

# DXi-RADIO-EXP and DXi-RADIO-P-EXP UHF Radio Kit *Installation Guide*

**TORO**

## Introduction

The DXi-RADIO kits allows the Toro DXi irrigation controller to communicate with the Central via UHF radio. This document illustrates how to mount the radio kit in the following DXi base models:

- DXI-PWM08
- DXI-PWMTW
- DXI-SWM08
- DXI-SWMTW
- DXI-SPED08
- DXI-SPEDTW
- DXI-SPEDHY08
- DXI-PSB08
- DXI-PSBTW
- DXI-DPSB56
- DXI-PPED08
- DXI-PPEDTW

## Kit Components

- UHF radio attached to DXi comm expansion board
- radio antenna
- radio antenna wire
- mounting screws
- stand-offs

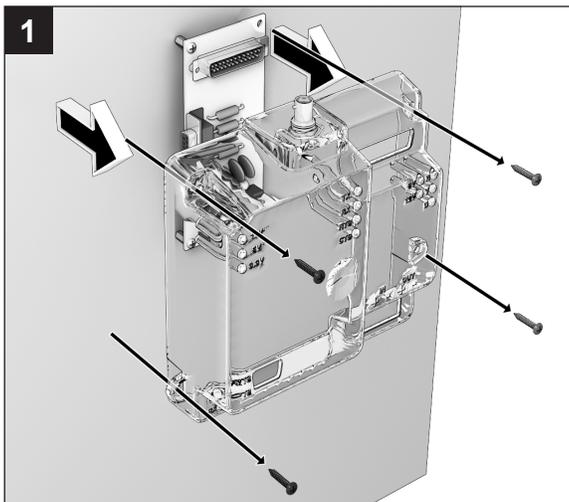
## Installation Instructions



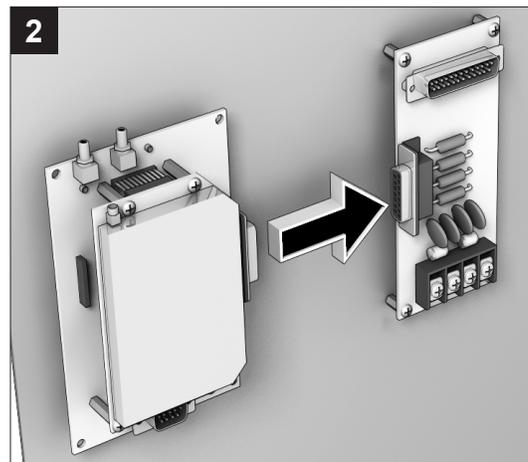
**CAUTION:** DXi serviceable parts shall be installed by qualified personnel familiar with the product and with local electrical code requirements. DXi serviceable parts shall not be used or installed in product other than DXi Product Series. Failure to do so will void product's safety and FCC certification. If used in product other than DXi Product Series, additional safety and FCC testing shall be considered as part of the end product assessment and usability.



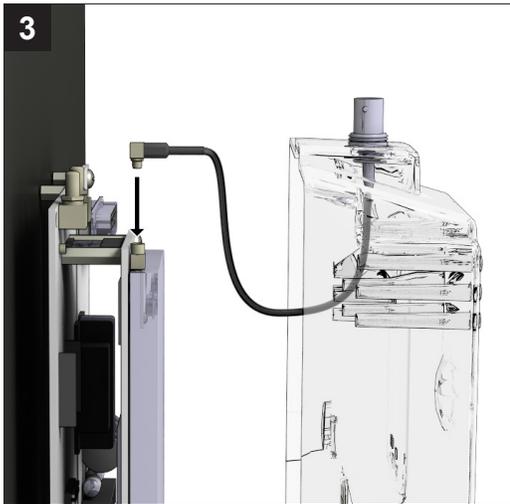
**CAUTION:** Power off the controller prior to installing expansion kits.



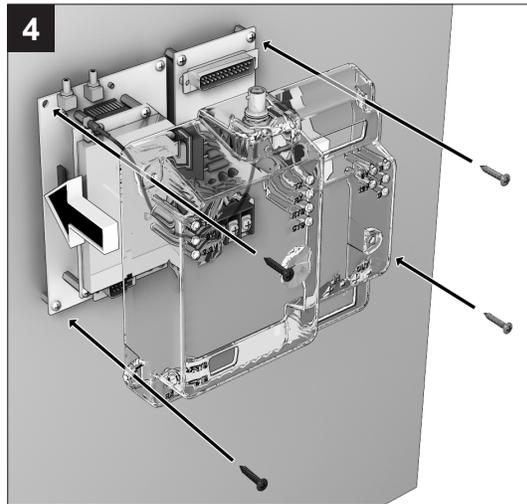
Remove screws and cover.



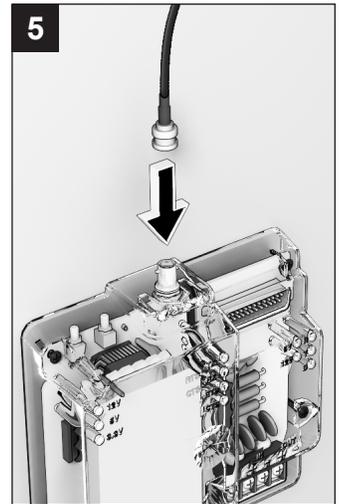
Connect radio COM board to hardwire COM board.



**3**  
Connect the BNC from the cover to the radio port.



**4**  
Reattach the cover and secure with screws and standoffs if necessary.



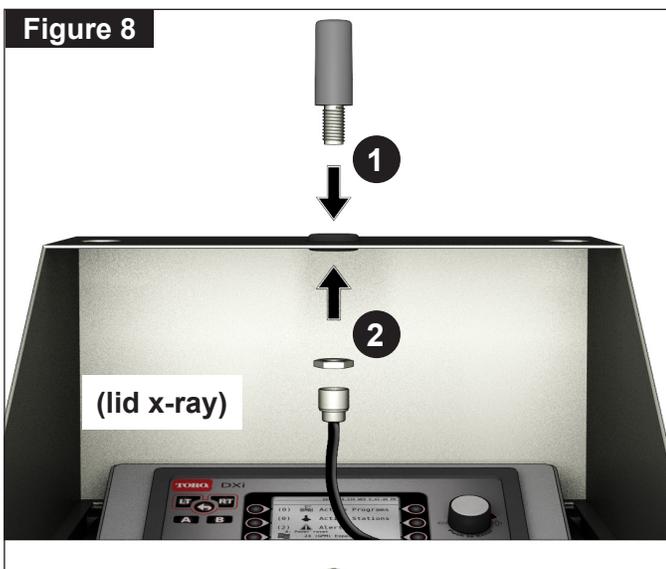
**5**  
Connect antenna's cable to BNC connector on cover.

## Antenna Installation

To install a UHF antenna for the DXi:

1. Insert included rubber grommet into the enclosure hole for the antenna.  
Insert antenna threading through the hole **1**.
2. Secure the large nut and antenna connector to threading of antenna **2**.
3. Power on the controller and initialize the newly connected UHF radio board.

4. The UHF radio uses the same frequency as the base radio. Both Rx and TX are on the same frequency. An FCC or IC license is required to operate the UHF radio. If the base network is on the internet through an Ethernet gateway, the "CLOUD ID" will be displayed on the controller faceplate. Communication at the Central can be verified by sending test commands via the Sentinel WMS or Laguna software and looking for acknowledgment.



**Figure 8**  
Antenna installed on the top of PSB, SPED, and wallmount enclosures.



**Figure 9**  
Antenna fully contained within plastic pedestal enclosure when lid is closed.

## FCC & IC Label

It is important to keep track of what wireless devices are installed in your DXi controller.

Each DXi controller ships with a label showing important information such as Model number, Serial number, UL certification, and more **1**.

Depending on the enclosure, this label might be found on the interior side of the enclosure door **2**.

- If your DXi controller ships with a wireless device, the label will show the FCC ID and IC ID **1**.
- If your DXi controller does *not* ship with a wireless device, the label will be blank in that area.

The radio kit ships with a small sticker label with its FCC ID and IC ID **3**.

- If your DXi controller label is blank in that area, adhere the FCC sticker to that blank area.
- If your DXi controller label already has FCC ID and IC ID information in that area, adhere the radio sticker adjacent to it as illustrated **4**.

**3** DXi-ACCESSORY-PN  
FCC ID:XXXX  
IC:XXXX

**4** MODEL NO.: XXXX SERIAL NO.: XXXX R2129  
INPUT; 120v ac, 60 Hz 5A  
OUTPUT: 24v ac 50/60 Hz, 100 VA MAX.

UL Plumbing Accessory US LISTED  
Contain: FC ID: XXXX IC: XXXX  
DXi-ACCESSORY-PN FCC ID:XXXX IC:XXXX  
CSA ENCLOSURE 3 SUITABLE FOR OUTDOOR USE

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.  
THE TORO CO., IRRIGATION DIV., RIVERSIDE, CA  
Assembled in USA P/N: 118-1385

**1** MODEL NO.: XXXX SERIAL NO.: XXXX R2129  
INPUT; 120v ac, 60 Hz 5A  
OUTPUT: 24v ac 50/60 Hz, 100 VA MAX.



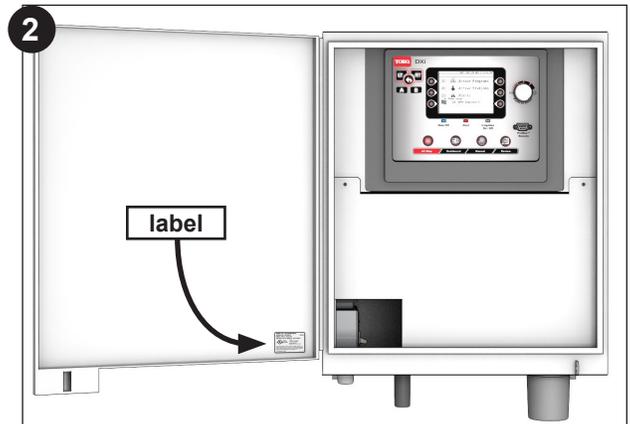
Contain:  
FC ID: XXXX  
IC: XXXX

CSA ENCLOSURE 3  
SUITABLE FOR OUTDOOR USE

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.  
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Assembled in USA

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Illustrative purposes only.

FCC label location differs depending on enclosure type.

## FCC / IC Statement

This product contain a modular approval with FCC ID 8RS-M8-UC and IC 8386A-M8UC.

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 commercial 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. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device contains licence-exempt transmitter(s)/receiver(s) that comply with innovation, Science, and Economic development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/recepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'innovation, Science et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This device complies with FCC and ISED RF radiation exposure limits set forth for genral population. This device must be installed to provide a separation distance of at least 20cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

Le present appareil est conforme aux niveaux limites d'exigences d'exposition RF aux personnes définies par ISDE. L'appareil doit être installé afin d'offrir une distance de séparation d'au moins 20cm avec les personnes et ne doit pas être installé à proximité ou être utilisé en conjonction avec une autre antenne ou un autre émetteur.



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WARNING: Cancer and Reproductive harm – [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).  
For more information, please visit [www.toro.com/CAProp65](http://www.toro.com/CAProp65).