Rain Bird® IC-TFU
Transition Field Upgrade Device

Installation Guide

CONNECT to convert

Reference Documents

Installation guidelines to be followed when installing IC-TFU or any other Rain Bird IC System™ components can be found on the Rain Bird IC System website at:

https://www.rainbird.com/products/ic-rotors-valves

https://www.rainbird.com/golf/products/ic-system

Reference Documents:

- Rain Bird IC System Wire Path Design Guide
- Rain Bird IC System Design Guide
- Rain Bird IC System Installation Guide
- Rain Bird IC System Operation & Troubleshooting Guide

IMPORTANT NOTES: Installing the IC-TFU – Transition Field Upgrade Device

NOTE: The IC-TFU device must be installed in compliance with all electrical codes.

NOTE: The installation of the IC-TFU device should be performed with the IC System™ **wire path power turned off**.

NOTE: The IC-TFU device requires time to intialize. Always wait two minutes after the wire path has been powered before attempting any operation with the IC-TFU device.

WARNING: Field wire paths must be kept separate from other wire paths. Do not connect the field wires together from different output (group) wire paths on the Integrated Control Interface.

WARNING: This device is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Installation Checklist

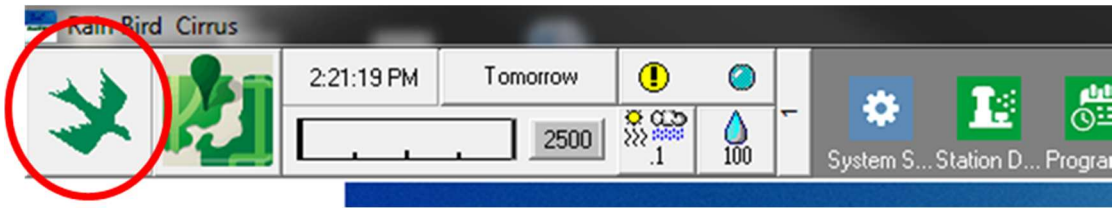
The following steps are recommended in order to properly install the IC-TFU device. For your convenience, a check-off box has been provided for each step.

- ❑ Verify Compatible Rain Bird Central Control Software is Installed
- ❑ Choose a location to install the IC-TFU.
- ❑ Gather Installation Tools / Other Materials Required
- ❑ Install IC-TFU
    - Step 1: Connect IC-TFU to Solenoid
    - Step 2: Connect IC-TFU to IC System™ field wiring
    - Step 3: Complete the installation
    - Step 4: Configure Rain Bird central control software

Verify Compatibility with Rain Bird Central Control Software

1. Verify Central Control software (Cirrus™, Nimbus™ II, Stratus™ II or Stratus LT™) in use is **version 8.1.0 or higher**.

2. Open the Central Control software and click on the “Rain Bird” icon in the front office.



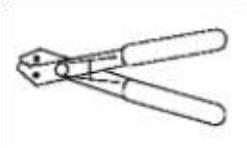
3. If the software version is less than **8.1.0**, (as viewed below) contact your Rain Bird distributor for options to acquire new software. Rain Bird distributors and / or Rain Bird GSP can assist with software updates.

Choose Location to Install the IC-TFU

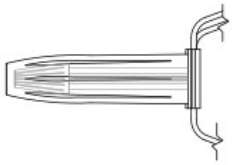
1. Choose a location minimizing wiring length between IC-TFU and the **DC Latching Solenoid** you desire to connect. The recommended location is within two (2) feet (0.6m) of the base of the connected rotor or in the same valve box as the connected valve.
2. Choose a location with easy access to the MAXI™ wire path.
3. The IC-TFU device should be housed in an accessible valve box with proper drainage whenever possible.
4. Take caution to observe local electrical codes when installing the IC-TFU.

NOTE: This and all other devices must be installed in compliance with local electrical codes.

Gather Installation Tools / Other Materials Required



Wire strippers



Rain Bird WC Series Wire Connectors (4)

Installation Step #1 – Connect IC-TFU Output wires to a DC Latching Solenoid

The IC-TFU device provides control output pulses in response to Rain Bird IC System™ commands received from the Rain Bird central control computer. IC-TFU control output pulses are suitable for activating and deactivating a large number of DC latching solenoids.

1. Strip approximately 1” of insulation from each DC Latching Solenoid connection wire to be spliced with IC-TFU output control wires. Take care not to score copper conductors.

2. Splice / join wires by wrapping IC-TFU wires around DC Latching Solenoid Wires. (Figure 1)
   a. Connect IC-TFU Output (+) (red-with-white stripe) wire to latching solenoid (+) control input. (red wire)
   b. Connect IC-TFU Output (-) (black-with-white stripe) wire to latching solenoid (-) control input. (black wire)
   c. Trim joined wires to the appropriate length for the wire nuts.

Figure 1

3. Add suitable protection to the splices using Rain Bird WC series wire connectors.
    a. Secure each splice with a wire nut (Figure 2)
    b. Insert the splice and wire nut completely into the grease cap (Figure 3)
        i. If required; use a thin object to push the wire nut to the end of the grease cap.

Note: grease caps are single-use; do NOT attempt to reuse them.

Figure 2

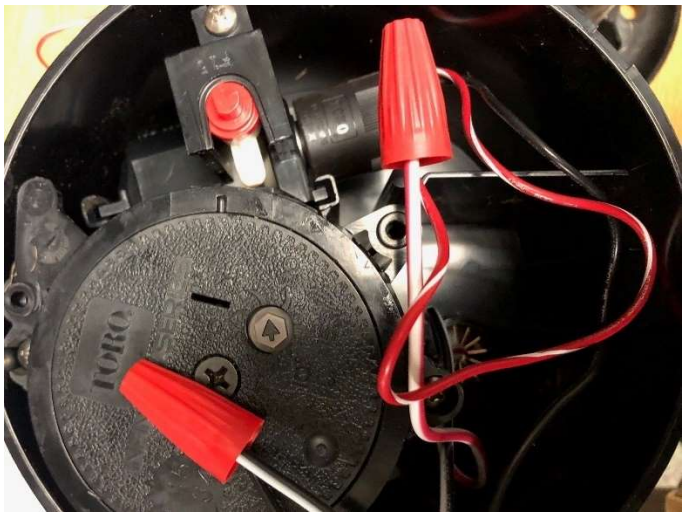
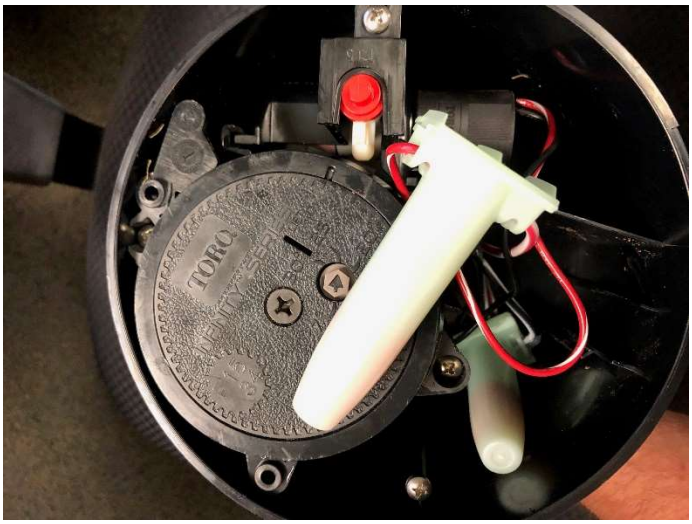


Figure 3



Installation Step #2 – Connect to MAXI™ wire

1. Assure the IC wire path that the IC-TFU will be connected to is powered OFF. (Figure 4)

2. IC-TFU should arrive from the factory with wire ends stripped. If not, strip approximately 1” of insulation from each wire. Take care not to score the copper strands.

3. Strip approximately 1” of insulation from each MAXI™ wire (IC System™ field wiring) to be spliced with IC-TFU. Take care not to score copper conductor.

4. Splice / join wires by wrapping IC-TFU wires around MAXI wires. (Figure 5)
    a. Connect the IC-TFU (red) wire to the MAXI™ (red) wire. The IC-TFU to MAXI™ connection should be solid red on both sides of the splice.
    b. Connect the IC-TFU (black) wire to the MAXI™ (black) wire. The IC-TFU to MAXI™ connection should be solid black on both sides of the splice.
    c. Trim joined wires to appropriate length for the wire nuts.

Figure 4

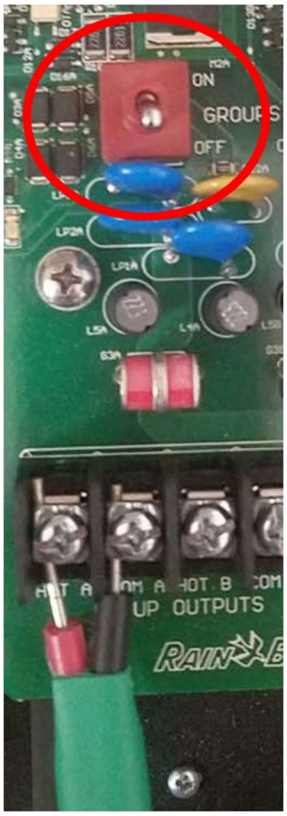


Figure 5

5. Add suitable protection to the splices using Rain Bird WC series wire connectors.
    a. Secure each splice with a wire nut (Figure 5)
    b. Insert the splice and wire nut completely into the grease cap (Figure 6)
        i. If required; use a thin object such as an irrigation flag to push the wire nut to the end of the grease cap.

Note: grease caps are single-use; do NOT attempt to reuse them.

Figure 6

Installation Step #3 - Complete Field Installation

1. Double-check safety of all connections. Assure that all electrical codes have been followed and that no exposed wire ends are present.

2. Remove address barcode from the IC-TFU device by tearing at perforated line. (keep this barcode for your records)

3. Assure that all connections are suitably protected from surrounding environment, placing the IC-TFU and wire splices near the base of an exposed rotor (Figure 7) or in a separate valve box.

Figure 7

*FLEX and INFINITY are registered trademarks of the Toro Corporation

4. Apply power to the IC System™ wire path.

    a. **<u>Allow two (2) minutes</u>** for all IC System™ devices on the wire path to power-up before performing operations.

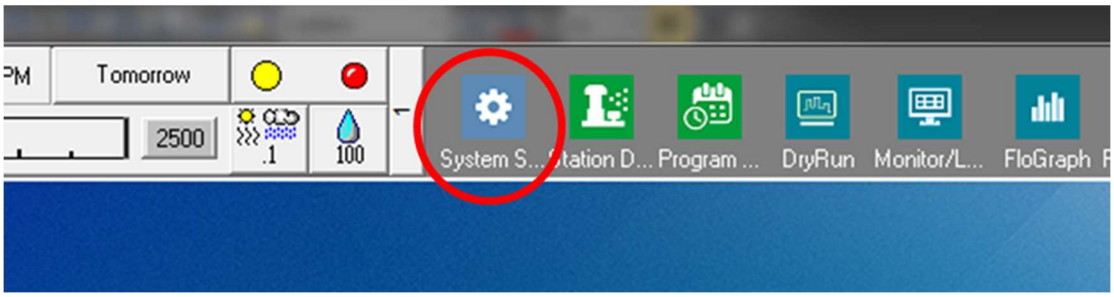
Figure 8

Installation Step #4 – Refer to IC System Installation Guide and Central Control Manual to Complete Setup

1. Refer to the IC System Installation manual found at:

   https://www.rainbird.com/products/ic-rotors-valves

2. Activate Rain Bird Central Control software (version 8.1.0 or higher) on the central control pc and select System Settings to check the Integrated Control Interface (ICI) configuration:



3. Refer to the Rain Bird Central Control user manual supplied with the Central Control PC to complete Station Detail and Flow Zone setup for the IC-TFU.

IC-TFU Specifications & Compliance

Operating Temperature:	14ºF to 125ºF (-10ºC to 51ºC)
Storage Temperature:	-40ºF to 150ºF (-40ºC to 65.5ºC)
Operating Humidity:	75% max at 40ºF to 108ºF (4.4ºC to 42.2ºC)
Storage Humidity:	75% max at 40ºF to 108ºF (4.4ºC to 42.2ºC)
IC System™ Field Wiring Voltage	26-28 VAC (max)

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CONTROLLER
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This device complies with Part 15 of the FCC rules 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.
This Class B digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations.

EN61000-6-1 (1997) Class B:
EN61000-3-2
EN61000-3-3
EN61000-6-3 (1996):
EN61000-4-2
EN61000-4-3
EN61000-4-4
EN61000-4-5
EN61000-4-6
EN61000-4-8
EN61000-4-11

EN 60335-1: 2010 Safety of household and similar electrical appliances

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