

Fill Key Operation:

The ADV 5100 and the Vending Machine must be **READY** and **ON-LINE**. Press the **C** button. **Watch the Indicator LED's carefully.**

The Indicator LED's on the ADV 5100 will display the following sequence:

			DEX audit in progress
			DEX completed successfully (15 sec)
			Telemetry session in progress
			Telemetry Session Completed OK (15 sec)
			Unit is Ready and On-Line

By performing a Fill Key operation, you make the ADV 5100 DEX the vending machine and make a call, sending the data to the server.



This is the QR code for www.meigroup.com.

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“Give your machines a voice™”



ADV 5100 Installation Booklet

TABLE OF CONTENTS

General Information Product Description	3
ADV 5100 Installation.....	4
Part Numbers.....	5
Installation Do's and Don'ts.....	7
ADV 5100 Operation.....	10
Trouble Shooting.....	13

SERIAL NUMBER CONFIGURATION

WWYLCCPPPPP

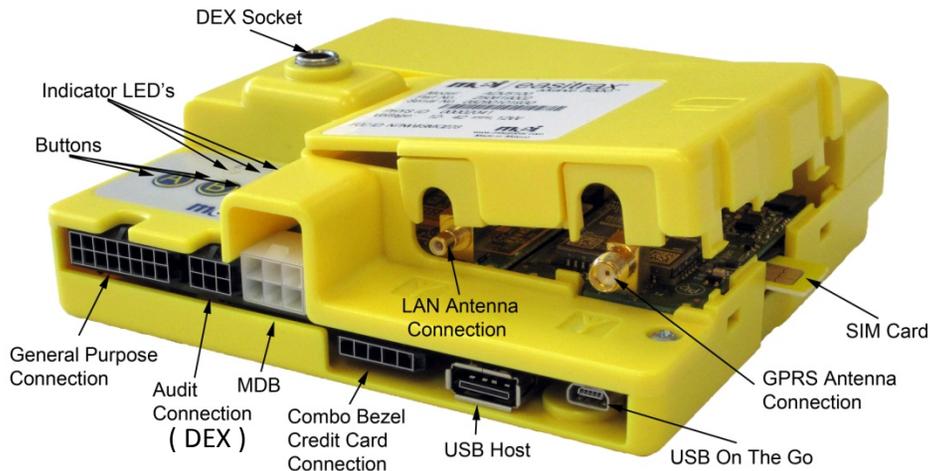
WW - Week Manufactured (01 through 52)

Y - Year Manufactured (2 for 2002)

L - Manufacturing Location

CC - Configuration Code

PPPPP - Sequential Production Number



General Information:

The MEI | Easitrax Advance 5100 is a microprocessor based online monitoring device with configurable interfaces to capture transaction activities of bottling and full-service vending machines through its DEX/UCS communication port. This information can then be transmitted to a distant host with a hand-held computer, WLAN, or RF WAN connection.

The Advance 5100 uses 20-42V DC power supplied by its host machine through the Multi Drop Bus Interface (MDB).

The ADV 5100 is capable of connecting to existing vending machine DEX ports. This feature allows for the capture and communications of all vend information through the wireless network server connection. Users may also extract industry-standard DEX data records through the ADV 5100 "pass through" DEX port using a variety of standard DEX audit applications.

RESTRICTIONS

Please consult your MEI sales representative, MEI authorized distributor, or MEI's web site, www.meigroup.com, for a list of compatible Vending Machines.

Product Description:

Input Voltage: 20-42 VDC

Input current : Max - 1 Amp

Operating Temperature: (-15)°C - +60°C

Dimensions: 5" x 5 1/8" x 1 3/8"

Weight: 0.58 lbs

Cleaning and Maintenance:

The ADV 5100 will not need cleaning however, if cleaning is required, use a soft cloth moistened with mild, non-abrasive detergent. Maintenance should be performed by a properly trained service technician.

The ADV 5100 is not suitable for use in areas where there could be direct contact with water jets.

Have product questions?

Call MEI Technical Support 1-800-345-8172

Advance 5XXX (ADV 5100)

Installation:

Getting Started

- Contact your MEI sales representative or Authorized MEI Distributor to discuss system options.
- Your MEI representative will conduct a site survey to determine equipment requirements. (Optional)
- Locate a position where the Easitrax™ Advance 5100 is easily accessible. Make sure that the wiring harnesses will reach, the LEDs are visible, and that no objects are obstructing the DEX Jack.

Before Installation

- Verify that the machine and its components work properly prior to installation.

Fix and clear all errors.

- Perform a test vend and verify change payback.
- Visually inspect machine cables for defects. Replace as needed.
- Locate mounting position and harness routing options for the GPRS antenna as applicable.
- Power should be removed from the vending machine prior to starting the installation.

Needed Tools/Supplies

- Wire Cutters
- Wire Ties – Black UV stable wire ties and self-adhesive wire tie bases.
- Pliers or Adjustable Wrench (To tighten the nut on the Antenna where it goes through the Vending Machine Cabinet).
- Cleaning materials for vending machines. (Mild detergent)
- 1/2" drill w/metal bit (To install the antenna outside the machine)

Antenna Installation

Antennas shall be installed so that a separation distance of 20cm (8 inches) is maintained from individuals and other antennas during normal use. Ensure that the antenna cable is not damaged by the opening and closing of the vending machine door. **Do not coil excess antenna cable.** Only the antenna supplied with this device is to be used. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Harness Dressing Recommendation

All products and cables should be securely fastened to the vending machine. The installer should provide additional UV stable cable ties to securely fasten all cables to the vendor. Any excess cable should be fastened to the vending machine and service loops should be minimized.

INSTALLATION COMPONENTS

MDB Vending Machine Easitrax™ Advance 5XXX

Required Components:

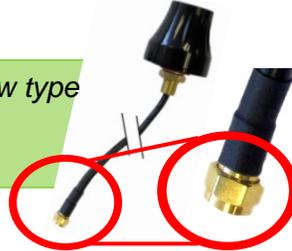
<u>Description</u>	<u>Part Number</u>
Easitrax™ Advance 5XXX (ADV 5100)	250611001
GPRS Antenna	213701001
ADV 5XXX Power MDB harness	216571001C
ADV 5XXX DEX harness	215637033C
Adhesive anchors for wire tie wraps	
Wire tie wraps	
Install Guide	

Installation Instructions

- 1) Check vending machine for normal operation and clear all errors.
- 2) Power OFF the vending machine door.
- 3) Connect the Power/ MDB harness and the DEX harnesses to the ADV 5100. Observe the orientation of the key on each plug.
- 4) Connect the GPRS antenna cable.

Note: The GPRS antenna is identified by a screw type connector that attaches to the GPRS radio.

FINGER TIGHTEN ONLY.



- 5) Select a location for the ADV 5100 in the vending machine and “dry test” the fit. Check for visible machine obstructions, harness routing options, and harness length requirements.

Note: It is strongly recommended that the GPRS antenna be mounted on a horizontal plane outside the vending machine. This may be accomplished by drilling a 1/2” hole through the top of the vending machine and threading the antenna cable inside. The GPRS antenna strength may be influenced by digital signal in the area and placement constraints in or on the vending machine.

- 6) Once satisfied with the potential ADV 5100 location, remove the ADV 5100 with attached harnesses and set aside. Thoroughly clean the machine surface around the areas where the ADV 5100 and where the Antenna will be installed. The surface should be clear of any dirt, dust, oils, or other foreign substances.
- 7) Disconnect the Antenna, Power /MDB, and the DEX cables from the ADV 5100 and set aside.
- 8) Remove the plastic adhesive backing from the hook and loop strips on the back of the ADV 5100 and firmly secure the ADV 5100 to the chosen mounting location. Attach the wiring harnesses and check the security of the cable connections

once the ADV 5100 has been secured to the machine surface.

- 9) Install wire tie anchors below the ADV 5100 cable connections. Using the wire ties provided, secure the cable harnesses to the anchors.
- 10) The MDB power and communication route should be as follows:
 - a. From the VMC to the ADV 5100 Power MDB harness
 - b. From the harness to the ADV 5100 and to the bill validator MDB harness
 - c. From the bill validator MDB harness to the Coin Mechanism harness.
- 11) Install GPRS Antenna. The GPRS antenna is identified by a screw type connector that attaches to the GPRS radio. It is strongly recommended that this antenna be mounted on a horizontal plane (the top) outside the vending machine. This may be accomplished by drilling a 1/2” hole through the top of the vending machine and threading the antenna cable inside. An extension adapter is available for Dixie Narco 5000 machines. Thoroughly clean the machine surface around the area where the GPRS antenna will be installed. The surface should be free of any dirt, dust, oils, or other foreign substances.

Warning: The antenna must be connected to the Easitrax™ ADV 5100 prior to power up. Powering up the Easitrax™ ADV 5100 before connecting the antenna may damage the unit.

Notice: “Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.”

- 12) Connect the DEX plug to the vending machine DEX jack. This DEX jack (if installed) can be found on either the vending machine control board or on a harness plugged into the vending machine control board.

Note: If the machine has no DEX jack, ensure that you tie off the harness from the connector so it does not impede machine operations. The Advance 5100 does not require the DEX connection to collect information.

- 13) Power **ON** the vending machine. The L1 red LED should be flashing on the ADV 5100. When the unit is Ready and On-Line, the L1 and L2 LEDs will be solid red and the L3 LED will be flashing.



- 14) The installation is now complete and ready for testing. Record the machine unique ID, Asset and ADV 5100 serial numbers and **perform a Fill Key operation**.
- 15) **Optional:** Using the **MEI Telemeter Service Tool**, program the machine asset number into the ADV 5100 and the VMC from your Data Shuttle Unit.
- 16) **Optional:** Use the Survey Tab of the **MEI Telemeter Service Tool** to inventory the vending machine.

The Do's and Don'ts of a Quality ADV 5100 Installation

Advance 5100 Antenna Placement:

The GPRS antenna must be placed on top of the vending machine and spaced a minimum of 8" from people and any other antenna. (See Figure 1)



Do

Figure 1

Do' and Don'ts

Figure 2



On a Royal 500, the GPRS antenna must be mounted on the top corner above the payment system channel in between the two mounting arms of the delivery mechanism control board. (See Figures 2 & 3)

On a Dixie Narco 5000, the GPRS antenna must be mounted on the top of the vending machine above the service area compartment. Note: Install GPRS antenna extension bushing.

(See Figure 4)



Figure 4

Figure 3



Do



Figure 5

On a Dixie Narco 5000, do not mount the ADV 5100 in the rear, against the cabinet wall. The ADV 5100 may be mounted on the door near the bill validator. (See Figure 5)

Do

Do' and Don'ts



Figure 6

Advance 5100 Wiring:

The ADV 5100 should never be mounted horizontal due to water ingress and visual verification reasons. (See Figure 6) Mount on the outer right side of the vertical payment system channel. (See Figure 7)

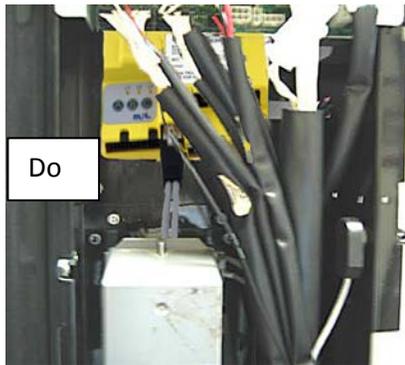


Figure 8

On a Dixie Narco 5000, a suitable place to run the Power MDB cable is in the open space between the coin mechanism and bill validator. (See Figure 9)

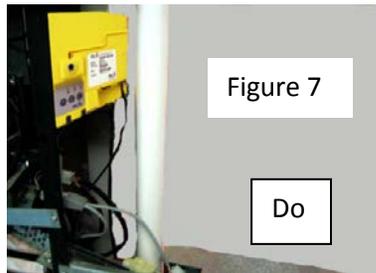


Figure 7

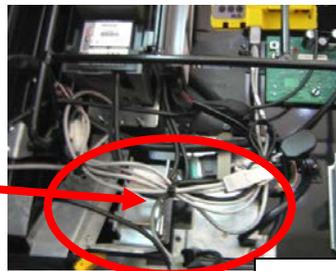


Figure 9

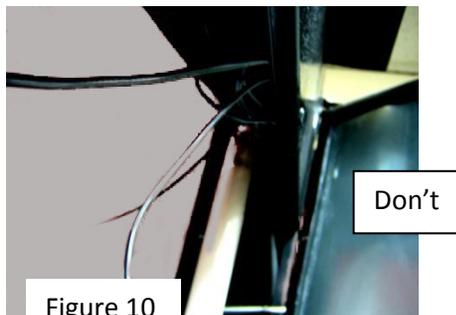


Figure 10

On a Dixie Narco 276, the ADV 5100 may be mounted behind the vending machine control board if there is not a sufficient amount of space on the outer right side of the vertical payment system channel. (See Figure 8)

Do' and Don'ts (continued)

Do not coil any cables. Run all cables for every installation. (See Figures 10 and 11)

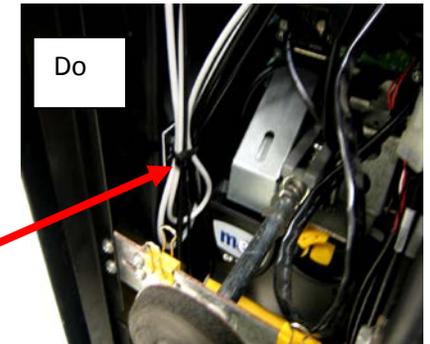


Figure 11

Use a wire tie wrap and mounting anchor to firmly secure the Power MDB and DEX cables against the vending machine door. (See Figure 11)

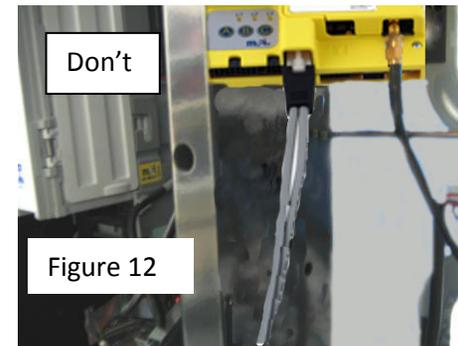


Figure 12

Operation:

Pushbutton Switches:

Three push button switches allow user input. The buttons are labeled A, B, and C. The following functions can be performed:

A	B	C	Function
●	⊗	⊗	DEX
⊗	●	⊗	Audit Call
⊗	⊗	●	Fill Key

● = Push this button(s)



LED Indicators

Three red LEDs provide user indications. Each LED can be OFF, ON or FLASHING.

The LEDs are marked L1, L2, and L3.

L1	L2	L3	Power Up Sequence
●	⊗	⊗	Unit is booting up
●	⊗	●	Unit is ready and off line
●	●	●	Unit is ready and online
●	●	●	Unit failed to boot up

L1	L2	L3	DEX Sequence
●	⊗	●	DEX audit in progress
●	⊗	●	DEX completed successfully (15 sec)
⊗	⊗	●	DEX failed (15 sec)

LED Indicators (continued)

L1	L2	L3	Telemetry Sequence
			Telemetry session in progress
			Telemetry Session Completed OK (15 sec)
			Telemetry session failed (15 sec)

L1	L2	L3	Credit Card Sequence
			Credit card authorization in progress
			Credit Card authorization complete (15 sec)
			Credit card failed authorization (15 sec)

L1	L2	L3	Firmware Update Sequence
			Firmware update in progress, do not power off
			Firmware update complete (15 sec)
			Firmware update failed (15 sec)

ADV 5100 REMOTE MONITORING

Tools Needed for Troubleshooting

DEX to PC Cable

Handheld with Windows OS (mobile 5 or PPC2003) or PC

ADV 5100 Service Tool Application (Covered in MEI Telemeter Service Tool V3.00 Operation Guide).

ADV 5100 Troubleshooting Check List

What to do when you arrive at the machine.

Before you open the machine:

_____ Confirm the Asset Number or Equipment Number.

_____ Confirm that the machine has at least one antenna on top of the machine.

After opening the machine:

_____ Confirm that Vending machine firmware is approved by MEI for compatibility with the ADV5100.

_____ Confirm the Physical ID of the ADV 5100 (this should match the asset assigned in the vendor system).

_____ Confirm that ADV 5100 is secure. If not, replace the VELCRO and re-mount the ADV 5100.

_____ Confirm that the ADV 5100 has POWER by looking at the red led's.

_____ Confirm that the antenna cable is connected properly to the ADV 5100 and leads to the antenna. Look for any damage and replace antenna if needed.

Confirming DEX Connections:

_____ Confirm that the DEX connector (from the ADV 5100) is connected to the DEX Jack of the machine.

_____ Disconnect the DEX connector and confirm the machine's DEX Jack does not have plastic threads (Royals Only).

_____ Replace with metal DEX connector socket.

_____ Reconnect ADV 5100 DEX plug.

_____ Follow DEX jack cable (if not mounted directly on the VMC) to the VMC and confirm it is securely connected.

_____ Confirm there is only one DEX jack active in the machine (On VMC or Extended).

Troubleshooting Check List (continued)

Confirming wiring and connections for all devices:

- _____ Machine VMC MDB cable connects to the bill validator and...
- _____ The bill validator cable connects to the ADV 5100 cable and...
- _____ The ADV 5100 cable connects to the Coin Changer.
- _____ If machine has i-Vend, i-Vend should follow the ADV 5100 on the MDB bus.
- _____ Ensure the SIM Card is fully inserted into the slot.

Confirming Fill Key Success:

- _____ Confirm that ADV 5100 red LED's have returned to the "Ready and On-Line indication"

ADV 5100 Compliance –

The ADV 5100 series Modular Data Port uses radio energy to communicate vending transaction activities to a remote host. MEI has not approved any changes or modifications to the ADV 5100. Any changes or modifications could void the user's authority to operate the equipment. See 47 CFR Sec. 15.21

The ADV 5100 series complies with 47 CFR Sec. 15.19(3) of the FCC Rules and Industry Canada RSS-GEN 7.1.5. 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 undesirable operation.

May Contain FCC ID:	May Contain transmitter module IC:
N7NWISMO228	2417C-WISMO228
N7NSL5011	2417C-SL5011
N7NSL8080	2417C-SL8080

To be sure that human exposure to RF energy does not exceed the guidelines in the relevant standards, always follow these instructions:

A minimum of 20cm (8 inches) should be maintained between the antenna and all persons and must not be co-located or operated

ADV 5100 Compliance – (continued)

in in conjunction with any other antenna or transmitter. Only the antenna s supplied with this device is to be used or the user may void the a authority to use this device.

DO NOT hold the antenna when the ADV 5100 is in use. Holding the antenna will affect call quality and may cause the radio to operate at a higher power level than needed.

Guidance - Pacemakers, Potential Interference -

Radiofrequency energy (RF) from cell phones can interact with some electronic devices. This type of interference is called electromagnetic interference (EMI). For this reason, FDA helped develop a detailed test method to measure EMI of implanted cardiac pacemakers and defibrillators from cell phones. This test method is now part of a standard sponsored by the Association for the Advancement of Medical Instrumentation (AAMI). This standard will allow manufacturers to ensure that cardiac pacemakers and defibrillators are safe from cell phone EMI.

The FDA continues to monitor the use of cell phones for possible interactions with other medical devices. Should harmful interference be found to occur, FDA will conduct testing to assess the interference and work to resolve the problem.

For more information reference sources for pacemakers can be found at U.S. Food and Drug Administration web site: www.fda.gov , see Radiation-Emitting Products and procedures, Interference with Pacemakers and Other Medical Devices.