



## SEA - GATE 1 - CONTROL BOARD PROGRAMMING AND LOGIC GUIDE FOR A SLIDING GATE

3 4 With DIP switches 3 & 4 OFF – **Safety Edge** logic is selected.  
With the ‘**normally closed**’ (N.C.) contacts of a Safety Edge device wired into the Auxiliary Input:-

If the gate hits an obstruction triggering the safety device, the gate will: –  
Stop – Reverse away (from the obstruction) for approximately 1 second – Stop and remain in this position until another ‘Start Command’ given.

5 **Pre-Flash** – Warning of impending movement.  
ON When selected, a Warning Indicator lamp or Flashing Light will start flashing approximately 3 seconds before the gate starts to move.

6 **Automatic Closing** - When selected the gate will automatically close after the open pause time set on Trimmer Dial RV3

7 **Photocell Auto-test** - When selected, a photocell test is carried out prior to movement. For this function to work, the photocell transmitter(s) must be wired into terminal 5 (24v+) and a Negative (-). If a failure is detected the Flashing Lamp & Warning Light will slowly flash.

8 **Encoder** - The encoder unit is mounted on top of the motor and is designed to detect any changes in the rotational speed of the motor. If the gate hits an obstruction when travelling in either direction, the clutch will slip and the encoder will signal the Gate 1 causing it to:- Stop and reverse the gates direction (for approx. 1-2 secs.) – Stop and wait for another ‘start command’. N.B. Put the DIP switch in the off position if an encoder is not fitted.

9 **Soft Start** – When selected the motor will start at a lower torque level to reduce initial mechanical stresses.  
ON **N.B.** Do not use this function on very heavy or tight running gates.

10 **Braking** (slowdown) – When selected, the motor/gate speed is reduced prior to the gate reaching a limit switch. The slowdown speed is fixed but the length of the slowdown period can be adjusted by Trimmer Dial Rv2.  
ON **N.B.** Braking may not work consistently on very large and/or heavy gates.

11 **Leaf Lock Boost** – **DO NOT USE THIS FUNCION ON A SLIDING GATE.**  
ON When the Gate 1 is used to control a hydraulic swing gate operator with ‘braking (slowdown)’ selected, the final 1 second of motor run time is increased to maximum speed to build up the operators hydraulic locking pressure when the gate is up-against the ground stop.

12 **Closing Direction** – This function selects the gate closing direction without the need to invert the motor and limit wiring.

### IMPORTANT SAFETY INFORMATION:

Always Switch-off the mains electrical supply to the operator/Gate 1 before Working-on or making any adjustments to the operator, limits, drive rack or gate.

Mechanical stops are required in both open and closed positions  
The gate **must be** physically prevented from passing out of the upper and lower gate supports at any time.

### PREPARE THE GATE FOR PROGRAMMING

Position the open and close Gate Limit Plates on to the drive racking. The Limit Plates should be positioned so as to trigger the Limit Switch and stop the gates movement a minimum of 25mm from the open and close physical gate stops.

**TIP:** Limit Plate positioning can be checked by slowly and carefully manually sliding the gate to the open and closed position and observing when relevant Limit LED goes out (Limit LEDs are lit when a Limit Plate **is not** present).

Before starting the programming phase check all your wiring connections. Check that all ‘Normally Closed - N.C.’ inputs are either wire-linked out or connected to a device i.e. Photocells.

### PROGRAMMING A SLIDING GATE OPERATOR WITH TRAVEL LIMITS

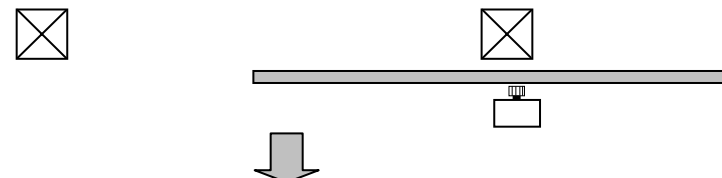
Set logic DIP switches as shown below



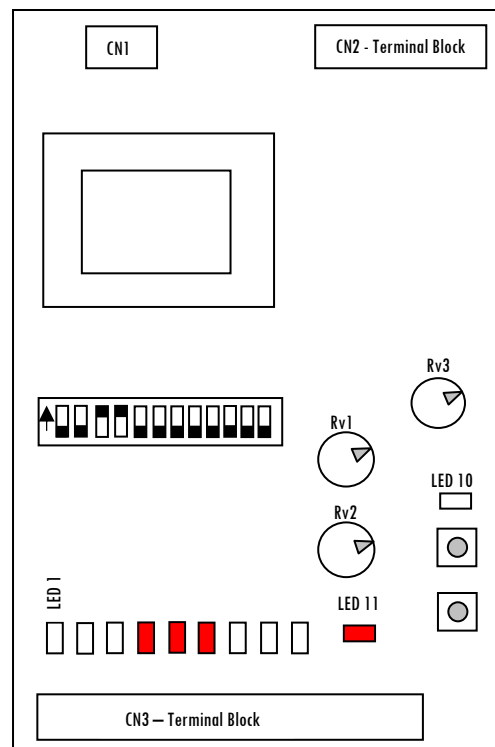
See pages 3 & 4 for other DIP switch settings and explanations



Place the gate in a mid-way position and reconnect the emergency release.



Switch-on the mains supply to the operator/Gate 1 and check you have 4 Led lit



If you do not have the correct number of LED lit – Switch-off the mains electrical supply to the operator/Gate 1 and check all ‘normally closed’ N.C. inputs.

Trimmer Rv1 – Motor torque (power)

Trimmer Rv2 – Slowdown (length of time)

Trimmer Rv3 – Open pause time adjustment

P2 – Radio transmitter learn button

P1 – Time programming button



When pressing Button P1 and entering the programming phase for the first time, the gate’s first movement should be towards close - If the gate starts to open:- Turn-off the power, switch Dip 12 over and start programming again from the beginning.

Press Button P1 for approximately 10 seconds – LED 10 will light after 5 seconds and the gate will start to close after 10 seconds - Release P1 when the gate starts closing

The gate will start an automatic searching process to find both the Open and Closed Limit Switch positions by:

- Closing up to and stopping at the ‘Close Limit Switch’ position.
- Pausing
- Automatically opening up to and stopping at the ‘Open Limit Switch’ position
- Pausing
- Automatically closing up to and stopping at the Close Limit Switch position.

If the programming phase is successful, the programming LED will extinguish.

## DIP SWITCH SETTINGS

### Operating Logic

#### Manual Logic



A ‘Start Command’ opens the gate. A second ‘Start Command’ input given whilst the gate is opening stops the gate. A ‘Start Command’ given when the gate is closing, stops the gate.

#### Safety Logic



A ‘Start Command’ opens the gate. A second ‘Start Command’ given whilst the gate is opening stops and re-closes the gate.  
A ‘Start Command’ given when the gate is closing, stops and re-opens the gate.

#### Automatic Logic 1



A ‘Start Command’ opens the gate. A second ‘Start Command’ given when the gate is opening is ignored. A ‘Start Command’ given during the open pause time, resets the pause time. A ‘Start Command’ given when the gate is closing, stops and re-opens the gate.

#### Automatic Logic 2



A ‘Start Command’ opens the gate. A second ‘Start Command’ given when the gate is opening is ignored. A ‘Start Command’ given during ‘open pause’ time closes the gate immediately. A ‘Start Command’ given when the gate is closing, stops and re-opens the gate.

### Auxiliary Input – CN3 Terminal 11

DIP switches 3 & 4 select the logic and type of Auxiliary Input required to be wired in to Terminal 11 – CN3. Please note the first two options shown below require a ‘normally open’ (N.O.) inputs and the last two options require ‘normally closed’ (N.C.) inputs.



With DIP switches 3 & 4 ON - ‘Pedestrian’ logic is selected:  
A ‘normally open’ (N.O.) Auxiliary Input from for example a pushbutton will provide a partial Pedestrian opening cycle.



With DIP switch 3 ON & 4 OFF - ‘Timer Control’ logic is selected.  
With the ‘normally open’ (N.O.) – ‘volt free’ contacts of a Time Clock wired in to the Auxiliary Input and ‘automatic closing’ logic selected, the Time Clock will open and keep the gate open for the time set on the clock.



With DIP switch 3 OFF & 4 ON- ‘Auxiliary Photocell’ logic is selected.  
When the ‘normally closed’ (N.C.) contacts of a set of photocells are wired in to the Auxiliary Input – If the photocell beam is broken when the gate is:-  
**Opening:-** The gate will stop and remain in this position until the beam is restored, when restored the gate continues opening.  
**Closing:-** The gate will stop and remain in this position until the beam is restored, when restored the gate will re-open.

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