DXi

INSTALLATION GUIDE

TORO

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Introduction

Congratulations on purchasing Toro's DXi controller, a next generation, weather-hardened, solid state irrigation controller. Whether you have purchased a pedestal or wall-mount controller, you will find the DXi has been redesigned to be easier than ever to program, operate, and maximize your productivity and flexibility, fulfilling all of your irrigation needs.

The DXi user interface is easy to use and includes a large, backlit LED display for improved visibility in low-light conditions, yet it is completely viewable in direct sunlight. The faceplate's combination of menu buttons, navigation arrows and input dial allows for easy and quick menu navigation.

The DXi comes in six versions:

- stainless steel pedestal (SPED or PSB)
- double-wide stainless steel pedestal
- plastic pedestal
- wall-mount cabinet (powder-coated or stainless)

The DXi controller pedestal is designed for installation on a substantial concrete foundation with imbedded conduit of various diameters to enable power, field, ground and communication wiring to be routed into the pedestal for connection. A mounting bolt positioner and basic mounting hardware components are included with each controller. A material list can be compiled by reading through the instructions completely prior to starting the installation.

CAUTION: For your protection and the safety of the product user, comply with all Caution and Warning statements within this document. All installation practices must comply with all applicable national and/or local electrical and construction codes.

About This Manual

This installation manual is divided into 7 sections.

1. Cabinet Installation
2. Power Installation
3. Earth Ground Installation
4. Field Wiring Installation
5. Master Valve and Pump Installation
6. Decoder Installation
7. Sensor Installation

Icons Explained

A note to clarify.

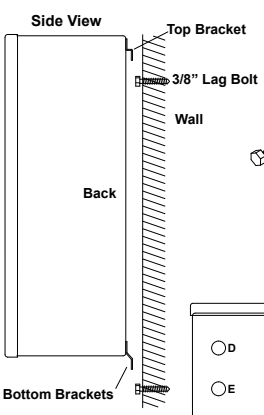
Important

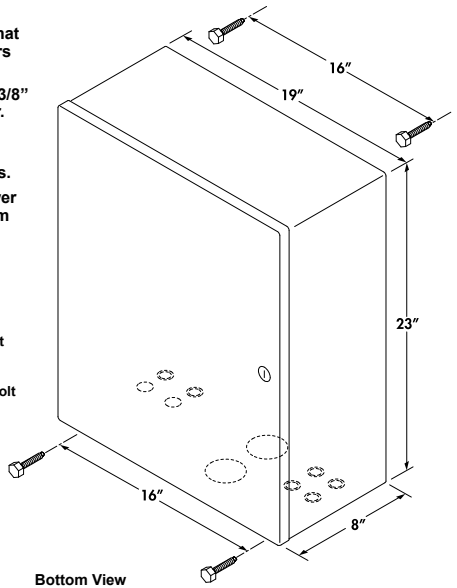
Warning! Risk of electric shock

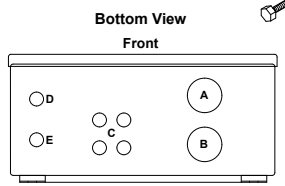
Cabinets

DXi Painted Steel Wall-Mount Installation

1. Position the controller so that the front panel display appears slightly above eye level.
2. For the top bracket, attach 3/8” lag bolts to wall on 16” center. Leave a 1/8” gap between lag bolt head and wall.
3. Hang enclosure on lag bolts.
4. Drill and mount the two lower 3/8” lag bolts using the bottom brackets as a guide.





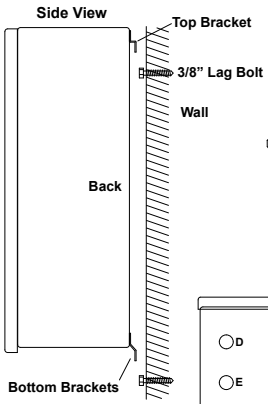


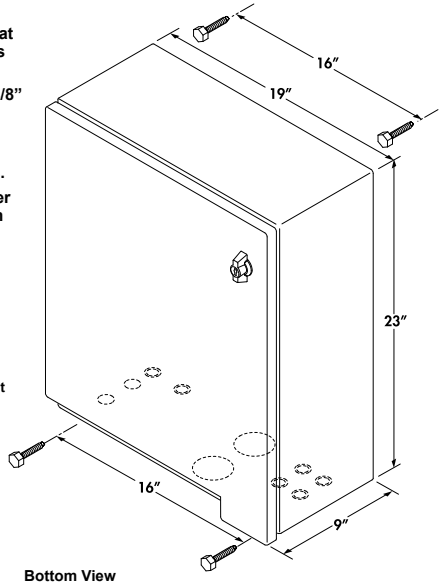
Knockouts		
Item	Accomodates	Description
A,B	2” conduit	Station Wires
C	½” conduit	wiring
D	½” capped	
E	½” conduit	incoming AC

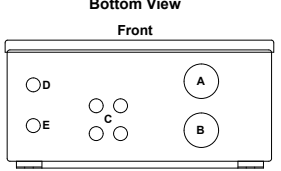
RMS Part No.500505 Rev. A

Vandal-Resistant Stainless Steel DXi Wall-Mount Installation

1. Position the controller so that the front panel display appears slightly above eye level.
2. For the top bracket, attach 3/8” lag bolts to wall on 16” center. Leave a 1/8” gap between lag bolt head and wall.
3. Hang enclosure on lag bolts.
4. Drill and mount the two lower 3/8” lag bolts using the bottom brackets as a guide.



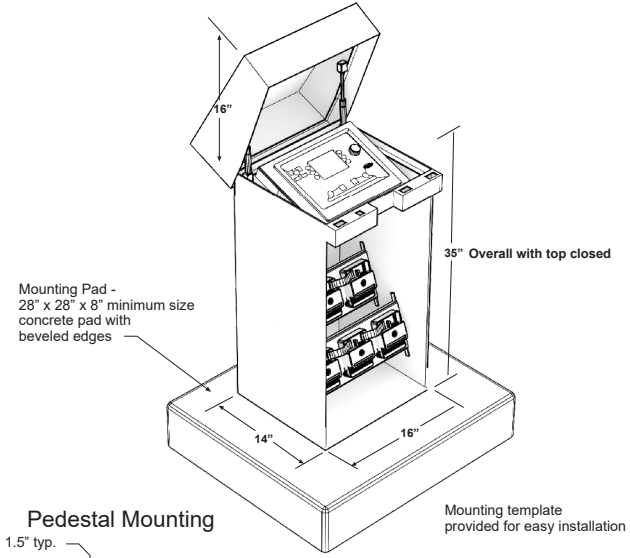




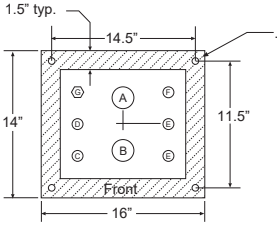
Knockouts		
Item	Accomodates	Description
A,B	2” conduit	Station Wires
C	½” conduit	wiring
D	½” capped	
E	½” conduit	incoming AC

RMS Part No.500506 Rev. A

DXi SPED Stainless Steel Pedestal Installation



Pedestal Mounting

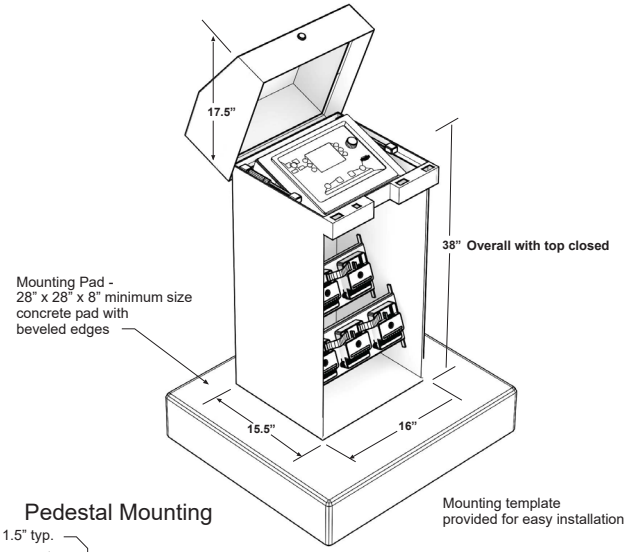


Item	Description
A, B	2" conduit - station wiring
C	1" conduit - communication
D	AC power conduit
E	1" conduit - sensor wiring
F	External antenna
G	Conduit ground rod

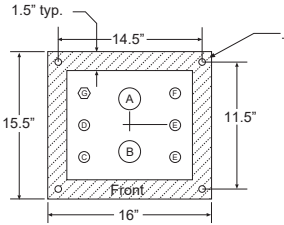
Bolt and Conduit Layout

RMIS Part No. 500501 Rev. D

DXi PSB Stainless Steel Pedestal Installation



Pedestal Mounting

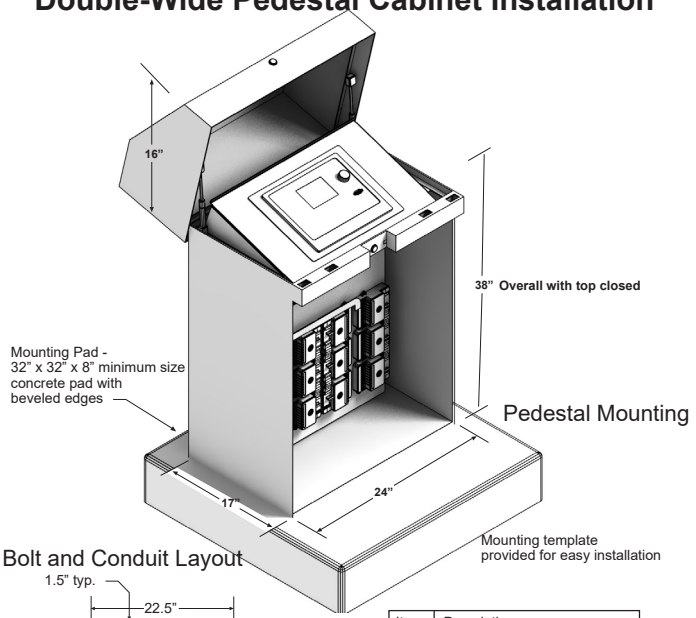


Item	Description
A, B	2" conduit - station wiring
C	1" conduit - communication
D	AC power conduit
E	1" conduit - sensor wiring
F	External antenna
G	Conduit ground rod

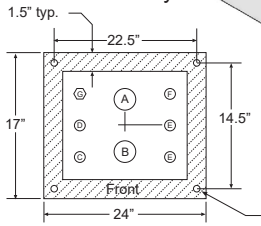
Bolt and Conduit Layout

RMIS Part No. 500503 Rev. D

DXi Stainless Steel Double-Wide Pedestal Cabinet Installation



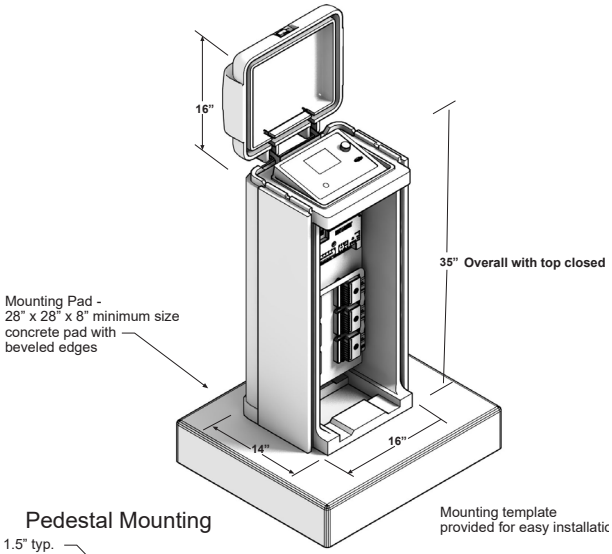
Bolt and Conduit Layout



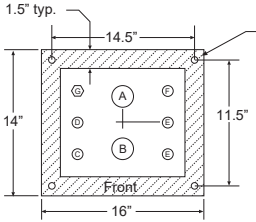
Item	Description
A, B	2" conduit - station wiring
C	1" conduit - communication
D	AC power conduit
E	1" conduit - sensor wiring
F	External antenna
G	Conduit ground rod

RMIS Part No. 500504 Rev. D

DXi Plastic Pedestal Cabinet Installation



Pedestal Mounting



Item	Description
A, B	2" conduit - station wiring
C	1" conduit - communication
D	AC power conduit
E	1" conduit - sensor wiring
F	External antenna
G	Conduit ground rod

RMIS Part No. 500502 Rev. D

Bolt and Conduit Layout

Power

WARNING!

AC POWER WIRING MUST BE INSTALLED AND CONNECTED BY QUALIFIED PERSONNEL ONLY.

ALL ELECTRICAL COMPONENTS AND INSTALLATION PROCEDURES MUST COMPLY WITH ALL APPLICABLE LOCAL AND NATIONAL ELECTRICAL CODES. SOME CODES MAY REQUIRE A MEANS OF DISCONNECTION FROM THE AC POWER SOURCE, INSTALLED IN THE FIXED WIRING, HAVING A CONTACT SEPARATION OF AT LEAST 3mm IN THE LINE AND NEUTRAL POLES.

ENSURE THE AC POWER SOURCE IS OFF PRIOR TO SERVICING. FAILURE TO COMPLY MAY RESULT IN SERIOUS INJURY DUE TO ELECTRICAL SHOCK HAZARD.

Electrical Conduit

The pedestal and wallmount cabinet's power cable access hole can accommodate a 1" (25mm) conduit fitting. If conduit is required:

1. Turn off the power at the power source location. Place the controller's power switch to OFF.
2. Install a section of flex metal conduit or rigid conduit 1" (25mm) from the power source junction box to the pedestal's access hole. (See **Figure 3**, opposite.)

Power Source

Steps:

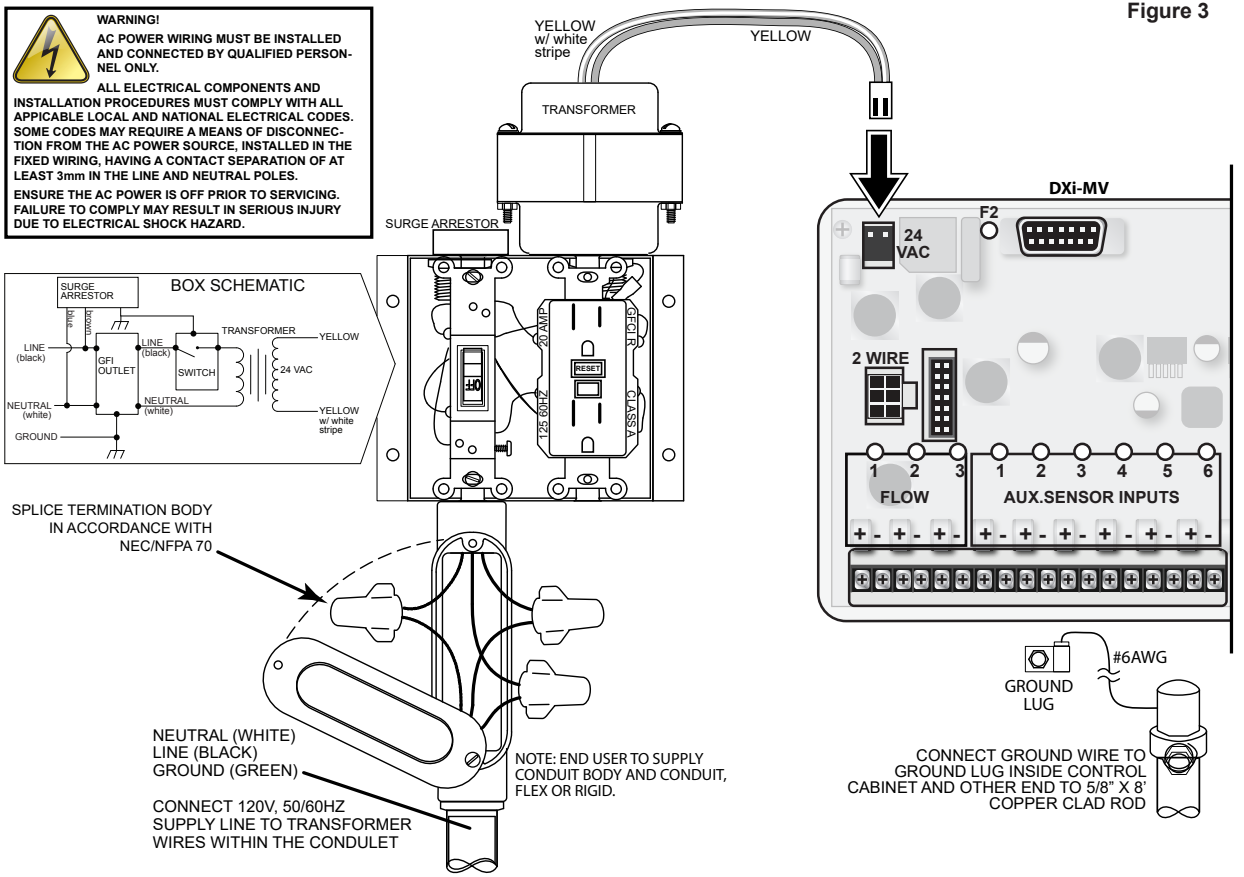
1. *Confirm that the AC power source is either off or physically disconnected from power prior to connecting wires!*
2. Place the controller's power switch to OFF.
3. Route the AC power and equipment ground wires through electrical and body conduit into the controller.
4. The DXi controller has three wires from its power transformer: hot (black), neutral (white), and ground (green). Following local and national electrical codes, connect the line, neutral, and ground wires to the line, neutral, and ground wires from the power source (see **Figure 3**). Secure with wire nuts within the body conduit.
5. For international wiring, reference **Table 1** for the appropriate type of power connection.

Do not apply power to the controller until all remaining installation procedures have been completed.

Table 1

AC Service Type	Line	Neutral	Equipment Ground
100 - 120 VAC (domestic)	Hot (Black)	Neutral (White)	Green
220 - 240 VAC (international)	Hot (Brown)	Neutral (Blue)	Green / Yellow

Figure 3


WARNING!
AC POWER WIRING MUST BE INSTALLED AND CONNECTED BY QUALIFIED PERSONNEL ONLY.
ALL ELECTRICAL COMPONENTS AND INSTALLATION PROCEDURES MUST COMPLY WITH ALL APPICABLE LOCAL AND NATIONAL ELECTRICAL CODES. SOME CODES MAY REQUIRE A MEANS OF DISCONNECTION FROM THE AC POWER SOURCE, INSTALLED IN THE FIXED WIRING, HAVING A CONTACT SEPARATION OF AT LEAST 3mm IN THE LINE AND NEUTRAL POLES.
ENSURE THE AC POWER IS OFF PRIOR TO SERVICING. FAILURE TO COMPLY MAY RESULT IN SERIOUS INJURY DUE TO ELECTRICAL SHOCK HAZARD.
BOX SCHEMATIC
SURGE ARRESTOR
LINE (black)
GFI OUTLET
NEUTRAL (white)
GROUND
SWITCH
TRANSFORMER
24 VAC
YELLOW
YELLOW w/ white stripe
SURGE ARRESTOR
YELLOW w/ white stripe
YELLOW
TRANSFORMER
DXi-MV
F2
24 VAC
2 WIRE
1 2 3
FLOW
1 2 3 4 5 6
AUX.SENSOR INPUTS
SPLICE TERMINATION BODY IN ACCORDANCE WITH NEC/NFPA 70
NEUTRAL (WHITE)
LINE (BLACK)
GROUND (GREEN)
CONNECT 120V, 50/60HZ SUPPLY LINE TO TRANSFORMER WIRES WITHIN THE CONDULET
NOTE: END USER TO SUPPLY CONDUIT BODY AND CONDUIT, FLEX OR RIGID.
#6AWG
GROUND LUG
CONNECT GROUND WIRE TO GROUND LUG INSIDE CONTROL CABINET AND OTHER END TO 5/8" X 8' COPPER CLAD ROD

Grounding the DXi Controller

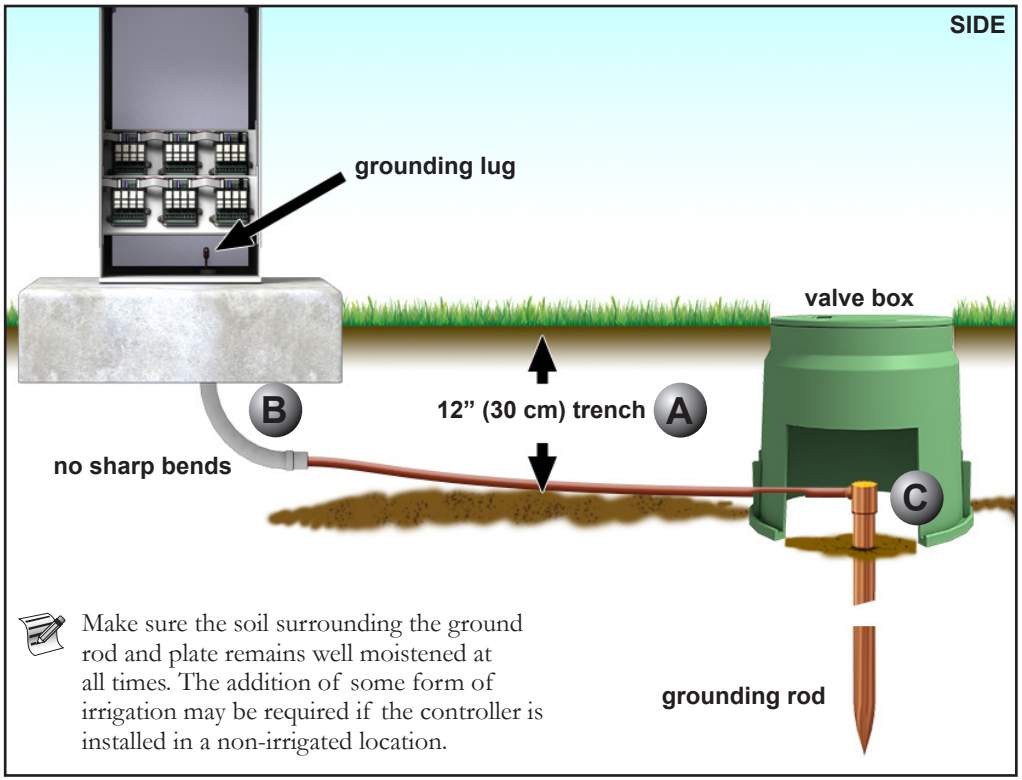
Earth Ground

IMPORTANT! The DXi controller surge protection components cannot properly function unless an efficient pathway to earth ground is provided. The ground path must be as direct as possible, without sharp bends and must not exceed 10 Ohm resistance (when measured with an earth ground resistance device). All electrical components throughout the irrigation system should be grounded similarly to provide the same ground potential.

The following instructions depict one of several acceptable earth grounding methods. Due to variables in soil composition and terrain, the method shown may not be suitable for your installation site. Contact your local Toro distributor for assistance and availability of the required earth ground resistance test instrument. Recommended ground testers are: AEMC Instruments, model 3710 clamp-on tester, or Biddle Megger, model 250260 (or equivalent).

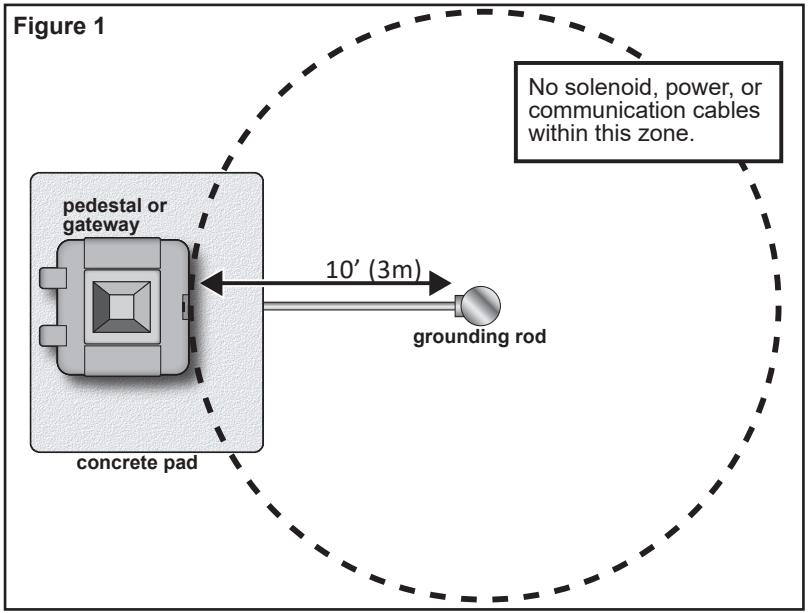
Steps

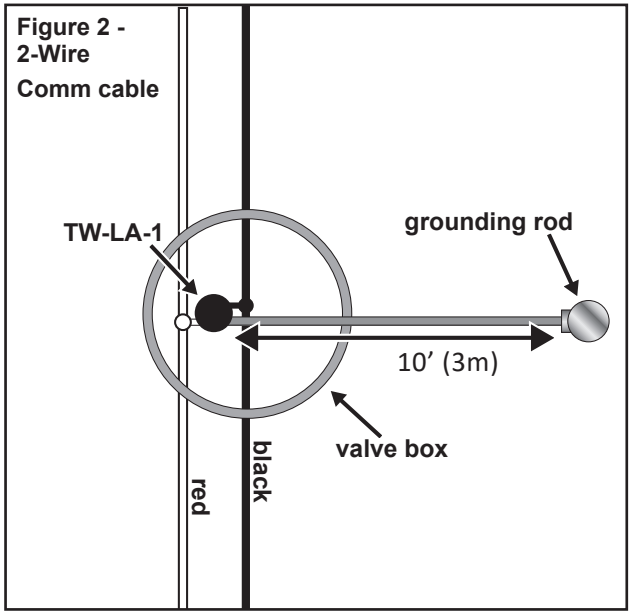
1. Drive a 5/8" by 10' (17mm x 3m) copper-clad steel rod into well-moistened soil, not less than 10' (3 m) or more than 12' (3.7 m) from the controller. The top of the ground rod should be buried approximately 12" (30.5cm) below grade (A).
2. Route a 6 AWG (13,0mm2) solid copper wire connected to the earth ground device into the controller cabinet through the access hole provided below the copper ground lug. Insert and secure the copper wire to the ground lug. To provide the most efficient path to earth ground, route the ground wire between the ground rod and controller with the least amount of bending possible. There should be no tight radius bends, nicks, or deep scratches the entire length of the wire (B).
3. For optimum connectivity, secure the ground wire to the ground rod using a Cad-Weld™ (or equivalent) metal-fusion connection method (C).
4. Using an earth-ground resistance tester; i.e., Meggor® or equivalent, confirm the resistance reading between the controller and ground rod is 10 ohms or less. Contact your local Toro distributor for assistance in obtaining the earth ground-resistance test device. Periodically retest the earth ground connection to confirm that resistance remains at 10 ohms or less.


SIDE
grounding lug
valve box
12” (30 cm) trench
A
B
C
no sharp bends
Make sure the soil surrounding the ground rod and plate remains well moistened at all times. The addition of some form of irrigation may be required if the controller is installed in a non-irrigated location.
grounding rod

Spacing

Figures 1 and 2 below show minimum distances of controller to grounding rod. Note that all other electrical equipment, such as solenoids and power and communication cables, must *not* be within a 10' radius of the grounding rod.





Communication Cable Ground

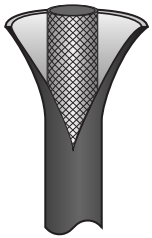
The first pages of this section covered grounding the DXi chassis.

For the Laguna DXi controller, proper grounding of the DXi communication cable is essential too.

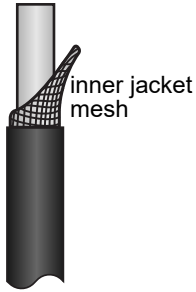
The cable connecting each DX3 / DXi controller (part number EV-CAB-COMM) contains one twisted pair and one mesh outer shield. By exposing the twisting the mesh shield (see **Prepping the Communications Cable**, it can serve as the ground connection between controllers. The ground connection can be attached to:

- the GND input on the DX Comm board (Method 1 - one ground wire only)
- grounding screw/s mounted in the chassis (Methods 2 and 3).

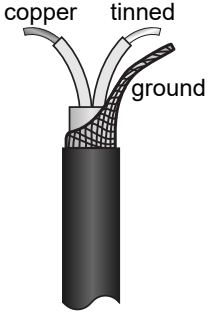
Prepping the Communications Cable



1) Slice outer jacket of COM wire to reveal wire mesh.

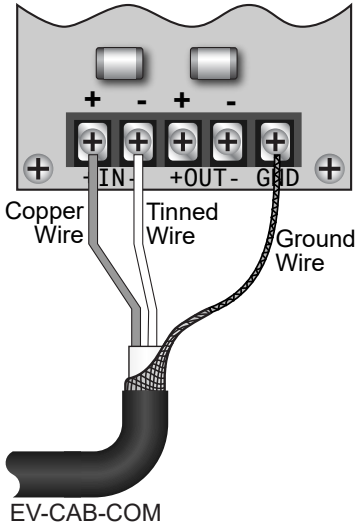


2) Trim away outer layer.
Twist mesh to form ground wire.



3) Trim inner jacket to expose copper and tinned wires.

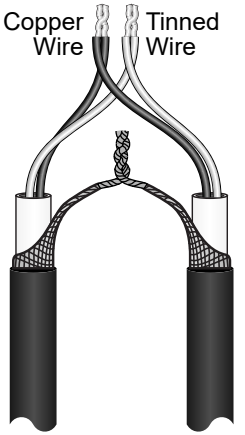
Method 1 - Ground to Comm Board



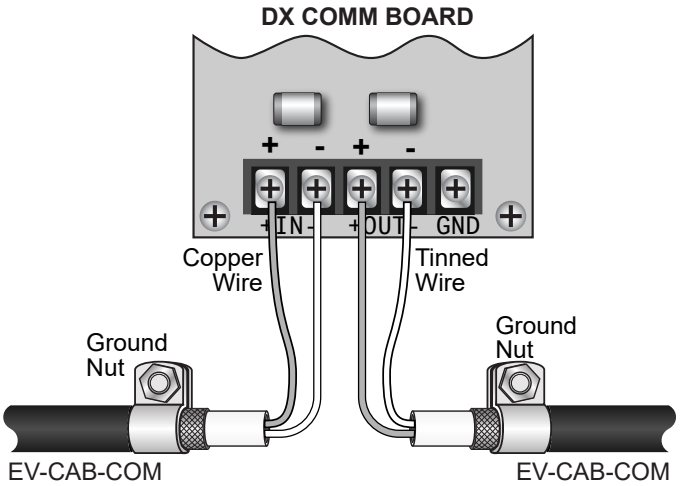
Splicing COM Ground Wires

It is possible to splice two COM wires together. Be sure to splice the ground wires together as well.

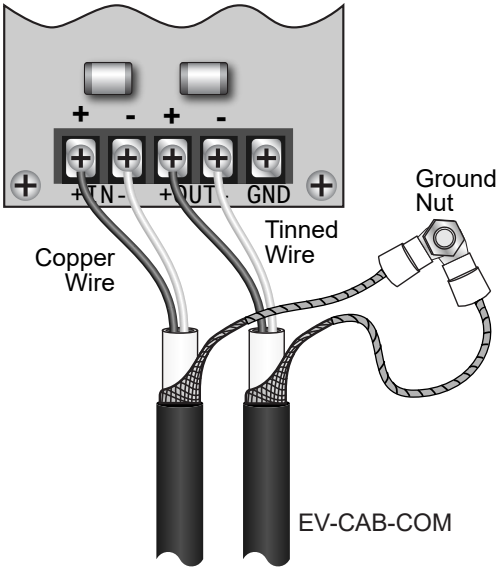
Spliced ground wires can be terminated in a ground nut.



Method 2 - Ground to Ground Screw



Method 3 - Two COM wires ground to Ground Screw



NOTE: For methods 2 and 3, ground nut screws might have to be added by drilling holes in the controller chassis. See "Prepping the Chassis", page 14, for complete instructions.

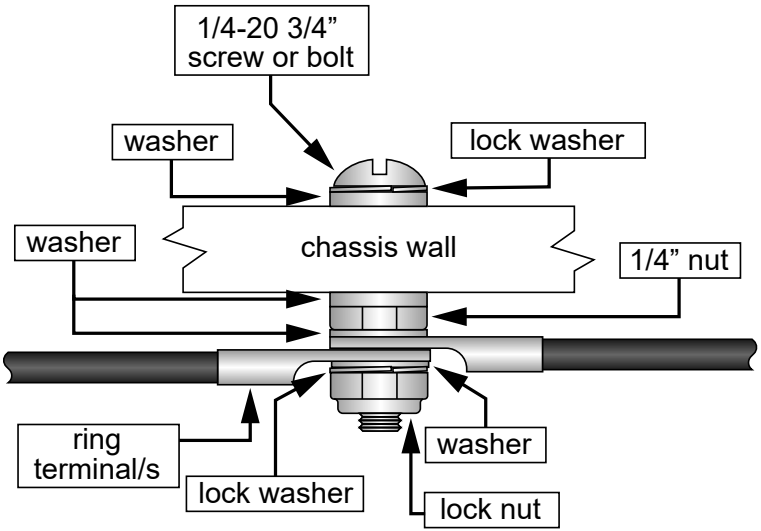
Prepping the Chassis

Methods 2 and 3 might require installing a ground nut into the controller chassis. Follow these directions carefully to ensure grounding and chassis water rating are not compromised.

1. Drill hole location. The ground nut should be installed within 12 cm of the terminal blocks of the DX output board. On the interior, the drill hole should be as unobstructed and clear of interior cards and cables as possible.
2. Drill a 1/4" hole. Have on hand a stainless-steel flathead machine screw (1/4-20) x 3/4" that engages at least two full threads.
3. Use the diagram, right, to install the screw and the various washers, lock washers, ring terminals, and nuts.

   To crimp the ground wires into the ring terminals, follow **Ring Terminal** instructions, right.

   Be sure that washers are installed on both sides of the chassis wall to ensure water cannot ingress.
4. Secure ring terminals with washer, lock washer, and lock nut.



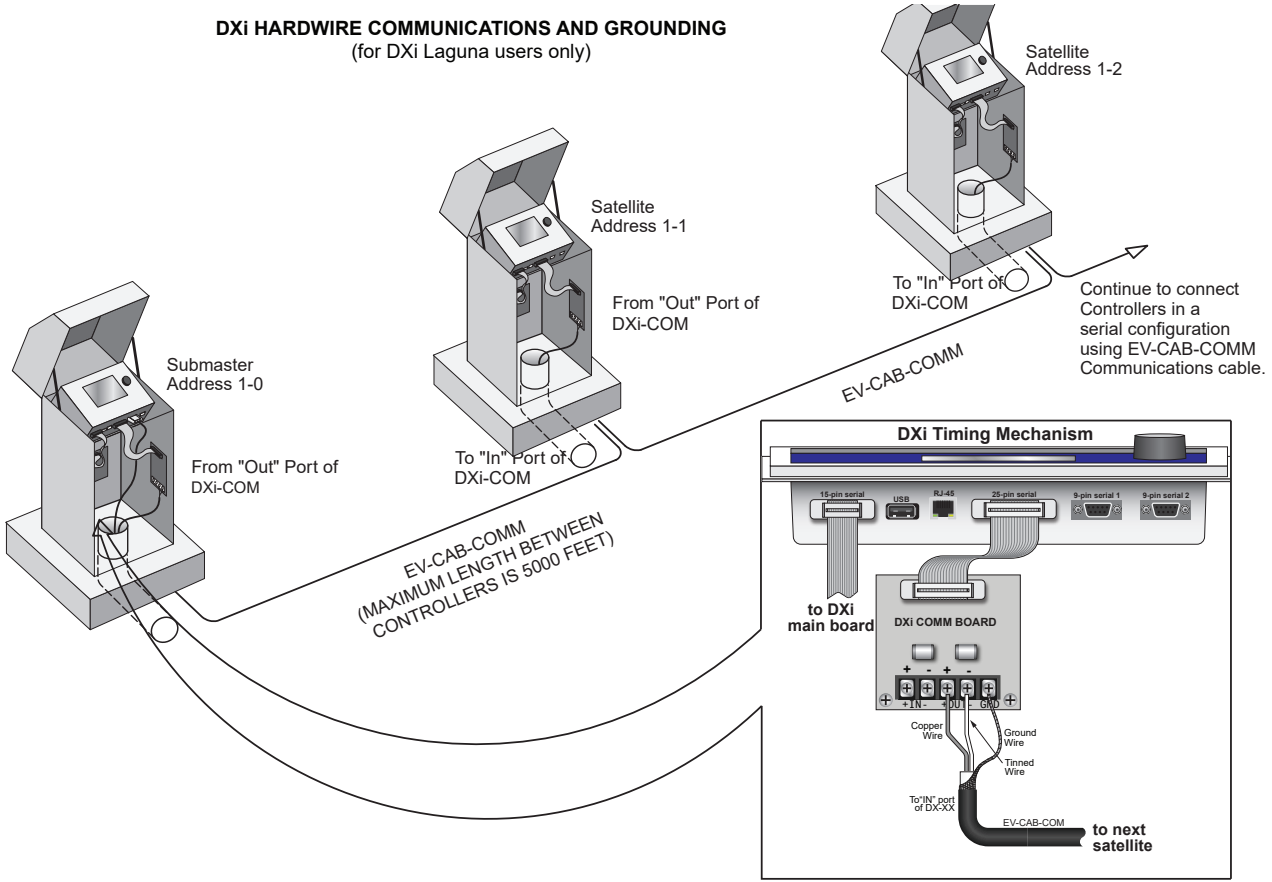
Ring Terminal Specifications

Part number: 415-0210: MPN 711K818

Crimping Instructions:

1. Mount the terminal on a threaded screw or stud for a secure connection.
2. Use a wire crimper (McMaster part 7289K1 or similar) to fasten ground leads to wire. Place crimp end into the die of the tool with ground leads passing through. Apply pressure on the crimp until ground leads are securely fastened into the crimping end of the terminal.

DXi HARDWIRE COMMUNICATIONS AND GROUNDING
(for DXi Laguna users only)



Field Wiring

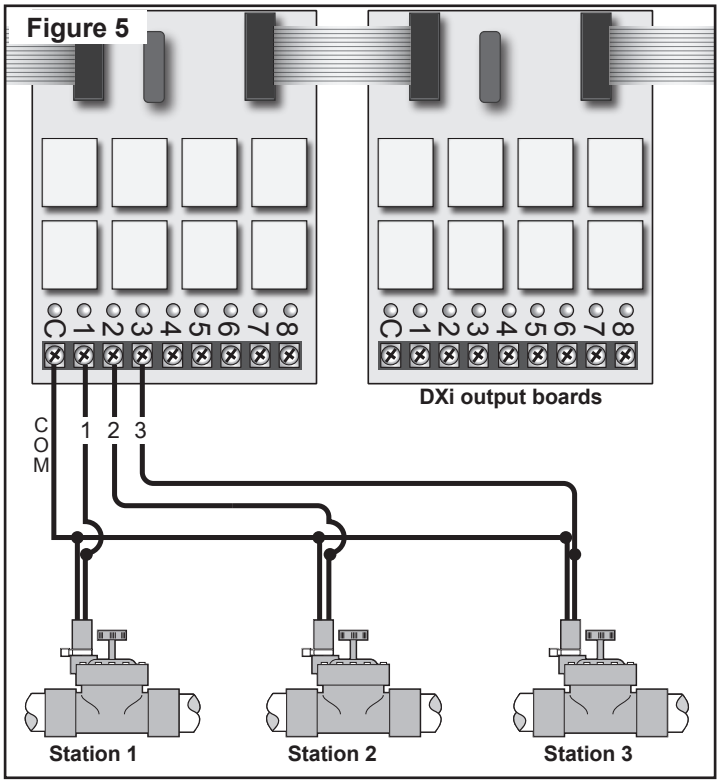
IMPORTANT! The DXi controller is powered by a 24VAC, 100VA transformer. The controller can be programmed to operate multile programs concurrently in addition to up to three master valves and up to two pump relays. Each individual station output is rated up to 2.5A @ 140°F (60°C). Ensure the total current draw on all station outputs, master valves and pumps does not exceed 2.75A. The controller will automatically detect excessive current load and generate appropriate alert(s).

Connecting Station Valves

Use waterproof connectors on all field wire splices to prevent corrosion and possible short circuit.

Ensure all exposed wiring inside the controller cabinet is taped back and properly insulated.

1. Route a separate control wire from each station output terminal (1, 2, 3...) to the corresponding valve location. Using a waterproof wire splice connector, attach the control wire to either valve solenoid lead (see **Figure 5**).
2. Route the field common wire(s) from the output board's common (C) terminal to interconnect the remaining lead of each valve solenoid to the field common circuit.



Master Valve, Pump, and Flow Sensor Wiring

The cover on the DXi main board shows all inputs and terminal polarity (see **Figure 6**).

Master Valve

1. Route the control wire from the **MV1** terminal to the master valve location. Using a waterproof wire splice connector, attach the control wire to the master valve solenoid lead.
2. Route the field common wire(s) from one of the controller's multiple **COM** terminals to interconnect the remaining lead of the master valve solenoid to the field common circuit.

Pump

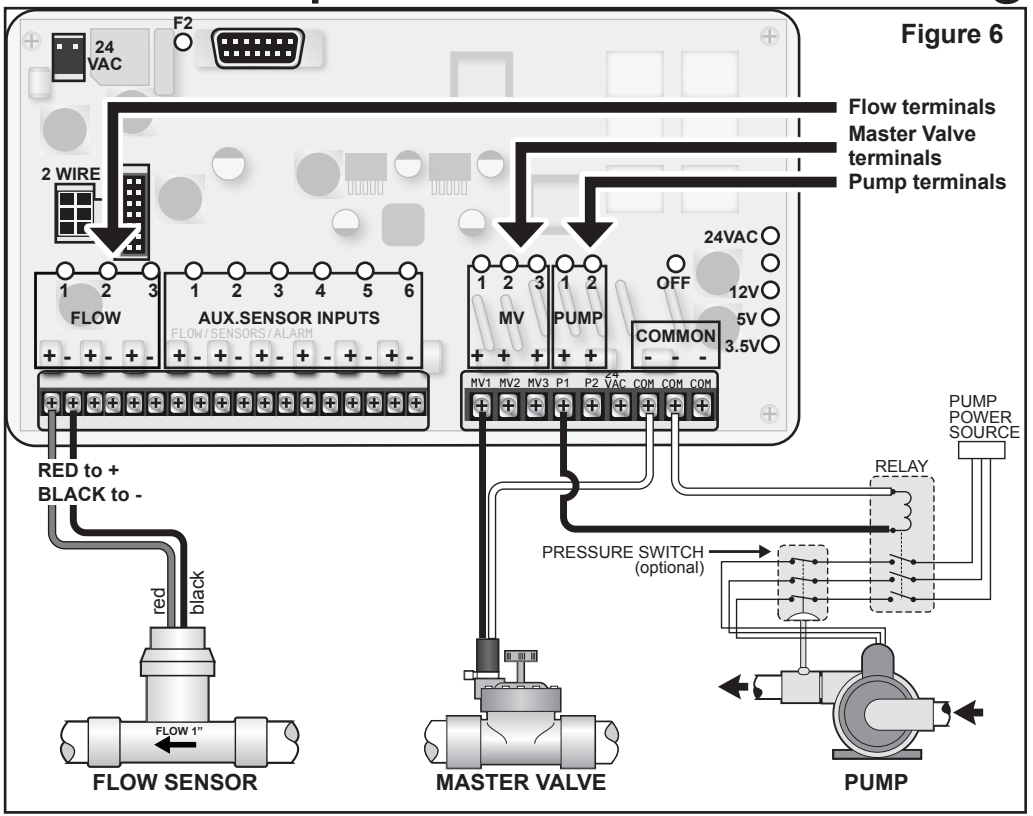
Do the same for the pump, routing the control wire from the **P1** terminal to the pump relay and the common wire from the COM terminal to the relay.

Flow Sensor

The DXi controller can manage up to three flow sensors: Flow 1, Flow 2, and Flow 3.

To install a Irritrol or Toro flow sensor, connect the red and black wires as shown.

See the DXi User Guide to configure the flow sensor.



Auxiliary Sensors

The DXi provides five auxiliary sensor inputs for a variety of sensors. The first three input pairs (1, 2, and 3) are for a rain bucket, a wind sensor, and an ET input, in that order.

Input pairs 4 and 5 are reserved for normally-open sensors such as a rain sensor (see Figure 7) or a freeze sensor.

To install a normally open sensor (such as an Irritrol or Toro rain sensor) into any one of those terminals, connect the red and black wires as shown.

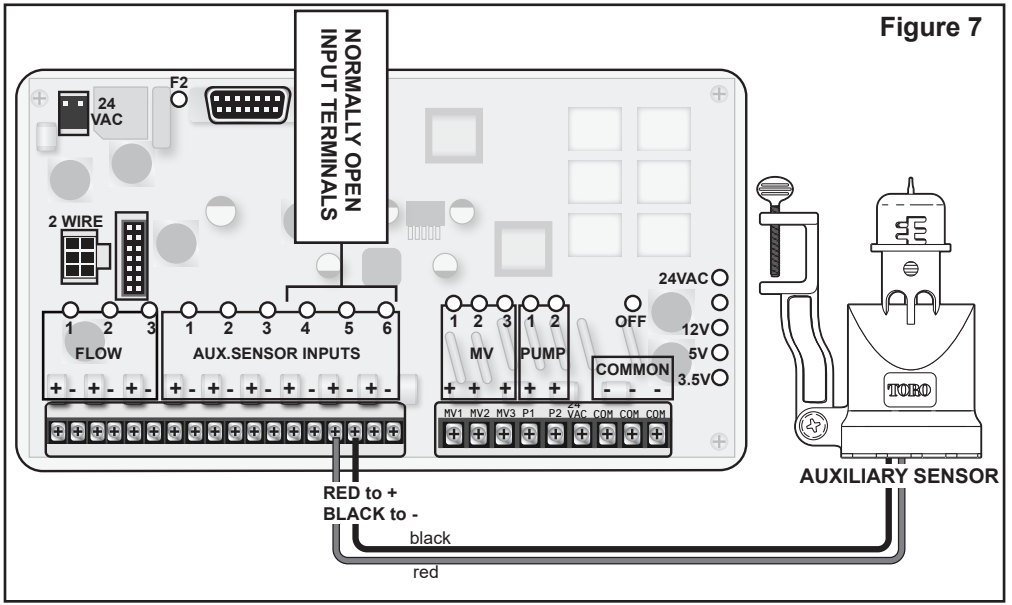
When closed, auxiliary input 4 or 5 halts irrigation programs and displays a different message on the DXi screen, “Rain Aux4” or “Freeze Aux5”.

4-20mA Sensor

Connect the Positive or Red wire from the 4-20mA pressure transmitter to the second terminal from the right at the Terminal Strip “Aux Sensor Inputs”. Connect the Negative or Black wire to the first terminal from the right.

The Sensor board will process the input and display “sensed mA” on its Sensor Board Diagnostics screen. This information is also sent to Central Software as well as displayed on the Cloud where such capabilities exist on the Controller.

Figure 7



The 24VAC Output Terminal

Between the PUMP and COMMON output terminals (Figure 7), you will see a single 24VAC output terminal. It is there to power accessories such as pumps or sensors. An example is the Irritrol wireless rain sensor, which needs 24VAC to power the receiver.

2-Wire Decoders

Programming the Decoders

Toro decoders are configured in 1-, 2-, and 4-station models, and as shipped from the factory, have no pre-defined station assignments. In order to be recognized by the DXi controller, each station must be defined as a either a station number from 1 to 200, a Master Valve control, or a Pump control. To facilitate decoder programming, a quick-connect programming port is provided on the Two-Wire Decoder module board (see **Figure 8**).

The DXi enables the decoders to be temporarily connected and programmed without disconnecting power.

1. Insert the red and black decoder wires into the corresponding terminal block positions as illustrated.
2. Apply power to the DXi controller. After it completes booting up, go to the Setup menu, select **Program Decoder**.
3. Change the New Address field.
4. Be sure to mark the decoder with its new address.

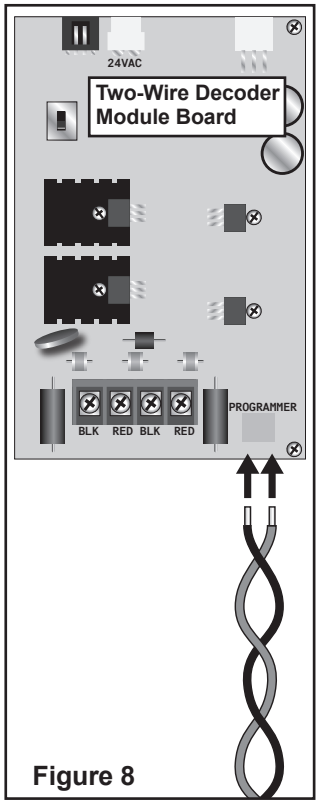


Figure 8

Two-wire Decoder System Specifications

Decoder Cable

Toro communication cable, TW-CAB-14, is recommended. Twisted-pair, polyethylene-jacketed communication cable, and PVC-insulated, single-core “irrigation” wire is not proven to be reliable for Toro decoder system application, and is NOT recommended.

- Two-conductor, 14-gauge, solid-core copper wire, double-jacketed insulation manufactured of high-density, sunlight-resistant polyethylene or UF-B UL PVC with a minimum wall thickness of 060” (1.5mm). A protective outer sheath must be manufactured of polyethylene or PVC material conforming to ICEA S-GL-402 or NEMA WC5, with a minimum wall thickness of .045” (1,2mm) and approved for direct burial installation.
- All wire insulation and conductors must be fully intact and free of nicks or cuts.
- A minimum wire size of 14-gauge (2mm2) is required for straight-line cable installation; i.e., wire distance to the furthest decoder not on a loop.

Decoder Cable Configuration

To provide the optimum power and communication for system operation, the recommended wire path configuration is a continuous loop beginning and ending at the controller, and is often routed generally following the main water lines. The loop configuration provides a redundant path for decoder operation, allowing the system to continue operation even in the event of a damaged cable.

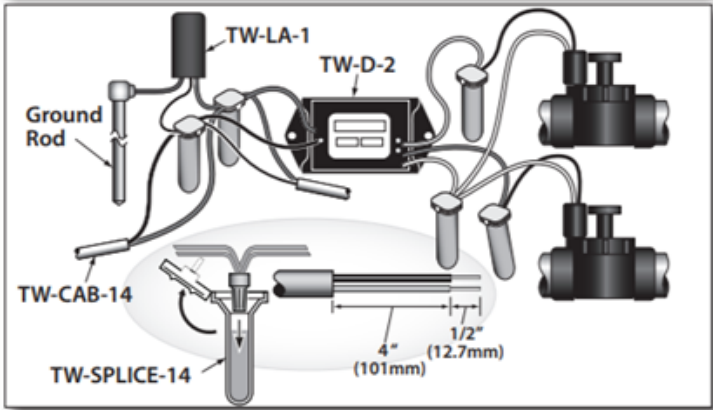
Other supported decoder cable path configurations include: straight line, looped, grid, or a combination of these methods. Separate branch paths can be tapped from the main loop, and are not required to feed back to the main trunk line. A branch path can be configured as a loop or a single line. The Toro decoder system will function with most wiring configurations when the correct wire type, size, and length of run are within specification.

Installating the Decoders

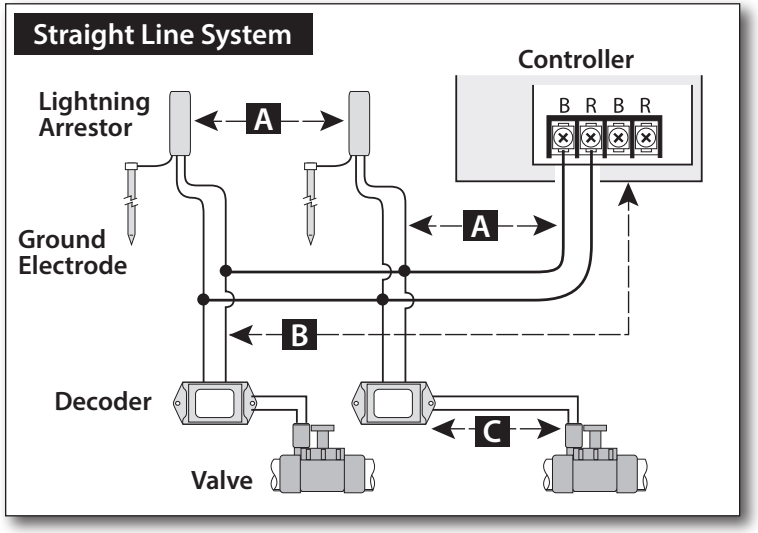
Installing a decoder system requires a different approach to field installation compared to a conventional multi-wire irrigation control system. The main differences include:

- A two-wire cable provides power and communication signals from the controller to up to 205 decoders for individual control (Stations 1 to 200, 3 Master Valves and 2 Pumps).
- The two-wire cable system can be configured in one of three methods: straight line, grid or loop, as illustrated in Appendix I.
- TW-LA-1 lightning arrestors must be connected throughout the two-wire path at intervals of 600' (183m) or less. The same grounding requirements as specified for the controller are required for each lightning arrestor.
- The cable wire path from the furthest decoder to the controller cannot exceed 5000' (1.54km).
- The cable wire length from the decoder to the valve (or pump) must not exceed 100' (30m).
- TW-CAB-14 – 14-gauge, two-wire direct-burial communication cable (or equivalent) is required for decoder connection.
- Two-wire cable wire color polarity must be maintained throughout the system and connected to the corresponding controller terminals.
- All wire splices and field connections must be insulated using TW-SPLICE-14 waterproof wire connectors (or equivalent).
- It is recommended that the decoders are installed in an approved valve box to provide easy access to the wiring.

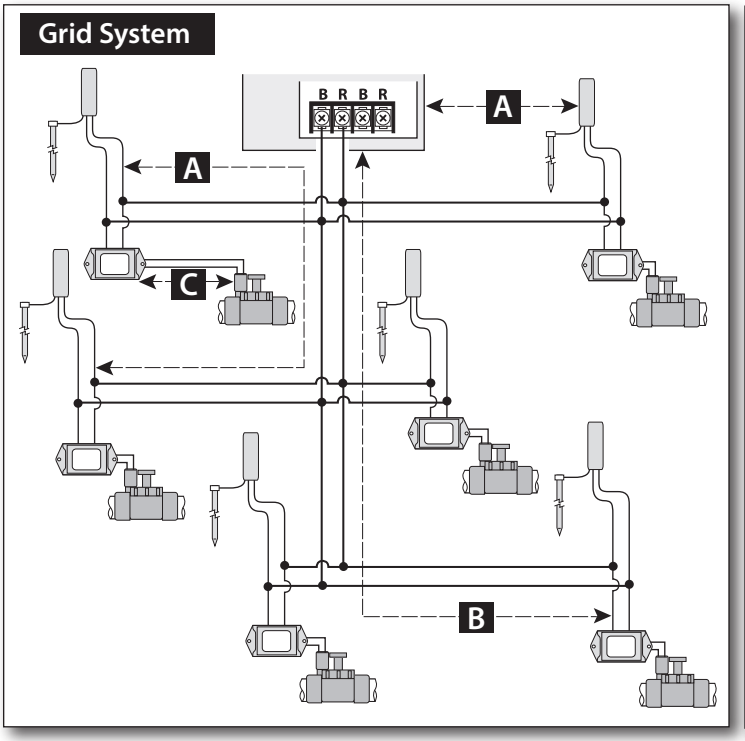
Part No. – Description		Part No. – Description	
TW-D-1	Single Valve Decoder	TW-SPLICE-14	Waterproof Wire Splice
TW-D-2	Dual Valve Decoder	TW-CAB-14	14-Gauge, 2-Wire, Direct-Burial Cable
TW-D-4	Quad Valve Decoder		
TW-LA-1	Lighting Arrestor		



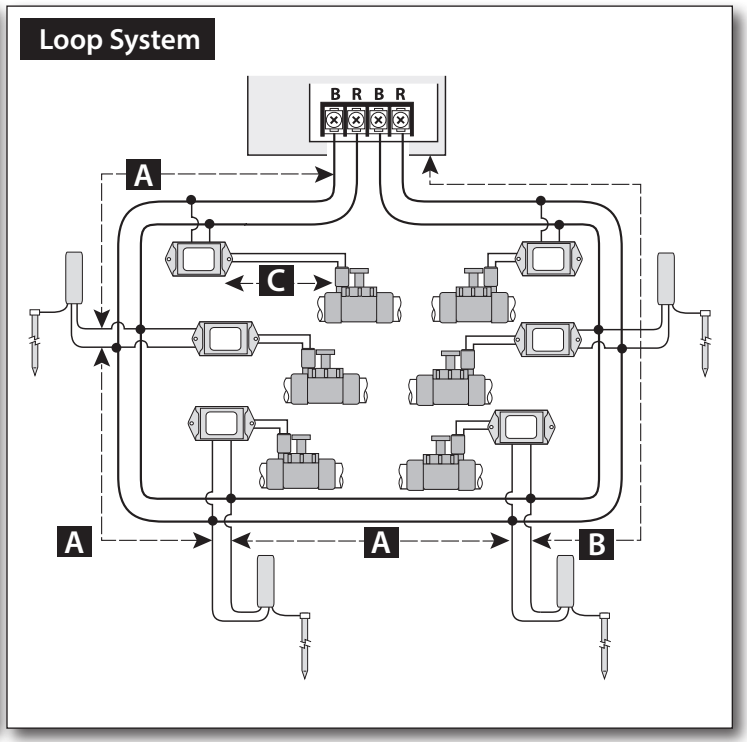
Appendix I: 2-Wire Layouts



Grid System



Loop System



Appendix II: Central to Submaster Communication

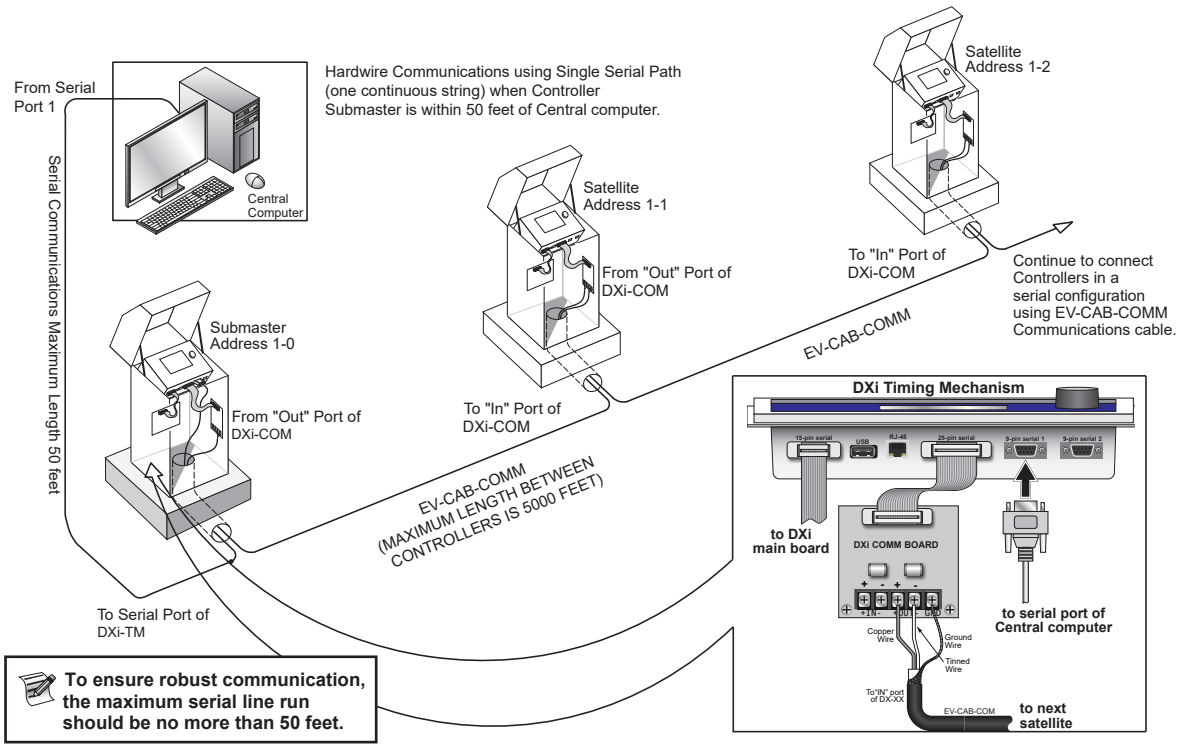
There are multiple ways to establish communication between a computer running Laguna software and a DXi controller:

- Serial
- Ethernet
- UHF radio
- WiFi
- Cellular

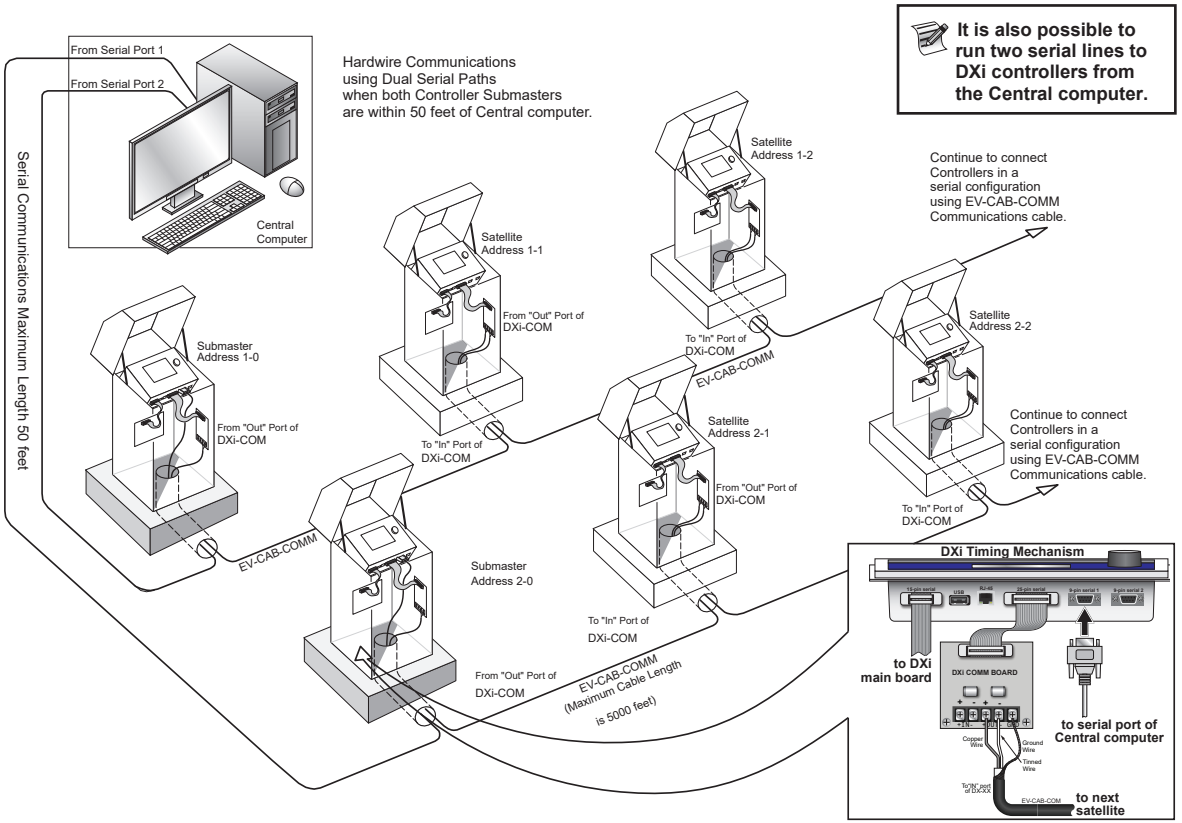
The illustrations that follow show the various cable connections.

Note: These illustrations apply to DXi Laguna users only.

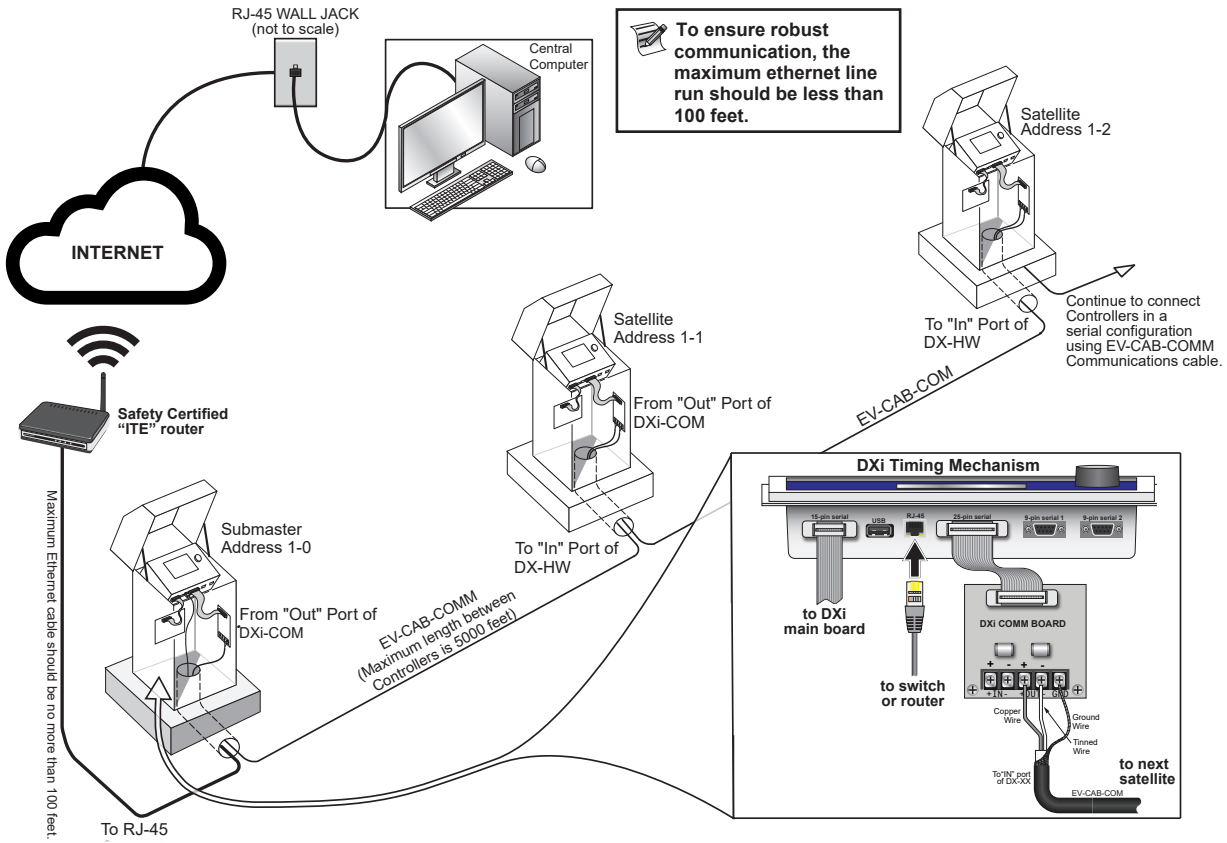
DXi HARDWIRE COMMUNICATIONS • SINGLE SERIAL PATH LESS THAN 50 FEET (DXi Laguna only)



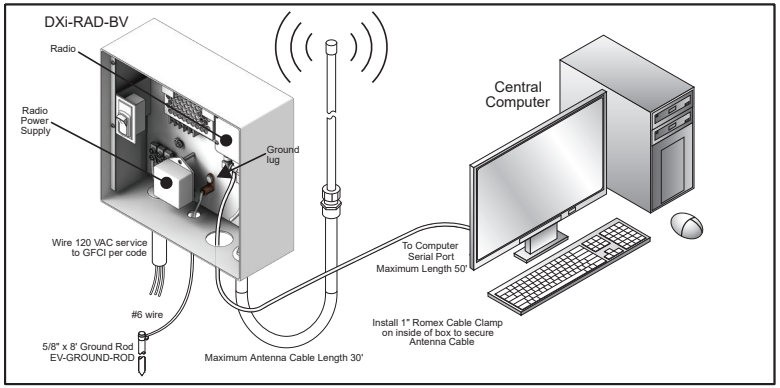
DXi HARDWARE COMMUNICATIONS • DUAL SERIES PATH LESS THAN 50 FEET (DXi Laguna only)



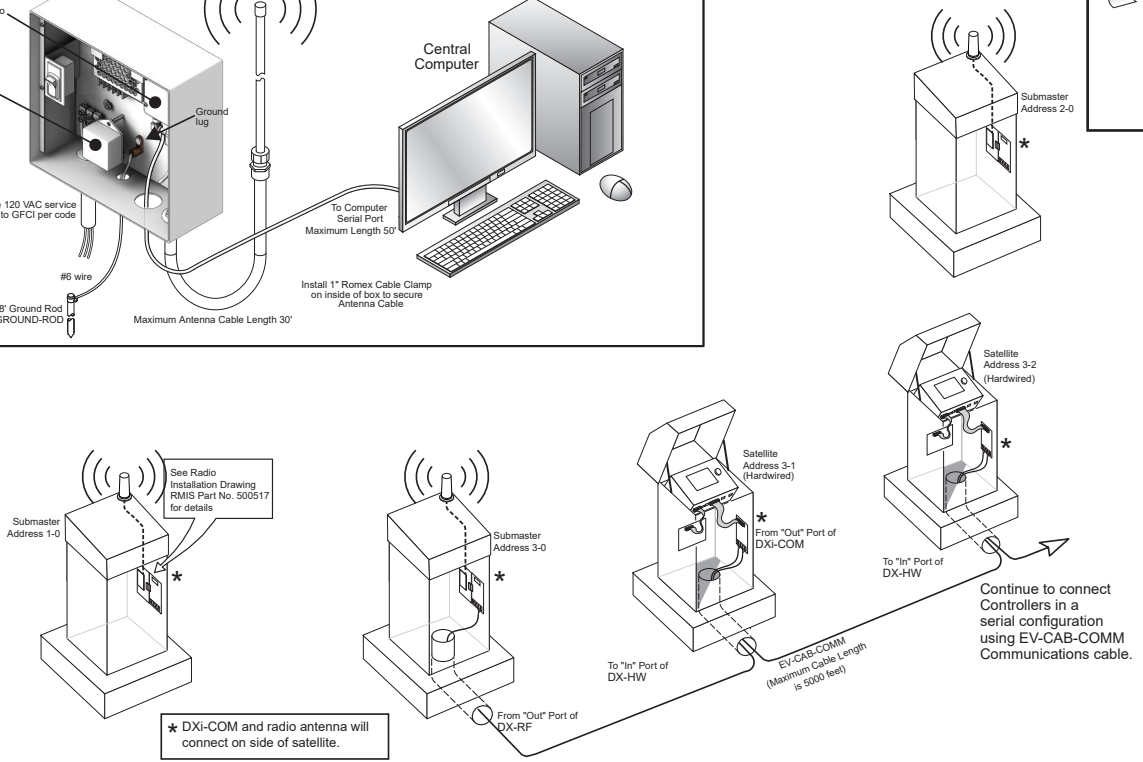
DXi ETHERNET COMMUNICATIONS INTERFACE



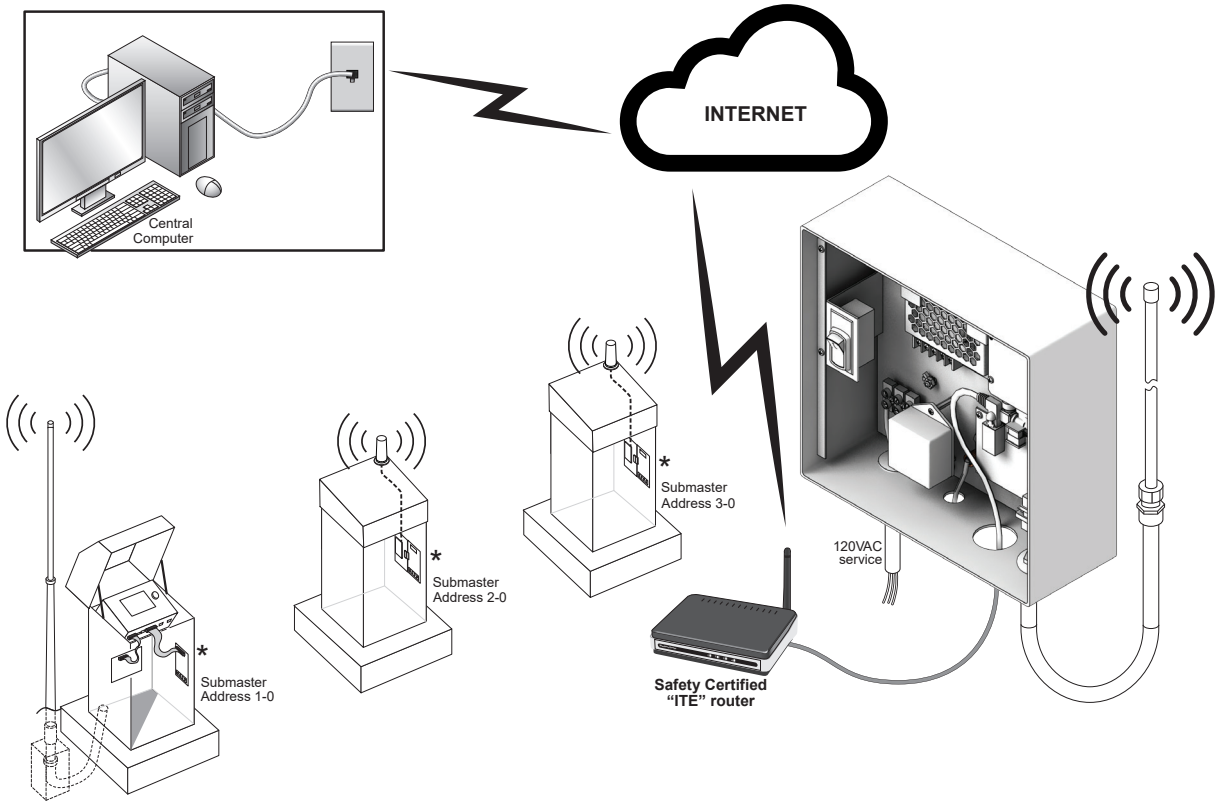
DXi RADIO COMMUNICATIONS OVERVIEW



An FCC license is required to operate on any given UHF frequency. Contact your local Toro distributor for more information.

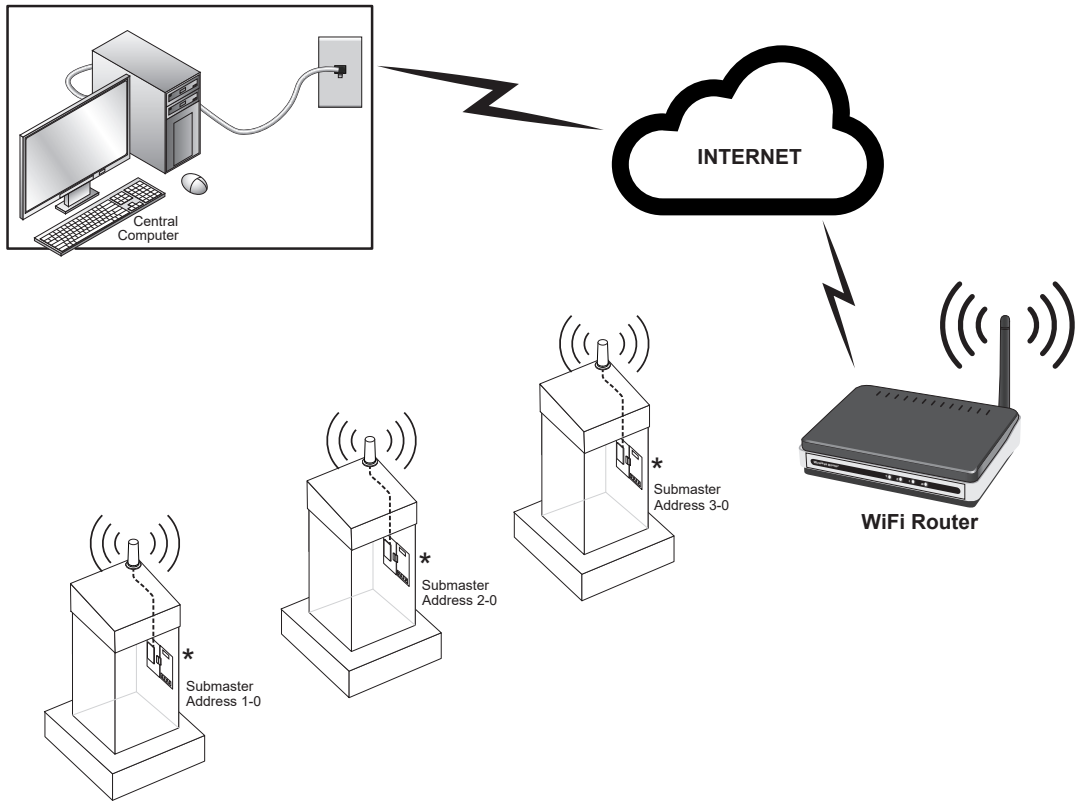


DXi ETHERNET RADIO REPEATER OVERVIEW (AKA CTM)

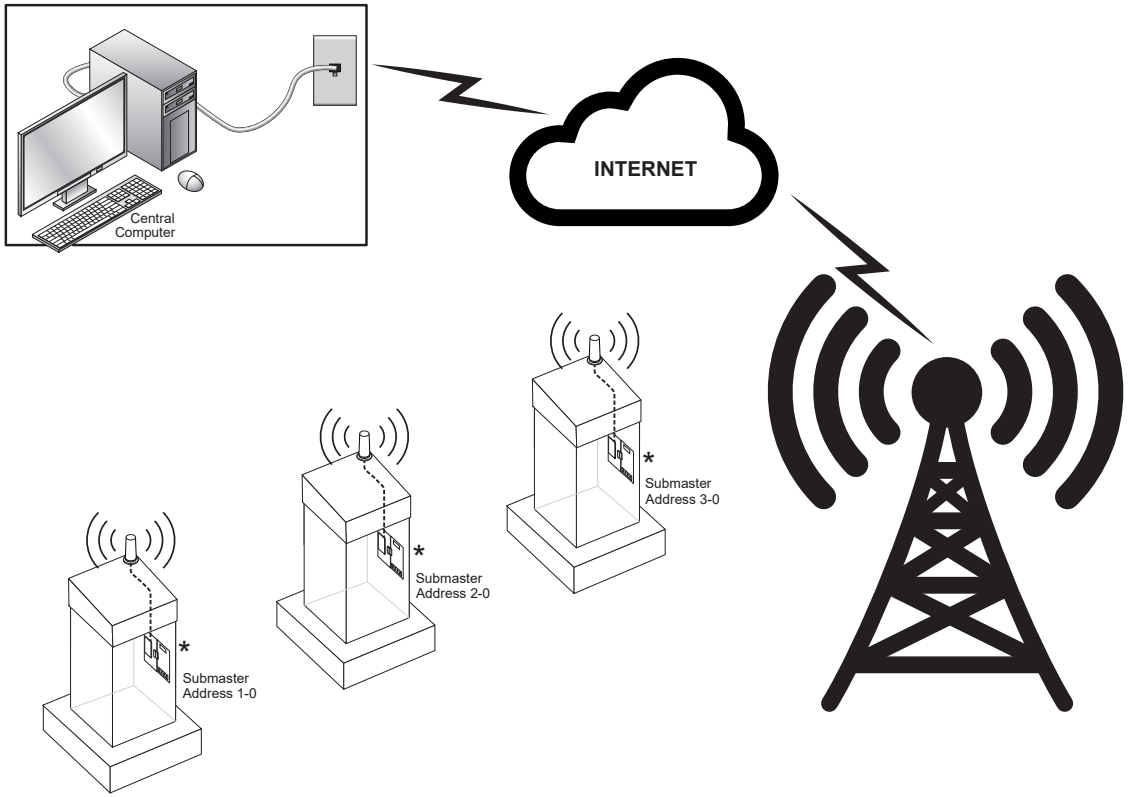


Appendix II: Central to Submaster Communication

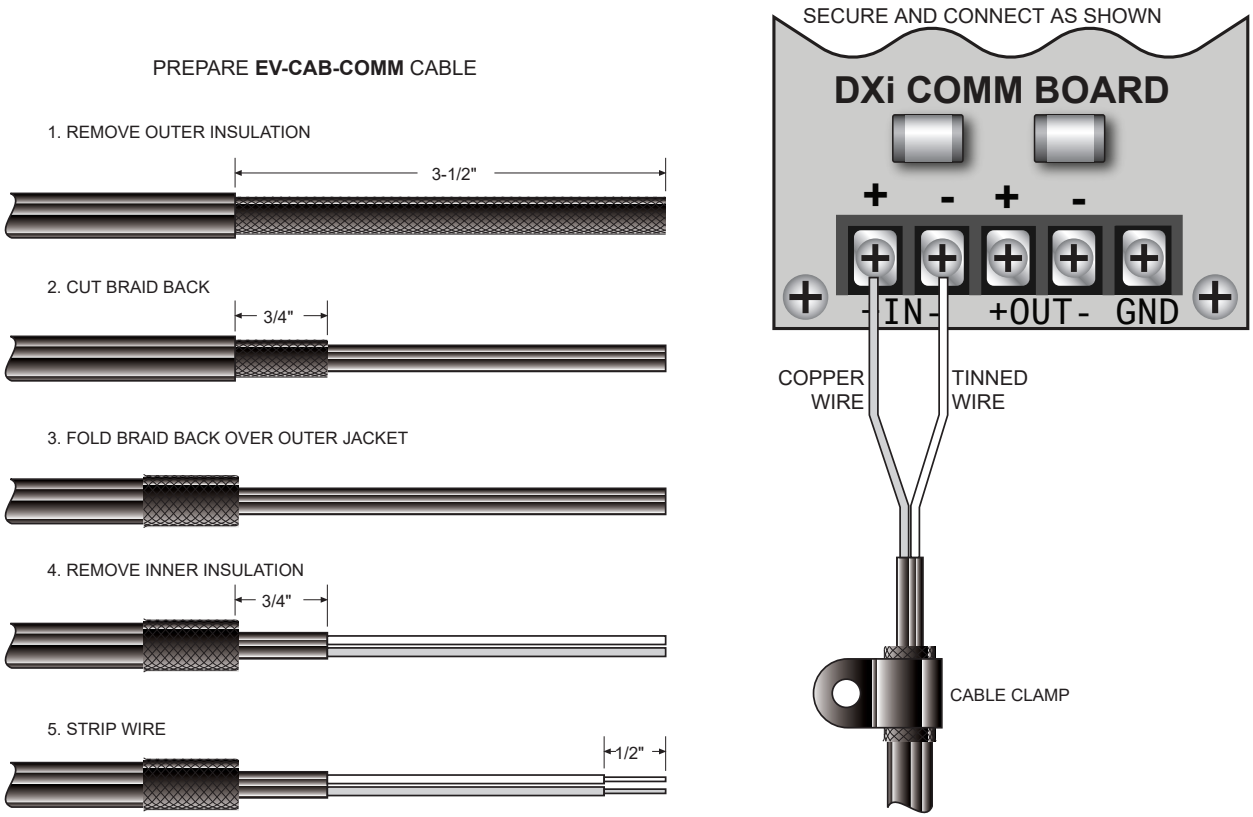
DXi ETHERNET WIFI OVERVIEW



DXi ETHERNET CELLULAR OVERVIEW



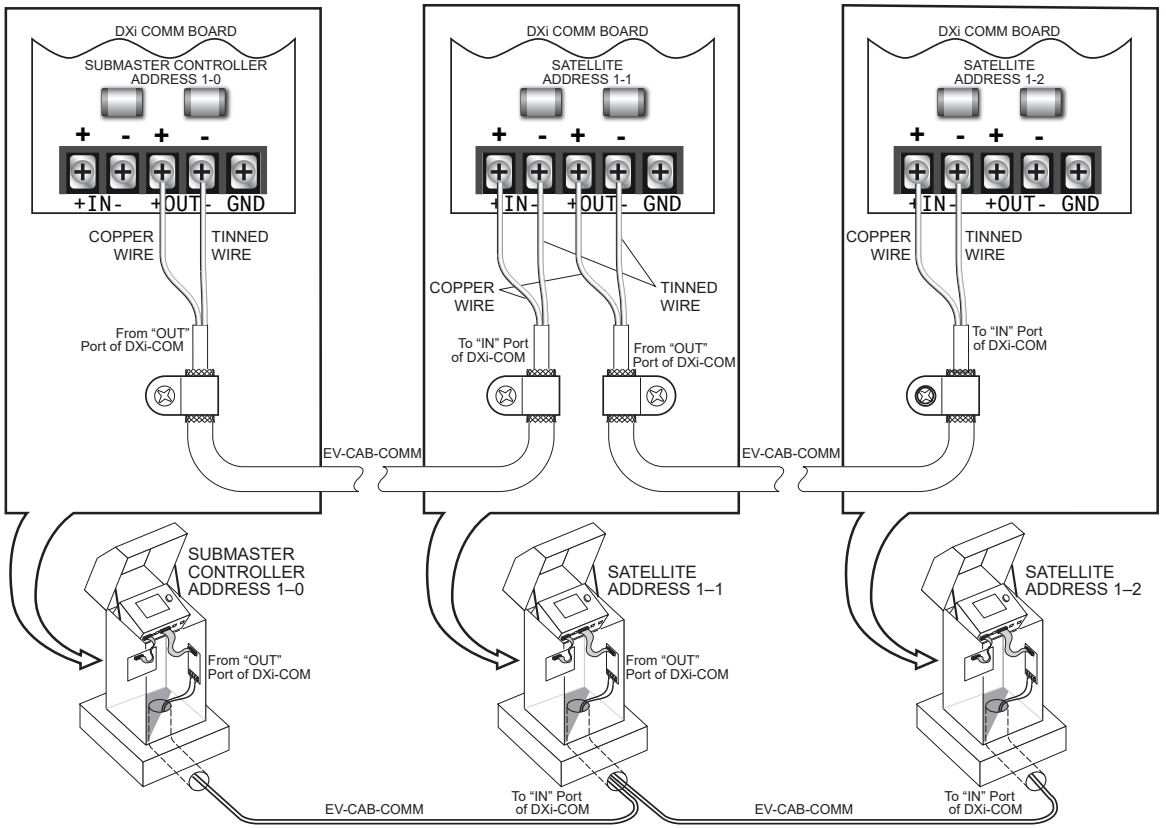
DXi HARDWIRE CABLE INSTALLATION



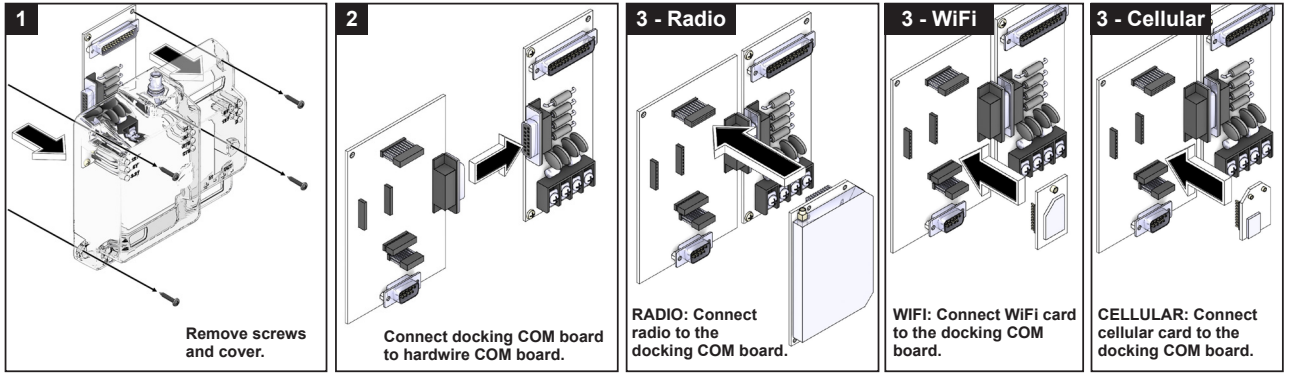
The illustrations above show multiple satellites "daisy-chained" together, necessary to take advantage of DXi's Flow Max capability. The following two illustrations show how to connect DXi satellite together.

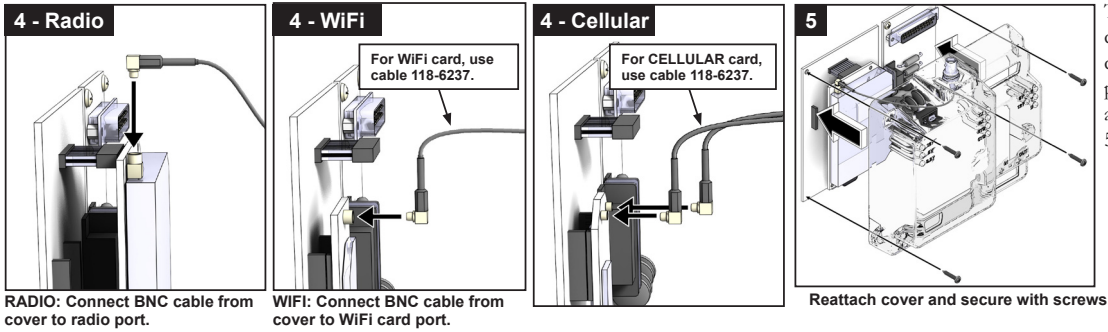
The GND terminals should also be connected following the procedure in pages 11 & 12, "Communication Cable Ground".

DXi HARDWIRE CONNECTIONS



DXi Wireless Communication Installation

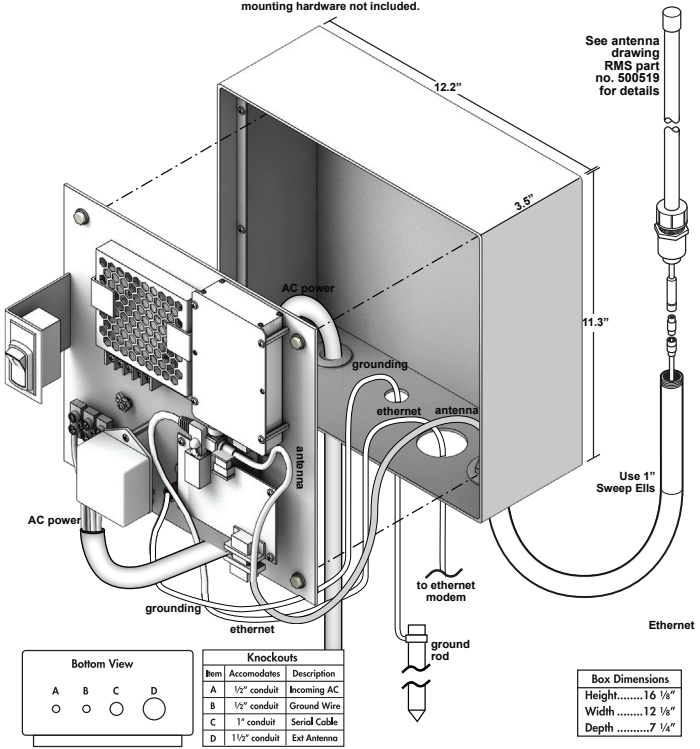




To connect the comm board cover's BNC port to the antenna, see 500520.

DXi Ethernet Radio Repeater (AKA CTM)

Note: DXi-ETHER-RF-RPTR includes all components within the enclosure as well as 30 feet of antenna coax cable 417-1002. Antenna EV-ANT-1 and mounting hardware not included.



Bottom View

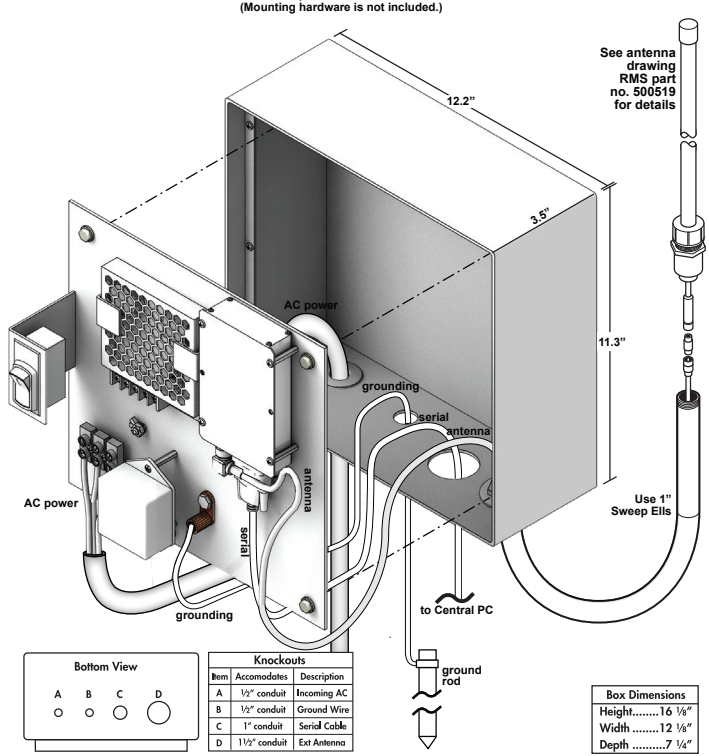
A B C D

Knockouts		
Item	Accomodates	Description
A	½" conduit	Incoming AC
B	½" conduit	Ground Wire
C	1" conduit	Serial Cable
D	1½" conduit	Ext Antenna

Box Dimensions
Height.....16 ⅛"
Width .....12 ⅛"
Depth .....7 ¼"

DXi Serial Base Radio

Note: DXi-RAD-BV includes all components within the enclosure, 30 feet of antenna coax cable 417-1002, and antenna EV-ANT-1. (Mounting hardware is not included.)



Bottom View

A B C D

Knockouts		
Item	Accomodates	Description
A	½" conduit	Incoming AC
B	½" conduit	Ground Wire
C	1" conduit	Serial Cable
D	1½" conduit	Ext Antenna

Box Dimensions
Height.....16 ⅛"
Width .....12 ⅛"
Depth .....7 ¼"

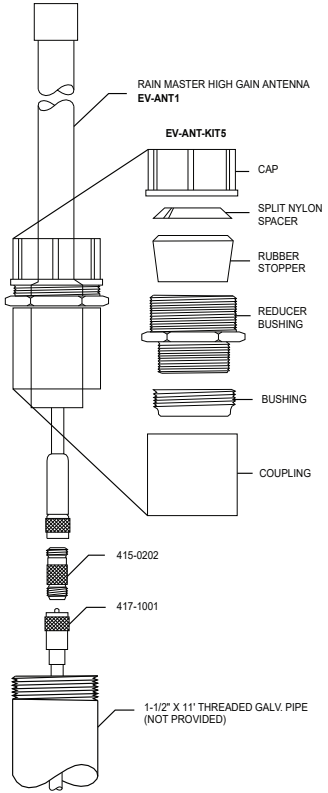
DXi Radio Antenna Installation

EV-ANT-KIT5 INCLUDES:
1. 705-0104 CAP, SPACER, STOPPER, REDUCER
2. 705-0103 BUSHING
3. 705-0102 COUPLING

EV-ANT-F INCLUDES:
1. EV-ANT1 5DB ANTENNA
2. 415-0202 FEM N TO UHF ADAPTER
3. 417-1001 20' COAX CABLE
4. 415-0207 UHF/BNC ADAPTER (NOT SHOWN)

ASSEMBLY INSTRUCTIONS

1. FEED THE COAX CABLE P/N 417-1001 TO THE TOP OF THE GALVENIZED PIPE.
2. CONNECT EV-ANT1 TO MATING CONNECTOR 415-0202.
3. THREAD BUSHING INTO 1 1/2" COUPLING.
4. THREAD REDUCER BUSHING INTO COUPLER, BUSHING ASSEMBLY.
5. SLIP ASSEMBLY OVER TOP OF ANTENNA UNTIL IT STOPS AT ANTENNA BASE.
6. SLIDE RUBBER STOPPER WITH SMALL END DOWN OVER TOP OF ANTENNA.
7. EXPAND SPLIT NYLON SPACER ABOVE COUPLING ASSEMBLY.
8. SLIDE CAP OVER TOP OF ANTENNA (DO NOT TIGHTEN CAP).
9. THREAD PARTIALLY COMPLETED ASSEMBLY ONTO THE GALVENIZED PIPE.
10. TIGHTEN CAP TO COMPRESS RUBBER AROUND ANTENNA.
11. ROUTE BOTTOM OF ANTENNA CABLE THROUGH CONDUIT TO CONTROLLER.



Support

TORO LIMITED WARRANTY

Excluding software and products formerly produced under the Toro® brand name, Toro® offers the following coverage to its trade customers:

Toro offers a 5-year manufacturer's warranty on all purchased controllers.

For the first year, from the date of original sale to the trade customer, product may be exchanged "hassle- free" over-the-counter, should it have original manufacturing defects. For years two through five from the date of original sale to the trade customer, all parts which are found to have original manufacturing defects, shall be repaired or replaced (Toro's choice), provided the product is returned to the original place of purchase or sent to the Toro Controller repair facility at 5825 Jasmine St, Riverside CA 92504, postage paid.

All Toro parts & accessories have a 2- year warranty, unless otherwise noted.

Toro Laguna Software has a 90-day warranty. All computer hardware purchased from Toro in conjunction with its PC-related software is NOT covered by any Toro warranty. Computer hardware and the installed operating system(s) is specifically covered by the hardware manufacturer's warranty as provided by the hardware manufacturer.

This warranty does not apply to loss or damage to the product due to improper installation, abuse, alteration, mishandling, accident, or if the product has been serviced by other than Toro or its authorized service centers. This warranty is not a consumer warranty and does not extend to anyone other than those trade customers who purchase Toro products.

NOTE: Toro is not liable for (i) failure of products not manufactured by Toro even though such products may be sold or used in conjunction with Toro products; (ii) indirect, incidental or consequential damages, including but not limited to vegetation loss during periods of malfunction or resulting non-use; (iii) any loss or damage (e.g., property damage) resulting from an installer's negligence; or (iv) implied warranties of merchantability or fitness for a particular purpose. Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you.

In no event shall Toro be liable or in any way responsible, for any damages or defects in the product which were caused by repairs or attempted repairs performed by anyone other than an authorized Toro / Toro Service dealer or center.

This warranty supersedes all previous warranties and shall be the sole and exclusive warranty granted by Toro and shall be the sole and exclusive remedy available to the trade customer. Correction of defects, in the manner and period of time described herein, shall constitute complete fulfillment of all liabilities and responsibilities of Toro to the trade customer with respect to the product, and shall constitute full satisfaction of all claims, whether based on contract, negligence, strict liability or otherwise.

NOTE: The user is cautioned that changes and modifications made to the equipment without the express written consent of the manufacturer will void this warranty.

FCC Notice - Electromagnetic Compatibility

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a FCC Class A computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause 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 the receiving antenna.

• Relocate the irrigation controller with respect to the receiver.

• Move the irrigation controller away from the receiver.

• Plug the irrigation controller into a different outlet so the irrigation controller and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

"How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, DC 20402. Stock No. 004-000-00345-4.

Getting Help

Toro strives to build safe, durable, and easy to use product. If, however, you encounter a problem that referring to this manual cannot resolve, please contact an authorized Toro product expert for assistance via phone or email.

U.S./Canada:
Phone: 1-800-777-1477 (7:30 am–4 pm, M–F, PT)
E-mail: irrigationsupport@toro.com

Notes

Notes

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

Patent: www.ttcopats.com

THE TORO COMPANY

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Riverside, CA 92504-1183
Toro support: 800.777.1477
irrigationsupport@toro.com
www.toro.com/dxi

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P/N: 373-1063 Rev. D