

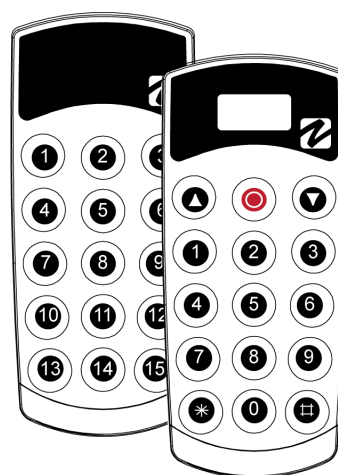
INSTALLATION INSTRUCTIONS

Transmitters:

T60TX-15DML, T60TX-15DML-US,

T60TX-15SML

T20TX-15DMM, T60TX-15SMM



IMPORTANT! This document is intended for T60TX-15DML, T60TX-15SML , T20TX-15DMM and T20TX-15SMM transmitters with base board TR383 and software versions SW0048-05v01 or higher (T60TX-15DML) and SW0048-04v01 or higher (T60TX-15SML), SW0048-07v01 or higher (T20TX-15DMM) and SW0048-06v01 or higher (T20TX-15SMM).

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CHAPTER 1: INTRODUCTION



READ ALL INSTRUCTIONS AND WARNINGS CAREFULLY BEFORE MOUNTING, INSTALLING, CONFIGURING AND OPERATING THE PRODUCTS.

These Installation instructions have been published by Tele Radio and are not subject to any guarantees. The Installation instructions may be withdrawn or revised by Tele Radio at any time and without further notice. Corrections and updates will be added to the latest version of the manual. Always download the Installation instructions from our website, www.tele-radio.com, for the latest available version. Keep the safety instructions for future reference.

IMPORTANT! These instructions are intended for installers and authorized service and distribution centers. The instructions containing information about the installation and configuration of the radio remote control unit on the machine are NOT intended to be passed on to the user. Only information that is needed to operate the machine correctly by radio remote control may be passed on to users.

Tele Radio remote controls are often built into wider applications. This documentation is not intended to replace the determination of suitability or reliability of the product for specific user applications and should not be used for this purpose. It is the responsibility of any such users or integrators to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use. Tele Radio shall not be responsible or liable for misuse of the information contained herein.

Always refer to the applicable local regulations for installation and safety requirements relating to cranes, hoists, material handling applications, lifting equipment, industrial machinery, and/or mobile hydraulic applications using Tele Radio products, e.g.:

- applicable local and industrial standards and requirements,
- applicable occupational health and safety regulations,
- applicable safety rules and procedures for the factory where the equipment is being used,
- user and safety manuals or instructions of the manufacturer of the equipment where Tele Radio remote control systems are installed.

Tele Radio Installation instructions do not include or address the specific instructions and safety warnings of the end product manufacturer.

For battery precautions, see "4.1 Battery precautions".

Tele Radio products are covered by a warranty against material, construction, or manufacturing faults. See "Chapter 5: Warranty, service, repairs, and maintenance".

1.1 About this document

Before installing or operating the product, read the corresponding documentation carefully.

Tele Radio's product range is composed of transmitters, receivers, and accessories intended for use together as a system.

These Installation instructions cover general safety issues, main technical specifications, standard installation, configuration and operating instructions, and battery information. Images shown in this document are for illustrative purposes only.

Please report any error or omission in this document, as well as any improvement or amendment suggestion to td@tele-radio.com.

1.1.1 TERM AND SYMBOL DEFINITIONS

The capitalized terms and symbol used herein shall have the following meaning:

- **WARNING:** indicates a hazardous situation which, if not avoided, could result in death or serious injury.
- **CAUTION:** indicates a hazardous situation which, if not avoided, will result in minor or moderate injury.
- **IMPORTANT:** is used for information that requires special consideration.
- **NOTE:** is used to address practices not related to physical injury.



This symbol is used to call attention to safety messages that would be assigned the signal words "WARNING" or "CAUTION".

1.2 About T60 transmitters

T60 transmitters have simplex communication and work in discontinuous mode

T20 can be used within all four areas for applications requiring a maximum of three functions where only one is used at a time, e.g. open- stop - close. Applications include winches, disability adaptations, doors, gates, barriers, conveyor belts, lighting and many more. Up to 30 transmitters can be programmed into one receiver, ideal for applications such as large and central garages, barriers, etc. T20 allows control of numerous different objects using a single transmitter.

T20TX transmitters can be used together with both T20RX and T60RX receivers within the same frequency range

Perfect for control of doors, ports and gates in heavy industrial environments, and for mobile applications. Applications include winches, disability adaptations, doors, gates, barriers, conveyor belts, lighting and many more. Depending on receiver models, up to 500 transmitters can be programmed into one receiver.

T60TX transmitters are intended for application where several users/transmitters are required to control one and the same object or to allow control of numerous different objects (up to 1,000) using a single transmitter.

T60TX transmitters can be used together with both T20RX and T60RX receivers within the same frequency range.

CHAPTER 2: SAFETY

2.1 Warnings & restrictions



Carefully read through the following safety instructions before proceeding with the installation, configuration, operation, or maintenance of the product. Failure to follow these warnings could result in death or serious injury.

This product must not be operated without having read and understood the Installation instructions, the specific technical documentation (for customized systems), and having received the appropriate training. The purchaser of this product has been instructed how to handle the system safely. The following information is intended for use as a complement to applicable local regulations and standards.

IMPORTANT! Tele Radio remote controls are often built into wider applications.

These systems should be equipped with:

- a wired emergency stop where necessary
- a brake
- an audible or visual warning signal

2.1.1 INSTALLATION AND COMMISSIONING

IMPORTANT! Only licensed or qualified personnel should be permitted to install the product.



This radio system must not be used in areas where there is a risk of explosion.



Always switch off all electrical power from the equipment before installation procedure.



RISK OF UNINTENDED EQUIPMENT OPERATION

Only transmitters that are intended for use should be registered in the receiver.

Failure to follow these instructions could result in death, serious injury, or equipment damage.



RISK OF ELECTRIC SHOCK

The receiver must only be opened by qualified installers or authorized personnel.

Make sure the power supply is switched off before opening the receiver. Failure to follow these instructions could result in death, serious injury, or equipment damage.

2.1.2 OPERATION



This equipment is not suitable for use in locations where children are likely to be present.



Only qualified personnel should be permitted to access the transmitter and operate the equipment.



- Make sure that the user satisfies the age requirements in your country for operating the equipment.
- Make sure that the user is not under the influence of drugs, alcohol and medications.
- Make sure that the user knows and follows operating and maintenance instructions as well as all applicable safety procedures and requirements.

The user should:



- Never leave the transmitter unattended.
- Always switch the transmitter off when not in use. Store in a safe place.
- Keep a clear view of the work area at all times.

2.1.3 MAINTENANCE



Before maintenance intervention on any remote controlled equipments:

- **always remove all electrical power from the equipment.**
- **always follow lockout procedures.**

- Keep the safety information for future reference. Always download the Installation instructions from our website, www.tele-radio.com, for the latest available version.
- If error messages are shown, it is very important to find out what caused them. Contact your representative for help.
- Keep the product in a clean, dry place.
- Keep contacts and antennas clean.
- Wipe off dust using a clean, slightly damp cloth.
- Never use cleaning solutions.
- Check the encapsulation, foils and cable for damages. If the encapsulation or foil is damaged, moisture can cause serious damage to the electronics.

CHAPTER 2: TECHNICAL DATA

	T60TX- 15DML	T60TX- 15SML	T60TX- 15DML-US	T20TX- 15DMM	T20TX- 15SMM
Power supply	9 V, 6F22 battery				
Radio frequency band	433.92 MHz			869.85 MHz	
Radio frequency output power (EIRP ¹)	< 0 dBm (1 mW)		≤ -14.4 dBm	< 9.15 dBm (8.2 mW)	
IP code	IP65				
Operating temperature	-20...+55°C / -4...+131°F (humidity 10–90%)				
Dimensions	43 x 62 x 38 mm				

2.2 Radio transmission

Transmission continues during the time each function button is held down and is interrupted once the button is released.

¹Equivalent isotropic radiated power. $EIRP (W) = 1.64 \times ERP (W)$ or $EIRP (dBm) = ERP (dBm) + 2.15$

CHAPTER 3: PRODUCT GENERAL DESCRIPTION

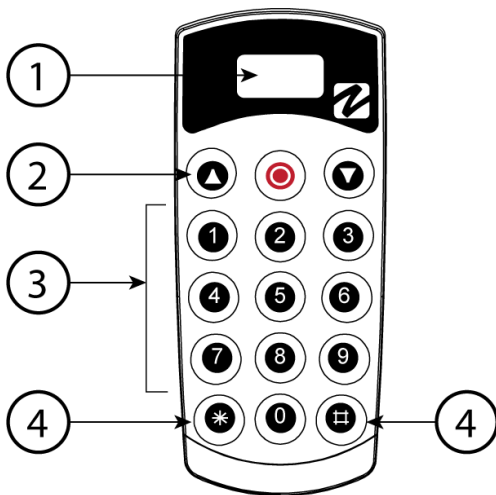
NOTE: The pictures shown in this chapter are for illustrative purposes only. Depending on the configuration, the actual product appearance may differ from the basic model used for reference.

3.1 T60TX-15DML, T60TX-15DML-US, T60TX-15SML, T20TX-15DMM, T20TX-15SMM transmitters

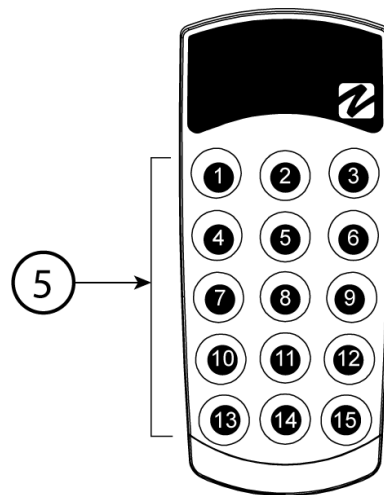
NOTE: Applies to T60TX-15DML, T60TX-15DML-US, T60TX-15SML, T20TX-15DMM and T20TX-15SMM transmitters with base board TR383 and software versions SW0048-05v01 or higher (T60TX-15DML) and SW0048-04v01 or higher (T60TX-15SML), SW0048-07v01 or higher (T20TX-15DMM) and SW0048-06v01 or higher (T20TX-15SMM).

3.1.1 TRANSMITTER FRONT

T60TX-15DML, T60TX-15DML-US, T20TX-15DMM



T60TX-15SML, T20TX-15SMM



- 1. LCD display
- 2. Function buttons
- 3. Door-number buttons
- 4. Shortcut functions

- 5. Door-number buttons

Shortcut functions

NOTE: Applies only to T60TX-15DML, T60TX-15DML-US, T20TX-15DMM

The *-buttons and #-buttons are used for programming a shortcut (one selection per button) for a particular function.

• Program a shortcut

1. Press the button(s) corresponding to the door number to be programmed as short-cut.

Ex: for door 35, press 3 + 5.

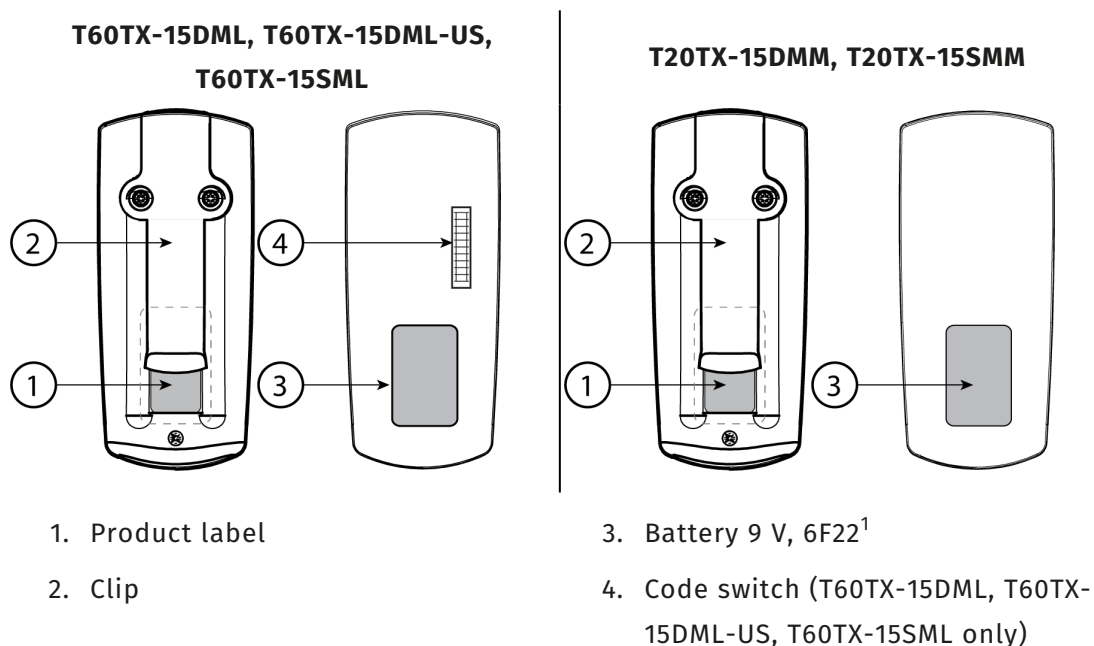
2. Press the * or #-button for more than 3 s.

The display flashes.

The door has been assigned to the shortcut button.

Ex: to activate door no. 35, press the shortcut button that has been programmed with this door number.

3.1.2 TRANSMITTER BACK



Code switch

By default, all transmitters are delivered with the code (DIP) switches set in position "0" (0000000000). **If an ADJUSTABLE code is to be used to co-program the transmitter and receiver, it is very important to change the code (DIP) switches in the transmitter to its own, individual code combination before programming the transmitter code in the receiver.**

¹Under back cover/on the PCB.

3.2 Program adjustable ID code with the code switch

NOTE: Applies only to T60TX-15DML, T60TX-15DML-US, T20TX-15DMM

To access the dip-switch

1. Disassemble the clip (2 screws)
2. Disassemble the back of the transmitter (1 screw) and gently pull to release it.
3. Remove the back of the transmitter.
4. Program the adjustable ID code.
5. Reassemble the back of the transmitter (1 screw).
6. Reassemble the clip (2 screws).

CHAPTER 4: BATTERY

4.1 Battery precautions

Carefully read the following safety instructions and warnings before using, charging or disposing of the batteries.



Batteries contain flammable substances such as lithium or other organic solvents, which may result in overheating, rupture or combustion. Failure to read and follow the below instructions may result in fire, personal injury and damage to property if charged or used improperly.

4.1.1 HANDLING AND STORAGE



- Risk of explosion if battery is replaced with a battery of an incorrect type.
- Do not short-circuit, disassemble, deform or heat batteries.
- Never attempt to charge a visibly damaged or frozen battery.
- Do not use or charge the battery if it appears to be leaking, deformed or damaged in any way.
- Do not solder directly onto batteries.
- Do not leave the battery in the charger once it is fully charged.
- Store in a cool location. Keep batteries away from direct sunlight, high temperature, and high humidity.
- Immediately discontinue use of the battery if, while using, charging, or storing the battery, the battery emits an unusual smell, feels hot, changes color, changes shape, or appears abnormal in any other way.
- Keep batteries out of reach of small children. Should a child swallow a battery, consult a physician immediately.

4.1.2 DISPOSAL

When discarding batteries, insulate the + and - terminals of batteries with insulating/ masking tape.



- **Do not place multiple batteries in the same plastic bag.**
- **Do not incinerate or dispose of batteries in fire.**
- **Do not place used batteries in the household waste. Dispose of used batteries in accordance with the applicable regulations and legal requirements.**
- **Batteries that have been disposed of incorrectly may short circuit, causing them to become hot, burst or ignite.**

4.2 Change the batteries

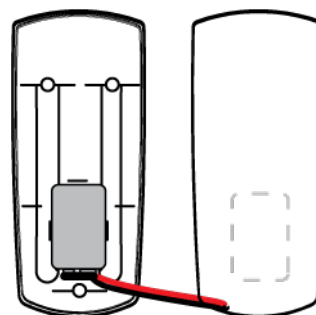
BATTERY TYPE: 1 x 9V, 6F22



Do not recharge the batteries! Attempts to recharge the batteries may cause rupture, or leaking of hazardous liquids, which will corrode the equipment and result in minor or moderate injury.

1. Disassemble the clip (2 screws)
2. Disassemble the back of the transmitter (1 screw) and gently pull to release it.
3. Remove the back of the transmitter.
4. Replace the battery.

NOTE: The cable must be positioned on the right of the battery compartment, to avoid any damage from the screw.



5. Reassemble the back of the transmitter (1 screw).
6. Reassemble the clip (2 screws).

CHAPTER 5: WARRANTY, SERVICE, REPAIRS, AND MAINTENANCE

Tele Radio products are covered by a warranty against material, construction and manufacturing faults. During the warranty period, Tele Radio may replace the product or faulty parts. Work under warranty must be performed by Tele Radio or by an authorized service center specified by Tele Radio.

The following are **not** covered by the warranty:

- Faults resulting from normal wear and tear
- Parts of a consumable nature
- Products that have been subject to unauthorized modifications
- Faults resulting from incorrect installation and use
- Damp and water damage

Maintenance

- Repairs and maintenance must be performed by qualified personnel
- Only use spare parts from Tele Radio
- Contact your representative for service or any other assistance
- Keep contacts and antennas clean
- Wipe off dust using a slightly damp, clean cloth

NOTE: Never use cleaning solutions or high-pressure washer.

CHAPTER 5: REGULATORY INFORMATION

Model	Article names	Additional naming conventions
T60TX-15DML	T31-70	
T60TX-15DML-US	T31-85	
T60TX-15SML	T31-74	
T20TX-15DMM	T32-21	K047155/K047185 (T32-34)
T20TX-15SMM	T32-22	K047154/K047184 (T32-33)

5.1 Europe

Applies to:

Models	with base board TR383 and software version
T60TX-15DML	SW0048-05v01 or higher
T60TX-15SML	SW0048-04v01 or higher
T20TX-15DMM	SW0048-07v01 or higher
T20TX-15SMM	SW0048-06v01 or higher

5.1.1 CE MARKING



Hereby, Tele-Radio i Lysekil AB, declares that the product(s) listed above is/are in compliance with the Radio Equipment Directive 2014/53/EU.

The latest version of the complete EU Declaration of Conformity is available at the following website: www.tele-radio.com.

5.1.2 WEEE DIRECTIVE



This symbol means that inoperative electrical and electronic products must not be mixed with household waste. The European Union has implemented a collection and recycling system for which producers are responsible. For proper treatment, recovery and recycling, please take this product to a designated collection point.

Tele Radio strives to minimize the use of hazardous materials, promotes reuse and recycling, and reduces emissions to air, soil and water. When a commercially viable alternative is available, Tele Radio strives to restrict or eliminate substances and materials that pose an environmental, health or safety risk.

5.2 United Kingdom

Applies to:

Models	with base board TR383 and software version
T60TX-15DML	SW0048-05v01 or higher
T60TX-15SML	SW0048-04v01 or higher
T20TX-15DMM	SW0048-07v01 or higher
T20TX-15SMM	SW0048-06v01 or higher

5.2.1 UKCA MARKING



UK Importer: Tele Radio (UK) LTD

1 SEYMOUR COURT,
MANOR PARK, RUNCORN, WA7 1SY, UK
Email: sales@teleradiouk.com

The latest version of the complete UKCA Declaration of Conformity is available on request. Contact your representative for more information.

5.3 North America

Applies to:

Models
T60TX-15DML-US

5.3.1 FCC STATEMENT

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.

Responsible Party – U.S. Contact Information

Company: TELE RADIO AMERICA LLC

Address: 14895 NE 20th Ave, North Miami, FL 33181, United States

Telephone and email: +001 305-459-0763, america@teleradio.com

IMPORTANT! Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful 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 or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which

the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

5.3.2 IC STATEMENT

This product complies with Industry Canada's licence-exempt RSSs. 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 device.

Le présent appareil est conforme aux CNR d'Industrie 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;
- 2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

5.3.3 FCC/IC LABELS

FCC ID: 2BC3H2519A

IC: 31388-2519A

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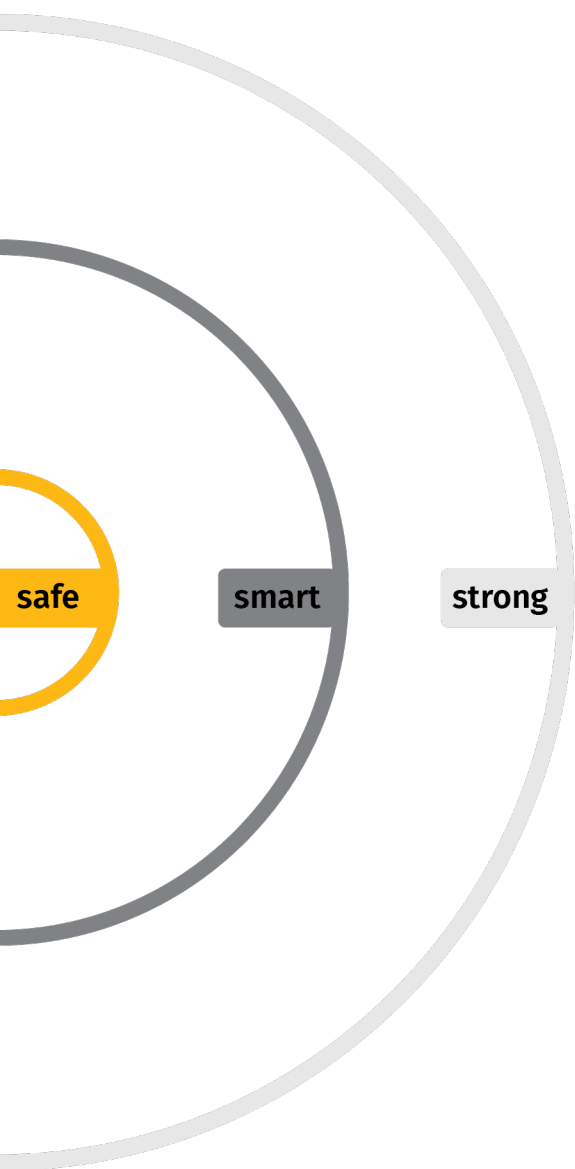
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These Installation instructions are subject to change without prior notice.
Download the latest instructions from www.tele-radio.com.