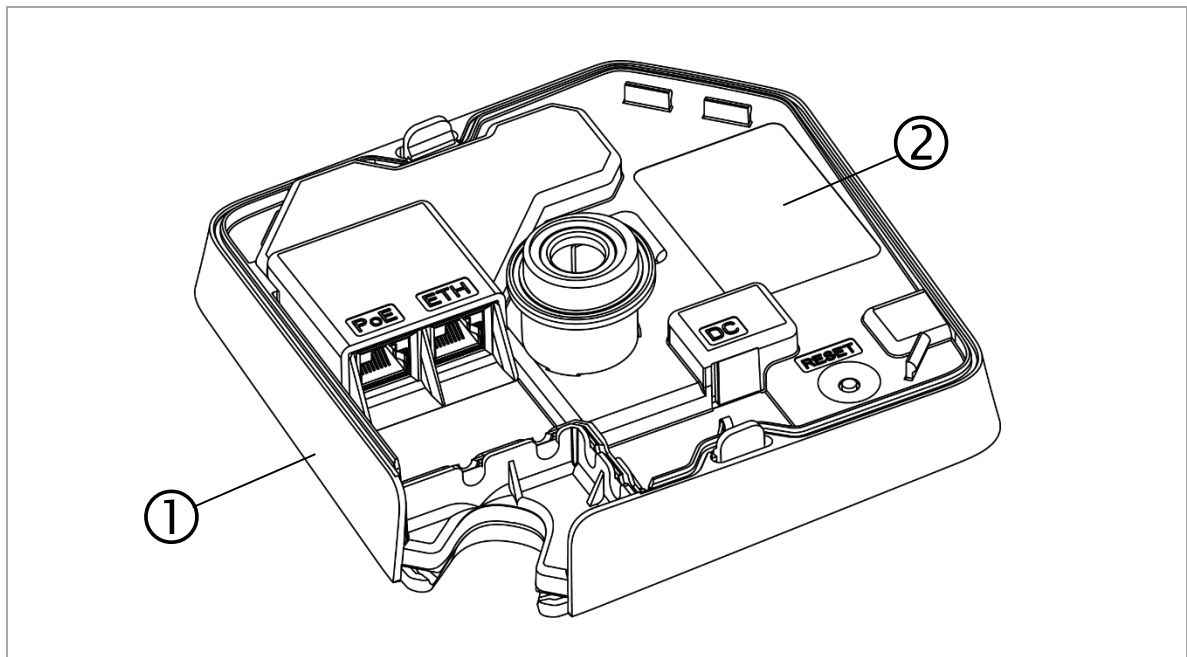
1.2 Labeling

The labeling provides information on certifications, standards, product descriptions and manufacturer specifications.

1.2.1 Labeling on the unit

The labeling (model plate) is located on top of the unit.

Fig. 1: Labeling



① Housing

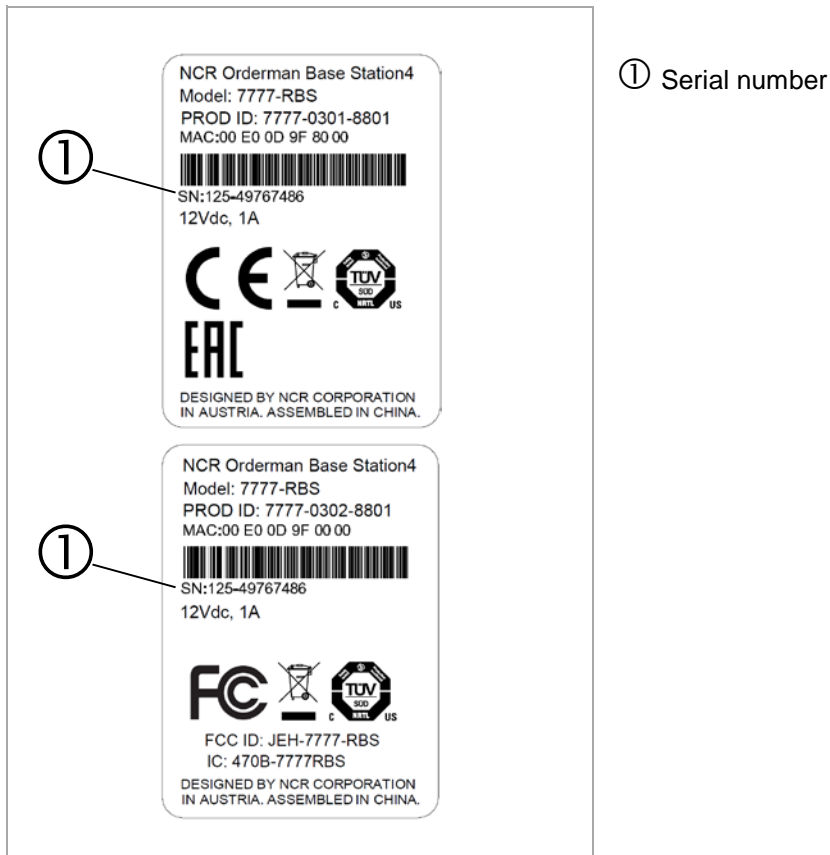
② Model plate

1.2.2 Serial number

The serial number is used to uniquely identify the unit.

The serial number is located on the model plate.

Fig. 2: Serial number



1.3 Safety notices

1.3.1 Explanation of symbols

Icons and signal words indicate the degree of danger that will result, unless actions to reduce damage are taken.

Caution



Caution means that minor property damage can occur. Caution is highlighted by horizontal lines above and below the text.

Warning



Warning means that minor personal injury or serious damage to property can occur. Warnings are highlighted by horizontal lines above and below the text.

Danger



Danger means that serious personal injury can occur. In particularly serious cases, there is danger to life. Danger is highlighted by horizontal lines above and below the text.

Notes



Notes are indicated in the text by the adjoining icon. In cases in which there are no imminent dangers for personnel or equipment, notices contain important information. Notes are highlighted by horizontal lines above and below the text.

Tips

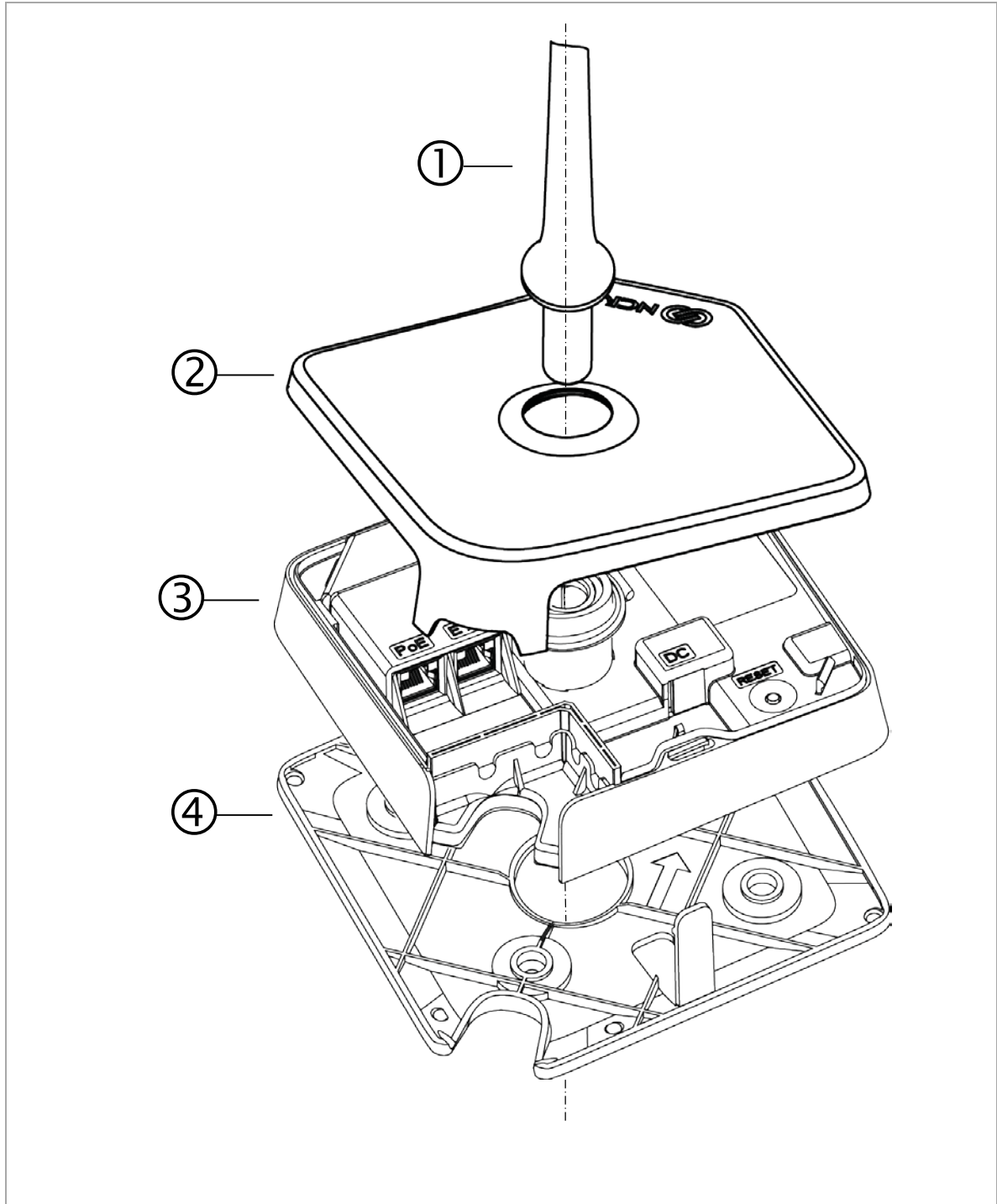


Tips describe non-binding recommendations. Tips are highlighted by horizontal lines above and below the text.

2 NCR Orderman Base Station4 (OMB4)

2.1 Overview

Fig. 3: NCR Orderman Base Station4 (OMB4)



① Antenna

② Housing cover

③ Housing

④ Mounting plate

2.2 Product description

The NCR Orderman Base Station4 is specially designed to connect with an Orderman secure radio (OSR). The NCR Orderman Base Station4 can be installed in standing position, hanging from a wall or ceiling, or suspended in a false ceiling.

2.3 NCR Orderman Base Station4 Features

| Feature | |
|------------------|---|
| Radio | 433 MHz or 915 MHz |
| Network | Ethernet 10Mbit/100Mbit/1Gbit 2 Ethernet ports |
| Power supply | Power supply unit or Power over Ethernet (PoE) |
| Status indicator | Status LED |

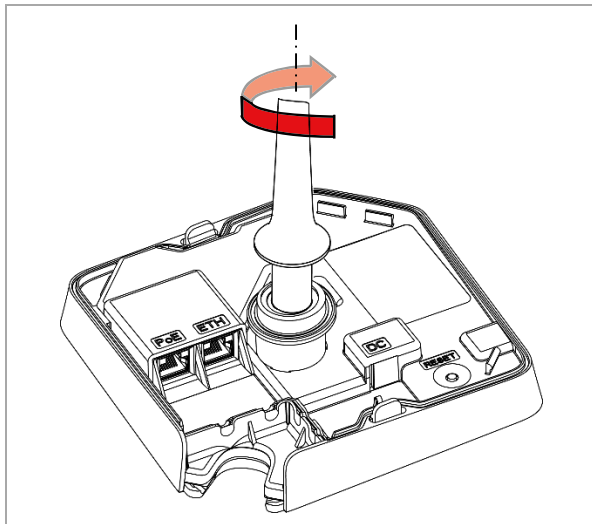
3 Installation of the NCR Orderman Base Station4

3.1 Preparation

3.1.1 Installing the antenna

The antenna is screwed into the housing with a right-hand thread. Turn the antenna in a clockwise direction (using finger force) into the housing until it hits the end stop. It is not necessary to use a tool.

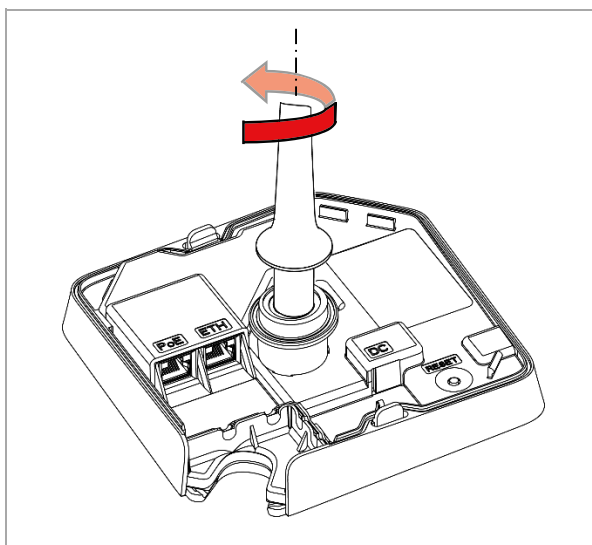
Fig. 4: Screwing in the antenna



3.1.2 Uninstalling the antenna

The antenna is connected to the housing with a right-hand thread. To remove the antenna from the housing, turn it in a counter-clockwise direction.

Fig. 5: Unscrewing the antenna



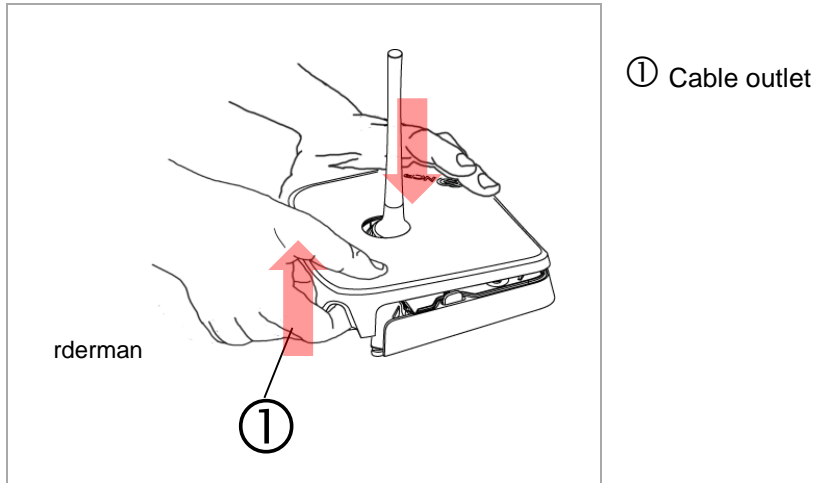
3.1.3 Removing/replacing the housing cover

For connection, i.e. for installation, you must remove the housing cover. It is not necessary to remove the antenna.

3.1.3.1 Removing the housing cover

- Press on the housing cover with one hand on the opposite side of the cable outlet.
- Lift the housing cover with a finger at the cable outlet.

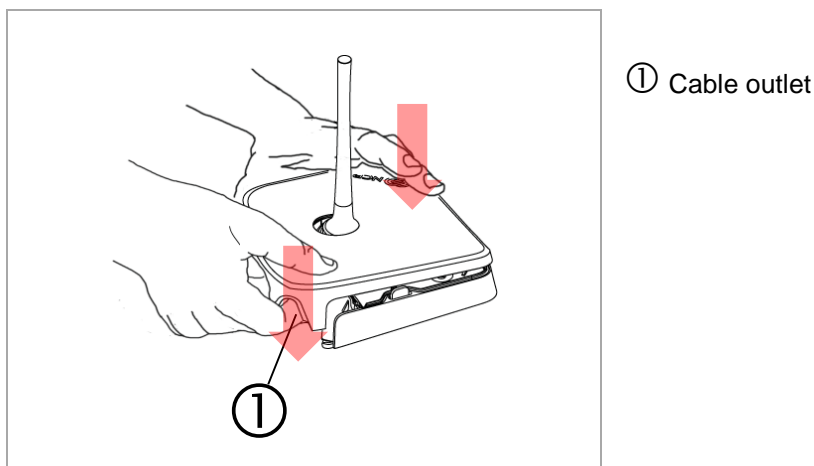
Fig. 6: Removing the housing cover



3.1.3.2 Replacing the housing cover

- To install the housing cover, press the opposite side of the cable outlet into the holder for the housing.
- Then press the housing cover (cable outlet side) downward until it latches into place.

Fig. 7: Replacing the housing cover

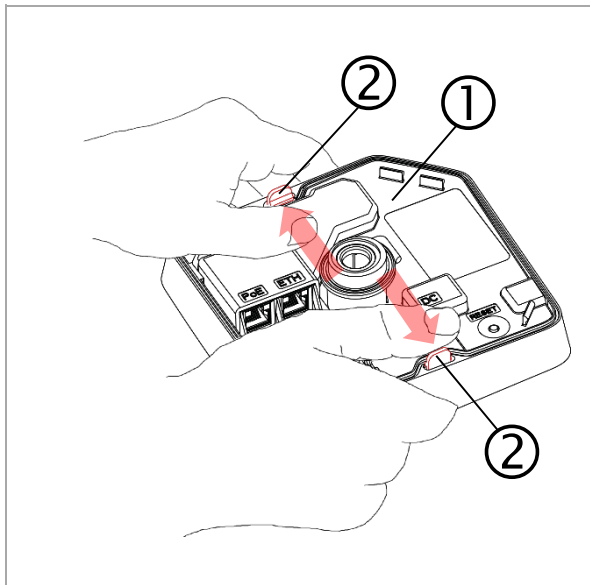


3.1.4 Uninstalling/installing the mounting plate

3.1.4.1 Uninstalling the mounting plate

- To remove the mounting plate from the housing, release the two retaining clips by pressing them away from the housing.
- The mounting plate is released by pressing the retaining clips.

Fig. 8: Removing the housing from the mounting plate

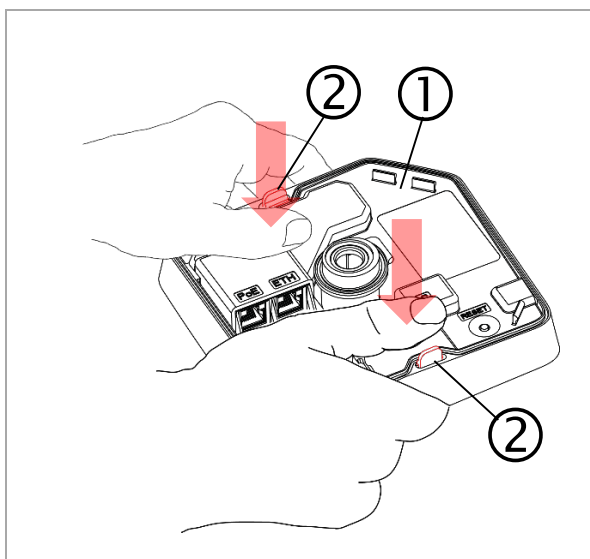


- ① Housing
- ② Retaining clips

3.1.4.2 Installing the mounting plate

- Place the housing above the mounting plate. The retaining clips should stick through the housing.
- By lightly pressing on the housing, the retaining clips snap into place (**clicking sound**). Check whether the housing has latched properly into place on both sides by lightly pressing the retaining clips.

Fig. 9: Placing the housing on the mounting plate



- ① housing
- ② Retaining clips

3.2 Setup

The NCR Orderman Base Station4 is designed to be set up indoors. It can be positioned standing, on the wall, overhead (ceiling mount) or suspended in a false ceiling. For optimal radio performance, avoid installation close to metal objects.



Note: For installation of more than one OBS, the following minimum clearances are required:

- minimum of 4 meters from one OBS to the next OBS
- minimum of 8 meters from one OBS to the next OBS2 or OBS3



Caution: The operating temperature (ambient temperature) for the OBS is 0°C to +50°C. The operating temperature (ambient temperature) for the Orderman power supply is 0°C to +40°C.

Operation outside of specified operating temperature limits is prohibited.



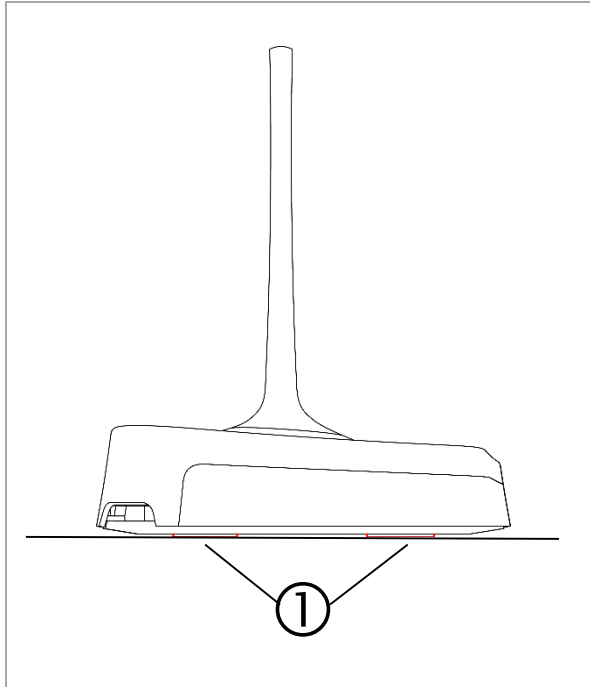
Note

- Use only the Orderman power supply unit provided in the delivery scope.
- If the NCR Orderman Base Station4 is operated with the power supply unit, the operating temperature limits for the power supply unit also apply.
- You will find more information on the subject of putting the unit into operation in Orderman's installation instructions.

3.2.1 Standing position

Rubber nubs on the underside of the mounting plate increase the stability.

Fig. 10: Standing position

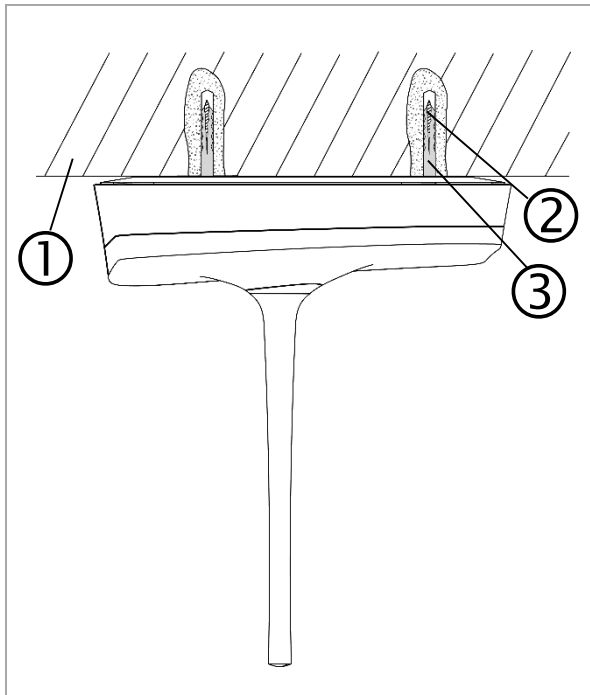


① Rubber nubs

3.2.2 Wall/ceiling installation

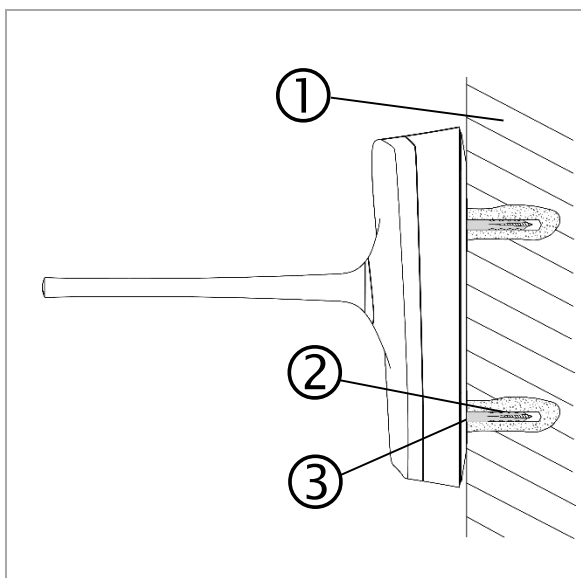
For wall/ceiling installation, the mounting plate has 2 mount holes. As the fastening means for concrete masonry Orderman recommends a 6 x 30 mm wall plug and a 4 x 35 mm universal screw with countersunk head. For other masonry, the proper plugs and screws must be used (screw with countersunk head, max. thread diameter of 4.5mm).

Fig. 11: Ceiling installation



- ① Ceiling
- ② Countersunk screw (4 x 35)
- ③ Plug (6 x 30)

Fig. 12: Wall installation



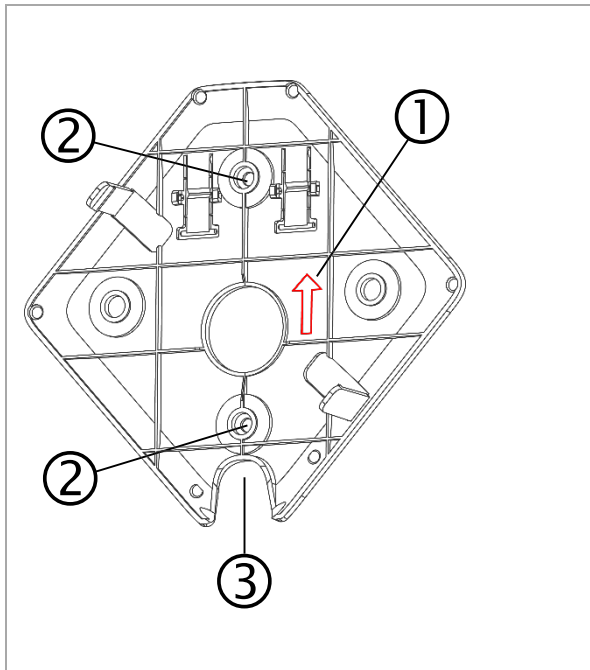
- ① Wall
- ② Countersunk screw (4 x 30)
- ③ Plug (6 x 30)



Note: For the wall and ceiling installation, the mounting surface must be absolutely level.

For a wall mount, we recommend you install the mounting plate with the cable outlet point downward. The arrow in the mounting plate must point upward.

Fig. 13: Wall installation



- ① Arrow (should point upward)
- ② 2 mounting holes
- ③ Cable outlet



Note: Turn the screws with care until countersunk. Too high a torque on the screws can damage the mounting plate.

3.2.3 Installation in a false ceiling

For installation in a false ceiling, clips are provided to compensate for the wedge profile of the housing.

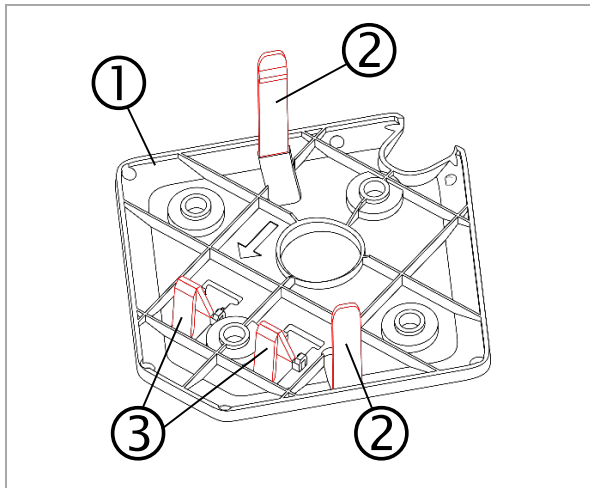
The following steps must be followed:

- Press both distancing strips as shown in the figure until the clips click into place in the counter surface.
- Break or cut the two retaining clips from the mounting plate with a knife.



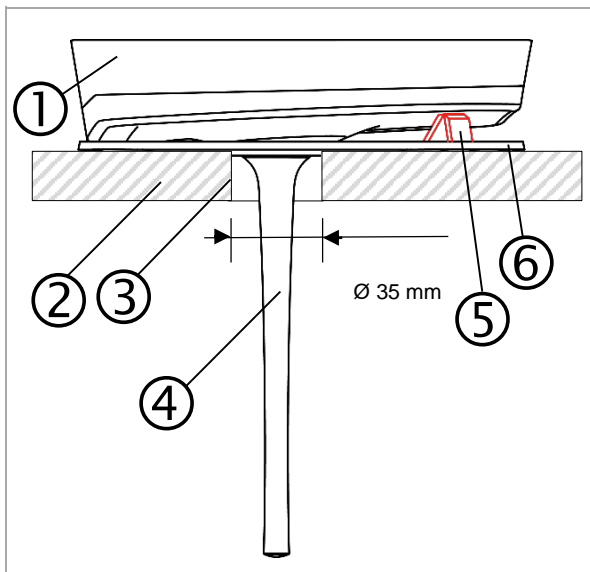
Warning: Breaking off or cutting off the retaining clips may result in sharp edges (risk of injury).

Fig. 14: Installation in a false ceiling



- ① Mounting plate
- ② Retaining clips
- ③ Distancing strips

Fig. 15: Installation in a false ceiling



- ① Housing
- ② False ceiling
- ③ Hole in a false ceiling
- ④ Antenna
- ⑤ Distancing strip
- ⑥ Mounting plate

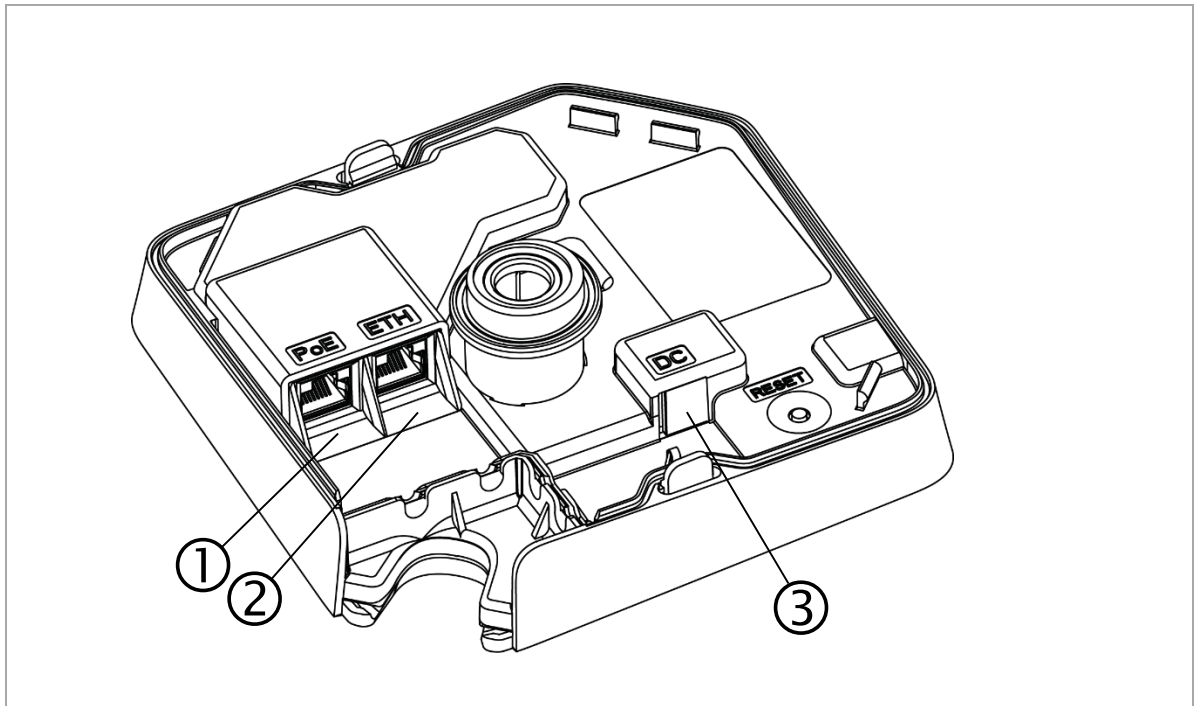
3.3 Cabling

The NCR Orderman Base Station4 can only be connected with an Ethernet network. Two RJ45 ports are located on the top of the housing. The port labeled PoE can also be used for power supply via the network (accessory required).



Note: If another Ethernet device is connected to the second Ethernet port (ETH), this device cannot be supplied with voltage via the network.

Fig. 16: Connections



① PoE (Power over Ethernet) RJ45

② ETH RJ45 Ethernet

③ Port for Orderman 12V power supply

4 Operation

4.1 Operation with power supply unit



Note: Comply with the operating temperature range (ambient temperature) for the power supply unit. Use only the original power supply unit for the NCR Orderman Base Station4.

4.2 Operation with Power over Ethernet (network-powered)

There are two options for using Power over Ethernet:

- Direct supply via PoE network switch
- Use of a PoE injector (available as Orderman accessory)

4.3 Status indicator

The OBS's light ring displays information about the following operating states:






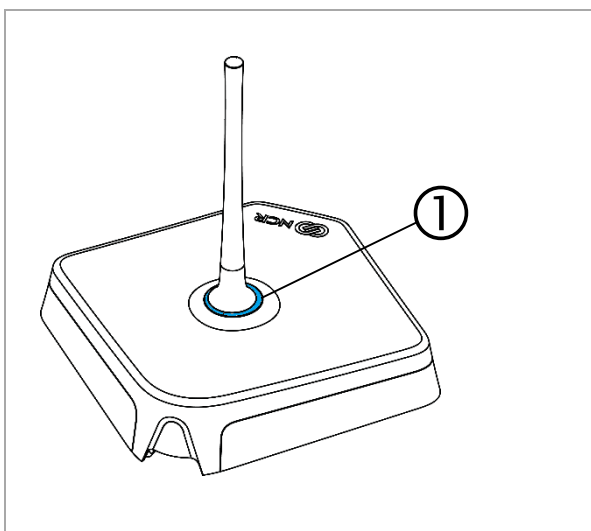
| Color | Status |
|-------------------|---|
| Blue |  Startup, booting up |
| Green |  Connection to host system is active |
| Pink |  Not connected to network |
| Yellow |  No connection to host system |
| Red |  Error |
| Does not light up | No or very low power supply |

Fig. 17: Light ring



① Light ring

5 Cleaning instructions

Observe the following care tips:

- Wipe the surface with a damp, soft cloth. Do not use abrasive agents or cloths with a rough surface.
- Clean the ports: Never clean the sockets with compressed air or pointed objects!



Note: Never use alcohol or corrosive liquids to clean the Orderman units.

6 Technical specifications

| Function | |
|--|--|
| Radio frequency | 433 MHz, 915 MHz* |
| Frequency band | OBS version 433MHz = 433,150MHz – 434,650MHz OBS version 915MHz = 902,000MHz – 928,000MHz |
| Transmitting power | less than 1 mW ERP |
| Power over Ethernet (PoE) | IEEE 802.3at-2009 Type 1 (IEEE 802.3af-2003 compatible) |
| Protection type | IPX4 |
| Dimensions L/W/H mm without antenna with antenna | 160x160x50 160x160x190 |
| Weight | 750 grams |

*see country list

DETACHABLE ANTENNA USAGE

This radio transmitter (IC: 470B-7777RBS / Model: 7777-RBS) has been approved by Industry Canada to operate with the antenna type listed below with maximum permissible gain indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.




Le présent émetteur radio (IC: 470B-7777RBS / Model: 7777-RBS) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

Approved antenna(s) list

| Type | Gain | Brand | Model No. | Frequency range | Country |
|--------|----------|-------------------|-------------|-----------------|---------|
| Dipole | 2.15 dBi | NCR | 497-0503602 | 902 - 928MHz | FCC/IC |
| Dipole | 2 dBi | Panorama Antennas | PCG-TNC-921 | 880 – 960MHz | FCC/IC |

7 Troubleshooting

7.1 Troubleshooting and corrective actions

| Error | Possible cause | Possible solution |
|--|--|--|
| Cannot connect to Orderman radio network | No network connection from NCR Orderman Base Station4 to host system | Check the cables and power supply to the OBS |
| | Range exceeded | Change position of the OBS accordingly |
| | Radio interference (other Orderman radio network) | Change radio channel |
| | Network configuration was changed | Check/change network configuration |
| Very long transmission times on the radio path | Radio interference from other devices (baby monitor, handheld radio transmitter, remote control, etc.) | |
| NCR Orderman Base Station status indicator | | |
| Pink  Not connected to network | There is no network connection to the NCR Orderman Base Station4 | Check the OBS network cable |
| Yellow  No connection to host system | There is no network connection to the NCR Orderman Base Station4 Firewall settings | Host system is switched off or network problem at host Check firewall settings |
| Red  Error | Error in configuration Hardware is defective | <ul style="list-style-type: none"> ■ System Center <ul style="list-style-type: none"> – Check the status of the OBS in the System Center – Eliminate error in configuration – Reset the OBS in the System Center – Run a factory reset in the System Center ■ OBS <ul style="list-style-type: none"> – Run a factory reset by pressing the Reset button on the OBS <p>Send the unit to the service department</p> |

7.2 Factory reset on the OBS

| Action | Time | Status |
|--|------------|---|
| Press and hold Reset button for 20 seconds | 2 seconds | |
| | 5 seconds | The status indicator lights up blue for 5 seconds |
| | 10 seconds | The status indicator does not light up for 10 seconds |
| | 3 seconds | The status indicator lights up white for 3 seconds |
| | | This triggers the factory reset function. |
| | | After running a factory reset, the indicator lights up red (unit not configured) |
| Configure the unit in the System Center | | After successful configuration, the status indicator is green |

8 Country list

The NCR Orderman Base Station4 is available in two different frequency versions.



Note: Make sure that the right OBS version is installed (see table) to match the country selected.

| Country | OBS Versions |
|----------------|--------------|
| European Union | 433MHz |
| Switzerland | 433MHz |
| Turkey | 433MHz |
| Russia | 433MHz |
| USA | 915MHz |
| Canada | 915MHz |



Note: Use of frequency bandwidths is regulated by federal laws and must be strictly observed. OBS frequencies are in the range of the SRD bandwidth (SRD – short range devices)

In these frequency bandwidths, which differ somewhat worldwide, the transmitting power and the interference for neighboring frequency ranges are regulated.

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10 Glossary

F

Firmware

As firmware refers to the operating software (Operating System) of the electronic devices.

H

Handheld

A handheld in this manual refers to all the versions of Orderman handhelds.

L

LED (Light-Emitting Diode)

LEDs convert electrical energy into very energy-efficient light. LEDs have a very long life.

N

NCR Orderman Base Station4 (OBS)

The NCR Orderman Base Station4 enables users to connect Orderman handhelds to a host system.

O

Orderman Secure Radio

The Orderman secure radio uses the 433MHz or 915MHz, depending on application area. The ability to penetrate solid objects, the large range, the minimal power consumption, the interference resistant and hacker-proof design are considerably better than other radio networks.

W

Wireless LAN (Wireless Local Area Network)

Wireless LAN is the term used for local radio networks.