



**NEPTUNE**®

Neptune Technology Group Inc.

**Accu-Flow**  
Meter Service Ltd.

**ARB**® Utility Management Systems™



# Advantage II Operating Instructions

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## **Class B Digital Device**

NOTE: This equipment has been tested and found to comply with the limits for a Class B 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 instruction manual, 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.

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## **Information to User**

Any changes or modifications to this equipment not expressly approved by Neptune could void the user's authority to operate the equipment.

# Advantage II Meter Reading Unit

The Advantage II is a convenient, lightweight meter reading device that provides single-handed reading of remote receptacles. The unit may be used as a Visual Reader, an encoder installation testing device, or as a cordless interface for collecting and transmitting meter readings to a Neptune Handheld through Radio Frequency communications. The Advantage II is designed to read ProRead and Sensus remotes from the round end probe, while the rectangular end probe is used for reading ARB remotes. A model that includes a wand extension for pit mounted remote pads is also available.

Meter reading data obtained by the Advantage II is displayed on the unit's screen. Simultaneously, this same data is transmitted via RF to a Neptune Handheld that is equipped with an Advantage II or DAP RF Receiver Adapter.

Each Advantage II unit is shipped with:

1. Four orange safety stickers. Place the stickers on the sides of the unit near the probe ends.
2. A metal ring and handstrap. Clip the strap into the holes on either side of the screen.

To power the Advantage II, depress the “On/Off” key once. The “On/Off” switch is a miniature recessed push switch located on the right side of the ARB or blank end of the unit. Press the switch with the tip of a pen or pencil to activate. A “tone” will be heard, Copyright and version data will momentarily be displayed on the screen, followed by the normal meter reading screen:



**N or R = meter reading**

**I = ID number**

## NOTES:

1. The Meter Reading may be preceded by an “N” or an “R”.
2. Neptune ProRead meter readings are followed by a single character indicating meter type; i.e. “W” = Water, and a three character user character code.
3. The trigger must be pulled down to obtain a reading from a pad. A trigger pull is not required if inserting the ARB interrogator into the ARB recepticals. The reading is taken automatically. The trigger pull or block insert also orients the display to the proper viewing direction.

# Using the Advantage II as a Visual Reader or Test Device

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First, make sure the unit is “On” (if it is “Off”, press the “On/Off” key once to turn it “On”).

**To obtain a meter reading from a remote ARB receptacle:**

1. Insert the rectangular ARB interrogator squarely into the ARB receptacle.
2. A short tone will be heard and the meter reading will be displayed.

**To obtain a meter reading from a remote touch pad:**

1. Place the round end probe squarely onto the touch pad.
2. Pull and hold down the trigger to obtain the meter reading.
3. A short tone will be heard and the meter reading will be displayed.

<b>N: 123455</b>
<b>I: 12345678</b>

The captured reading will remain on the display until;

- a. Another reading is captured
- b. The trigger is pulled
- c. A key is pressed

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## Error Conditions

### ARB End Probe Error Condition:

If the ARB end probe is NOT making proper contact with a remote receptacle when inserted in the block, the unit will sound a long error tone. The screen appears as ;

<b>N: _____</b>
<b>I: _____</b>

### ProRead, Sensus, End Probe Error Condition:

If the ProRead, Sensus end probe is NOT in contact with a remote pad when the trigger is pulled for an extended period of time, the unit will sound a long error tone. The screen appears as;

<b>READING ERROR</b>
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To correct either error condition, position the probe such that proper contact is achieved with the remote. For ProRead and Sensus meters, the trigger must be pulled after making proper contact.

## Wiring Errors

Two types of wiring errors can occur - Short Circuits and Open Circuits. Short circuits appear as an “H”, and Open circuits appear as a “-” (dash).

**NOTE: Autosearch feature in the Neptune Handheld will NOT function when there is a Wiring Error in the captured ID.**

You should perform at least two tasks in an attempt to clear the problem;

1. Check the pins in both the ARB V remote receptacle and the front interrogator of the Advantage II for dirt, corrosion, and other contamination.  
Clean the pins if required.
2. Insert the Advantage II again to obtain the reading.

### Short Circuit:

An “H” in the place of a number represents a “short” circuit. It usually means that the copper portions of two wires are touching each other. A display similar to the one below is displayed:

<b>N: 0012</b>
<b>I: 123HHH</b>

### Open Circuit:

An “Open” circuit is represented by a “-” (dashes) in the place of numbers. It usually means that a wire is broken or cut which can be caused by corrosion or contamination on the pins of an ARB V box. The screen will appear as;

<b>N: _____</b>
<b>I: 000012</b>

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## Advantage II Menu Selections

Each time the MENU key is pressed, a different menu option will be displayed. To clear the Menu and return to the normal meter reading screen, continue pressing MENU.

### Menu Options :

#### ***RETRANSMIT***

The Advantage II stores the previous five captured meter readings. This option allows you to retransmit either the last reading or the previous five readings captured to the Neptune Handheld. As additional readings are captured, the oldest reading is overwritten.

1. Press ITEM to display RETRANSMIT LAST.
2. Press ENTER to retransmit the last read captured.

#### **OR**

1. Press ITEM again to display RETRANSMIT ALL.
2. Press ENTER to retransmit all readings.

#### **OR**

Press MENU to go to the next Menu option.

#### ***REVIEW***

Reviews any readings stored.

1. Press ITEM to display the last reading captured.
2. Press ITEM again to see the next reading.
3. If the unit contains no readings, “REVIEW” remains on the screen.

#### **OR**

Press MENU to go to the next Menu option.

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## Recharging the Advantage II Battery

A battery charger is supplied with each Advantage II unit. Use the supplied charger to recharge the battery. The use of any other type charger will void the warranty.

To recharge the battery:

1. Plug the charger transformer into a 110V outlet.
2. Insert the charging plug into the charging jack in the Advantage II handle. Make sure the plug is fully seated into the jack. The amber light on the transformer will illuminate when a good connection is made.

During daily use, recharge the unit overnight, every night.

During long periods of storage or “non-use”, DO NOT charge the unit. Before using the unit again, allow the unit to charge for 16 hours.

Use the “ON/OFF” button to turn ON, OFF, or RESET the unit.

### LOW BATTERY MESSAGE

The Advantage II will display a low battery message and will discontinue operating when the battery has become too low for operation. The keypad will remain operational, but the unit will not capture meter readings.

If a low battery condition is detected, the low battery message will appear and the unit will remain in this mode until the battery has been recharged or until it discontinues operation.

### REPLACEMENT BATTERIES

Replacement batteries are available from your local Neptune sales representative. You may replace the battery yourself by turning the battery cover screw and removing the cover. Turn off the unit and carefully disconnect the battery at the white connector. Reconnect the new battery in the same connector orientation. Replace the battery, reposition the battery cover, and turn the screw to lock into place. Turn on the unit by pressing “On/Off” key once.

Replacement battery part number... 11992-101  
(comes with wiring harness and connector)

### DISPOSAL OF OLD BATTERIES

The old batteries must be disposed of properly. Never put old batteries in a trash receptacle. Please return the old batteries from any Neptune meter reading product to the factory for proper disposal. Use the return procedure and address on the next page to return old batteries for disposal.

## Questions

For Help on the Advantage II System, please contact the Customer Support Department at 1-800-647-4832.

If you need to return an Advantage II or other Handheld reading equipment for repair:

1. Contact the Customer Support Department to explain the problem. The problem can possibly be resolved over the telephone.
2. Obtain a Return Material Authorization (RMA).
3. Turn the unit off prior to shipping it to Neptune for repair.
4. Write the RMA number on the outside of the carton.
5. Ship the carton to:

Neptune Technology Group Inc.  
1600 Alabama Hwy 229  
Tallasse, AL. 36078  
Attention : Electronics Repair

NOTE: Our repair department always attempts to repair equipment as quickly as possible. If you require "Express" shipping (Federal Express, UPS Blue or Red Label), please notify Customer Service by telephone to expedite your order.

To obtain pricing or order related parts and equipment, contact your local Authorized Neptune sales office, Authorized Neptune Distributor, or contact the Factory Customer Service Department at 800-645-1892.

### CUSTOMER SERVICE

(800) 645-1892 phone  
(334) 283-7434 fax

### CUSTOMER SUPPORT

(800) 647-4832 phone  
(334) 283-7497 fax

