# Tele Radio T60

## Manual

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## IMPORTANT!

**In order to get the best out of your system it is important you take the time to read through the manual before you start to install/program your equipment.**

### GENERAL INFORMATION

The system works at the frequency 433.92 MHz and uses frequency modulation, generally known 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 in computers, electric motors, etc.

Objects positioned between the transmitter and receiver antenna, especially large metal objects (such as the reinforcement rods in concrete walls), can affect the range in a very unpredictable manner, depending on how the distribution of radio signals takes place.

The influence of other radio transmitters on the same frequency in the vicinity also affects the range. Due to these circumstances it is difficult to give any general advice other than that free visibility between the transmitter and the receiver should produce the best the range with an optimal signal.

The normal range for the transmitter in an interference-free environment is about 50-100 m.

DK

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## CODES T60

Transmitters and receivers that are to be used together must be co-coded prior to use. There are two different types of code in system T60.

### Adjustable code:
All transmitters are equipped with a code switch that comprises 10 three-position switches, which makes it possible to choose between 59,049 different codes.

### Fixed individual code:
Each transmitter supplied has a fixed, individual code that cannot be altered.

### Self-instruction of code:
In system T60, transmitters and receivers are co-coded through self-instruction, i.e. the receiver learns the transmitter's code. It is possible to learn the adjustable code only or both the adjustable and the fixed individual code.

### Compatible with system 460
System T60 is compatible with Tele Radio's system 460.

## PLACEMENT OF THE ANTENNA AND RECEIVER

### The receiver should be placed
-As far as possible, protected from the wind and weather.
-With cable glands facing down.

### Placement of the receiver's antenna
-Place the antenna high above the ground.
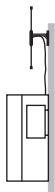-The antenna should not be in the vicinity of metal objects such as electrical cables and other antennas.

*X= 3, 5, or 10 m antenna cable*



*DIP-433K3*            *1/4-433Kx*            *5/8-433Kx*
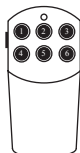
## HANDHELD TRANSMITTER MINI
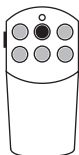


*Size: 84x40x16 mm*

*T60TX-01SHL*
*with 1 button function*

*T60TX-03SHL*
*with 3 button functions*

*T60TX-06SHL*
*with 6 button functions*



*(A) System switch*

*(B)*
*Code switch*

*Battery 3V*
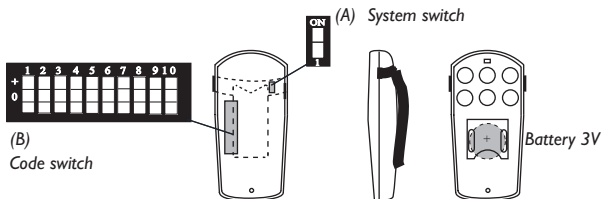
## HANDHELD TRANSMITTER MIDI

*Size: 98x62x22 mm*

*(B)*
*Code switch*

*(A)*
*System switch*
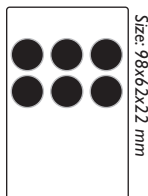
*T60TX-06SOL*
*with 1, 3, 4 or 6 button functions*

*Battery 9V*
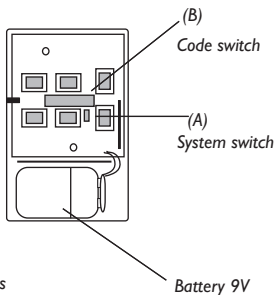
## MOBILE TRANSMITTER MAXI

*Size: 143x62x38 mm*

*Function buttons*

*Door no. buttons*

*Transmitter T60TX-15SML*
*with 15 button functions*

*Function shortcut*
*T60TX-15DML*

*(B)*
*Code switch*

*(A)*
*System switch\**

*Battery 9V*
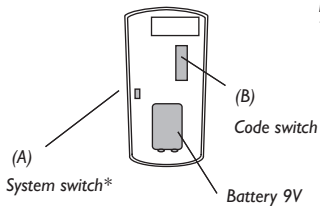
\*NOTE! When resetting, the transmitter must be switched off.

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

## ROBUST TRANSMITTER MAXI

T60TX-0XYZL*

* X = Number of buttons
  Y = Transmitter type (S= 9V, C= Rechargeable, E= Rechargeable + Stop)
  Z = Casing type
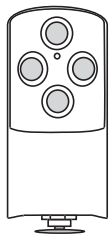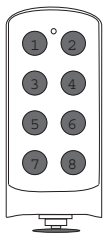
*Size: 160x70x35 mm*

*T60TX-04EDL*   *T60TX-08ERL*   *Rear side Rechargeable battery and stop switch*   *Rear side 9V*
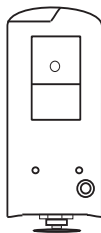
DK

NO

SE

NL

ES

FR

DE

GB

US

*4 dual function buttons*

*(A1)* *(A2)*

*(B)*

*Stop switch*
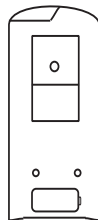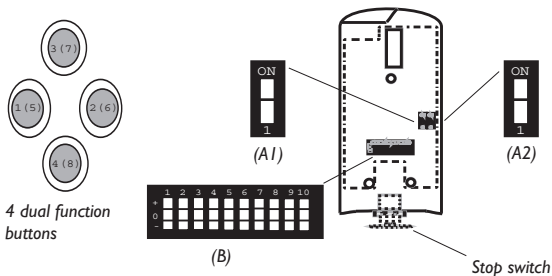
### System switch (A1):

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

### Mode selector (A2):

With (A2) in the ON position, continuous transmission (only T60TX-0xERL & T60TX-04EDL) is activated. In position 1 (OFF) there is normal transmission.

In the latter case, the transmitter operates as a T60TX-0xCRL with the stop switch as a switch.

### Code switches (B):

Coding transmitters.

### Stop switch:

For continuous transmission, the stop switch must be pulled out and buttons 1 and 2 must be pressed for at least 0,5 s.

In order to interrupt continuous transmission, the stop switch must be pressed.

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## RECEIVER

### T60RX-0XYSL

Operating voltage:   12-28V AC / DC or 48 / 115 / 230V AC
Size:   132 x 133 x 45 mm
Protection:   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 is actuated. |
| 6. Red LED. | |
| 6.1. Lights. | - Learning of code possible. |
| 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 changeover function. |
| 8. Green LED. | Flashes when one of the relays is interlocked. |
| 9. | Connection terminal for voltage. |
| 10. | BNC contact for the antenna. |

## ROBUST RECEIVER

T60RX-0XYSL

Operating voltage: 12-28V AC / DC or 48 / 115 / 230V AC
Size: 175 x 125 x 45 mm
Protection: 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 is actuated. |
| 6. Red LED. | |
| 6.1. Lights. | - Learning of code possible. |
| 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 changeover function. |
| 8. Green LED. | Flashes when one of the relays is interlocked. |
| 9. | Connection terminal for voltage. |
| 10. | BNC contact for the antenna. |

## PROGRAMMING THE RECEIVER T60RX-0XYSL

The receiver's function and select buttons are used to program the receivers.
The function button is used to scroll through the different program options.
The select button is used to confirm the selection of the program option.

In the first position it is possible to move between the following options by
pressing the function button.

RED Diode (no. 6)      - Learning the transmitter's code
YELLOW Diode (no. 7) - Setting the changeover/instantaneous function
GREEN Diode (no. 8)  - Setting the interlock function

When one of the above program options has been selected by using the
select button, the function button is used to move to the relay/relays to be
programmed. The red diodes above the relays indicate which relay/relays are
selected. Refer to respective programming sequences.

### SELF-INSTRUCTION OF THE TRANSMITTER'S CODE

#### Adjustable code
Ensure that the required adjustable code is set on the transmitter's code
switch.

1. Select the program option "Self-instruction of code" (RED diode) using
   the function button.
2. Confirm using the select button. The red diodes above the relays light.
3. It is possible, by using the function button, to scroll to the relay/relays
   to be coded.
   - When an individual relay is selected it will be controlled by the trans-
     mitter button used during instruction.
   - When all relays are selected the system will function as normal. That
     is say, the transmitter's first button will control relay 1, button 2 will
     control relay 2, etc.
4. Confirm that the adjustable code is to be programmed by pressing the
   select button once.
5. Program the transmitter's code by holding down the appropriate trans-
   mitter button until the red diode no. 6 flashes three times.

The red diode (no. 6) flashes as an indication that the transmitter's adjustable code has been saved.

Adjustable code and fixed individual code

1. Select the program option "Self-instruction of code" (RED diode) using the function button.
2. Confirm using the select button. The red diodes above the relays light.
3. It is possible by using the function button to scroll to the relay/relays to be coded.
   - When an individual relay is selected it will be controlled by the transmitter button used during instruction.
   - When all relays are selected the system will function as normal. That is say, the transmitter's first button will control relay 1, button 2 will control relay 2, etc.
4. Confirm that the adjustable code and fixed individual code are to be programmed as follows:
   - Press down the select button and release it after 0.3 - 4 seconds.
   - Press down the select button within 1 second and keep it held down for at least 1 second.
5. Program the transmitter's code by holding down the appropriate transmitter button until the red diode no. 6 flashes three times.

RED diode (no. 6) double flashes to indicate that the transmitter's adjustable and fixed individual code have been saved.

Erase codes

1. Select the program option "Self-instruction of code" (RED diode).
2. Confirm using the select button. The red diodes above the relays light.
3. Use the function button to scroll to the relay/relays to be erased.
4. Hold down the select button until the diode/diodes above the relays go out (at least 6 seconds).

PROGRAMMING THE CHANGEOVER / INSTANTANEOUS FUNCTION

The receiver's relays have an instantaneous function as standard.

1. Select the program option "changeover/instantaneous function" (YELLOW diode) using the function button.

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2. Confirm using the select button. Red diode above relay 1 lights.
3. Select using the select button whether the relay should have a change-over function or not. The YELLOW diode lights when the changeover function is activated.
4. Move to the other relays by using the function button and select whether they should have a changeover or instantaneous function using the select button. Programming is complete when all the relays have been processed.

The YELLOW diode (7) starts to flash when one or more relays have a changeover function.

## PROGRAMMING THE INTERLOCK FUNCTION

It is possible to select the following interlocking options: –

Interlocking between relays 1 and 2
Interlocking between relays 3 and 4
Interlocking: between relays 5 and 6  (Robust receiver)
Interlocking: between relays 7 and 8  (Robust receiver)

1. Select the programming option "interlocking function" (GREEN diode) using the function button.
2. Confirm using the select button. The red diodes above relays 1 and 2 light.
3. Use the select button to select whether interlocking should be active or not. The GREEN diode lights when interlocking is active.
4. Move to the other relay-pairs using the function button and select using the select button whether interlocking should be active or not. Programming is complete when all the relay pairs have been processed.

The GREEN diode (no. 8) starts to flash when the interlocking function has been activated.

It is possible to effect interlocking between functions other than those above by programming the code for individual transmitter buttons on individual relays (see self-instruction of code). Example: When the transmitter buttons 1 respective 3 are programmed to relay 1 respective relay 2 you can practically bring about interlocking between function 1 and 3.

## DIN-RECEIVER T60RX-03ADL

| | |
|---|---|
| Frequency: | 433.92 MHz |
| Operating voltage: | 12-24V AC/DC |
| Size: | 86 x 30 x 58 mm |
| Protection: | IP 20, for internal installation |



*The red LED shows the programming status.*

*The yellow LED indicates the supply voltage.*

*The green LED indicates signal reception.*

*Button for self-instruction / erasing.*

*Connecting power.*
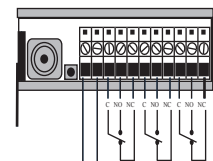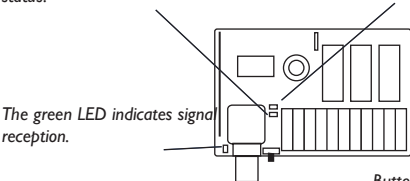
12/24V AC/DC
12/24V AC/DC

## PLUG-IN RECEIVER T60RX-01APL

| | |
|---|---|
| Frequency: | 433.92 MHz |
| Operating voltage: | 12-24V AC/DC |
| Size: | 70 x 58 x 40 mm |
| Protection: | IP 23, for internal installation |

*BNC connector.*

*The red LED shows the programming status.*

*Side 2*

*Side*

*The yellow LED indicates the supply voltage.*

*The green LED indicates signal reception.*

*Button for self-instruction / erasing.*
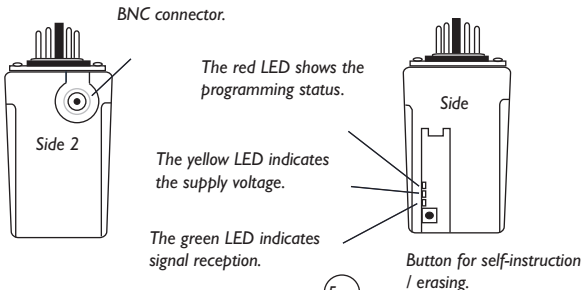
*Voltage connection 11-pin terminal*

5. 12-24V AC/DC
6. 12-24V AC/DC
10. NO
11. C

5

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10   11   6
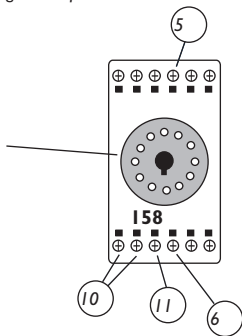
## PROGRAMMING RECEIVER T60RX-03ADL, T60RX-01APL AND T60RX-01ARL

LEARNING ADJUSTABLE AND FIXED INDIVIDUAL CODE

Register adjustable code:
1. Press the self-instruction button for at least 0.3 sec, at most 4 sec.
2. Release the button.
   - Programming mode, red LED comes on.
3. Press the required function button.
   - The red LED flashes three times quickly.
4. The adjustable code is now saved.
   - The red LED flashes. once every other sec.
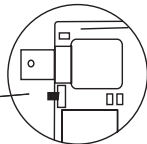
Register fixed individual code:

1. Press the self-instruction button for at least 0.3 sec, at most 4 sec.
2. Release the button (less than 1 sec).
3. Press the button again (longer than 1 sec).
   - Private program mode, the red LED goes out and comes on again.
4. Press the required function button.
   - The red LED flashes three times quickly.
5. The private code is now stored.
   - The red LED double flashes every other sec.

## 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 your own code on the transmitter's code switch (B) 1-10.
3. Press the self-instruction button (C) on the receiver.
   - The red LED comes on (programming mode 6 sec).
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 will function as buttons 4-6 etc.
5. Press the required function button (1-15) on the transmitter.
   - The red LED flashes three times.
6. Check that the relay is actuated when the same function button is pressed again.



*(A)* *(B)* *(C)*
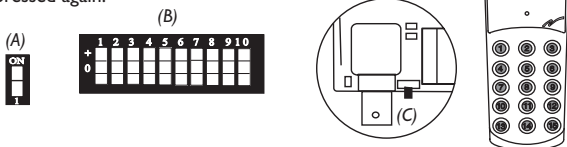
### T60TX-15DML AND T60RX-03ADL

1. Check that the transmitter's system switch (A) is in the ON position.
2. Set your own code on the transmitter's code switch (B) 1-10.
3. Press the self-instruction button (C) on the receiver.
   - The red LED comes on (programming mode 6 sec).

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4. Press the required door number button (0-999) and any function button (up, stop, down) on the transmitter.
   - The red LED flashes three times.
5. Check that the relay is actuated when one of the transmitter's 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 your own code on the transmitter's code switch (B) 1-10.
3. Press the self-instruction button (C) on the receiver.
   - The red LED comes on (programming mode 6 sec).
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 will function as buttons 4-6 etc.
5. Press the required function button (1-6) on the transmitter.
   - The red LED flashes three times.
6. Check that the relay is actuated when the same function button is pressed again.

*(A)*      *(B)*

ON

*(C)*

## SUPPLEMENT FOR THE 460 SYSTEM
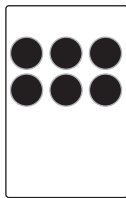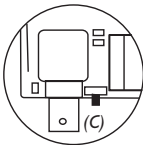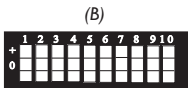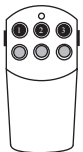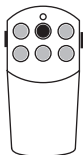
T60TX-15DML*

Type 401RVL9 and 403RVL9 transmitter with knob 1-10:
1. Check that the transmitter's system switch (A) is in position 1 (OFF).
2. Check that the 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) which are identical to the receiver's (code switches 5-8 are not used).
5. Check that the relay is actuated when one of the transmitter's buttons is pressed in. The digits on the transmitter display correspond to the knob. Press down one figure followed by a transmitter button and verify that the corresponding relay is actuated.
   See code table 1-10, Appendix A.

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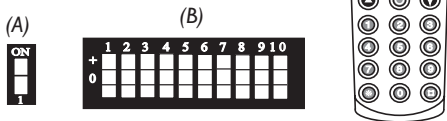


Type 401RVL9 and 403RVL9 with knob 0-15:
1. Check that the transmitter's system switch (A) is in position 1 (OFF).
2. Check that the code switch (B) 9 is in the - (minus) position.
3. Set code switch 10 to either the minus or plus position depending on whether you are using A or B coding on the old transmitter (robust transmitter).
4. Set a code on the transmitter's 4 first switches (code switches 1-4) which are identical to the receiver's (code switches 5-8 are not used).
5. Check that the relay is actuated when one of the transmitter's buttons is pressed in.

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

See code table 460-93, Appendix C.

**NOTE!**
When you select the door on the T60TX-15DML transmitter, a combination of the first digit and the last two digits is entered when it works together with a 460-93 transmitter.

**Example:.** If you want to operate door A2 as set out in table A, then enter the combination 102, to operate door D3 as set out in table D, enter the combination 403, etc.

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 switch (B) 1-8 identical to the
   existing receiver (9-10 not used).
3. Check that the relay is actuated when the same function button is
   pressed again.



*(A)* *(B)*
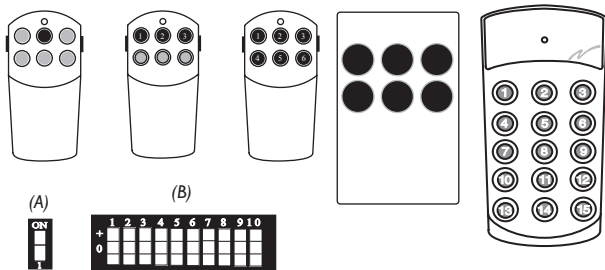
Type 408RFLI9, 408RFLIC, 408RFLIE, 404RFLI9 transmitter:
Programming systems 460 and T60 for normal or continuous transmission.

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

*(B)*      *(A1)*   *(A2)*

```
    1 2 3 4 5 6 7 8 9 10      ON    ON
+
0
-                             1     1
```

## SERVICE AND SUPPORT

For service, returns and complaints, please write an R/A number on each
dispatch sent to Tele Radio AB.
(Contact Tele Radio AB to obtain an R/A number.) Products with R/A
numbers are prioritised ahead of those without an R/A number.

### Service

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

**NOTE!** The warranty does not apply to faults that have arisen due to
modifications to products 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 to
hand:
System, model and a description of the problem.

DK

NO

SE

NL

ES

FR

DE

GB

US

## TROUBLE SHOOTING CHART

If the equipment does not work as it should, please check the points set out below.

| INCORRECT FUNCTION | POSSIBLE CAUSES | ACTION |
|---|---|---|
| The receiver does not work when you are transmitting. | The receiver is connected incorrectly. | Check the connection of the receiver. |
| | Incorrect operating voltage to the receiver. | Check the supply voltage. |
| The receiver's green LED comes on when you are transmitting, but the relays are not activated. | The code in the transmitter and the receiver do not correspond, i.e. are not identical. | Check the coding. |
| The receiver's green LED does not come on when you are transmitting. | The battery is dead. | Replace the battery. |
| | The transmitter is defective. | Contact your dealer. |
| The receiver's green LED comes on when you are not transmitting. | Somebody is transmitting in the vicinity on a similar frequency. | Contact your dealer. |
| The transmitter's LED does not come on when you are transmitting. | The battery is dead. | Replace or charge the battery. |
| | The transmitter is defective. | Contact Tele Radio's support. |
| The range is too short. | Poor battery. | Replace the battery. |
| | The antenna cables are damaged or incorrectly installed. | Check the antenna connection. |

Please contact your dealer if you have followed these instructions and despite this have not managed to get the radio system to work.

## 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  | +  |

### 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 | +  | +  | +  | +  |

## 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 |

**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 |

**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 |

**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 |

## 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