

## GENERAL INFORMATION

### 1.1. Product description

#### INTRODUCTION

RAIN BIRD thanks you for having purchased a **TBOS-II™** series field transmitter.

This new transmitter is universal and is compatible with the entire TBOS™ range (old and new generation).

Adding a radio interface unit enhances the programming of the old generation TBOS™ modules.

Once the program data has been entered into the field transmitter, it could be sent in one of two ways:

- **Via an infrared connection**, using the cord supplied with the transmitter.
- **Via a radio connection**, using the TBOS-II™ radio adaptor that attaches to the control module.

This dual radio/Infrared communication option allows continued transmission in the event of disruption to the radio system (bad weather, low batteries in the radio module, etc...)

The new programming module also includes new features that will provide additional benefits for the management of your TBOS™ and/or TBOS-II™ modules.



*\* except VRM1 and FS1*

*The information contained in this document is purely indicative. It may be changed without notice and does not represent a commitment on the part of RAIN BIRD.*

#### A – PRESENTATION OF THE TBOS-II™ RADIO SYSTEM

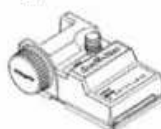
##### 1. The TBOS-II™ system

The new generation system works with products using the 868MHz (EU, South Africa) or 915 MHz (US, Canada, Mexico, Australia) frequency band.

System composition:



- A universal FIELD TRANSMITTER (FT) that serves to configure your irrigation programs and transfer them via infrared or radio connection to the TBOS™ and/or TBOS-II™ control modules.



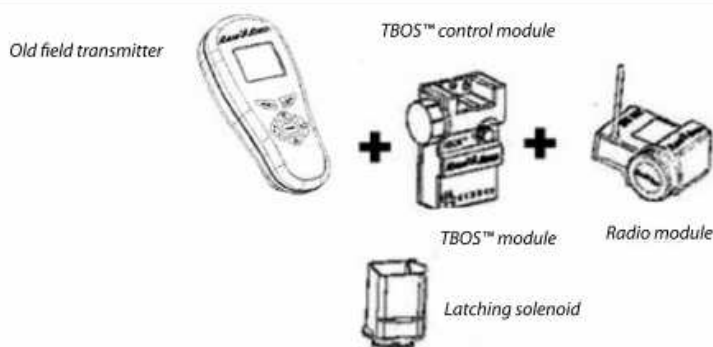
- One (or more) TBOS™/TBOS-II™ CONTROL MODULE(S) installed underground, in valve box.



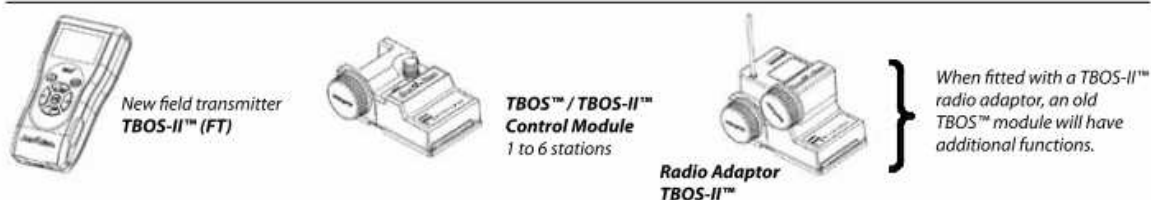
- a TBOS-II™ RADIO INTERFACE UNIT for radio reception of data, installed underground, in valve box.

## 2. Description of the system

### Old TBOS system



### New TBOS-II system



## 3. New features of the TBOS-II™ system

### The TBOS-II™ field transmitter (FT)

- Powered by rechargeable NiMH batteries (charger provided)
- Back-lit dot-matrix display
- Scrolling menus with reverse video
- Transmitter name customisation
- Language selection
- Miscellaneous display settings
- Storage of 3 saved programs in the in the field transmitter once connected to the TBOS™ controller

### Field transmitter (FT) <-> TBOS™/TBOS-II™ interactions

- Rain Delay (1 to 31 for TBOS-II™ model and 1 to 6 for model TBOS™)
- Check program
- Day setting OFF
- Water budget (per program A/B/C or per month)
- 3 saved programs
- Reading of irrigation program
- Consultation and modification of the following parameters:
  - TBOS™ module name
  - Station run times
  - Station names
  - Assignment of a station to one or more programs
  - Manual actions
  - Programming cycle
  - Water budget by program
  - Start Times

## 1.2. Related Submittal(s) / Grant(s)

All host equipments used in the test configuration are FCC granted, when relevant.

## 1.3. Tested System Details

The FCC IDs for all equipment, with description of all cables used in the tested system are:

Internal max frequencies: 32MHz

- **Power supply:**

- Battery Alkaline 9VDC (Radio Adaptor)

- **Input/output:**

- None

- **Auxiliaries used for testing:**

- None

- **Equipment information: Radio Adaptor**

- External antenna connector: NO

- Radiated fundamental frequency band: [902-928]MHz, 1 channel @ 915MHz

- Antenna type: External

- Stand By mode: Yes

- Modulation Type: FSK

- Modulation Technology: DSSS

- Maximum Antenna Gain: 0dBi

## 1.4. Test Methodology

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4-2009, FCC Part 15 Subpart C.

Radiated testing was performed at an antenna to EUT distance of 10 meters. During testing, all equipment's and cables were moved relative to each other in order to identify the worst case set-up.

## 1.5. Test facility

Tests have been performed from October 15<sup>th</sup> to 21<sup>st</sup>, 2010.

This test facility has been fully described in a report and accepted by FCC as compliant with the radiated and AC line conducted test site criteria in ANSI C63.4-2003 in a letter dated March 25<sup>th</sup>, 2008 (registration number 94821).

This test facility has also been accredited by COFRAC (French accreditation authority for European Union test lab accreditation organization) according to NF EN ISO/IEC 17025, accreditation number 1-1633 as compliant with test site criteria and competence in 47 CFR Part 15/ANSI C63.4 and EN55022/CISPR22 norms for 89/336/EEC European EMC Directive application. All pertinent data for this test facility remains unchanged.