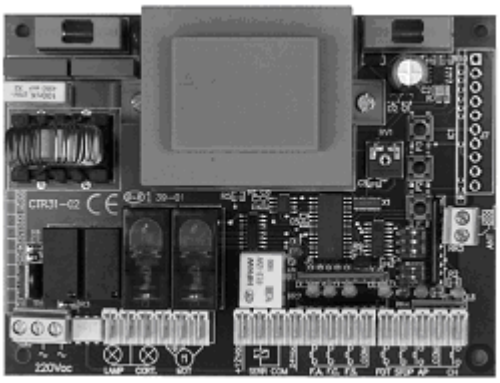
QUICK INSTALLATION
Sliding Gate Opener GR4, GR6 and GR8



CTR31

INSTRUCTIONS MANUAL

INSTALL YOUR INPUT LOOPS

The only wiring needed before testing your installation is to install the mains power. Easysystems has already installed loops but if these are missing then you will need a few loops into the “NC” or normally closed inputs. Cut a few short lengths (50mm) of single core cable and strip the two ends. Connect one end to the “photocell” terminal and one end to the “common” terminal, another to the “photo-stop” terminal and the “common”. Do the same with the “stop” terminal and the “common”. These will need to be removed later if you add safety beams (photocells) or a stop button to your installation but for now will close the inputs and make the board operational.

INSTALLING ANTENNA WIRE

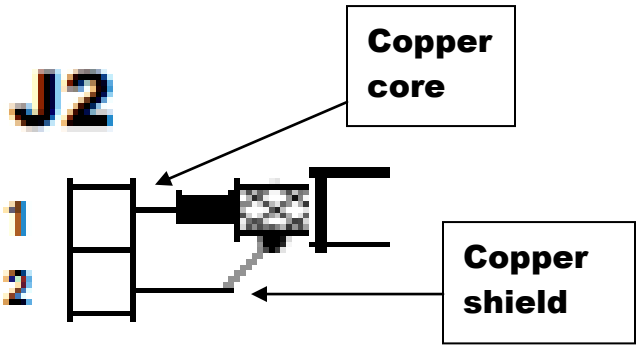
Option 1: If you intend using a full antenna, install the cable into the antenna terminals taking care not to allow the copper shield to make any contact with the copper core of your coaxial.

J2 2-pole Terminal board for the connection of the aerial cable is located on the CTR control board so you may need to remove the board to install the cable.

We recommend you switch off all power to the control board before attempting this installation. You will not need to remove any of the cables connected to the board but take care you do not drop the tiny control board mounting screws. Use a Philips Head screw driver with a magnetic head for best results.

You can install the antenna on the side of the plastic cover of the motor or position it on top of your gate pillar as line of sight will give you a longer range.

Option 2: Otherwise cut a small length (170mm) of mains power cable as it has a solid core which you can bend the end a right angles and is easy to fit. Place the stripped end into the right hand antenna terminal J2-1 and secure.



SET YOUR DIP SWITCHES AND JUMPERS
Set your dip switches as per the settings below until you have completed testing of motor.

OFF	ON
1	
2	
3	

	4
5	

INSTALLING 240V POWER
Insure your power has an isolation switch that can be used incase of emergency.
Connect the earth to both connector block J1-1 (top of control board) and the motor.
Warning: Do not try to fit both earth wires into the J1 as this may short circuit to the 240Vac Mains supply phase.
Connect the 240Vac Mains supply **phase** to J1-2
Warning: Insure there is no opportunity for the cable wire to short circuit with the control board mounting screw when motor cover is installed.
240Vac Mains supply **neutral** to J1-3
PROGRAM YOUR TRANSMITTERS (REMOTES)
To proceed to the next step you need to have programmed a remote control transmitter into the control board. To program a transmitter press “P1” once on the control board and wait for the led “DL1” to light. Press the button (channel) on your remote control transmitter that you wish to use for two seconds and release. Your transmitter should now be programmed. Repeat for other transmitters. You can also program a second button (channel) on any transmitter to operate the close command or (if dip switch 4 is on) open in pedestrian mode. To program a transmitter to operate close command or pedestrian opening press “P1” twice and release (NB: Each press of P1 should be spaced by 1 second minimum), when “DL1” is lit press the button (channel) you wish to use for pedestrian access. Up to 50 codes may be stored in any combination of full open or pedestrian open. To erase all codes press and hold “P1” until the red LED “DL1” goes out (about 10 seconds)
IMPORTANT - (If you are not using transmitters you will need to connect a normally open momentary pushbutton into “COM” and “START” terminals to proceed)
CHECK FOR CORRECT MOTOR DIRECTION
With your gear motor in manual, position the gate about half way open and lock into automatic mode. Using the transmitter you programmed press the button and release. Because this is the first activation after a power interruption your gate should open. Press your transmitter again to stop the gate. To correct any gate which did not open you have to reverse the motor wires and limit switch wires. Turn off the power, reverse the motor terminals 4 and 5. You also need to swap your limit switch inputs “FCA” and “FCC” (terminals 5 and 6 on connector J4). Apply power and test gate opens on first activation. Check your limit pole is functioning by manually moving the pole in the direction the gate is moving to stop the gate. Do not open gate fully at this stage until “Working Time” is setup correctly.
SETTING GATE WORKING TIME
1).First make sure your limit spring is set correctly in the fully open and closed positions with the Limit switch cams fitted to the gear rack at each end of the gate.
2).Use you manual override key to put the gear motor in manual mode and move the gate to the fully closed position and re-lock your gear motor.
3).Set the trimmer RV1 to about half way.
Press push button “P2” once (middle button approximately 2-3 seconds) until the gate starts opening at a reduced speed. This is to set the “slow down speed” for soft start and finish and the distance the gate will open and the force amps need to move the gate.

4).During this opening phase, use a small screwdriver to adjust the trimmer “RV1” to obtain the desired slow down speed. (It will not change the normal running speed of 10m/per min.) If the limit spring is positioned correctly it will trip the system and shut off the motor at the open position. Hint: Slow Speed should be about 50-75% of the normal 10m/per min speed.
5).After fully opening gate, wait 3 seconds for “DL1” to light up red. Adjust the RV 1 again to about ½ way to give the force setting
Press “P2” for each of the following steps.
6). Press P2 – Motor Starts a close cycle in fast mode.
7).When gate reaches approximately 1m from the fully closed position, Press 2 – to memorize this position. Gate will slow down to the speed you have set in step 4
8).Let the gate complete the closing cycle and stop when the limit spring pole is activated. The control board will automatically exit this mode when complete and led “DL1” will go out.
9).Use your transmitter (or pushbutton) to test your installation.

SETTING THE AUTOMATIC CLOSE MODE:

Place dip switch 2 to the ON position. Close gate completely.
Press push-button P3 until the led DL1 lights. Let the desired pause time pass, and then press push-button P3 again.
In automatic mode a single command via transmitter remote or a momentary switch like a keypad or button connected to the OSC input will cause the gate to open. If no other command is issued and at the end of the slow down phase the gate will stop, the pause period starts and when concluded the gate closes automatically.
When the gate is closed the operating cycle is complete and the gate waits for a further command. If a command is made before the end of any part of the opening or closing cycle the gate will stop.
A new command will cause the reversal of the motion.
To stop gate in automatic close mode: A) If a command is made during the *pause part* of the cycle with a remote, keypad or exit button the gate will not close automatically and the gate will wait for a new command to close the gate. B) Place dip switch 2 to OFF.
To re-activate automatic close mode: Press your remote, keypad or exit button and the automatic mode will re-activate.

Connecting optional devices to CTR31 Sliding Gate Opener control board

Warning: You must use a 1amp in-line fuse for any powered accessory.

Infrared beams (Photocell): Use standard telecom or network wire such as cat.5.
1). Connect the 12vdc power wire via a 1amp in-line fuse (automotive type) from both the master and slave photocell to the J4 -1 (+ 12vdc) connector on the motor control board.
2). Connect the negative from both the master and slave from the photocell J4 -3 (COM) on the motor control board.
3). Wire the com (NC) wire from the master photocell to the J4 -12 (COM)
4). Wire the signal (NC) wire from the master photocell to the J4 -9 (FOT)
Easysystems supply a photocell that allows for both N/o and N/c wiring depending on application. In most wiring of control boards we only need to us the n/c terminal at the photocell leaving the N/o un-used.
Note: This device has effect only during the closure phase or in the pause period. If an obstacle covers the photo-cell during the closure phase, the gate stops and reverses its motion after approx. 1.5 sec. If an obstacle covers the photo-cell during the pause period this last one is re-set and the automatic closure is therefore delayed.
Exit button: Connect 2 x network N/O wires to J4 – 11(A/S) and J4 -12(Com)
Keypad: Connect the 12v power wire from keypad to the J4 -1 (+ 12vdc) connector on the motor control board via an in-line 3amp fuse.
Connect the negative from keypad to J4 -3 (COM) on the motor control board.
Connect N/O wires to opening start J4 – 11(A/S) and J4 -12(Com)
Intercom: Connect N/O wires to opening start J4 – 11(A/S) and J4 -12(Com) from house gate release button on hand set.
Connect the audio directly back to outdoor call unit from your house hand set.

DEFINITION OF DIP SWITCH SETTINGS

"Step-by-step Mode" (Dip switches 1 and 2 OFF) – In step-by-step mode a single command via transmitter or a momentary switch connected to the OSC input will cause the gate to open. If no other command is issued and at the end of the slow down phase the gate will stop, the operating cycle is complete and the gate waits for a further command to close. If a command is made before the end of any opening or closing cycle, the gate will stop. A new command will cause the reversal of the motion.

"Automatic Mode" (Dip switch 1 OFF and dip switch 2 ON) - In automatic mode a single command via transmitter or a momentary switch connected to the OSC input will cause the gate to open. If no other command is issued and at the end of the slow down phase the gate will stop, the pause period starts and when concluded the gate closes automatically. When the gate is closed the operating cycle is complete and the gate waits for a further command. If a command is made before the end of any part of the opening or closing cycle the gate will stop. A new command will cause the reversal of the motion. If a command is made during the pause part of the cycle the gate will not close automatically and the gate will wait for a new command to close the gate.

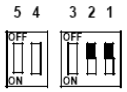
"Apartment Mode" Used for Loop Detectors using FREE EXIT mode (Dip switch 1 ON and dip switch 2 OFF) – In apartment mode a single command via transmitter or a momentary switch connected to the OSC input will cause the gate to open. At the end of the slow down phase the gate will stop, the pause period starts and when concluded the gate closes automatically. When the gate is closed the operating cycle is complete and the gate waits for a further command. If a command is made during the opening phase it has no effect. If a command is made during the closing phase the gate will stop, pause for approximately 1.5 seconds and reopen. If a command is made during the pause part of the cycle the pause time will reset and gate closing will commence later. If using a time clock to control the gate then apartment mode must be selected.

"Opening Slow Down Exclusion" (Dip switch 3 ON) – This will exclude slow down from the opening phase.

Cyclical Mode" (Dip Switch 4 ON) – This will affect both the "Closing Start Terminal" and the second channel on the radio receiver. It changes both inputs to "Pedestrian Mode".

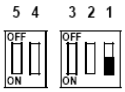
G) Programming the board

Step-by-step logic



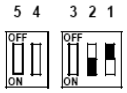
Set the dip switches 1 e 2 to OFF.
The state of the other dip switches has no effect.

Condominium logic



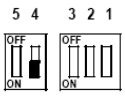
Set the dip switch 1 to ON.
The state of the other dip switches has no effect.

Automatic logic



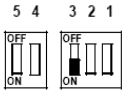
Set the dip switch 1 to OFF.
Set the dip switch 2 to ON.
The state of the other dip switches has no effect.

Cyclical mode



Set the dip switch 4 to ON.
The state of the other dip switches has no effect.

Opening slow-down exclusion logic



Set the dip switch 3 to ON.
The state of the other dip switches has no effect.

Radio-command codes self-learning : Press the **P1** push-button once to insert a "Opening Start" code; press the **P1** push-button twice to insert a "Closing Start" code; press the **P1** push-button three times to insert a "Pedestrian Start" code". Each time the push-button is pressed, the led DL1 flashes in acknowledgement. Subsequent pressures of the **P1** push-button must be spaced by 1 sec. minimum periods. When the led is lit with a fixed light transmit the code to be learn by means of the radio-command.
Warning : In **Ciclical mode (dip switch 4 = ON)** the opening start and closing start commands become, respectively, start and pedestrian start.

Erasing all stored codes : Press push-button P1 until the led DL1 goes off (about 10 seconds).

Setting the work time : Make sure the gate is completely closed. If not, position it manually. Press push-button **P2** for about 3 seconds (the led DL1 will light with a fixed light) until the gate starts opening at a reduced speed. During this phase adjust the speed by means of the trimmer **RV1** to obtain the desired slow-down. When the gate is completely open press push-button **P2** again and wait for the led DL1 and the blinker to go on with a fixed light. **You adjust the RV1 trimmer to half of run** and then press push-button **P2** repeatedly (3 times) to program the following operations :

1) motor M1 start in closure
2) motor M1 slow-down start
3) motor M1 stop (end of travel and end of programming)

Note : if the unit is connected to the closing limit switch it is not necessary to press P2 in order to stop the motor.

Setting the pause time : Press push-button **P3** until the led DL1 lights. Let the desired pause time pass, then press push-button **P3** again.

Connection of the devices

230Vac mains power supply cable and ground – Terminals 1,2 and 3 on J1

Warning : The cable's ground pole must be connected to a good ground reference in the gate's nearby area.

Motor 1 – Terminals 4, 5 and 6 on J3
Blinker – Terminals 1 and 2 on J3
Courtesy light – Terminals 2 and 3 on J3
Electric lock – Terminals 2 and 3 on J4
Photo-cells power supply – Terminals 3 and 4 on J4
NC photo-cell contact – Terminals 9 and 12 on J4
NC stop push-button – Terminals 10 and 12 on J4
NC photostop contact – Terminals 7 and 8 on J4
NO opening start push-button – Terminals 11 and 12 on J4
NO closing start push-button – Terminals 12 and 13 on J4
NC opening limit switch – Terminals 5 and 8 on J4
NC closing limit switch – Terminals 6 and 8 on J4
Aerial – Terminals 1 and 2 on J2

Important : Before starting the gate check all connections to the electronic card. Check also the electric contacts' switching, which is signalled by the leds' operation.

E) MAINTENANCE

Warning : The maintenance of the device must be effected only and exclusively by a specialized technician authorized from the Manufacturer. Any operation of maintenance or control of the device must be effected in absence of power supply.

Ordinary maintenance : Every time that it is necessary and however every 6 months is recommended to verify the device operation.
Extraordinary maintenance : In case of failure, remove the device and send it for repair to the manufacturer laboratory or to authorized laboratory.

The Manufacturer is not responsible for missing observance of rules above described.

BOARD INTERFACE TERMINALS LEFT TO RIGHT J1 1 Earth J1 2 240Vac Mains supply **phase** J1 3 240Vac Mains supply **neutral** J3 1 Flashing Light 240Vac 40W Max	J4 13 Closing Start NO Can also be Pedestrian Open (via Dip Switch 4) J2 1 Antenna Core J2 2 Antenna Shield J7 Plug In Radio Receiver

J3 2 Com Flashing Light & Courtesy Light J3 3 Courtesy Light 240Vac 40W Max J3 4 Motor Open 240Vac 1HP Max J3 5 Motor Close J3 6 Motor Neutral **J4 1 12-18Vdc. Connection for optional devices such as keypads.** J4 2 12Vac Electric Lock 12Vac 15W Max **J4 3 12/24Vac Common** J4 4 24Vac .5A Max J4 5 Limit Switch Open NC J4 6 Limit Switch Close NC J4 7 Photo Stop Input NC J4 8 Common **J4 9 Photocell Input NC (infrared safety beams)** J4 10 Stop Input NC **J4 11 Start Input NO (Keypads, exit button, loop detector, intercom etc)** **J4 12 Common**	P1 Radio Receiver Programming P2 Work Time Programming P3 Pause Time Programming RV1 Slow Speed Trimmer F1 240Vac Fuse 5A F2 24Vac Fuse 2A DL1 Power Supply LED DL3 Limit Switch LED DL4 Limit Switch LED DL5 Photo Stop LED DL6 Photocell LED DL2 Stop LED DL7 Start LED DL8 Close LED (Pedestrian Start via Dip Switch 4)

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