



User Manual UPC-100 Handset

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1 Introduction

1.1 Use

The UPC-100 Handset, together with a UMS-developed interface, enable the user to amend the factory settings of certain industrial trucks.

The UPC-100 Handset must be used together with an UMS-developed Interface. Any other use is not authorized.

Remark: Drawings and images in this UPC-100 Handset Manual may differ from your model.

1.2 Warnings

Amending factory settings of an industrial truck can cause material and physical injury. Therefore, the UPC-100 Handset must only be used by skilled, trained and authorized staff.

The users of the UPC-100 Handset must have access to the user manual at all times.

Read this UPC-100 Handset Manual carefully before connecting, maintaining or using the UPC-100 Handset. Strictly follow the safety instructions in the truck manufacturer's maintenance manual prior to connecting the UPC-100 Handset to the truck.

Warning: Failure to comply with the instructions and warnings in this manual could result in serious injury to the user or other persons in the vicinity of the truck.

People working with the UPC-100 handset, and using procedures, work methods or tools that are not described in this manual, are solely responsible for the safe and good operation of the UPC-100 handset.

2 General description

2.1 Technical features

Working temperature	0°C-40°C (32°F – 104°F)
Charging temperature	0°C-40°C (32°F – 104°F)
Charging time	circa 2 hours
Input voltage	12V DC (max 1,5A)
Autonomy	4 to 8 hours (depending on the use)
Battery type	LiPo (Lithium Polymer)

2.2 Components

The UPC-100 Handset consists of 3 components. Each of these is required to connect the UPC-100 Handset to an industrial truck. The components are explained in this manual.

2.2.1 Console (UPC-100)



This UPC-100 Handset can be combined with all UMS-developed devices from the UPI series (unless otherwise stated in the specific UPI manual). Depending on the brand of the truck on which the user performs diagnostics/parameterization, a different UPI device must be connected to the UPC-100 Handset.

2.2.2 Interface (UPI-xx)

Different types of interfaces are available, depending on the brand of the truck to be diagnosed. An overview of all available interfaces can be found on our website (www.ums.sg). The interfaces are distinguishable by the letters following 'UPI-'.



2.2.3 Cables



Depending on the brand/type of industrial truck, different cables are available to connect the interface to the truck. These cables are designed especially for proper functioning of the device. Only use the cables provided by UMS. Other/longer cables can cause malfunction and will invalidate the warranty.

3 Intended use

The UPC-100 Handset is a diagnostic device that allows a qualified repairer of industrial trucks to perform diagnostics on types of industrial trucks that are supported by the connected interface (UPI-xx).

Although we have made efforts to support as many truck types as possible, it could be that certain types or configurations are not supported. It is therefore recommended that you consult the list of supported trucks in the manual of your interface.

Only use the UPC-100 Handset as described in this Manual. Read the 'Solve Problems' section at the end of this Manual when encountering problems.

3.1 Correct operating conditions

The UPC-100 Handset may only be used with an ambient temperature between 0°C and 40°C (32°F – 104°F).

The user has to be a qualified repairer of industrial trucks.

The user must always have sufficient working space, in order to prevent him from getting stuck between the industrial truck and a wall or other object.

The values on the rating sticker must under no circumstances be exceeded. If the data on the type of sticker is unreadable, please immediately order a new rating sticker at UMS through www.ums.sg. Always specify the serial number on the sticker.

3.2 Discouraged use

Do not use the UPC-100 Handset on industrial trucks which show severe signs of damage.

4 Commissioning and safety

4.1 First commissioning

For safety reasons, we ship the UPC-100 Handset with the battery disconnected in the UPC-100 Handset. Before first use, the user must install the battery:

- Make sure all cables are disconnected from the UPC-100 Handset
- Open the UPC-100 Handset by unscrewing the 4 screws on the back of the device
- Gently peel off the protective foil from the battery connector
- Insert the connector to the PCB
- Close the device using the original screws.



Before using the device for the first time, the user must charge the battery for at least 8 consecutive hours, using the supplied charger.

4.2 Activation

Each interface is activated by inserting an activation code. This code can be purchased on www.ums.sg. When purchasing a new interface, activation for 1 year is included. More information on how to insert the code can be found in paragraph 6.3.3 of this manual.

4.3 Warnings for each use

Be sure that the device is only used by trained staff. People that have insufficient knowledge of the truck on which the UPC-100 Handset is connected, can make changes as such that the safe working of the truck can no longer be guaranteed.

Prior to each use, all parts of the UPC-100 Handset and the Interface must be checked for cracks or other damages. Don't forget to check the cables: they may not show any signs of deformation. Only use the equipment when it is in a perfect condition.

When connecting the UPC-100 Handset to the industrial truck, both devices must be switched off. Connecting the devices when powered on can lead to malfunction and possibly dangerous situations.

5 Installation instructions

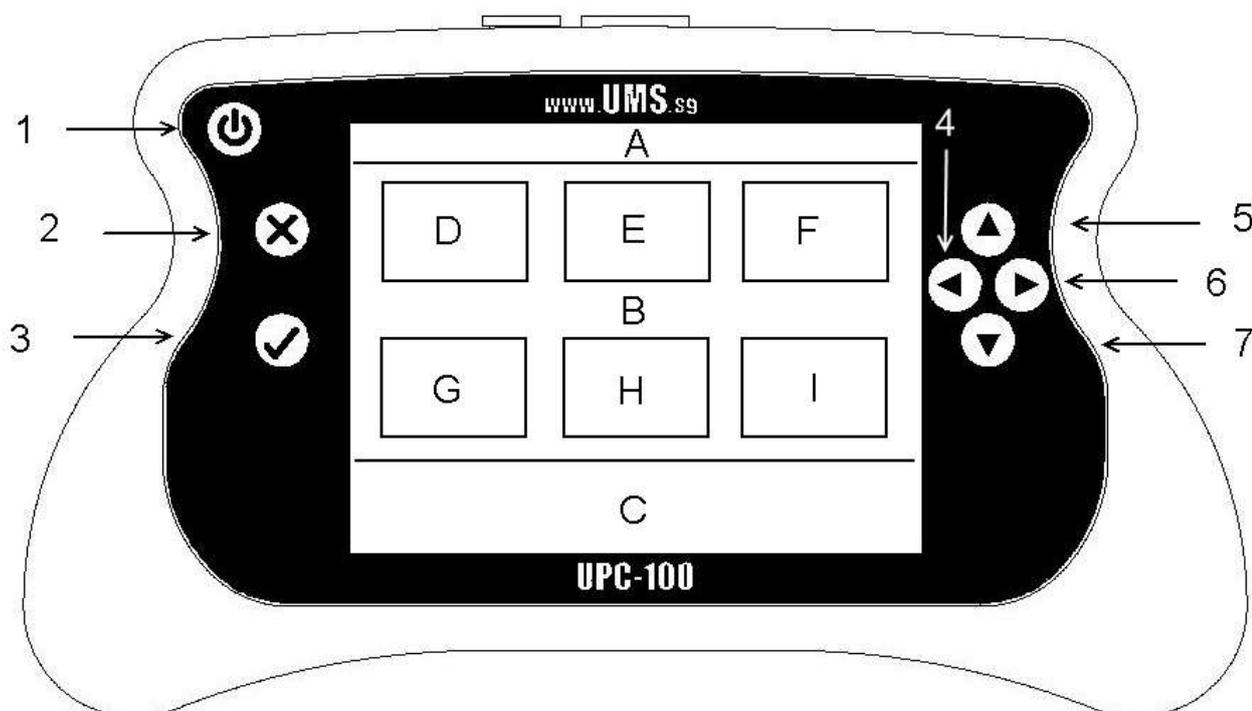
When connecting the UPC-100 Handset to the industrial truck, following sequence must ALWAYS be used:

- Make sure that the industrial truck is blocked up, and no wheels touch the ground
- Make sure that the industrial truck and UPC-100 Handset are powered off
- Connect the appropriate interface (UPI-xx) to the UPC-100 Handset using a blue connector. Do not use any tools!
- Connect the 26-pole connector of the appropriate cable to the UPI-xx

- Connect the cable to the service connector of the industrial truck. Refer to the service manual of your truck for the location of the service connector.

6 Operating instructions

6.1 General



The device is powered on/off using button 1 (top left)

The other buttons on the left side are used to confirm () or cancel () a choice.

Navigating through the menu's and changing values is done using buttons 4 to 7 on the right side of the display.

If an Interface is connected when powering up the UPC-100 Handset, the menu structure is shown. Depending on the connected interface and cable, a different number of options is available. The structure of this menu is described in this manual.

6.2 Layout of the display and menu structure

Top bar (Zone A)

On the left of the top bar, the battery status is displayed. In the center, the current menu is shown.

Depending on the current menu, the top right corner is used to show the number of pages (e.g. for parameter lists).

Central block (Zone B)

Here, the menus are shown. The user can navigate using the arrow keys on the right side of the display, and the OK () and ESC () keys left of the display.

Bottom bar (Zone C)

When the UPC-100 Handset is showing a menu, the bottom bar is used to show the status of a truck.

6.3 Changing UPC-100 Handset display settings

6.3.1 Brightness

Select the desired brightness using the arrow keys (left and right). Higher brightness improves the readability of the display, but requires more battery power.

6.3.2 Contrast

Select the desired contrast using the arrow keys (left and right).

6.3.3 Insert code

If no challenge has been made yet, you will be asked to do so. Press OK to create a challenge. This challenge along with the serial number on the back of your device is required to request an activation code on www.ums.sg.

Now insert the response that you have received from UMS. Select the digit to be changed using the left/right arrows. Change the digit using the up/down arrows (when 0 is selected, use 'down' to select numbers and 'up' to select letters). Confirm using 'ok'.

WARNING: You only have 10 attempts to insert a valid code. When you have inserted 10 wrong codes, return the UPC-100 Handset to UMS.

6.4 Reading/changing the truck settings

The functionalities described below may vary depending on the connected interface. For a more specific description of the available options, please read the manual of the concerning interface. This manual can be found on the website www.ums.sg.

6.4.1 Reading diagnostic values

Depending on the number of available diagnostic values, the list is divided in several pages. Navigating between those pages is done using the 'arrow left' and 'arrow right' keys. Navigating between several items on a page is done using the keys 'arrow up' and 'arrow down'. Only the selected value is updated frequently. Upon loading another page, all values on that page are loaded once.

6.4.2 Reading/writing parameters

Navigating through parameters is done the same way as with diagnostics. When the desired parameter is selected, an editing box can be called using the OK key. Change the values is done using the arrow keys. Confirm using OK.

6.4.3 Reading and storing parameter sets

Select the set number on which you wish to store the parameters of the connected truck. The fields where both 'Name' and 'Type' are marked with '---' are still empty. Press OK to get an editing box. Change the name using the arrow keys, and confirm using OK.

6.4.4 Restoring parameter sets

The parameters that are stored using the method above can be sent to the truck. In some cases, the truck must be of the same type as the one where the parameters are read from.

7 Maintenance

7.1 General

The UPC-100 (including interfaces, accessories and cables) is an electronic device and can be damaged by contact with liquids. Keep the device away from liquids when using or storing it.

Only clean the device with a damp cloth. Do not use any solvents, gasoline, strong detergents and other.

All warning symbols and labels must be readable at all times. Change broken/unreadable labels. Contact UMS to obtain new labels.

7.2 Charging the battery

The UPC-100 Handset must be charged with the UPA-ADP-12 adapter that was delivered with your UPC-100 Handset. Using another adapter can damage your UPC-100 Handset. If the adapter is defective, order a new one from UMS through www.ums.sg

8 Storage

Store the UPC-100 and the interfaces, accessories and cables in a dry frost-free room.

9 Solving problems

Problem	Solution
RTC battery empty	Send the UPC-100 Handset to UMS
Too many activation codes have been inserted	Send the interface to UMS

10 Transport

The battery in the UPC-100 Handset contains lithium. Therefore special care must be taken when shipping the unit. Contact your courier service for the most up to date legislation. Never send defective batteries by airmail.

11 Regulatory compliance

This UPC-100 Handset complies with the Electromagnetic Compatibility Directive 2004/108/EC, in particular with the harmonized standards listed below:

- Emission: EN 55022 (2006) + A1 (2007), class B
- Immunity: EN 55024 (1998) + A1 (2001) + A2 (2003)
- Emission: EN 61000-3-2 (2006)
- Emission: EN 61000-3-3 (1995) + A1 (2001) + A2 (2005)

12 Warranty

UMS warrants the UPC-100 Handset for a period of six (6) months from the date of purchase. The warranty is strictly limited to the replacement or the repair of the UPC-100 console, or parts thereof, showing a manufacturing defect according to the final judgment of UMS.

UMS shall never accept a warranty claim if the user has carried out repairs or modifications to the UPC-100 Handset; or if the defect results from assembly, maintenance, storage or use in a manner which is inconsistent with the indications and recommendations by UMS, or from use for purposes other than those described in the User Manual, abnormal use, overloading, or normal wear; or if the original UMS identification, label or serial number has been removed; or if the warranty period has lapsed.

The warranty excludes all costs for transportation.

Warranty claims are administered through Universal Machine Solution Pte. Ltd.. Company registration number 201201400E.

Contact: www.ums.sg