Tele Radio T60

Manual

Rev. IM-T60-001-A4

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IMPORTANT!

In order to make optimal use of your system, it is important that you take the time to read through this manual before you begin to install/program your equipment.

GENERAL INFORMATION

The system works at the frequency 433.92MHz and uses frequency modulation, commonly referred to as FM. The main benefit of using FM instead of the more common AM (amplitude modulation) is that FM is less sensitive to the electrical interference generated by computers, electric motors, etc.
Objects positioned between the transmitter and receiver aerial, especially large metal objects (think about the reinforcement rods in concrete walls), can affect the range in a very unpredictable manner, depending on how the radio signals spread.
The effect of other radio transmitters operating on the same frequency in the vicinity also affects the range. Due to these factors, it is difficult to provide any general advice other than that if there is a free line of visibility between the transmitter and the receiver the range with an optimal signal should be the best.
The normal range for the transmitter in an interference-free environment is about 50-100m.

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T60 CODES

The transmitter and receiver that are to be used together must be coded together before use. The T60 system has two different types of codes.

Adjustable codes:

All transmitters are equipped with a code switch that consists of 10 three-position switches, which makes it possible to choose freely among 59,049 different codes.

Fixed individual code:

Each transmitter is supplied with a fixed individual code that cannot be changed.

"Learning" the codes:

In the T60 system, the transmitter and receiver are coded together through a self-instruction process, in other words, the receiver "learns" the transmitter's code. You can have the receiver learn only the adjustable code or both the adjustable and fixed individual code.

Compatible with the 460 system

The T60 system is compatible with Tele Radio's 460 system.

PLACEMENT OF THE AERIAL AND RECEIVER

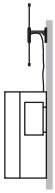
The receiver should be placed:

-As far as is possible, protected from the elements.
-With cable holders facedown.

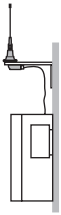
Placement of the receiver aerial

-Place the aerial high above the ground.
-The aerial should not be in the vicinity of metal objects such as electrical cables and other aerials.

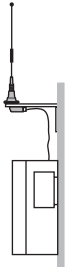
X= 3, 5, or 10m aerial cable



DIP-433K3



1/4-433Kx

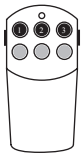


5/8-433Kx

HANDHELD TRANSMITTER MINI

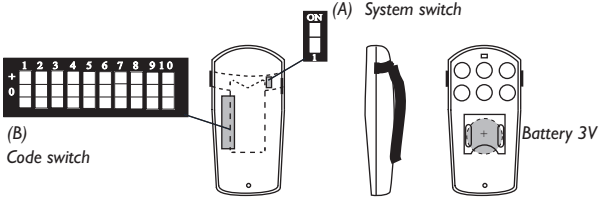
Dimensions: 84x40x16mm

T60TX-01SHL
with 1 button function

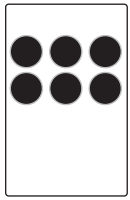


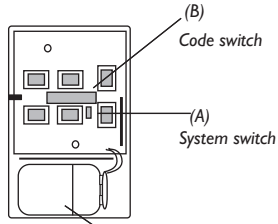
T60TX-03SHL
with 3 button functions

T60TX-06SHL
with 6 button functions



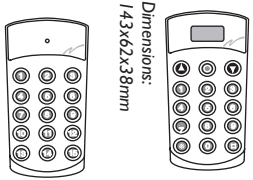
HANDHELD TRANSMITTER MIDI



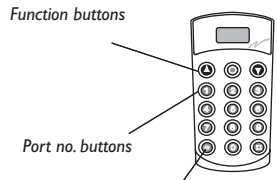


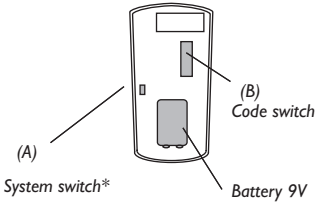
T60TX-06SOL
with 1, 3, 4, or 6 button functions

MOBILE TRANSMITTER MAXI



Transmitter T60TX-15SML
with 15 button functions





*Note: During adjustment, the transmitter must be turned off.

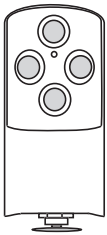
SHORTCUT FOR ONE FUNCTION (T60TX-15DML)

The * and # buttons are used to program a shortcut (1 selection per button) for a specific function. To program a shortcut set the port you wish to save, press * or # for more than 3 seconds (the display flashes). The port has now been saved as a shortcut. To reach the shortcut, press the appropriate button once.

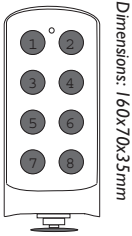
ROBUST TRANSMITTER MAXI

T60TX-0XYZL*

* X= Number of buttons
Y= Transmitter type (S=9V, C=Rechargeable, E=Rechargeable + Stop switch)
Z= Enclosure type

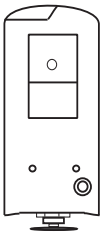


T60TX-04EDL

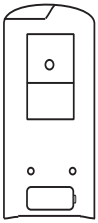


Dimensions: 160x70x35mm

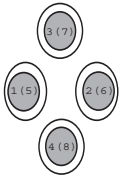
T60TX-08ERL



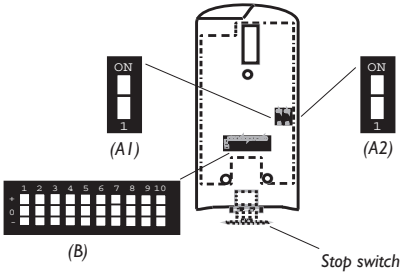
Rear Rechargeable battery and stop switch



Rear 9V



4 dual function buttons



System switch (A1):

With (A1) in the ON position, the transmitter communicates with the T60 system and in position 1 (OFF) with the 460 system. When adjusting, the transmitter must be turned off.

Mode switch (A2):

With (A2) in the ON position, continual transmission is activated (only T60TX-0xERL & T60TX-04EDL) and in position 1 (OFF) normal transmission is activated.
In the latter case, the transmitter functions like a T60TX-0xCRL with the stop switch acting as as a circuit breaker.

Code switches (B):

Coding the transmitter.

Stop switch:

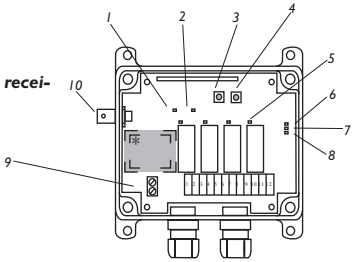
For continual transmission, the stop switch must be pulled out and buttons 1 and 2 held down for at least 0,5s.
To stop continual transmission, the stop switch must be pressed in.

RECEIVER

T60RX-0XYSL

Operating voltage: 12-28V AC/DC or 48/115/230V AC
Dimensions: 132x133x45mm
Enclosure: IP 65

Note: Connecting the receiver – see Appendix D



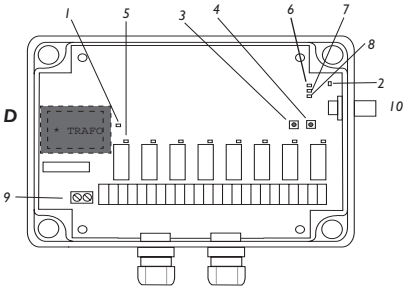
1. Yellow LED.	Lights when the receiver has the correct supply voltage.
2. Green LED.	Lights when the receiver receives a radio signal.
3.	Function button.
4.	Select button.
5. Red LED.	Each relay is fitted with an LED that lights when the relay switches.
6. Red LED.	
6.1. Lights.	-Code learning enabled.
6.2. Flashes.	- Adjustable code learnt (1-10).
6.3. Flashes twice.	- One or more fixed individual codes have been learnt.
7. Yellow LED.	Flashes when one of the relays has a latching function.
8. Green LED.	Flashes when one of the relays is interlocked.
9.	Connection terminal for the supply voltage.
10.	BNC contact for the aerial.

ROBUST RECEIVER

T60RX-0XYSL

Operating voltage: 12-28V AC/DC or 48/115/230V AC
Dimensions: 175x125x45mm
Enclosure: IP 65

Note: Connecting the receiver – see Appendix D



1. Yellow LED.	Lights when the receiver has the correct supply voltage.
2. Green LED.	Lights when the receiver receives a radio signal.
3.	Function button.
4.	Select button.
5. Red LED.	Each relay is fitted with an LED that lights when the relay switches.
6. Red LED.	
6.1. Lights.	- Code learning enabled.
6.2. Flashes.	- Adjustable code learnt (1-10).
6.3. Flashes twice.	- One or more fixed individual codes have been learnt.
7. Yellow LED.	Flashes when one of the relays has a latching function.
8. Green LED.	Flashes when one of the relays is interlocked.
9.	Connection terminal for the supply voltage.
10.	BNC contact for aerial.

PROGRAMMING RECEIVERS T60RX-0XYSL

The function and select buttons on the receiver are used to program it. The function button is used to step
through the different program alternatives. The select button is used to confirm program alternative selections.

Initially, it is possible to step through the following alternatives by pressing the function button.

RED LED (no. 6) - Learn a transmitter's code
YELLOW LED (no. 7) - Set the latching/instantaneous function
GREEN LED (no. 8) - Set the interlock function

When one of the above program alternatives has been selected using the select button, the function button is used to step through which relay or relays are to be programmed. The red LEDs above the relays indicate which relay or relays are selected. See further under the appropriate programming sequence.

LEARNING THE TRANSMITTER'S CODE

Adjustable code

Ensure that the desired adjustable code is set on the transmitter's code switch.

1. Use the function button to select the "learn code" program alternative (RED LED).
2. Confirm the selection with the select button. The red LEDs above the relays light.
3. Using the function button, it is possible to step through to the relay or relays to be coded.
   - If a single relay is selected, it will be controlled by the transmitter button used during the learning process.
   - If all relays are selected, the system will exhibit normal functionality. That is, the transmitter's first button is to control relay 1, button 2 is to control relay 2, and so on.
4. Confirm that the adjustable code is to be learnt by pressing the select button once.

5. Program the transmitter's code by holding down the desired transmitter button until red LED no. 6 flashes three times.

Red LED (no. 6) flashes to indicate that the transmitter's adjustable code has been stored.

Adjustable code and fixed individual code

1. Use the function button to select the "learn code" program alternative (RED LED).
2. Confirm the selection with the select button. The red LEDs above the relays light.
3. Using the function button, it is possible to step through to the relay or relays to be coded.
   - If a single relay is selected, it will be controlled by the transmitter button used during the learning process.
   - If all relays are selected, the system will exhibit normal functionality. That is, the transmitter's first button is to control relay 1, button 2 is to control relay 2, and so on.
4. Confirm that an adjustable code and fixed individual code are to be learnt in the following manner:
   - Press the select button and release it after 0.3 - 4 seconds.
   - Press the select button again within 1 second and hold it down for at least 1 second.
5. Learn the transmitter's code by holding down the desired transmitter button until red LED no. 6 flashes three times.

Red LED (no. 6) double-flashes to indicate that the transmitter's adjustable and fixed individual codes have been stored.

Erase codes

1. Select the "learn code" program alternative (RED LED).
2. Confirm the selection with the select button. The red LEDs above the relays light.
3. Using the function button, step through to the relay or relays to be erased.
4. Hold down the select button until the LED(s) above the relay(s) goes (go) out (at least 6 seconds.)

PROGRAMMING THE LATCHING / INSTANTANEOUS FUNCTION

The receivers' relays are set to instantaneous function as standard.

1. Use the function button to select the "latching/instantaneous function" program alternative (YELLOW LED).
2. Confirm the selection with the select button. The red LED above relay 1 lights.
3. Use the select button to set whether the relay is to have a latching function or not. The YELLOW LED lights when the latching function is activated.
4. Step through the other relays using the function button and select whether they are to have a latching or instantaneous function using the select button. Once all the relays have been stepped through, programming is finished.

YELLOW LED (7) flashes when one or more relays have a latching function.

PROGRAMMING THE INTERLOCK FUNCTION

The following interlock alternatives can be selected:
Interlock between relays 1 and 2
Interlock between relays 3 and 4
Interlock between relays 5 and 6 (Robust transmitter)
Interlock between relays 7 and 8 (Robust transmitter)

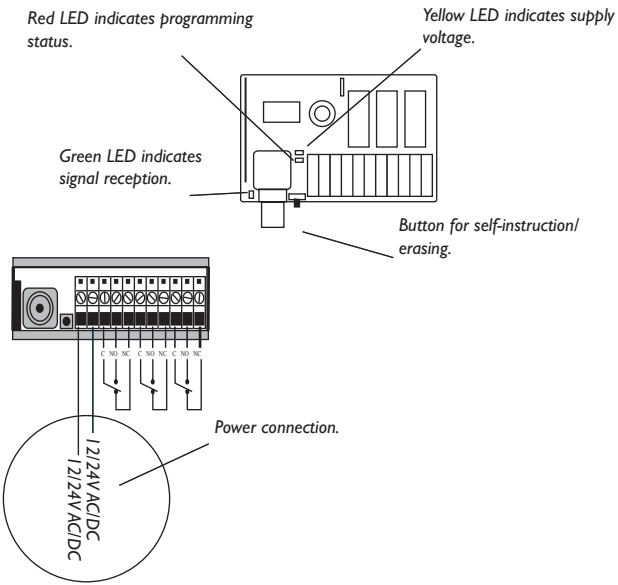
1. Use the function button to select the "interlock function" program alternative (GREEN LED).
2. Confirm the selection with the select button. The red LEDs above relays 1 and 2 light.
3. Use the select button to set whether interlock is activated or not. The GREEN LED lights when interlock is activated.
4. Step through the other relay pairs using the function button and select whether interlock is to be activated or not. Once all the relay pairs have been stepped through, programming is finished.

The GREEN LED (no. 8) flashes when the interlock function is activated.

It is possible to program interlocks between functions other than those above by programming individual transmitter buttons' codes into individual relays (see learning codes). Example: If transmitter buttons 1 and 3 are programmed into relays 1 and 2 respectively, then in practice, an interlock can be set between functions 1 and 3.

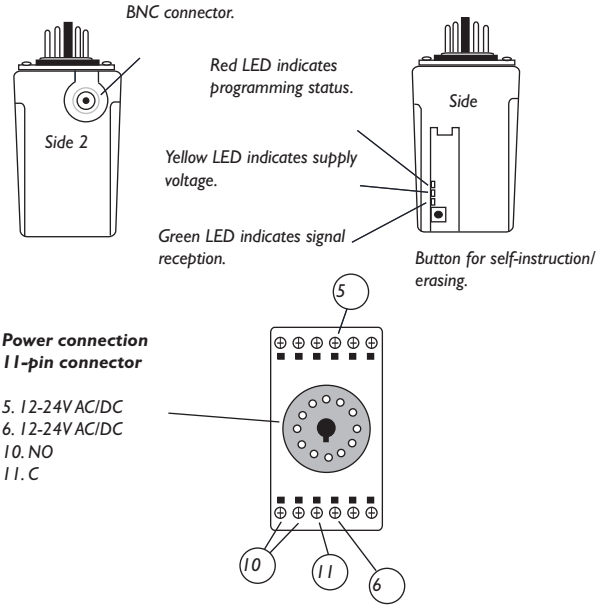
DIN-RECEIVER T60RX-03ADL

Frequency:	433.92MHz
Operating voltage:	12-24V AC/DC
Dimensions:	86x30x58mm
Enclosure:	IP 20, for internal installation



PLUG-IN RECEIVER T60RX-01APL

Frequency:	433.92MHz
Operating voltage:	12-24V AC/DC
Dimensions:	70x58x40mm
Enclosure:	IP 23, for internal installation

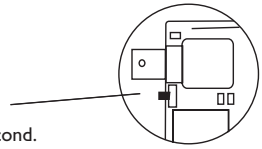


PROGRAMMING RECEIVER T60RX-03ADL, T60RX-01APL, AND T60RX-01ARL

SELF-INSTRUCTION FOR ADJUSTABLE AND FIXED CODES

Register adjustable code:

1. Press the self-instruction button for at least 0.3 seconds, max. 4 seconds.
2. Release the button.
   -Programming mode, red LED lights.
3. Press the desired function button.
   -Red LED flashes rapidly three times.
4. The adjustable code is now stored.
   -Red LED flashes. Once every other second.



Register fixed individual code:

1. Press the self-instruction button for at least 0.3 seconds, max. 4 seconds.
2. Release the button (less than 1 second).
3. Press the button again (longer than 1 second).
   -Private program mode, red LED goes out and lights again.
4. Press the desired function button.
   -Red LED flashes rapidly three times.
5. The private code is now stored.
   -Red LED double-flashes every other second.

CO-PROGRAMMING THE TRANSMITTER AND DIN-RECEIVER

T60TX-15SML AND T60RX-03ADL

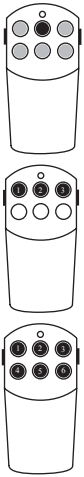
1. Check that the transmitter's system switch (A) is in the ON position.
2. Set a unique code on the transmitter's code switch (B) 1-10.
3. Press the self-instruction button (C) on the receiver.
   -Red LED lights (programming mode 6 seconds).
4. If buttons 1-3 are pressed, the relays in the receiver will function as buttons 1-3. If buttons 4-6 are pressed, the relays in the receiver will function as buttons 4-6, and so on.
5. Press the desired function button (1-15) on the transmitter.
   -Red LED flashes three times.
6. Check that the relay switches when the same function button is pressed again.

T60TX-15DML AND T60RX-03ADL

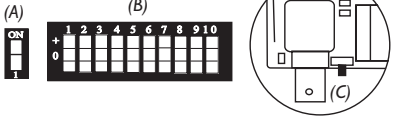
1. Check that the transmitter's system switch (A) is in the ON position.
2. Set a unique code on the transmitter's code switch (B) 1-10.
3. Press the self-instruction button (C) on the receiver.
   -Red LED lights (programming mode 6 seconds).

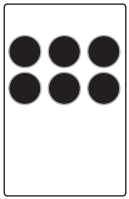
4. Press the desired port number button (0-999) and an optional function button (up, stop, down) on the transmitter.
   -Red LED flashes three times.
5. Check that the relay switches when one of the transmitter buttons is pressed again.

T60TX-0XSHL/T60TX0XSOL AND T60RX-03ADL



1. Check that the transmitter's system switch (A) is in the ON position.
2. Set a unique code on the transmitter's code switch (B) 1-10.
3. Press the self-instruction button (C) on the receiver.
   -Red LED lights (programming mode 6 seconds).
4. If buttons 1-3 are pressed, the relays in the receiver will function as buttons 1-3. If buttons 4-6 are pressed, the relays in the receiver will function as buttons 4-6, and so on.
5. Press the desired function button (1-6) on the transmitter.
   -Red LED flashes three times.
6. Check that the relay switches when the same function button is pressed again.



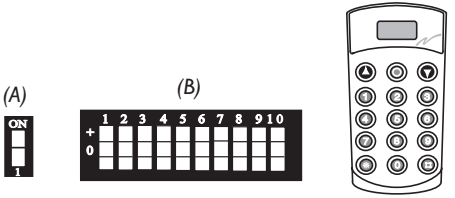


T60TX-15DML*

Type 401RVL9 and 403RVL9 transmitters with knob 1-10:

1. Check that the transmitter's system switch (A) is in position 1 (OFF).
2. Check that code switch (B) 9 is in the 0 (zero) position.
3. Set code switch 10 to either the minus or plus position depending on whether you are using A or B coding on the old transmitter (robust transmitter).
4. Set a code on the transmitter's 4 first switches (code switches 1-4) identical to the receiver's (code switches 5-8 not used).
5. Check that the relay switches when one of the transmitter buttons is pressed. The numbers on the transmitter display correspond to the knob. Press a number followed by the transmit button and verify that the corresponding relay switches. See code table 1-10, Appendix A.

* Transmitter T60TX-15DML in the T60 system is compatible with transmitter Type 401RVL9 and 403RVL9 in the 460 system.



Type 401RVL9 and 403RVL9 with knob 0-15:

1. Check that the transmitter's system switch (A) is in position 1 (OFF).
2. Check that code switch (B) 9 is in the - (minus) position.
3. Set code switch 10 to either the minus or plus position depending on whether you are using A or B coding on the old transmitter (robust transmitter).
4. Set a code on the transmitter's 4 first switches (code switches 1-4) identical to the receiver's (code switches 5-8 not used).
5. Check that the relay switches when one of the transmitter buttons is pressed.

See code table 0-15, Appendix B.

Type 460-93 transmitter:

1. Check that the transmitter's system switch (A) is in position 1 (OFF).
2. Check that code switch (B) 9 is in the + (plus) position.
3. Set codes on the transmitter's 3 first switches (code switches 1-3) identical to the receiver's codes (code switches 4-8 not used).
4. Check that the relay switches when one of the transmitter buttons is pressed.

See code table 460-93, Appendix C.

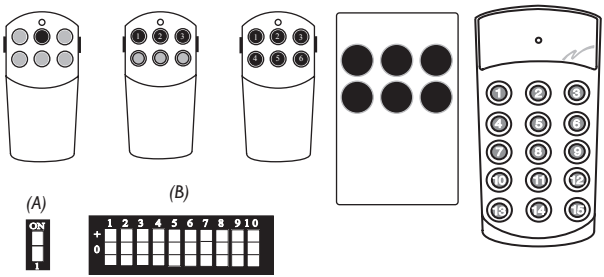
Note:
When you select the port on the T60TX-15DML transmitter, a combination of the first digit and the last two digits is entered when used together with a 460-93 transmitter.

Example: In order to control port A2 in accordance with table A, enter the combination 102; to control port D3 in accordance with table D, enter the combination 403; and so on.

T60TX-0XSHL/T60TX-0XSOL/T60TX-15SML

Type 401L-406L transmitter:

1. Check that the transmitter's system switch (A) is in position 1 (OFF).
2. Set codes on the transmitter's code switches (B) 1-8 identical to the existing receiver (9-10 not used).
3. Check that the relay switches when the same function button is pressed again.



Type 408RFLI9, 408RFLIC, 408RFLIE, 404RFLI9 transmitter:

Programming the 460 and T60 systems for normal or continuous transmission.

1. Check that the transmitter's system switch (A1) is in position 1 (OFF) for the 460 system or in the ON position for the T60 system.
2. Check that the transmitter's mode switch (A2) is in position 1 (OFF) for normal transmission or in the ON position for continuous transmission.
3. Set codes on the transmitter's code switches (B) 1-8 identical to the receiver for the 460 system. For the T60 system, set codes on the transmitter's code switches 1-10.
4. Check that the relay switches when the same function button is pressed again.

SERVICE AND SUPPORT

For service, returns, and complaints, please write an R/A number on each consignment sent to Tele Radio AB.
(Contact Tele Radio AB to obtain an R/A number). Products that have an R/A number are given priority over those that do not have one.

Service

If the product stops working during the warranty period, Tele Radio AB offers full servicing of the product. The product should be sent to Tele Radio AB (to the specified address).

Note: The warranty does not apply to faults that arise due to product modifications or incorrect installation.

Support

This service is designed so that you receive the results you need in a fast and professional manner.
When you contact Tele Radio's Support you should have the following noted:
System, model, and a description of the problem.

TROUBLE SHOOTING CHART

If the equipment is not working as it should, we would ask you to follow the steps below.

FAULTY FUNCTION	POSSIBLE CAUSES	REMEDY
The receiver does not work when you transmit.	The receiver is incorrectly connected.	Inspect receiver connections.
	Incorrect operating voltage to the receiver.	Check the supply voltage.
The receiver's green LED lights when you transmit, but the relays are not activated.	The codes in the transmitter and receiver do not correspond, i.e., they are not identical.	Check the coding.
The receiver'sgreen LED does not light when you transmit.	The battery is discharged.	Replace the battery.
	The transmitter is damaged.	Contact your dealer .
The receiver's green LED lights when you are not transmitting.	Another unit is transmitting in the vicinity on a similar frequency.	Contact your dealer .
The transmitter's LED does not light when you transmit.	The battery is discharged.	Replace or charge the battery.
	The transmitter is damaged.	Contact Tele Radio's support.
The range istoo short.	Bad battery.	Replace the battery.
	Aerial cables are damaged or incorrectly installed.	Check the aerial connection.

If you have followed these instructions and still cannot get the radio system to work properly, please contact your dealer.

TELERADIO COMPANY TERMS AND CONDITIONS OF SALE

1. AGREEMENT: The Purchaser grants to TeleRadio and TeleRadio retains a security interest in all equipment shipped pursuant to this contract and the proceeds thereof until the Purchaser shall have made full payment for the equipment. In the event of a failure to make payment on the date when due in accordance with the terms designated, the entire balance shall become due and payable at once. In case of default of payment, TeleRadio shall have the right to enter the premises of purchaser and take possession of the equipment immediately, wherever it may be found, and remove it with or without process of law and may retain all money paid hereunder as liquidated damages and rental for said equipment. While any amounts are payable to TeleRadio, the Purchaser shall not sell, mortgage, pledge or lease said TeleRadio equipment without the prior written permission of TeleRadio.

2. WARRANTIES: Subject to the limitations below, TeleRadio warrants all of its products to be free from material defects in material and workmanship. However, TeleRadio's liability under such warranty shall be limited to repair or replacement of any product which TeleRadio's inspection shall disclose to have been defective. This warranty does not apply to any products, which have been subject to abuse, mishandling, or improper use, and does not include field labor of any type. TeleRadio's quotation does not include price provision for performance bond of indemnity. Therefore, the additional cost incurred to provide such a bond shall be added to the total amount of this quote and paid by Purchaser. The warranty period for any equipment shipped hereunder is one (1) year and covers all labor and material manufactured by TeleRadio, provided Purchaser returns them to the factory for repair. Defective items will be repaired or replaced free of charge at TeleRadio's discretion, during the one- (1) year term of this warranty. Freight and/or postage are not covered by said warranty and will be paid by Purchaser. Any services rendered in the field will be performed at current rates for time and travel at the discretion of TeleRadio and will be paid by the Purchaser. All commercial grade products of TeleRadio carry a warranty period of one (1) year. Batteries, cases, switches, and such other items subject to normal wear and deterioration are not included in this warranty.
TeleRadio's warranty period begins at system receipt after direct shipment to the Purchaser.

IN NO EVENT WILL TELERADIO BE LIABLE FOR INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES.EXCEPT AS STATED ABOVE, TELERADIO MAKES NO REPRESENTATIONS OR WARRANTIES, EXPRESSED OR IMPLIED, NO OTHER REPRESENTATION OR WARRANTY IS GIVEN, AND NO AFFIRMATION OF TELERADIO OR ITS REPRESENTATIVES BY WORD OR ACTION SHALL CONSTITUTE A WARRANTY. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE ONE (1) YEAR PERIOD DESCRIBED HEREIN. TELERADIO SPECIFICALLY DISCLAIMS, AND PURCHASER HEREBY WAIVES, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE.

3. PAYMENT: In the event credit is applied for and granted, terms shall be net thirty (30) days. All equipment will be invoiced at time of shipment. In the event any payment is not received according to the terms set forth herein, TeleRadio may, at its discretion, assess interest at the rate of 1 and 1/2 percent per month or the maximum rate allowed by law. The Purchaser also agrees to pay any reasonable and customary legal fees or agency commissions sustained by TeleRadio in pursuit of any payment which is past due.

4. TAXES: The Purchaser agrees to pay any federal excise, state or local taxes, if any.

5. PRODUCT OR PRICE CHANGE: The contract, product specification, and statements concerning products and any published prices are subject to change without prior notification. The only exceptions are special quotations and purchase orders accepted by TeleRadio.

6. DELIVERY & LIABILITY: TeleRadio shall not be liable for loss or damage of any kind resulting from carrier delay, or inability to deliver on account of Acts of God, fire, labor troubles, accidents, acts of civil or military authorities, fuel, labor or material shortages, or other such conditions beyond TeleRadio's control. The promised delivery date is the best estimate possible based on current and anticipated factory load. All shipments are made F.O.B. factory dock unless otherwise stated. All transportation, when not specified by Purchaser, will be the least expensive surface transportation. Costs of packing for domestic shipment are included in the quoted price. Any special packing may result in additional charges to Purchaser.

7. RETURNS & CANCELLATIONS: Orders placed by Purchaser, and entered upon TeleRadio's books cannot be canceled or changed except with TeleRadio's consent and upon terms that will indemnify TeleRadio against all losses. TeleRadio shall not accept returns without a request and authorization issued by it before shipment. All return shipments must be prepaid by the Purchaser and properly packed. TeleRadio

shall not be responsible for damages incurred during such shipment.

8. GENERAL: All orders are subject to factory acceptance and shall not be considered a contract unless such order is accepted in writing by an authorized executive of Teleradio. Teleradio reserves the right to correct any clerical errors which may occur in quotations. Teleradio shall not be bound by any statements or promises made by any representative of TeleRadio which are not stated in and made a part of this contract. This contract is expressly made subject to the terms and conditions contained herein and will be interpreted accordingly if a conflict arises with Purchaser or its terms of purchase. The parties stipulate to the venue and jurisdiction of the courts located in Allegheny County, Pennsylvania for the resolution of any dispute that may arise hereunder.

TeleRadio Company, 1006 Corporate Lane, Unit C, Murry Corporate Park, Export, PA 15632

FCC STATEMENTS

15.19 - TWO PART WARNING 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.

15.21 - MODIFICATION STATEMENT

NOTE: THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER´S AUTHORITY TO OPERATE THE EQUIPMENT.

APPENDIX A

CODING TABLES 1-10

Setting the code on the receiver for operations on the 460 system.
Type 401RVL9 and 403RVL9 transmitter with knob 1-10.

Table 1-10 Minus code (A)

	T5	T6	T7	T8
0(10)	0	0	0	0
1	0	0	0	-
2	0	0	-	0
3	0	0	-	-
4	0	-	0	0
5	0	-	0	-
6	0	-	-	0
7	0	-	-	-
8	-	0	0	0
9	-	0	0	-

Table 1-10 Plus code (B)

	T5	T6	T7	T8
0(10)	0	0	0	0
1	0	0	0	+
2	0	0	+	0
3	0	0	+	+
4	0	+	0	0
5	0	+	0	+
6	0	+	+	0
7	0	+	+	+
8	+	0	0	0
9	+	0	0	+

APPENDIX B

CODING TABLES 0-15

Setting the code on the receiver for operations on the 460 system (robust transmitter with control knob).

Minus code/Mincode (A)

	T5	T6	T7	T8
0	0	0	0	0
1	0	0	0	-
2	0	0	-	0
3	0	0	-	-
4	0	-	0	0
5	0	-	0	-
6	0	-	-	0
7	0	-	-	-
8	-	0	0	0
9	-	0	0	-
10	-	0	-	0
11	-	0	-	-
12	-	-	0	0
13	-	-	0	-
14	-	-	-	0
15	-	-	-	-

Plus code (B)

	T5	T6	T7	T8
0	0	0	0	0
1	0	0	0	+
2	0	0	+	0
3	0	0	+	+
4	0	+	0	0
5	0	+	0	+
6	0	+	+	0
7	0	+	+	+
8	+	0	0	0
9	+	0	0	+
10	+	0	+	0
11	+	0	+	+
12	+	+	0	0
13	+	+	0	+
14	+	+	+	0
15	+	+	+	+

APPENDIX C

CODING TABLES 460-93

Setting the code on the receiver for operations on the 460 system (460-93 transmitter).
Switches 1-3 should have the same setting on both the transmitter and receiver.
Note that the positions A0=D0, B0=E0, C0=F0.

A

460	T60	4	5	6	7	8
A1	101	-	0	0	0	-
A2	102	-	0	0	-	0
A3	103	-	0	0	-	-
A4	104	-	0	-	0	0
A5	105	-	0	-	0	-
A6	106	-	0	-	-	0
A7	107	-	0	-	-	-
A8	108	-	-	0	0	0
A9	109	-	-	0	0	-
A10	110	-	-	0	-	0
A11	111	-	-	0	-	-
A12	112	-	-	-	0	0
A13	113	-	-	-	0	-
A14	114	-	-	-	-	0
A15	115	-	-	-	-	-
A0	100	-	0	0	0	0

Code tables ....continued on next page >>>

CODING TABLES 460-93

B

460	T60	4	5	6	7	8
B1	201	0	0	0	0	-
B2	202	0	0	0	-	0
B3	203	0	0	0	-	-
B4	204	0	0	-	0	0
B5	205	0	0	-	0	-
B6	206	0	0	-	-	0
B7	207	0	0	-	-	-
B8	208	0	-	0	0	0
B9	209	0	-	0	0	-
B10	210	0	-	0	-	0
B11	211	0	-	0	-	-
B12	212	0	-	-	0	0
B13	213	0	-	-	0	-
B14	214	0	-	-	-	0
B15	215	0	-	-	-	-
B0	200	0	0	0	0	0

Code tables ....continued on next page >>>

CODING TABLES 460-93

C

460	T60	4	5	6	7	8
C1	301	+	0	0	0	-
C2	302	+	0	0	-	0
C3	303	+	0	0	-	-
C4	304	+	0	-	0	0
C5	305	+	0	-	0	-
C6	306	+	0	-	-	0
C7	307	+	0	-	-	-
C8	308	+	-	0	0	0
C9	309	+	-	0	0	-
C10	310	+	-	0	-	0
C11	311	+	-	0	-	-
C12	312	+	-	-	0	0
C13	313	+	-	-	0	-
C14	314	+	-	-	-	0
C15	315	+	-	-	-	-
C0	300	+	0	0	0	0

Code tables ....continued on next page >>>

CODING TABLES 460-93

D

460	T60	4	5	6	7	8
D1	401	-	0	0	0	+
D2	402	-	0	0	+	0
D3	403	-	0	0	+	+
D4	404	-	0	+	0	0
D5	405	-	0	+	0	+
D6	406	-	0	+	+	0
D7	407	-	0	+	+	+
D8	408	-	+	0	0	0
D9	409	-	+	0	0	+
D10	410	-	+	0	+	0
D11	411	-	+	0	+	+
D12	412	-	+	+	0	0
D13	413	-	+	+	0	+
D14	414	-	+	+	+	0
D15	415	-	+	+	+	+
D0	400	-	0	0	0	0

Code tables ....continued on next page >>>

APPENDIX C

CODING TABLES 460-93

E

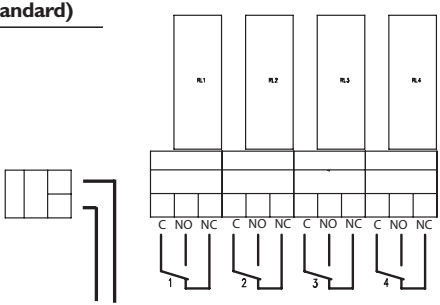
460	T60	4	5	6	7	8
E1	501	0	0	0	0	+
E2	502	0	0	0	+	0
E3	503	0	0	0	+	+
E4	504	0	0	+	0	0
E5	505	0	0	+	0	+
E6	506	0	0	+	+	0
E7	507	0	0	+	+	+
E8	508	0	+	0	0	0
E9	509	0	+	0	0	+
E10	510	0	+	0	+	0
E11	511	0	+	0	+	+
E12	512	0	+	+	0	0
E13	513	0	+	+	0	+
E14	514	0	+	+	+	0
E15	515	0	+	+	+	+
E0	500	0	0	0	0	0

APPENDIX D

VOLTAGE CONNECTIONS

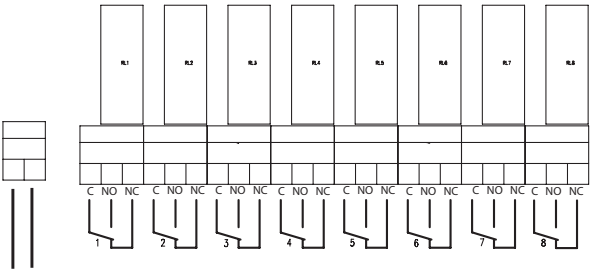
T60RX-0xASL	12-30V AC / DC
T60RX-0xBSL	230V AC
T60RX-0xCSL	48V AC
T60RX-0xDSL	115V AC

T60RX-04ySL (Standard)



Supply voltage

T60RX-08ySL (Robust)



Supply voltage