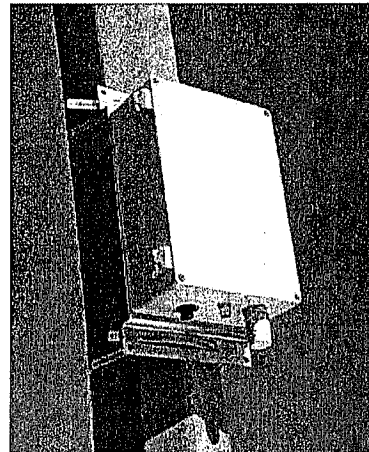




# R450™ Mini Collector Installation and Maintenance Guide



R450 DATA COLLECTOR INSTALLATION AND MAINTENANCE GUIDE

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#### **Trademarks used in this manual**

R450 Mini Collector is a trademark of Neptune Technology Group Inc. R450 is a trademark of Neptune Technology Group Inc. Other brands or product names are the trademarks or registered trademarks of their respective holders.

#### **FCC Notice**

This device complies with Part 15 of the FCC Rules. Operation is subject to the 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.

**NOTE:** 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 in a residential installation. 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 this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more 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/TV technician for help.

#### **RF Exposure Information**

This equipment complies with the FCC RF radiation requirements for uncontrolled environments. To maintain compliance with these requirements, the antenna and any radiating elements should be installed to ensure that a minimum separation distance of 46cm is maintained from the general population.



#### **CAUTION:**

**The antenna used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This device is approved with emissions having a source-based time-averaging duty factor not exceeding 50%..**



**Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.**

#### **Professional Installation**

In accordance with Section 15.203 of the FCC rules and regulations, the R450 Data Collector must be professionally installed by trained utility meter installers. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.


### Industry Canada

This Class A digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations. Operation is subject to the 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.


Cet appareillage numérique de la classe A répond à toutes les exigences de l'interférence canadienne causant des règlements d'équipement. L'opération est sujette aux deux conditions suivantes: (1) ce dispositif peut ne pas causer l'interférence nocive, et (2) ce dispositif doit accepter n'importe quelle interférence reçue, y compris l'interférence qui peut causer l'opération peu désirée.

### Important Safety Precautions

Review the following precautionary measures prior to installation.

	<b>Refer installation and service to qualified service personnel only.</b>
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- Review the following precautionary measures prior to installation. Connections to the AC mains must be performed by a licensed electrician. No user-installable parts inside.
- Installation must be done in accordance with the instructions contained in this manual.
- Installation must be done in accordance with the National Electrical Code (NEC), NFPA 70 or Canadian Electrical Code (CEC.), CSA C22.2, No. 1.
- In particular, installation must be done in accordance with NEC Article 810 or CEC Section 54.
- This unit is not intended to be powered directly from the Mains Distribution System.

	<b>CAUTION:</b> <b>Risk of explosion if battery is replaced by an incorrect type.</b> <b>Dispose of used batteries according to the manufacturer's instructions.</b>
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#### ***R450 Mini Collector Installation and Maintenance Guide***

Literature No. IM R450 Mini Collector 03.10

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# 1 Product Description

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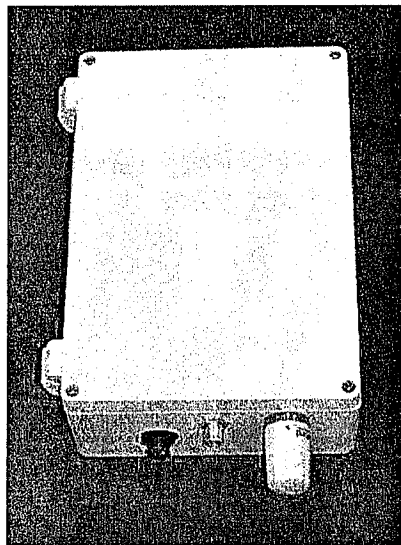
## General Product Overview

This section provides a general description of the R450 Mini Collector, Model 450M.

The R450 Mini Collector receives, stores, and communicates meter reading data to the ARB® N\_SIGHT™ FixedBase software in the host computer. The R450 Mini Collector collects meter reading data from Neptune's R450 Meter Interface Unit (MIU) interfacing with Neptune's absolute encoder register. This data can later be uploaded to the Customer Information System (CIS) and sent to the utility billing system for processing.



The R450 Mini Collector utilizes frequencies in the 450-470 MHz licensed band. A FCC license is required prior to installation of the system.



**Figure 1 R450 Mini Collector**

This chapter is designed to provide you with an introduction to the installation process. It explains the focus of the guide, the pre-installation personnel responsibilities, and general information on technical support.

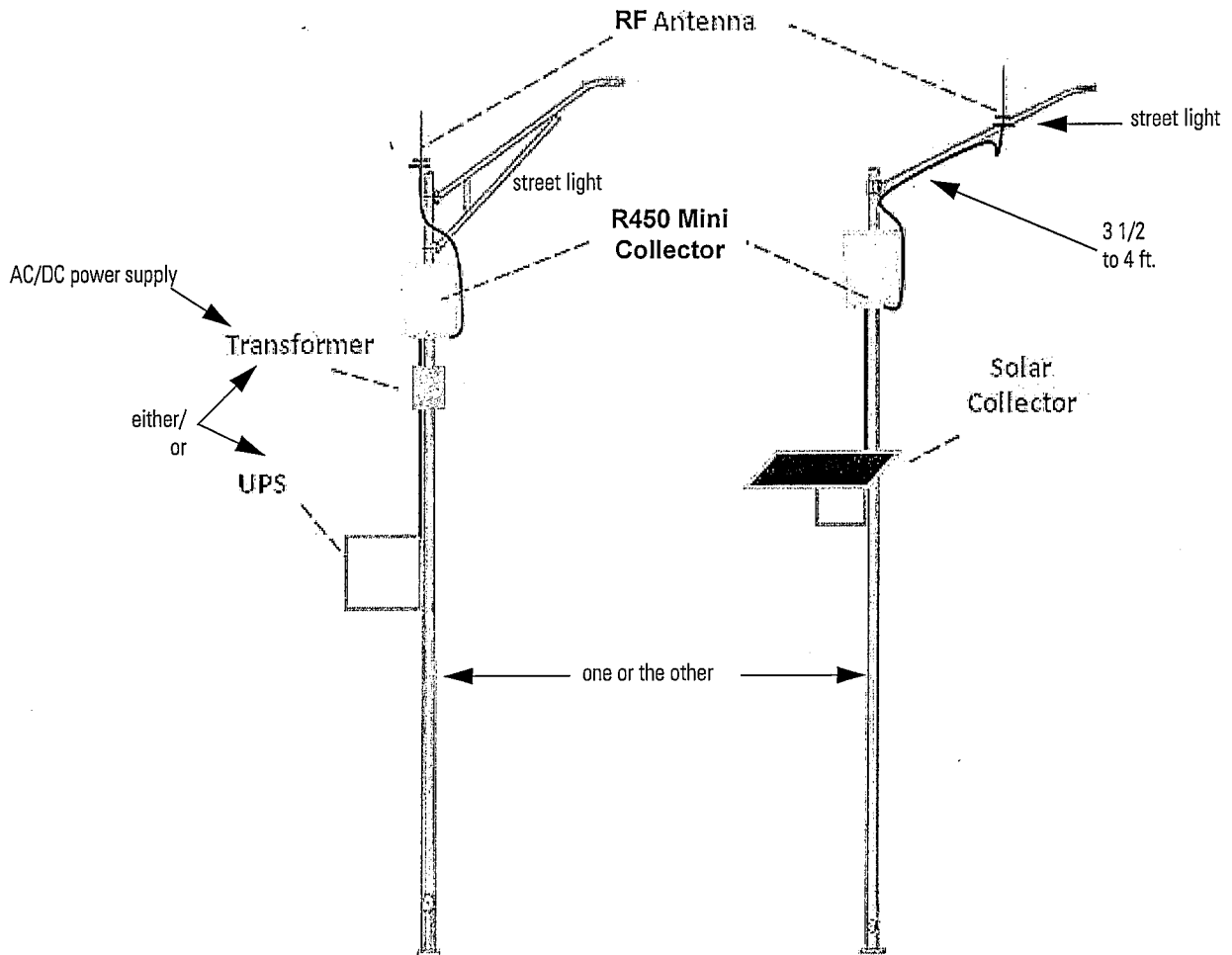
Before you begin to install the R450 Mini Collector, it is important to become familiar with the unit and its components. This guide is intended for use by installers and is designed to help in the installation process. This guide contains information on the components and specifications, the site selection, and the actual installation of the unit.

## Determining How to Install the R450 Mini Collector



For best performance of your R450 Mini Collector, mount the RF450 MHz antenna at a minimum of 30 feet high, but no more than 75 feet high.

The following figure illustrates how the R450 Mini Collector can be installed.



**Figure 2 Mounting Options**



Depending upon the availability of communications, GPRS, WiFi, or Ethernet modems can be used. Use site selection checklist before installing the R450 Mini Collector.