

UNIVERSAL CONTROL PANEL FOR ALL TYPES
OF 240V AC SLIDING GATES AND BOOM GATES
Model: DCP-240R / August 2007

This universal **Control Panel (CP)** can replace all types of 240V AC Control Panels for Sliding gates, and Boom gates. It has programmable self-learning timers that are very simple to set and four easy to choose programs for operating the gate. The unit operates with “**rolling code**” remote controls that provide TOP SECURITY, while also enabling the end user an easy method of duplicating additional remote controls by a unique **self-learning and service-free** method of teaching.

SETTINGS

⇒ **AUTOMATIC SET UP ; Self Learning - the control panel sets the opening and closing time automatically.**

This sophisticated control panel has a self-learning system that sets up opening and closing time, automatically. It is a must to run the automatic set up after installing the motor. The automatic set up will set the time in which the gate takes to **close fast**, and the time it needs to **slow down** towards the end of closure as well as for the opening operation. Before operating the motor, it is necessary to disconnect the motor from the gate by putting the gate on manual, and checking whether the motor’s rotation is to the right direction of opening and closing of the gate by manually hitting the limit switches to the right and left direction. Check that the limit switches function accordingly to the opening and closing directions.

1. HOW TO SET THE OPENING AND CLOSING TIME, and THE RAMP UP and SLOW DOWN TIME.

AUTOMATIC SET UP

1. Remove the “TIMER” jumper in the CP and the PROGRAM LED will turn ON.
2. Press and release button (I) on the remote control of the unit and the automatic set up will begin.
3. The gate will open and close twice after which it will stop.
4. Return the jumper “TIMER” to its place. *END OF SET UP.*

Now the unit is ready for operation. Press the button on the remote control and the gate will start to open slowly and then fast and slow down towards the end and stop. The ramp-up and ramp-down time are set in the CP automatically and can not be changed.

⇒ **LEFT & RIGHT INSTALLATION ; setting the motor to open according to gate’s installation.**

The gate can open to the right or to the left according to the installation. Accordingly, the motor can be installed on the right or left side of the gate. Therefore, the motor should be set to open according to its installation, on the Left or Right side of the gate. If the motor is not responding to the photo electric sensor *during closure* and instead is responding during opening phase, it means that the motor’s wires and the limit switches’ connections to the control panel are reversed to the installation of the motor to the gate. This can be solved by swapping between the two live wires of the motor and by swapping between the limit switches’ wires in the control panel, however, it much more easier to do it by the remote control as follows;

HOW TO CHANGE BETWEEN OPENING AND CLOSING PHASE

To change between opening and closing modes do as follows:

1. Remove Jumper FUNCTION in the CP.
2. Press and release button (III) on the remote control. A “Click” sound will confirm the command.
3. Return Jumper Function to its place.

Note: for swapping the connections back to the original setting, repeat step 1 to 3.

⇒ **REMOTE CONTROL; Teaching / Deleting**

1. HOW TO TEACH REMOTE CONTROLS INTO THE CONTROL PANEL'S MEMORY.

The CP has a learning type receiver that can learn up to 165 codes (buttons) of the TR-4RS remote controls. Each button of the remote control has a different combination of code. Therefore, each remote control can operate up to four different control panels. There are two ways for teaching the unit a new button of the remote control. The first method is used when the unit's memory is clear and empty or the original remote control of the CP is not available. The second method allows teaching the unit a new remote control by using one of the control panel's already-programmed remote control (a remote control that operates the unit) without having to open and access the CP – We call it **SERVICE FREE** programming.

First method: Teaching a new remote control by the control panel.

1. Remove the jumper "REMOTE" in the CP and the program LED will start to flash.
2. Choose and press the button on the new remote control, which you would like to operate the unit, for one second. The program LED will stop flashing to confirm.
3. Return the "REMOTE" jumper to its place. The teaching process is complete.
4. Repeat steps 1,2,3 to teach more remote controls if required.

Second method: "Service – Free" programming of new remote controls.

This method allows the end user to teach a new remote control into the unit, without the need of neither a technician nor accessing the control panel. Use an operational remote control of the unit, i.e. a remote control which operates the unit, for teaching a new remote control into the Control Panel's memory as follows:

1. Take the **operational remote control** of the unit and stand about 1- 5m' from the unit. Press and hold both its buttons (I) and (II) simultaneously for 10 second and release the buttons. A "Clicking" sound will be heard from the unit to indicate that the CP is in learning mode and ready to learn a new button of a TR-4RS remote control.
2. Choose, press and release for one second, on one of the buttons of the **NEW** remote control. A "Clicking" sound will stop to indicate that the new remote control has been learned into the unit.

You can repeat the above 2 steps for teaching more remote controls wirelessly.

2. HOW TO DELETE ALL THE REMOTE CONTROLS FROM THE CONTROL PANEL'S MEMORY.

1. Remove the jumper "REMOTE" in the CP.
2. Disconnect the power to the unit.
3. Wait for 5 seconds and reconnect the power to the unit.
4. The PROGRAM LED light in the CP will start to flash to indicate that the CP is ready to delete all the remotes.
5. Return the jumper "REMOTE" into its place and the PROGRAM LED will turn off to indicate that **all** the remote controls are cleared from the control panel's memory.

⇒ OPERATION PROGRAMS ; Step By Step / Automatic Closure / Secure Automatic / Full automatic

1. HOW TO CHOOSE THE REQUIRED OPERATION PROGRAM to open and close the gate.

The control panel has four options of programs that you can choose from, for operating the gate. You can choose one of the operating functions according to the required program needed:

Program (I) : Semi automatic – Step By Step

When using this type of operation, the unit will open, close or stop the gate by the command of the remote control or the manual push button only (if connected). The first command opens the gate, the second stops, the third closes the gate, and the fourth stops the operation and so on.

Program (II) : Automatic operation

For automatic closure operation. When pressing the remote control, the CP will open the gate and keep the gate open for a preset time, after which the CP will close the gate automatically.

Program (III) : Full Automatic operation - The same as program (II) Automatic operation, but in addition:

During opening time, the user can stop the gate by the remote control, and after the preset delay time it will close the gate automatically – this function enables pedestrians to enter without opening the gate fully, which saves unnecessary operations and therefore adds to the lifetime of the motor.

During closing time the user can stop the gate by the remote control or the push button at any stage of the closure to keep the gate partially open till the next command is received by remote or the push button. This function allows keeping the gate open in automatic mode for pedestrians, if required.

Program (IV) : Secure Automatic operation- The same as program (II) Automatic operation, but in addition:

After the gate is opened, it will close immediately as soon as the safety photoelectric sensor is cleared.

The gate will stay open for all the preset time of automatic closer as long as no car has passed and cut the beam of the photo sensor.

2. HOW TO SELECT THE REQUIRED OPERATION PROGRAM.

Remove the “PROGRAM” Jumper in the control panel, choose and press button I, II, III, or IV on the remote control according to required program you need and return the jumper to its place.

⇒ SETTING TIMERS; Auto close time / canceling Ramp Up or Slow Down time

1. HOW TO SET THE AUTO CLOSE DELAY TIME.

The control panel has a **programmable** timer that can be set to close the gate automatically as follows:

1. Remove the jumper “TIMER” in the CP.
2. Press and release button (II) on the unit’s remote control and the light relay and the program LED will start to flash.
3. Wait the period of time you wish to set the Auto Close Time (for example 15 seconds) and then press and release button (II) of the remote control once again.
4. The PROGRAM LED and the light relay will stop flashing to indicate that the auto close delay time has been set for automatic operation.
5. Return the Jumper “TIMER” into its place.

2. HOW TO CANCEL THE RAMP - DOWN AT THE END OF CLOSURE AND OPENNING.

It is possible to cancel the slowdown feature, at the end of opening and closing of the gate, as follows:

1. Remove Jumper FUNCTION in the CP.
2. Press and release button (II) on the remote control, and a “Click” sound will confirm the cancellation.
3. Return Jumper Function to its place.

Note: To restore the slow down feature repeat step 1 to 3.

3. HOW TO CANCEL the SOFT START.

To cancel the Soft Start do as follows:

1. Remove Jumper FUNCTION in the CP.
2. Press and release button (IV) on the remote control, and a “Click” sound will confirm the cancellation.
3. Return Jumper Function to its place.

Note: To restore the Soft Start feature repeat step 1 to 3.

⇒ **ADJUSTING THE MOTOR'S POWER**

The power of the motor can be adjusted **by the remote control** to one out of the ten different levels as follows:

1. Remove Jumper "POWER" in the CP.
2. Press and release button (I) on the remote control for *Max power* or
3. Press button (II) for *Minimum power* of 50%.
Three "Click" sounds will indicate Max. power level selection and two "Click" sounds will confirm Min. Power-level selection.
4. You can adjust and reduce the power to increase the power to a one step higher level by pressing button (III) once, or to a one step lower level, by pressing and releasing button (IV) once.
A "Click" sound will follow to confirm.
4. Return Jumper POWER to its place after selecting the required power level..

LEVEL	1	2	3	4	5	6	7	8	9	10
POWER	100%	95%	90%	85%	80%	75%	70%	60%	65%	50%
Remote's Button	Press (I)	Increase power press (III) <= To => Reduce power press (IV)								Press (II)

⇒ **PEDESTRIAN MODE**

1. HOW TO USE PEDESTRIAN MODE WITH THE REMOTE CONTROLS.

Button (IV) is reserved for pedestrian access only. By programming button (IV) of the remote control into the CP, the end user will be able to operate the gate in the pedestrian mode.

By pressing button (IV) on the remote control the CP will open the gate for two seconds. The gate will stay open in Semi Automatic Mode (Step By Step Mode) till this button is pressed once again or will close automatically if Automatic Mode is chosen in the CP.

2. HOW TO SELECT PEDESTRIAN MODE for the PUSH-BUTTON INPUT

The push button input in the control panel activates the gate in Step-By-Step mode, however, you can change this input to operate the gate in pedestrian mode as follows:

1. Remove Jumper TIMER in the CP.
2. Press and release button (IV) on the remote control.
3. Return the jumper "TIMER" to its place.

Note: From now on the push button input will activate the gate as a pedestrian mode.

To restore the push button input to operate in Step-By-Step mode, repeat steps 1 to 3.

⇒ **HOW TO ACTIVATE THE ELECTRONIC BRAKE**

This sophisticated control panel can stop the motor's rotation instantly by applying an electronic brake to the motor at the end of each travel. This is a very useful feature in uphill or downhill installations of sliding gates, the CP will prevent the gate from sliding more, at the end of the travel more than it should. To ACTIVATE the Electronic Brake do as follows:

1. Remove Jumper FUNCTION in the CP.
2. Press and release button (I) on the remote control, and a "Click" sound will confirm the Activation.
3. Return Jumper Function to its place.

Note: To cancel the Electronic Brake repeat steps 1 to 3.

⇒ **HOW TO SELECT BETWEEN LIGHT AND LOCK RELAY**

This control panel can be used for single swing gate as well as for sliding gate motor. Thus you can change the light relay to function as a lock relay if needed. To change the relay's function to Lock Relay do as follows:

1. Remove Jumper TIMER in the CP.
2. Press and release button (III) on the remote control, and a "Click" sound will confirm your selection.
3. Return Jumper Function to its place.

Note: To restore the function of the relay to be as a Light Relay, repeat step 1 to 3.

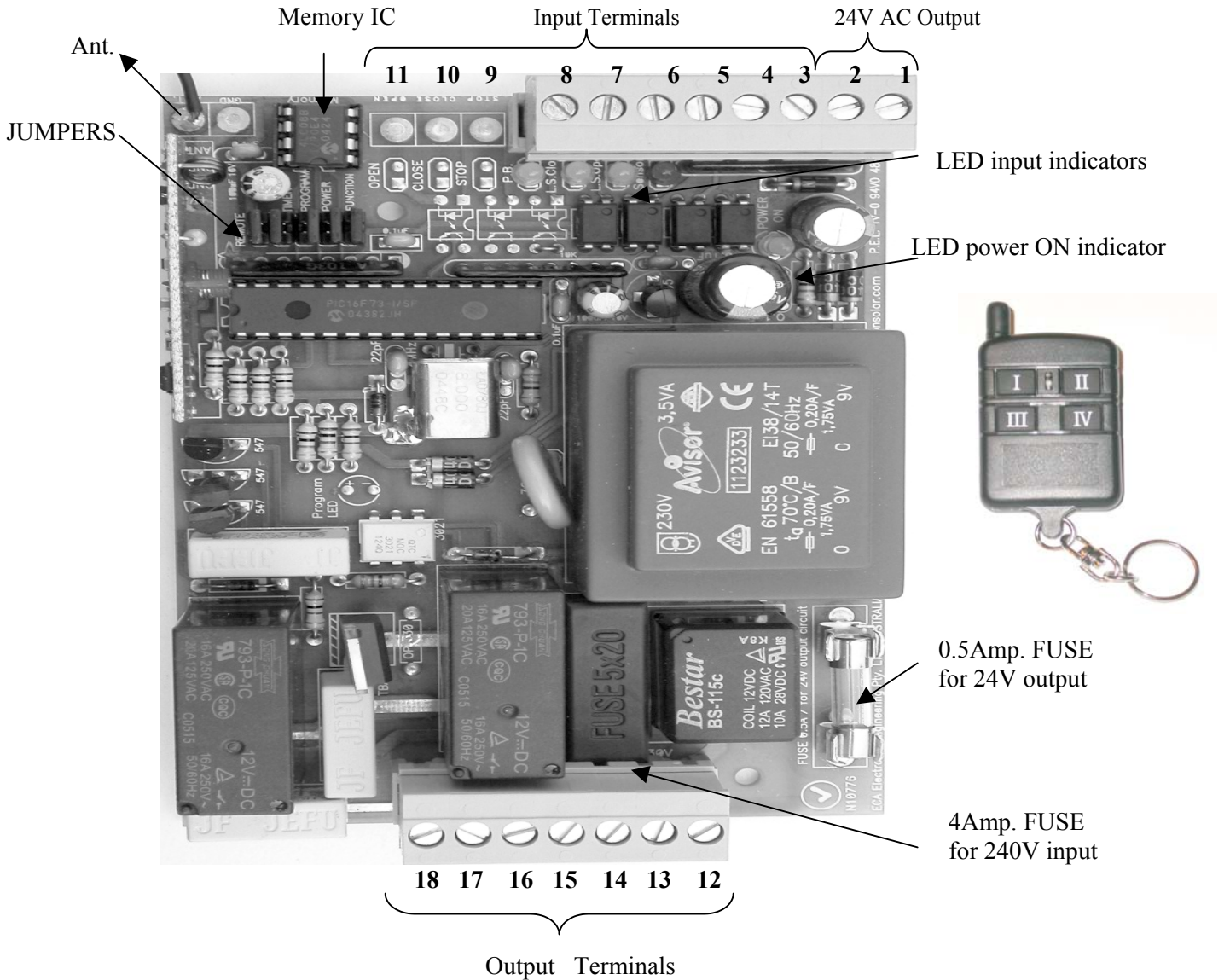
Programmable Features Summary

REMOTE CONTROL'S BUTTON	JUMPER FUNCTION
I	With / Without Electric Brake
II	With / Without Ramp Down
III	Swapping between Open & Close
IV	With / Without Soft Start

REMOTE CONTROL'S BUTTON	Jumper PROGRAM
I	STEP BY STEP operation
II	Automatic Closure
III	Full Automatic operation
IV	Secure Automatic operation

REMOTE CONTROL'S BUTTON	Jumper TIMER
I	Automatic SET UP
II	Auto Close Time
III	Courtesy Light or Lock Relay
IV	Push Button input selection

REMOTE CONTROL'S BUTTON	JUMPER POWER
I	100% Power
II	Min. power 70%
III	To Increase power by one level
IV	To Reduce power by one level



Output power supply for an Optic Sensor

The CP has a 24VAC / 85mA output, to operate one external optic sensor 24Vac / 40mA .

A Normally Close (N.C.) input for photo sensor in the CP enables to connect an optic beam sensor for getting a safe closure operation. If during closure time, the beam sensor is obstructed, the unit will stop the gate reopen immediately. Call ECA Australia on 03-95720535 about our top quality optic beam sensor model IR-3000G or IL-1200.

Manual Push Button

An external Normally Open (N.O.) push button can be used to operate the gate as Step-By-Step operation: Open, Stop, Close, Stop, Open or to operate the gate in pedestrian mode.

Inputs: There are 7 input-terminals located on top of the control panel:

Terminal No. 1	}	24v/AC output for the Optic sensor.
Terminal No. 2		
Terminal No. 3	}	Common outputs for the limit switches, optic sensor and the push button.
Terminal No. 4		
Terminal No. 5	Optic sensor input: This input must be connected to one of the negative output terminals if it is not in use.	
Terminal No. 6	Limit switch input: A Normally Open (N.O.) limit switch should be connected between this terminal and one of the negative outputs. The limit switch should open its contact when the gate is fully opened.	
Terminal No. 7	“Closure” limit switch input: A Normally Open (N.O.) limit switch should be connected between this terminal and one of the negative outputs. The limit switch should open its contact when the gate is fully closed.	
Terminal No. 8	Push Button input: This input can be used with an external Normally Open (N.O.) Push Button if a manual operation is needed.	
Terminal No. 9	STOP Normally Close Push Button input to stop the gate at any stage. Upon request.	
Terminal No. 10	CLOSE Normally Open Push Button input that would close the gate only. Upon request	
Terminal No. 11	OPEN Normally Open Push Button input that would open the gate only. Upon request	

Electrical features

Operating voltage: 240V/AC 50Hz.

Output voltage : 24v/AC 85mA for optic sensor only.

Output load : Max. 1.5Hp 220v/AC.

Light's output : Voltage free contacts for external warning light 220v/AC 0.5A or 24v/AC 5A

Main Fuse : 4A / 240v AC.

24V output FUSE: 0.5Amp / 24V DC

Light outputs – for 5 minutes courtesy garden lights

There are (voltage free) outputs in the control panel for operating the garden or front yard lights when the gate is opened or closed.

Terminal No. 12 is the **Common** connection of the internal light relay in the control panel.

Terminal No. 13 is the **Normally Open** connection of the internal light relay.

Main Power

Terminal No. 14 Should be connected to the Live Line voltage. 240V AC 50Hz.

Terminal No. 15 Should be connected to the Neutral.

Motor's Connection

Output terminals No. 16, 17 and 18 should be connected to the AC motor.

Outputs 17 and 18 should be connected to the **Live** wires and the output 16 should be connected to the motor's **Neutral** wire. See and connect the motor according to the schematic diagram enclosed. Make sure the motor's capacitor is connected to 17 and 18 outputs.

