

# "RADAR NEW TXF"

## **USER AND MAINTENANCE MANUAL**

FAMILY CODE **101-050**

# "RADAR II"

## **Multi-channel transmitter for RADAR II radio remote controls**



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Data: Venerdì 16 giugno 2017

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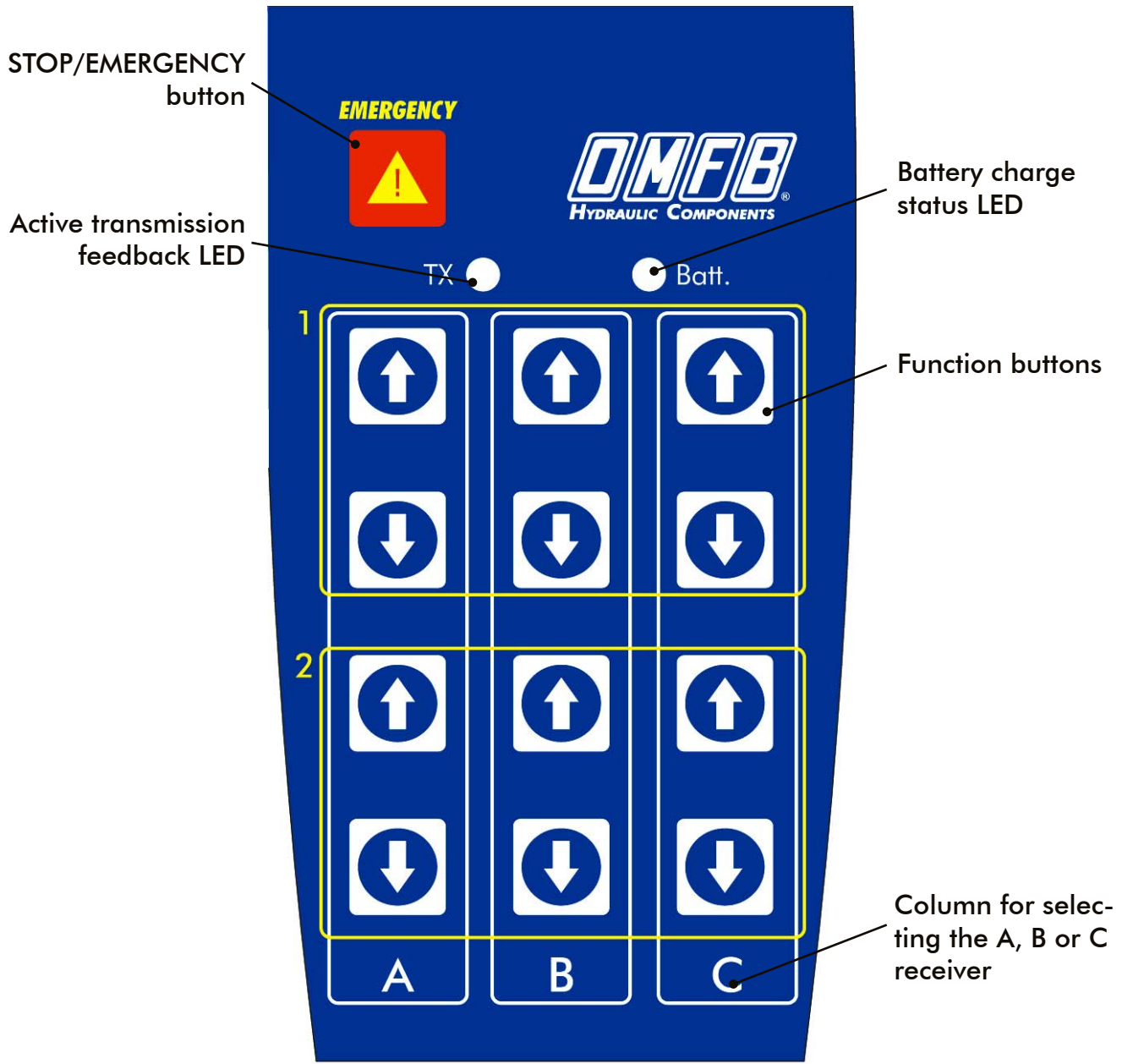
# 1. General comments

## 1.1 Description of individual push-button and LED functions

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## 1.2 Distinguishing features

- Compatible with the receivers: RADAR II 2CH, 4CH, 8CH, 12CH
- Transmitting commands: up to 12 (2 Channels x 2 Functions x 3 Banks selectable)
- Equipped with STOP/Emergency command

## 1.3 Standard supplies

- 1 Transmitter
- 2 AA batteries (ALKALINE)
- 1 User and maintenance manual

## 1.4 Technical specifications

	Min	Typical	Max	Unit
Work frequency centre	433.82	433.92	434.02	MHz
Effective radiated power (E.R.P.)		5.0	10	mW
Modulation		OK		On-Off Keying
Power supply (2xAA)	2.2	3	3.3	V
Current consumption in Tx		40	50	mA
Current consumption in stand-by		0		uA
Battery life		3 (1)	5	years
Serial code		28		bit
Hopping code		32		bit
Combinations		2 <sup>32</sup>		-
Working temperature	-10		+55	°C
Dimensions		75x169x32		mm

The use of rechargeable batteries does not ensure correct operation of the transmitter because the supply voltage generated by the batteries is at the minimum card operating limit.

## 1.5 Status information

Battery LED	Tx LED	Battery
OFF	ON steady when a function button is pressed	Charged Normal operation
ON flashing	ON steady when a function button is pressed	Partly discharged Normal operation
ON flashing	ON flashing when a function button is pressed	Abnormal operation transmission of the signal is not stable. Battery flat immediate replacement is recommended.
ON quick flashing	OFF when a function button is pressed	There is no signal transmission the transmitter cannot be used to complete the operation. Battery dead dispose of the batteries and replace.

If the batteries are replaced with new ones, the tx can be used immediately to complete any operations that are currently underway.

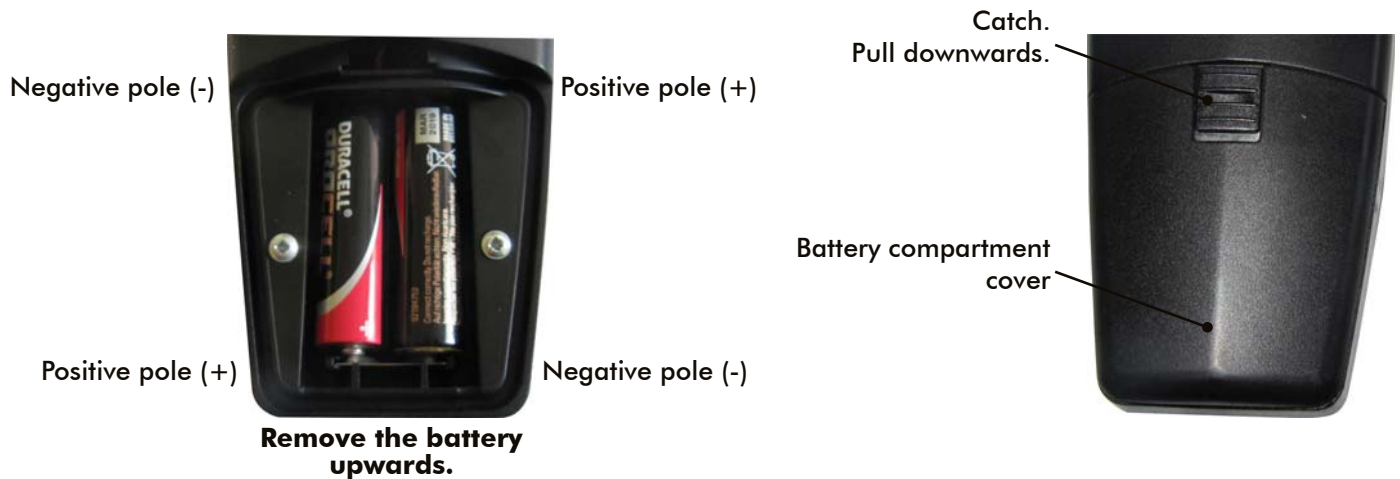
## 1.6 Replacing the batteries

The power batteries have to be replaced immediately when the BATT LED switches on and flashes quickly while the function button is active and the TX LED is off.

To do this, move the catch downwards, lift the battery compartment cover and remove the flat batteries. Replace them with two of the same type (AA 1.5V alkaline), taking care not to reverse the polarity (see figure). Put the battery compartment cover back and lock with the catch.

If the battery is leaking liquid, immediately remove it and clean the battery compartment, making sure you do not touch this substance; wash your hands thoroughly after this operation.

**ATTENTION: Do not dispose of old batteries in the environment, but throw them into special containers to facilitate disposal.**



## 1.7 Emergency command from the transmitter

The RADAR TXF is fitted with Emergency command: whenever the emergency button is pressed on the transmitter, an emergency signal is sent to all programmed receivers.

The emergency button dominates all other commands, thus the receiver stops any function active at that time.

Pressure on the emergency command is signalled by the receiver, by the continuous sound of a buzzer inside the receiver itself.

To restore proper operation of the system, press the Green start button on the receiver, the radio remote control is ready to perform new operations.

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## 2. Use in combination with the RADAR II 2CH and 4CH receiver

### 2.1 Programming

This procedure is necessary if you have received a transmitter and receiver(s) separately.

Before using a new TXF transmitter, communication has to be created between the transmitter and the receiver(s).

To do this please follow the below described programming procedure.



**ATTENTION:** make sure the receivers have not already been programmed, if they have, cancel the program and reprogram with the new transmitter.

1. Power up the receiver (insert the battery disconnecter and any other switch that may be installed in series with the receiver power supply);
2. On the transmitter: make sure the TX LED lights up when a function button is pressed in columns A, B, C;
3. On the receiver: press the red emergency mushroom-head button: the buzzer inside begins to emit a continuous sound;
4. **On the receiver: put a magnet next to the “Learning Zone”:** the buzzer inside the receiver will emit an intermittent sound;



5. On the transmitter: press one of the function buttons (channel 1 Up/Down or channel 2 Up/Down) in the column on which you wish to program the receiver (A, B or C).
6. On the receiver: the sound issued by the buzzer returns;
7. On the receiver: release by turning the red emergency mushroom-head button;
8. On the receiver: press the green button;
9. Make sure all functions connected to the radio remote control system are correctly activated.

#### RESET OR PROGRAM CANCELLING PROCEDURE

Each receiver stores up to 5 distinct transmitter codes. When the memory is full, the receiver signals it by emitting an intermittent high frequency sound. To reset the memory, proceed as for programming up to step 4 and keep the transmitter at hand. When the continuous beep switches to alternating beeps, within 5 seconds the alternating beeps will emit a sound at a different frequency. Now, after releasing the emergency button, press the green button on the receiver.

## 2.2 Use

1. Power up the receiver (insert the battery disconnecter and any other switch that may be installed in series with the receiver power supply);
2. On the transmitter: press the desired functions, remembering that, if you are controlling a RADAR II 2 CH, the 2 commanded functions are controlled by the channel 1 Up/Down function buttons, but if you are controlling a RADAR II 4 CH, the 4 functions correspond to the function buttons in the first column A; if the red LED signalling the battery's charging status lights up and the TX LED is not active, follow the instructions in paragraph 1.6 to replace the batteries.

## 3. Use in combination with the RADAR II 8CH receiver

RADAR II 8CH radio remote control systems are configured thusly:

- Qty. 2 4CH Receivers;
- Qty. 1 Transmitter.

The TXF transmitter controls, respectively, the first 4CH receiver on the "Receiver A" and the second 4CH receiver on "Receiver B" of the transmitter: in other words, to activate the devices connected to the first receiver you must press the button "A" on the transmitter, while to control the devices connected to the second receiver you must press the button "B".

**Note:** The receivers are perfectly identical to one another, and completely interchangeable. It is the operator or installer who defines which is the first and second receiver, during the programming stage described below.

### 3.1 Programming

1. Power up the receivers (insert the battery disconnecter and any other switch present in series with the receiver power supply);
2. On the transmitter: press a function button in the A, B or C column and make sure the TX LED lights up flashing;
3. On the receiver 1: press the red emergency mushroom-head button: the internal buzzer begins to emit a continuous sound;
4. See paragraph 2.1 to program with REED;
5. Make sure all functions connected to the first receiver of the radio remote control system are correctly activated;
6. On the receiver 2: press the red emergency mushroom-head button: the internal buzzer begins to emit a continuous sound;
7. See paragraph 2.1 to program with REED;
8. On the transmitter: press one of the function buttons (channel 1 Up/Down or channel 2 Up/Down) in the column on which you wish to program the receiver, with the exception of those already programmed in A, B or C.
9. Make sure all functions connected to the radio remote control system are fully functional. Test that the emergency function from the Transmitter is sent to the two receivers.

### 3.2 Use

1. Power up the receivers (insert the battery disconnecter and any other switch that may be installed in series with the receiver power supply);
2. On the transmitter: press the desired functions, remembering that the first column is for receiver A and the second column is for receiver B.
3. The transmitter automatically switches off.

## 4. Use in combination with the RADAR II 12CH receiver

RADAR II 12CH radio remote control systems are configured thusly:

- Qty. 3 4CH Receivers;
- Qty. 1 Transmitter.

The TXF transmitter controls, respectively, the first 4CH receiver on "Receiver A", the second 4CH receiver on "Receiver B", and the third 4CH receiver on "Receiver C": in other words, to activate the devices connected to the first receiver, you must press the button "A"; to control the devices connected to the second receiver, you must press the button "B"; finally, to control the devices connected to the third receiver you must press the button "C".

**NB:** The receivers are perfectly identical to one another, and completely interchangeable. It is the operator or installer who defines which are the first, second and third receivers, respectively, during the programming stage described below.

### 4.1 Programming

1. Power up the receivers (insert the battery disconnecter and any other switch that may be installed in series with the receiver power supply).
2. On the transmitter: press a function button in the A, B or C column and make sure the TX LED lights up flashing;
3. On the receiver 1: press the red emergency mushroom-head button: the buzzer inside begins to emit a continuous sound;
4. See paragraph 2.1 to program with REED;
5. Make sure all functions connected to the first receiver of the radio remote control system are correctly activated;
6. On the receiver 2: press the red emergency mushroom-head button: the buzzer inside begins to emit a continuous sound;
7. See paragraph 2.1 to program with REED;
8. On the transmitter: press one of the function buttons (channel 1 Up/Down or channel 2 Up/Down) in the column on which you wish to program the receiver, with the exception of those already programmed in A, B or C.
9. Make sure all functions connected to the second receiver of the radio remote control system are correctly activated;
10. On the receiver 3: press the red emergency mushroom-head button: the buzzer inside begins to emit a continuous sound;
11. See paragraph 2.1 to program with REED;
12. On the transmitter: press one of the function buttons (channel 1 Up/Down or channel 2 Up/Down) in the column on which you wish to program the receiver, with the exception of those already programmed in A, B or C.
13. Make sure all functions connected to the third receiver of the radio remote control system are correctly activated;
14. Test that the emergency function from the Transmitter is sent to the three receivers.

### 4.2 Use

1. Power up the receivers (insert the battery disconnecter and any other switch installed in series with the receiver power supply)
2. On the transmitter: press the desired functions, remembering that the first column is for receiver A, the second column is for receiver B, and the third column is for receiver C.
3. The transmitter automatically switches off.



## 5. Product Markings and certification

**RADAR II** radio remote controls meets the rules set forth in the following harmonised technical standards:

Directive 99/5/EC article:

Harmonised standards:

Art. 3.1 (a) - HEALTH

Art. 3.1 (a) - SAFETY

EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + AC:2011 + A2:2013 Information technology equipment - Safety

Assessment of the compliance of low power electronic and electrical equipment with the basic restrictions related to human exposure to electromagnetic fields (10 MHz to 300 GHz).

Part 1: General requirements

Art. 3.1 (b) - ELECTROMAGNETIC COMPATIBILITY EMC EN 301 489-3: v1.6.1 (2013-08)

Electromagnetic compatibility and radio spectrum matters (ERM); electromagnetic compatibility (EMC) standard for radio equipment and services. Part 3: Specific conditions for short-range devices (SRD) operating on frequencies between 9 kHz and 246 GHz.

Art 3.2 - RADIO SPECTRUM EN 300 220-2: v2.4.1 (2012-05)

Electromagnetic compatibility and radio spectrum matters (ERM); short-range devices (SRD); radio equipment to be used in the 25 MHz to 1000 MHz frequency range with power levels ranging up to 500 mW. Part 2: Harmonised EN covering essential requirements under article 3.2 of the R&TTE Directive.