PROGRAMMING THE RADIO

Important: Before programming for the first time the radio receiver, delete all the recorded test codes.

See function 'C' at the bottom of this chapter.

In case of transmitters with dip-switches, set the microswitches to create a new personal code.

(For security reasons avoid to set all microswitches all in OFF or all in ON position).

Programming the radio

To erase a single stored code:

1. Press and hold the remote control button until a dot appears on the display.
2. Press the button C to store the new code.

To delete all stored codes:

1. Press and hold the remote control button until a dot appears on the display.
2. Press and hold button D until the display shows 'r'.
3. Press button B until the display shows 'R'.
4. The display will now cycle through each stored code from 01 to 50.
5. Press button C repeatedly until the display shows the parameter that you need to change.
6. Use buttons C and D to change or confirm each parameter as necessary.
7. Important: press button B repeatedly until the display shows 'U' and then press button C to save the changes.

Standard programming process (Method 1)

a) Give a START signal by either turning the key switch or by another control device (terminals 1 and 8).
b) Wait until the gate has finished a complete (pre-programmed) opening/stop/wait/close cycle.
c) Give another START signal and note which parameter needs adjusting.
d) Press button A on the control unit to select the Parameters menu.
e) Press button B repeatedly until the display shows the parameter that you need to change.
f) Use buttons C and D to change or confirm each parameter as necessary.

Example:

Increase the motor 1 working time by 2 seconds

With the control board switched on, ensure that the display shows:

Press button A (steps thru the top menu) until the display shows 'P S'.
Press button B (steps thru the sub-menu) until the display shows 'U'.
Wait until the display shows the current setting.
Press button C twice until the display shows '2'.
Press button B repeatedly until the display shows 'S U'.
Press and hold button C until the relays click and the display shows 'A S'.

Important:

When the closing cycle has completely finished, the control unit automatically exits from the sequential programming process and all the working times have been saved.

Sequental programming for gates with only one leaf

a) Press button A (steps thru the top menu) until the display shows 'R S'.
b) Press button B (steps thru the sub-menu) until the display shows 'P S'.
c) Give a START signal:
   - The leaf 1 starts opening and the display shows 'P S'.
   - Wait until the leaf 1 has done the 90% of the opening cycle and then give another START signal: the display shows 'R S' and the deceleration phase of leaf 1 begins.
   - Wait 4/5 seconds after the leaf 1 has completely opened and give another START signal.
   - Wait until the leaf 2 has done the 90% of the opening cycle and then give another START signal: the display shows 'R S' and the deceleration phase of leaf 2 begins.
   - Wait 4/5 seconds after the leaf 2 has completely opened and give another START signal.
   - The display shows 'P S', the control unit has stored the opening and deceleration times of both leaves and is now calculating the "stay open" time.
   - Give a START signal to stop calculating the "stay open" time and start the closing cycle.
   - When the closing cycle has completely finished, the control unit automatically exits from the sequential programming process and all the working times have been saved.

Sequental programming for gates with two leaf

Method 1 = Standard
Method 2 = Sequential

Warning:

Important: If the photocells are not installed in closing phase, you must link terminals 3 and 9.

If the photocells are not installed in opening phase, you must link terminals 4 and 9.

1. Check that the motor connections are correct.
2. Check that the photocell connections are correct.

Important:

If an emergency stop button is not fitted, you must link terminals 2 and 8.

3. Check that the control connections are correct.
4. Use the motor release key supplied to disengage the electric motor from the mechanical drive; then close the gate and re-engage.
5. Power the control unit up.

Sequential programming (method 2)

a) Press button A (steps thru the top menu) until the display shows 'R S'.
b) Press button B (steps thru the sub-menu) until the display shows 'P S'.
c) Give a START signal:
   - The leaf 1 starts opening and the display shows 'P S'.
   - Wait until the leaf 1 has done the 90% of the opening cycle and then give another START signal: the display shows 'R S' and the deceleration phase of leaf 1 begins.
   - Wait 4/5 seconds after the leaf 1 has completely opened and give another START signal.
   - Wait until the leaf 2 has done the 90% of the opening cycle and then give another START signal: the display shows 'R S' and the deceleration phase of leaf 2 begins.
   - Wait 4/5 seconds after the leaf 2 has completely opened and give another START signal.
   - The display shows 'P S', the control unit has stored the opening and deceleration times of both leaves and is now calculating the "stay open" time.
   - Give a START signal to stop calculating the "stay open" time and start the closing cycle.
   - When the closing cycle has completely finished, the control unit automatically exits from the sequential programming process and all the working times have been saved.

Self-diagnosis display messages

Photocell's test error
Opening phase photocell beam interrupted or wiring fault
Closing phase photocell beam interrupted or wiring fault
Both opening and closing phase photocell beam interrupted or wiring fault
Stop pressed (or open circuit between terminal 2 & 8)
Pedestrian start signal (short circuit between terminal 7 & 8)

Start signal (short circuit between terminal 1 & 8)
Radio fob continuously transmitting
Motor 1 problem (wiring fault, obstruction or torque setting too low)
Motor 2 problem (see 'n1' above)
Both motors problem (see 'n1' above)

Special functions

P3 Automatic closing function
When set to YES ("Sr"):  
- an impulse during the opening phase will stop the motors until another impulse is received
- an impulse during the closing phase will stop and reverse the motors

When set to NO, the step-by-step operation is active:
- 1st impulse starts the opening phase
- 2nd impulse stops the opening phase
- 3rd impulse starts the closing phase

P2 Multi-user function
When set to YES ("Sr"):  
The control unit will not accept any command during the opening phase
TERMINAL BLOCK CONNECTIONS

All the connections must be done without power supply.

EARTH TERMINAL BLOCK CONNECTIONS

Connect the yellow/green network cable and the yellow/green motor cables to earth terminals A B C.

TERMINAL BLOCK 2 CONNECTIONS

1-8 Start control normally open (NA) for button, key selector, radio receiver or timer clock connections. The Start control starts the programmed running cycle.

2-8 Stop control normally closed (NC). Emergency button. When pressed the gate stops immediately.

In Opening phase: at the first impulse, the gate closes. Break-time: at the first impulse, the gate opens.
If temporarily the Stop contact is not used, link terminal 2 with terminal 8.

3-8 Input of one safety photocell in closing phase.

Input of one safety rubber edges and of one safety photocell in closing phase.

In Closing phase: at the first impulse, the gate opens.

If temporarily the photocell contacts are not used, link terminal 3 with terminal 9.

3-9 Input only for safety rubber edges in closing phase.

The contacts must be connected in series if there is more than one safety rubber edge. Normally closed (NC).

In opening phase: does not work.

In closing phase: Stop, break-time for 2 seconds, opening phase again.

4-8 Input for safety photocells in opening phase (for swing gate).

Normally closed (NC).

In opening phase: Stops until the obstacle has not been removed.
In closing phase: Stops and changes direction when the obstacle has been removed.

If you also want to connect the safety rubber edges, you must connect their contacts with the photocell ones.

If temporarily the photocell contacts are not used, link terminal 4 with terminal 9.

4-9 Input for safety rubber edges in opening phase (for swing gate).

Normally closed (NC).

In opening phase: Stops until the obstacle has not been removed.
In closing phase: Stops and changes direction when the obstacle has been removed.

The contacts should be connected in series.

7-8 Pedestrian start input. Normally open (NA).

8-10 Output for photocell receiver power supply.

Output for extra 24V dc accessories power supply. With all Standard accessories included 100 mA are still available for extra accessories.

9-10 Output for photocell transmitter power supply.

11-12 Blinker intermittent output. 24V 20W max.

TERMINAL BLOCK 3 CONNECTIONS

13-14-15 Motor M1 - output. Leaf that opens firstly and that delays in closing phase.

In case of a gate of one single leaf, connect the motor to output M1, select parameter P5 on St, confirm with S5 and save with push button C.

CAPACITOR between terminal 13 and 15.

16-17-18 Motor M2 - output. Leaf that opens secondly.

CAPACITOR between terminal 16 and 18.

TERMINAL BLOCK 4 CONNECTIONS

19-20 Power input 230-240 Vac - 50/60 Hz. (19 = Neutral - 20 = phase)
WIRING SCHEME FOR THE Q60A CONTROL UNIT

1. **START**
   - Terminal block 2a
   - Terminal block 2b

2. **PEDESTRIAN START**
   - Terminal block 2a
   - Terminal block 2b

3. **PERMANENT START COMMAND WITH TIMER**
   - Terminal block 2a
   - Terminal block 2b

4. **EMERGENCY STOP BUTTON**
   - Terminal block 2a
   - Terminal block 2b

5. **MOTORS CONNECTIONS**
   - **LEADER**
     - First opening leaf, RIGHT

   - **ACE**
     - First opening leaf, RIGHT

   - **FIRST OPENING LEAF**
     - Terminal block 3

   - **ONE MOTOR ONLY (RIGHT) CONNECTION**
     - Terminal block 3

   - **ONE MOTOR ONLY (LEFT) CONNECTION SX**
     - Terminal block 3

   - **FIRST OPENING LEAF**
     - Terminal block 3

   - **ONE MOTOR ONLY (LEFT) CONNECTION SX**
     - Terminal block 3

   - **FIRST OPENING LEAF**
     - Terminal block 3
### PHOTOCELLS CONNECTIONS

- **8**: Power supply + PHOTO RX
- **9**: Power supply + PHOTO TX
- **10**: Power supply - COM. PHOTO TX/RX
- **3 - 8**: Photocells connection

3 - 9: Link terminals 3 and 9 if the photocells are not used in the closing phase.

4 - 9: Link terminals 4 and 9 if the photocells are not used in the opening phase.

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**Advantage**

First opening leaf, **RIGHT**

First opening leaf, **LEFT**

**One Motor Only (Right) Connection**

**One Motor Only (Left) Connection**

**Electro-Lock Interface Board (MEL)**

If you want to connect the MEL into CN:
- Connect the Electro Lock
- Change the parameters P0, P1, and P2

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**Connecting Photocell in Closing Phase**

**Connecting Photocell in Opening Phase**