



# Thales ARTEMA mobile GSM/GPRS



INSTALLATION MANUAL

## **Note**

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# Safety Precautions

## Lithium Batteries

In addition to the battery pack of the handset, ARTEMA uses Lithium batteries in order to backup internal data. The Lithium batteries under normal usage conditions have a 6 year life expectancy. These batteries should only be replaced by an approved servicing center.

### **Caution:**

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Don't short, burn, heat, open the lithium battery.

Don't throw old or damaged lithium batteries into the house trash. Dispose of used or damaged lithium batteries according to statutory requirements. Incomplete discharged lithium batteries have to be isolated by means of wrapping with adhesive tape or by putting into a plastic bag to prevent short cuts.



## Battery Pack

The terminal is supplied by a battery pack.

Don't short, burn, heat, open the battery packs.

Never use other battery packs than Thales battery packs!

Types: 4432-107-000 NiMH or  
4432-102-000 NiCd.

Other battery packs may damage ARTEMA mobile GSM / GPRS. In these cases the manufacturer cannot be held responsible.

## Battery Quality

The capacity of your ARTEMA mobile GSM / GPRS battery pack reduces each time you charge / discharge it. Storing the battery at temperatures that are too high or too low also causes a gradual loss of capacity. This can cause the operating times of your ARTEMA mobile GSM / GPRS to reduce significantly per usage cycle. The battery is, however, designed to be charged and fully discharged within a period of

## Safety Precautions

six months from the time when ARTEMA mobile GSM / GPRS was purchased. Following this six-month period, it is recommended replacing the battery if you experience a significant drop in performance. Please purchase only Thales e-Transactions' original batteries.

Remove the battery pack if you are not going to use ARTEMA mobile GSM / GPRS for extended periods of time.



Don't throw old or damaged battery packs into the house trash. Dispose of used or damaged batteries according to statutory requirements.

### Important Installation Note

For security reasons the battery shall not be inserted in the device during transportation.

The device is delivered with an incomplete charged battery pack. Unconditionally the battery pack must be fully charged before using the device. To gain the best battery performance the battery pack must be charged according to the installation manual. New battery packs should be fully charged within a period of 3 months after delivery.

Before storage the battery pack must be removed from the device. Discharged battery packs shall not remain inserted in the device for an extended storage. Improper use may result in battery damage.

Operate and store the battery pack within the temperature limits according to the ratings in the installation manual. Exceeding the temperature limits may result in gradual loss of capacity or damage of the battery pack.

Please handle battery packs according to the recommendations above for best battery performance and life time. Malfunctions that are caused by improper use or damaged battery packs void warranty and any repairs are subject to charges.

# Safety Precautions

## General

All radio transmitter such as ARTEMA mobile GSM / GPRS are subject to restrictions. Radio transmitter may impair improper shielded electronic equipment.

## Warnings

Switch off ARTEMA mobile GSM / GPRS in any area where radio transmitters are prohibited.

### In aircrafts



Mobile units must be switched off at all times in an aircraft. Prevent accidental activation.

### In vehicular environment



Don't use mobile units such as ARTEMA mobile GSM / GPRS other than described in the User's Manual of your vehicle. Switch off while driving.

### In vehicles with airbags



ARTEMA mobile GSM / GPRS must not impair the proper operation of vehicle functions (such as airbag). Never place ARTEMA mobile GSM / GPRS next to airbags or its propagation directions. Improper placement may cause serious injury in cause of airbag activation.

### In explosive environment



Switch off near petrol stations, fuel depots, chemical plants or blasting operations.

### In medical environment



Switch off in hospitals; medical equipment such as pacemakers and hearing aids may be affected.

## Cautiously use ARTEMA mobile GSM / GPRS

- The Artema must be located at a minimum of 20 cm from all persons, and must not be co-located or operated in conjunction with any other antenna or transmitter.
- Don't touch the metallic parts of the rear connector (next to the SIM card connector) with your fingers or any other objects. Electrostatic discharge (ESD) may impair ARTEMA mobile GSM / GPRS.
- Do not use magnifying glasses or the like to view the infrared port during operation.

# Safety Precautions

## Plug-In / SIM card

**Caution:** Plug-in and SIM cards can be removed; keep away from children; small parts could be swallowed by children.

Before changing the SIM card refer to the User's Manual.

## SIM card

Please consider that prepaid cards have a limited credit. When the credit expires no more online transactions or telephone calls are possible. Please verify that your SIM card is enabled for data transmission.

## Loss / theft

In case you lose your ARTEMA mobile GSM / GPRS and / or the plug-in / SIM card contact your Service Provider immediately to prevent misuse.

## Compliance information



This device complies with part 15 of the FCC rules. Operation is subject to following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

FCC-ID: RNUARTMOB001

## Warranty

Do not try to repair ARTEMA mobile GSM / GPRS. There are no serviceable parts inside. Warranty will void if the warranty seal is broken. In case of malfunctions please refer to your local service provider.

**Any misuse or service by non-authorized personnel voids the warranty and could damage the unit and/or create a hazard.**

## Important Notes

### Locations for use

- Place the terminal away from excessive heat sources, vibrations, dust, water and strong radio sources.
- Do not insert any objects or pour fluid into the terminal or the smart card reader. This may damage the terminal.

### Temperature and Environment

- Operate ARTEMA mobile GSM / GPRS in an adequate distance from radio devices to avoid disturbance of the electronic circuits.
- Operate ARTEMA mobile GSM / GPRS in an adequate distance from strong magnetic fields devices to avoid disturbance of the magnetic swipe card reader.
- Do not expose ARTEMA mobile GSM / GPRS to direct sunlight or excessive heat sources. High environmental temperature may damage the terminal.
- Protect ARTEMA mobile GSM / GPRS against dust and high humidity. This may impair the smart card reader.
- Operate ARTEMA mobile GSM / GPRS in dry environment only and in a temperature range from +5°C to +40°C.
- Store ARTEMA mobile GSM / GPRS in dry environment only and in a temperature range from -20°C to +60°C.

**Attention:** Storage temperature of battery pack: -20°C to +30°C. Store battery pack separate from terminal if necessary.

### Cleaning and Maintenance

- Disconnect ARTEMA mobile GSM / GPRS from main power before cleaning it. Clean ARTEMA mobile GSM / GPRS with light moist cloth or an antistatic cloth. Don't use chemical cleaning agent.
- Never use cleaning fuel, paint thinner or any other solvent. These chemicals may deform or discolor the plastic housing.



## Important Notes

### Lithium Battery Caution

- A lithium battery protects the Random Access Memory (RAM) in the ARTEMA mobile GSM / GPRS. Do not, under any circumstances, attempt to replace this battery. Failure to comply may invalidate the product warranty.

### No Warranty

- Although Thales e-Transactions has attempted to ensure the accuracy and completeness of its contents, this manual may contain errors or omissions.

### Limited Liability

- In no event shall Thales e-Transactions be liable for any indirect, special, incidental, or consequential damages (including damages for loss of business, profits, or the like), even if Thales e-Transactions or its representatives have been advised of the possibility of such damages.

### Product Changes

- Thales e-Transactions reserves the rights to change, update, or render obsolete any product changes at any time and without notice. Document Title: ARTEMA mobile GSM / GPRS Installation Guide.
- No part of this publication may be copied, distributed, stored in a retrieval system, translated into any human or computer language, transmitted, in any form or by any means, without prior written consent of Thales e-Transactions.

### Warranty

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**Any misuse or service by non-authorized personnel voids the warranty and could damage the unit and/or create a hazard.**

# Product Description

## ARTEMA mobile GSM / GPRS



### General

ARTEMA mobile GSM / GPRS is a wireless payment terminal. It can be used to perform credit as well as debit card transactions with smart cards and magnetic stripe cards. The integrated GSM engine and the integrated antenna support the use in GSM850 and in PCS1900 public land mobile networks. The terminal offers functionalities similar to a standard mobile phone. The terminal can be used to make telephone calls, send / receive emails and SMS.

### Interfaces

ARTEMA mobile GSM / GPRS has a multifunctional interface at the rear side of the terminal. This interface can be used to connect accessory such as power supply or car charger.

### Smart Card Reader

ARTEMA mobile GSM / GPRS includes a magnetic stripe card reader and additionally a smart card reader. These interfaces support all standard smart, magnetic stripe or hybrid payment cards as well as a wide range of additional cards such as loyalty or memory cards.

### Printer

The integrated thermal line printer is used to print receipts, diagnosis printouts, SMS text, emails and device specific information.

### Supported networks

ARTEMA mobile GSM / GPRS operates a dual-band GSM engine for use in GSM850 and PCS1900 networks.

# Softkeys and Icons

## Softkeys



Power on key; select function; select menu.



Navigation key up.



Navigation key down.



Correction key.



Number sign; "00".



Cancel key.



Enter key.


### **Note:**

It is required to enter the main menu, before switching off the terminal.


## Icons



The battery charge icon (1 to 4 bars) indicates the charge level of the battery.

Battery icon:  = battery almost empty

 = battery fully charged

The battery icon  flashes if the battery capacity is too low to perform an additional transaction.



The signal strength indicator indicates the received signal strength of the mobile network.


Table of signal strength:

1 block	= low
2 blocks	= medium
3 blocks	= strong
4 blocks	= maximum



Sub-menu icon. Additional sub-menus can be called pressing the key .



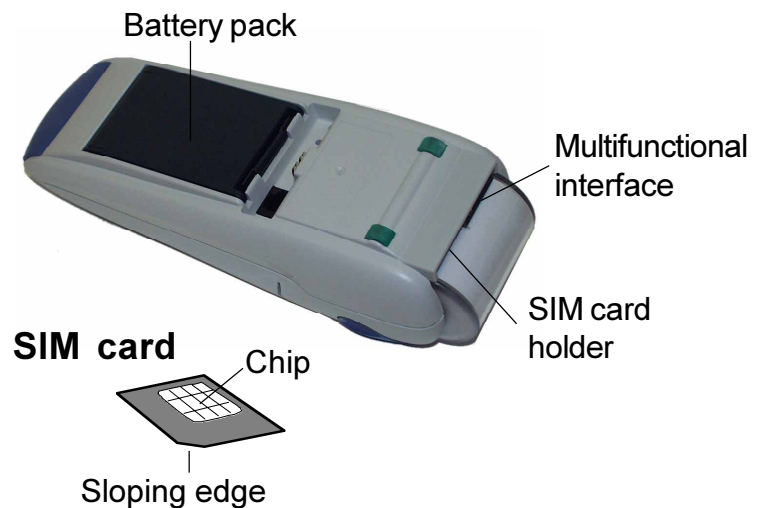
Paper feed icon. Select the key  to feed the paper.

# Installation

## Insert / remove SIM card

### ARTEMA mobile GSM / GPRS

(bottom view)



The Service Provider supplies you with a SIM card and a personal identification number (PIN). The SIM card contains all important data (e.g. telephone number) for your GSM communication stored in a chip.

Only 3 Volt SIM cards are supported. Older SIM cards (5 Volts technology) cannot be used.

**Attention:** In order to perform payment transactions data transmission must be enabled by the Service Provider.

**Caution:** Keep SIM card away from children; small parts could be swallowed by children.

## Before changing the SIM card

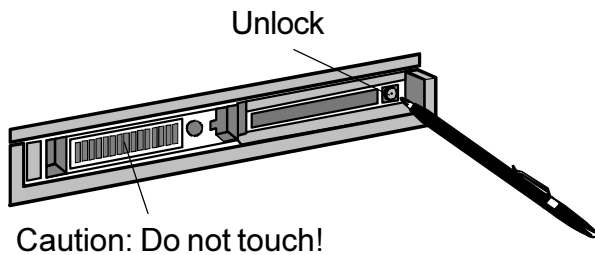
- Refer to your user's manual for the PIN handling of your SIM card.

**Caution:** Do not touch the contact pads of the SIM card or of the multifunctional interface.

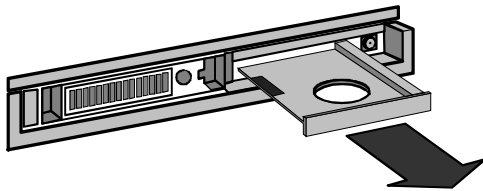
# Installation

## Insert SIM card

- Switch off ARTEMA mobile GSM / GPRS by pressing the key **CLR**.

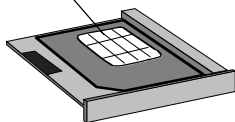


- Push the SIM card release button with a pointed object such as a ballpen. The SIM card holder will eject slightly.



- Remove the SIM card holder.

SIM card with SIM card holder



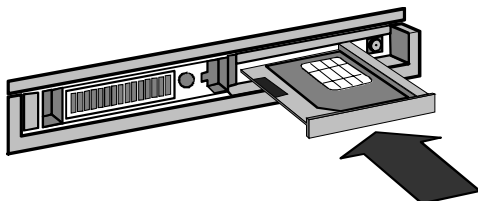
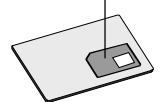
- Insert the SIM card in the SIM card holder as shown in the drawing. Pay attention to the orientation of the SIM card. The metallic pads must be visible and the SIM card's sloping edge has to fit in the card holder's sloping edge.

SIM card

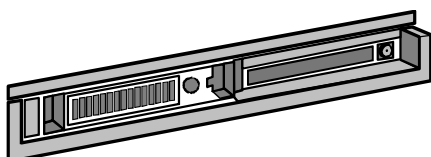
SIM card in a credit card format:

Cut carefully the small bridges between inner and outer card.

Press carefully and take out SIM card.



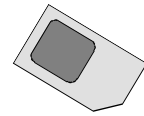
- Insert the SIM card holder (including the SIM card) like a drawer into the SIM card slot according to the drawing. Push the drawer until it is blocked.



- Now ARTEMA mobile GSM / GPRS can be powered on again by pressing the **OK** key.

# Installation

## Insert / change plug-in card



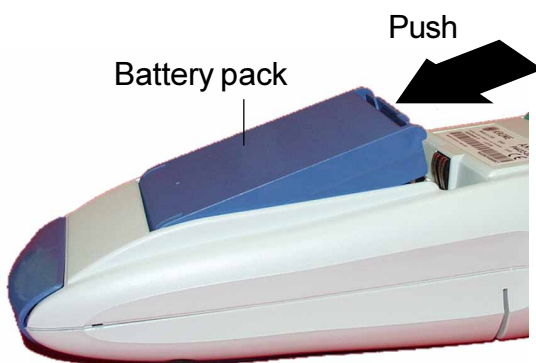
Plug-in card

For the operation of some payment and loyalty cards plug-in cards need to be inserted into the terminal. These cards are supplied by your local dealer/provider or bank.

**Caution:** Keep away from children; small parts could be swallowed by children.

## Before changing the plug-in card

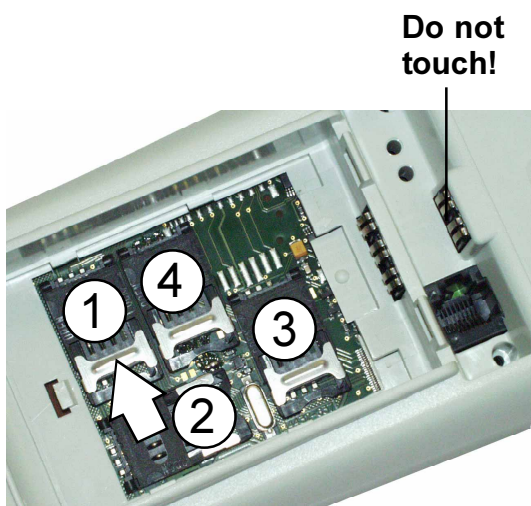
- Switch off the terminal by pressing the key **CLR** before inserting or removing the plug-in card.



Bottom view

## Insert plug-in card

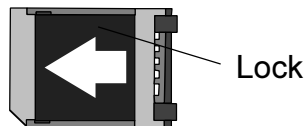
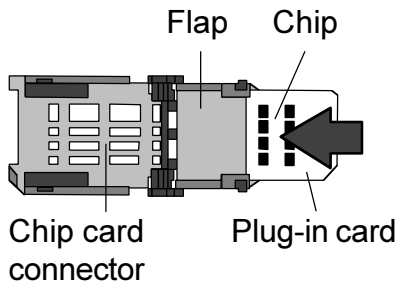
- Push the battery pack interlocking pin as shown in the drawing and lift it up to remove the battery pack.



- Push the flap of the chip card connector as ① ... ④ shown in the drawing and open the flap.


**Caution:** Do not touch the metal pads of the plug-in cards or electronic devices with your fingers or other objects. Electrostatic discharge (ESD) may cause damage.

# Installation



- Insert the plug-in card completely into the flap as shown in the drawing.
- Close the flap and push it into the direction as shown.
- Position the battery pack in the back of the terminal. Press on the upper part of the battery until a „click“ is heard.

## After changing the plug-in card

- Switch on ARTEMA mobile GSM / GPRS by pressing the „power on“ key .

## Battery Pack Handling

### Important note for the use of battery packs

The battery pack supplies the terminal with power.

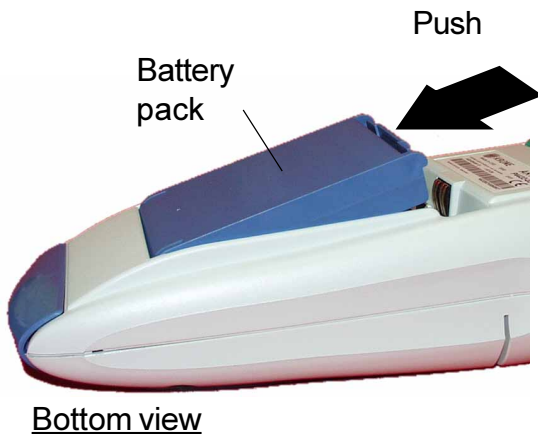
- The battery pack heats up during charging and discharging. This is normal and not dangerous.
- Replace old batteries only by original batteries recommended by Thales e-Transactions.

**Caution:** The use of battery packs other than recommended may cause malfunctions or may damage ARTEMA mobile GSM / GPRS. In this case Thales e-Transactions cannot be held responsible!

# Installation

## Before changing the battery

- Important: Switch off ARTEMA mobile GSM / GPRS by pressing the “power off” key **(CLR)** before changing the battery pack.



Bottom view

## Insert battery back

- Push the battery pack interlocking pin as shown in the drawing and lift it up to remove the battery pack.
- Position another battery pack in the back of ARTEMA mobile GSM / GPRS and press on the battery upper part until a “click” is heard.
- Switch on ARTEMA mobile GSM / GPRS by pressing the “power on” key **(OK)**.
- Do not store battery inserted in the terminal for a prolonged period of time.


Note: The battery pack reaches its maximum capacity after charging with the delivered power supply.

## Spare batteries:

Type: NiMH, 7.2 Volt, 1500 mAh Order code: 4432-107-00
---

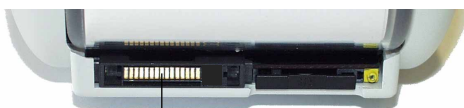
Type: NiCd, 7.2 Volt, 700 mAh Order code: 4432-102-00
--

## Connect Power Supply

The battery level icon  at the ARTEMA mobile GSM / GPRS display flashes if the battery is nearly empty. The terminal refuses to perform additional transactions. Connect ARTEMA mobile GSM / GPRS to the power supply to recharge the battery pack.

**Caution: Do not operate ARTEMA mobile GSM / GPRS without inserted battery pack!**

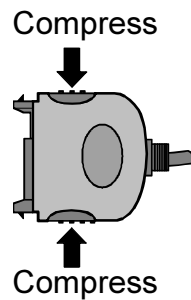
ARTEMA mobile GSM / GPRS  
(Rear view)



Multifunctional interface for the power supply or car charger.



# Installation



ARTEMA mobile GSM / GPRS  
with power supply  
110-240 VAC  
50-60 Hz



- Connect the provided power supply to the multifunctional interface of ARTEMA mobile GSM / GPRS properly.

**Note:** Compress the connector sides to connect or to remove the plug.

**Caution:** Connecting or removing the plug without compressing the connector sides will damage your ARTEMA!

- Connect the power supply to the wall outlet. The electrical outlet needs to be close to the terminal, within reach, in order to quickly disconnect the terminal if necessary.

**Caution:** The battery pack inside ARTEMA mobile GSM / GPRS has to be charged with the delivered power supply only. The use of other power supplies than recommended can cause malfunctions or can damage ARTEMA mobile GSM / GPRS. In this case Thales e-Transactions cannot be held responsible.

**Caution:** Do not touch the metal pads of the multifunctional interface with your fingers or other objects. Electrostatic discharge (ESD) may damage the device.

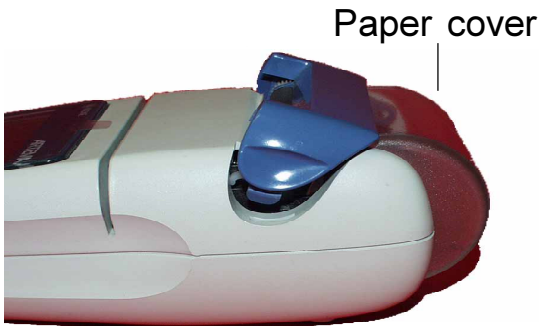
**Charging time:** An empty NiMH battery is fully charged after 2.5 hours. An empty NiCd battery is fully charged after about 4 hours. Charging of batteries is only permitted in an ambient temperature of 5°C to 40°C.

Please disconnect the power supply from ARTEMA mobile GSM / GPRS and the power supply from the wall outlet after the battery is fully charged.

**Note:** Battery pack reaches its maximum capacity by charging and discharging several times.

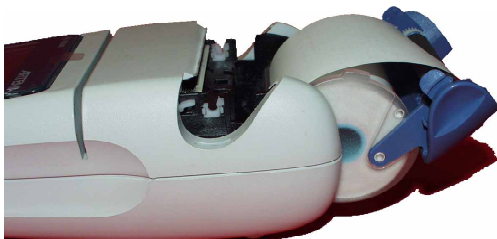
## Paper Roll

To obtain the highest printing quality, and to ensure maximum printer life span, only use recommended paper rolls.



1. Open the printer casing by pressing simultaneously on both sides, and by pulling upwards.

2. Open the paper cover completely and remove the old paper roll.




3. Place the new roll of paper in the casing, paper output towards the keypad. Leave a few centimeters / inches of paper outside.



4. Close the printer casing. You will hear a “click” to confirm the casing is closed.

**Note:** The printer will work only if the casing is closed and the battery is sufficiently charged.

5. Switch on ARTEMA mobile GSM / GPRS by pressing the “power on” key  and draw a few centimeters / inches to check the roll is correctly placed in its casing.

### Paper roll specification:

Paper	: thermal paper
Width	: 58mm +0/-1,0 mm (2.28 inch +0/-0.04 inch)
Roll diameter	: max 45 mm (1.77 inch)
Paper thickness	: 65µm + 5/-7µm
Paper color	: white
Developing color	: black
Thermal sensitivity	: standard
Core diameter	: 12 mm (0.47 inch)

# Technical Specification

## ARTEMA mobile GSM / GPRS

Application	wireles electronic transaction via GSM850/PCS1900 networks
Dimensions	9.45 x 3.54 x 2.56 inch (240 x 90 x 65 mm)
Weight	700 g
Printer	thermal line printer 12 lines/seconds
Graphics display	132 x 40 pixels, backlight
Keyboard	silicon rubber keypad, 17 keys, backlight
Card Readers	2-track magnetic swipe card reader (ISO track 2+3 or 1+2 or 2) smart card reader IS=IEC 7816/1-3 4 plug-in connectors
Microprocessor	32-bit RISC processor
Memory	Flash 4 MB / SRAM 512 KB
Battery pack	Nickel-Metal-Hydrid battery pack 7.2 Volt, 1500mAh; Nickel-Cadmium battery pack 7.2 Volt, 700mAh
Power supply	special plug-in AC power unit 100-240 VAC 50-60 Hz 12 VDC
Interfaces	RS232 interface, up to 115 kbps; multifunctional interface for accessory: car charger, power supply
Mobile networks	GSM850/PCS1900
SIM card	ID000, 3 Volt
Protocols	V.32, V.110, TCP / IP
Accessory (optional)	spare battery pack, car charger
Environment terminal	Operating temperature 41°F (+5°C) to 104°F (+40°C) at 15% to 85% rel. humidity non condensing Storage temperature -4°F (-20°C) to 140°F (+60°C) at 10% to 90% rel. humidity non condensing
Environment battery	Charging/discharging temperature 41°F (+5°C) to 104°F (+40°C) at 15% to 85% rel. humidity non condensing Storage temperature -4°F (-20°C) to (86°F) +30°C at 45% to 85% rel. humidity non condensing

## Getting Started

To start to work with ARTEMA mobile GSM / GPRS please refer to the supplied User's Manual.

## Short Maintenance Guide

**Technical maintenance operations should only be done by approved servicing centers.**

**Some problems can easily be solved:**

ARTEMA stops during transaction processing or printing:	Recharge the battery by connecting the belonging power supply for several hours. Check if the battery is correctly set in the hand held unit. Check if the printer casing is correctly closed.
The hand held unit is not communicating with the network:	Check the signal strength of the network (look for radio icon on hand held unit).
Paper jams:	Check that the paper roll is correctly placed. Check that the paper casing is correctly closed.

Spare parts:

Contact your terminal provider for spare parts and servicing.

## Mobile Phones (...Devices) Health Issues

According to FDA and others, the research to date does not show that mobile phone (...device) radio frequency emissions have adverse health effects but there is not enough information at this point to conclude that these products are without risk. While most epidemiological and laboratory studies related to the radio frequency emissions of mobile phones (...devices) have found no adverse health effects, the results of some studies have raised questions that require further research.

A number of studies have been conducted on the possible health effects of Radio frequency emissions from mobile phones. FDA's position, first stated in 1993 and still in place today, is that the research to date does not show that radio frequency emissions from mobile phones (...devices) have adverse health effects. However, according to FDA, there is not enough information at this point to conclude that the phones pose no risk. Several international bodies, including the World Health Organization<sup>1)</sup> and Expert panels commissioned by the British<sup>2)</sup> and Canadian<sup>3)</sup> governments, have drawn similar conclusions. All of these bodies conclude that while most of the studies related to mobile phone (...device) radio frequency emissions have found no effect on human health, some studies that have suggested the existence of biological effects require further investigation.

<sup>1)</sup> World Health Organisation, "Electromagnetic Fields and Public Health: Mobile Telephones and Their Base Stations," Fact Sheet No. 193 (2000).

<sup>2)</sup> Independent Expert Group on Mobile Phones, "Mobile Phones and Health," National Radiological Protection Board (UK) (Apr. 1999).

<sup>3)</sup> Royal Society of Canada, "A Review of the Potential Health Risks of Radio frequency Fields From Wireless Telecommunication Devices." Expert panel report prepared for Health Canada (1999).

[Citation: Page 8 GAO-01-545 "Research and Regulatory Efforts on Mobile Phone Health Issues", 5/2001, Washington, DC, J.I. Lieberman, E.J. Markey]

FDA - US Food and Drug Administration  
GAO - US General Accounting Office  
RF - Radio Frequency  
SAR - Specific Absorption Rate  
WHO - World Health Organisation

## RF Exposure Statement

Your Artema may contain a transmitter and receiver that emit radio frequency (RF) energy. The actual frequency range used by the Artema is radio-modem dependent according to the specific model. Digital modulation techniques are used. During radio communication, the local radio system handling the actual communication controls the actual power transmission output level. This output level may typically vary (relative to the distance between the user location and the cell transmission sites).

\* When used properly, the design of this hand-held wireless terminal complies with U.S., Canadian, European and other standards for protection from public exposure to radio frequency (RF) magnetic signals.

\* This device has been tested and meets RF exposure guidelines for hand held operation pursuant to FCC OET Bulletin 65 Supplement C ed. 01-01, IEEE 1528/D1.2 (2003).



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