

Regulatory Information

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FC FCC Declaration of Conformity
Product Name: Forklift or Vehicle Mount Terminal Charger
Model Number: ACC-7036

Radio Frequency Interference Requirements

This equipment complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This equipment may not cause harmful interference, and (2) this equipment must accept any interference received, including interference that may cause undesired operation.

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 residential 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. However, there is no guarantee that interference will not occur in a particular installation. If you determine the equipment does cause harmful interference to radio or television reception (this may be determined by monitoring the interference while turning the equipment off and on), you are encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or TV technician for help.

Radio Frequency Interference Requirements - Canada

This Class A digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Marking and European Economic Area (EEA)

CE Products intended for sale within the European Union are marked with the CE mark which indicates compliance to applicable Directives and European Normes (EN), as follows. Amendments to these Directives or EN's are included.

- Electromagnetic Compatibility Directive 89/336/EEC
- Low Voltage Directive 73/23/EEC

Normalización y Certificación Electrónica (NYCE)



Safety

NOM / NYCE-NOM-019-SCFI-1998
Safety of data processing equipment.

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AML **ACC-7036**

Forklift or Vehicle Mount Terminal Charger



User's Guide

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Introduction

The ACC-7036 Forklift or Vehicle Mount Terminal Charger charges the internal 7.8V Li-Ion battery of the M7100 handheld terminal, and holds the M7100 securely for use or transit in a forklift or other vehicle. A 9-pin RS232 port is provided for connection of an external serial device such as a tethered bar code reader or a serial printer. An optional output of 5V DC at 1 Amp is available, primarily intended for powering a device such as a tethered bar code reader.

About This Guide

This guide provides information on setting up and using the ACC-7036 Forklift or Vehicle Mount Terminal Charger. For instructions on battery charging, see the M7100 User's Guide.

Operational Characteristics

The ACC-7036 operates using DC power found in a vehicle. This power is presumably safe and must be within the range of 9 to 54 Volts DC. Reasonable precautions have been taken to protect all utilized equipment against electrical transients commonly found in vehicles. If installed in a combustion vehicle, be sure that the vehicle's transient suppressor is functional; this is typically installed at the alternator. Voltage outside this 9 to 54 V DC range will invoke under-voltage lockout behavior or overvoltage lockout and transient protection. There is also built-in blocking reverse battery protection.

The ACC-7036 provides approximately a 4-hour charging time for the M7100 Li-Ion battery. There is a "Power Good" (PG) indicator LED used to indicate that the input power is present and good, and that no power faults exist in the system. The PG indicator will turn OFF if there is a fault. If a fault is observed, remove power immediately and examine the M7100 and attached devices. The PG indicator will turn OFF if one of the following faults occurs:

- Vehicle battery DC voltage too low or too high
- Reverse connection of vehicle battery
- Power not present
- System current draw too high
- Li-Ion battery charging circuit short circuit
- Optional 5V output short circuit

The optional 5V DC output is provided primarily to power a tethered bar code reader. The 9-pin RS232 serial port allows direct connection to the M7100 in cradle for use with many types of applications. The RS232 cable used should be 3M (10 ft.) or shorter, and will typically incorporate a null-modem design.

Preparing to Install

Installing the ACC-7036 requires physically mounting the bracket on a secure surface and wiring into the vehicle's power system. Please consult your forklift or vehicle manufacturer's documentation regarding the installation of accessory equipment.

Installation

Recommended Tools and Materials

- Wire crimping and stripping tool, and/or soldering iron and solder.
- Teflon coated braided power and grounding wire of adequate gauge and length:
 - Under 6 feet (1.8 M), minimum 18 ga.
 - Exceeding 6 feet (1.8 M), 16-14 ga. is recommended
- Heatshrink tubing and heat gun
- Electric drill and drill bits
- Common hand tools and mounting hardware (nuts and bolts, etc.)
- (Optional) Power toggle switch (10A minimum rating)
- 24 ga. wire, DC power connector suitable for your laser, and 1/8" Mono phone plug for making a custom power cable if using the 5V output to power your laser.

Installation Guidelines

- **SAFETY:** Disconnect the vehicle battery cables before installation.
- Power is typically available from the vehicle terminal/fuse block.

- Use removable power. Use keyed system power, i.e. power that is removed when the vehicle is turned off, or alternatively use a power toggle switch (10A minimum rating) to remove power in systems without keyed power connections or for additional safety reasons.
- The ACC-7036 wiring color code is as follows:
Red – Power from vehicle
Black – Ground
- Keep wiring as short as is practical.
- Cover all wiring joints completely with heatshrink tubing.
- Route cables and wiring to minimize exposure to damage. Use a snap-in bushing if routing the power wiring through a firewall or other sheet metal.
- Secure the wiring at least every 2 ft (60 cm)
- Observe the required polarity of the bar code scanner or other device when installing the optional 5V DC power connector. The 1/8" Mono jack tip is +5V and the sleeve is Ground.
- **NOTE:** The case need not be grounded, as it is internally isolated. Primary power and ground wiring connections are provided.
- **NOTE:** External fuses and a fuse holder may be used, but are not required. The ACC-7036 incorporates internal self-resetting 1 Amp fuses.

RS232 Port Pin out (DB-9)

- | | |
|--------------------------------------|----------------------------------|
| 1 – DCD (Data Carrier Detect) | 6 – DSR (Data Set Ready) |
| 2 – RXD (Receive Data) | 7 – RTS (Request To Send) |
| 3 – TXD (Transmit Data) | 8 – CTS (Clear To Send) |
| 4 – DTR (Data Terminal Ready) | 9 – +5V DC |
| 5 – GND (Signal Ground) | |