

AUTOMATIC SOLUTIONS

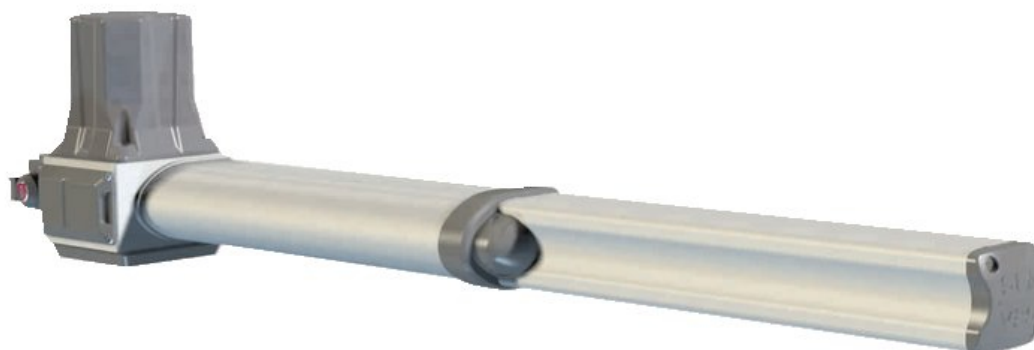
QUICK START INSTRUCTIONS

IMPORTANT - READ THIS FIRST

These instructions are intended as a quick start guide and should be used in conjunction with the manufacturer supplied instructions. These instructions provide you with a basic setup and are based on common installations in Australia.

All electrical work in this country is to be performed by licensed electrical contractors. Electricity can kill.

ALPHA – USER2-24V LOGIC



GENERAL

ALPHA

Motor Voltage – 24 volt
Power Absorbed – 70 watts
Current Absorbed – 3.0A
Maximum Thrust – 350 N
Protection Level – IP54
Duty Cycle – 40 Cycles / Hour
Dimensions – 1160L x 120W x 205H
Opening Time – 16 Seconds
Maximum Leaf – 3.3 metres
Maximum Leaf Weight – 300 Kg

USER2 24V

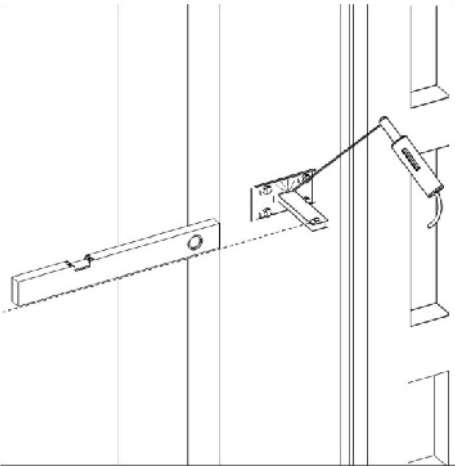
Motor Voltage - 24 DC
Motor Inputs - Two
Battery Charger – Optional
Receiver – External
Limit Switches – Yes
Pedestrian Input – Yes (NO)
Start Input - Yes (NO)
Stop Input – Yes (NC)
Photocell Input – Yes (NC)
Electric Lock – Yes 12Vdc 1A
Slow Speed Regulator – Yes

GENERAL ORDER OF INSTALLATION

To ensure a good installation of the gear motors ALPHA, we suggest the following order of installation:

- 1 - Open the box and take out gear motor. Inspect the contents and ensure all components are present.
- 2 - Make sure that the leaf of the gate is perfectly horizontal.
- 3 - Determine the height position of your motor and mark post bracket position.
- 4 - Spend some time here considering the correct height and geometry of your post bracket.
- 5 - Attach the gear motor on to the support post.
- 6 - With gate/s leaf closed, turn and slide the screw of gear motor's shaft, until it comes to the end of the screw.
- 7 - Screw shaft back 1 complete turn of 360°.
- 8 - Place the gate support plate in the hole of the shaft end and position it against the gate leaf.
- 9 - Fix it to the gate leaf taking in account the level.
- 10 - Put the gear motor into manual operation mode with your override key and test your install for smoothness.
- 11 - If correct proceed in the same way with the other gate leaf if applicable.
- 12 - Place the mechanical limit stops.
- 13 - Connect the gear motors to the logic controller.
- 14 - Adjust the limit switches
- 15 - Program and test your installation
- 16 - Attach your safety devices and access devices one by one testing for correct operation at each point.

ALPHA GEAR MOTOR INSTALLATION

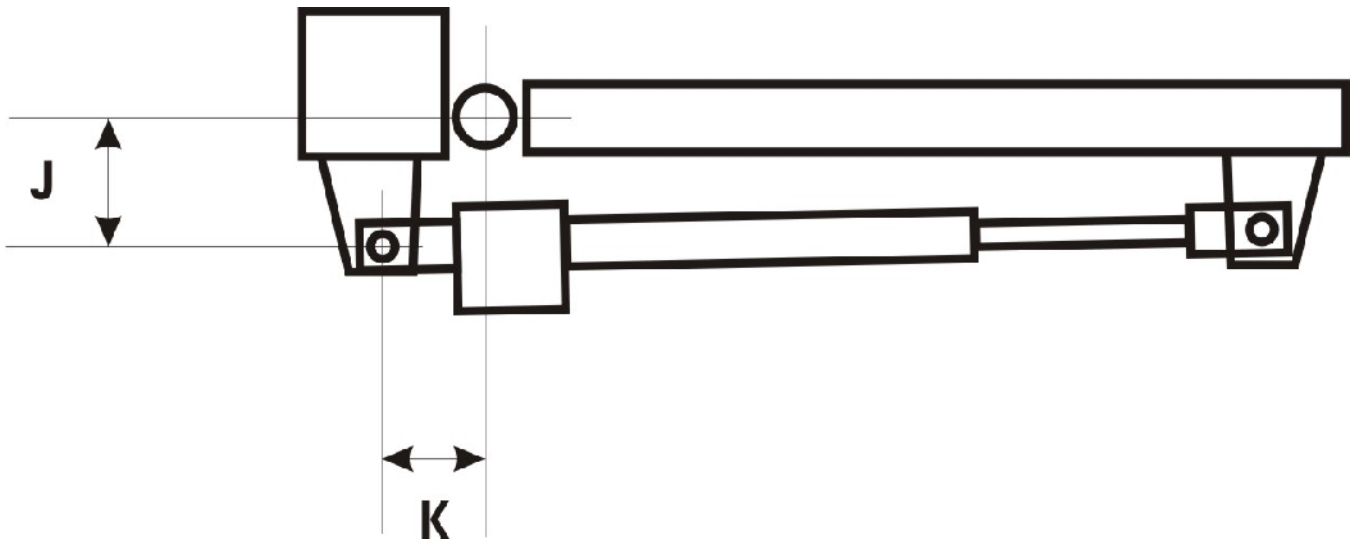


INSTALL POST BRACKET

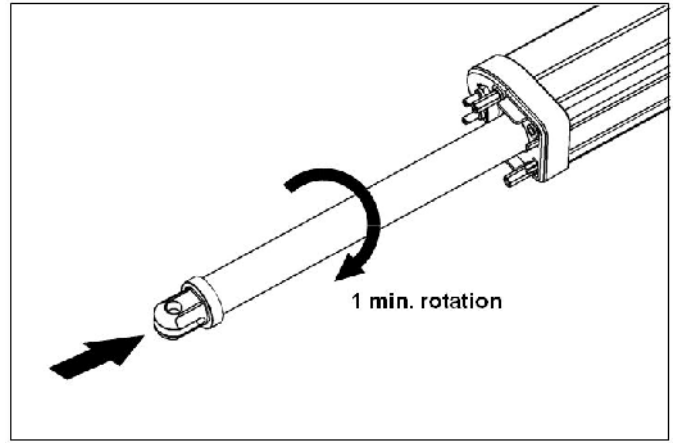
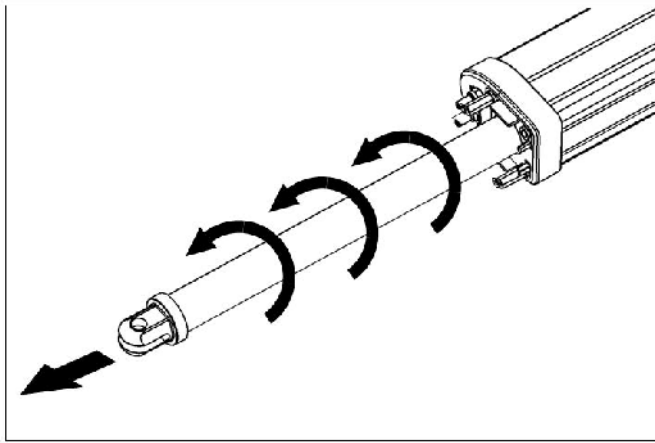
The position of the post bracket is critical to the success of your installation and attention needs to be paid to both its correct height and also its position on the post in respect to the relationship between your gate hinge pivot point and the motor pivot point on the bracket.

Once you have determined the general desired height of your motor, position the bracket and take note of dimensions "J" and "K". In a standard installation the basic aim is to get dimensions "J" and "K" to be as close as possible to equal.

The other consideration before fixing the post bracket is that the pivot point of the post bracket should be level with the pivot point of the gate bracket making the gear motor perfectly horizontal.

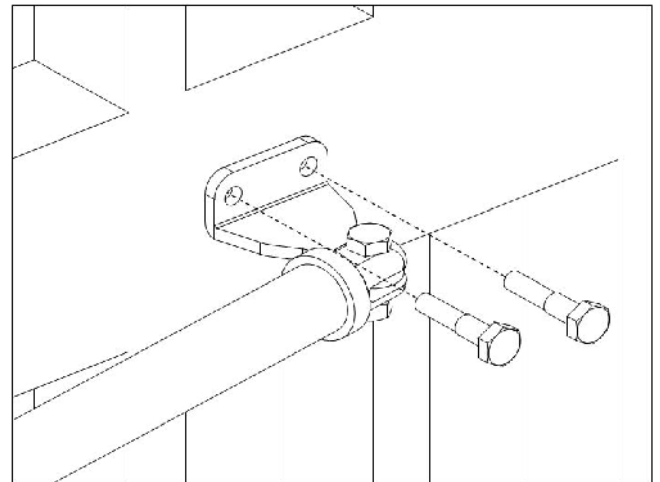
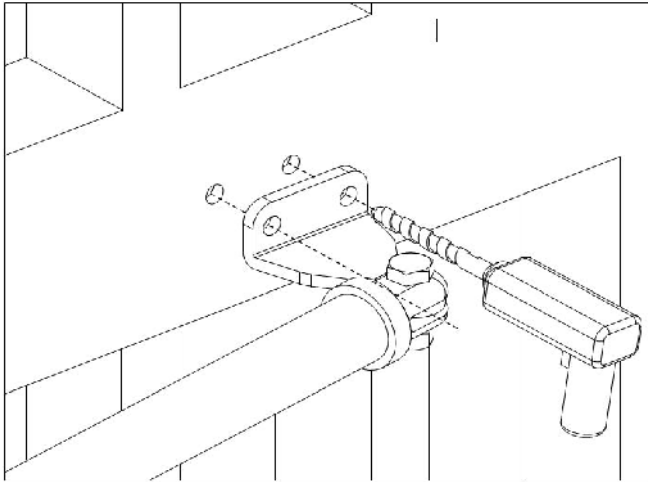


With your post bracket securely fastened, attach your gear motor to the post bracket with the bolts provided. Take care to support the weight of the gear motor at this point and throughout this stage.

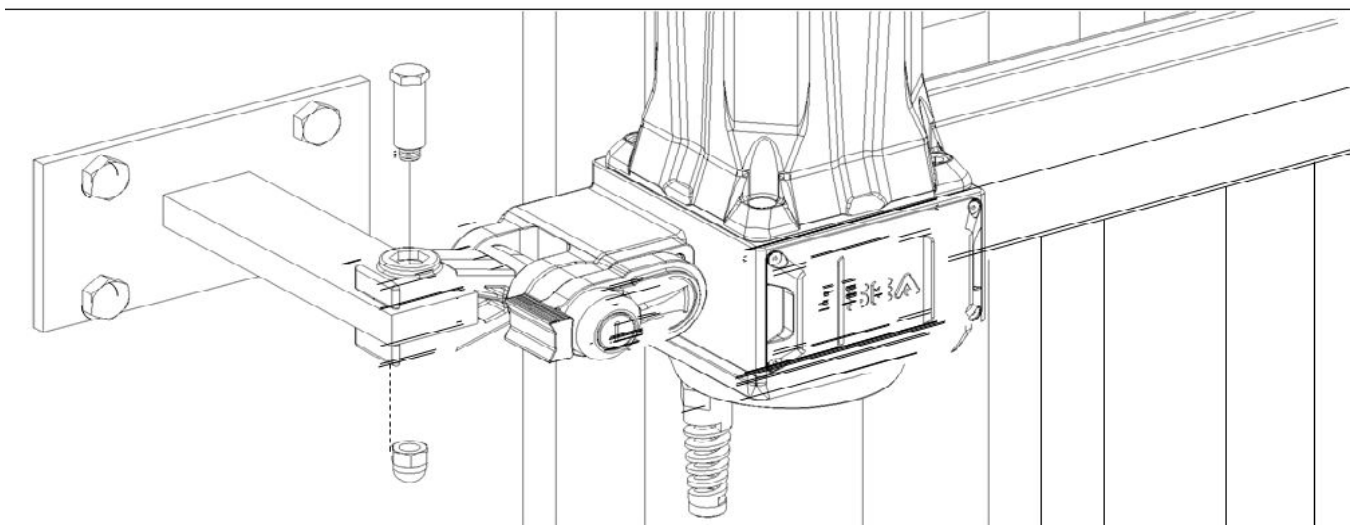


INSTALL GATE BRACKET

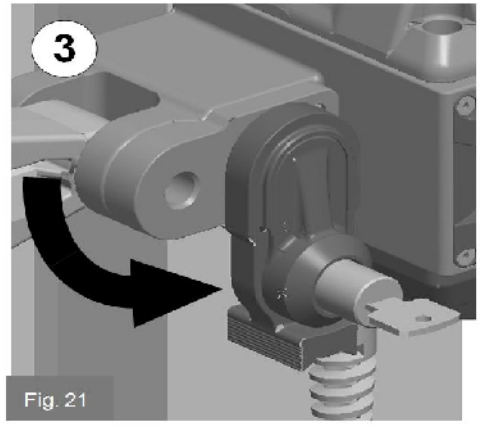
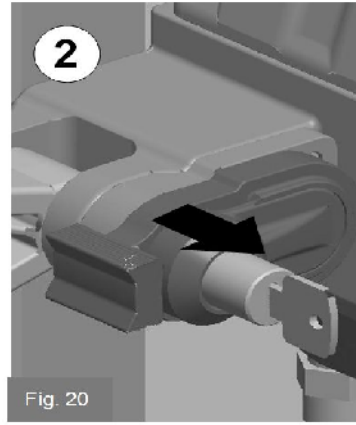
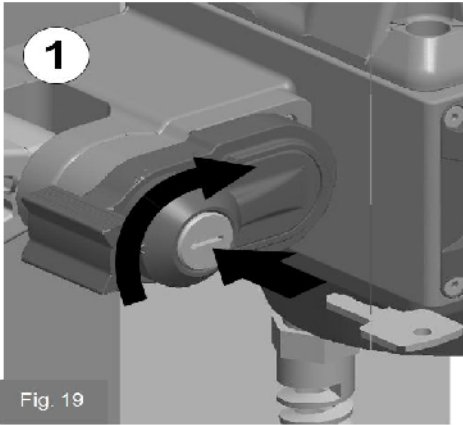
Wind out the shaft all the way till the end. Now turn the shaft back one complete turn of 360 degrees.



Attach your gate bracket to the shaft end and position on the gate taking careful note to be level with the post bracket. Fix your gate bracket at this position.



Using your manual override key put the gear motor into manual mode and gently rotate your gate and gear motor through the entire 90 degree arc to test the smoothness of your installation. If your gate and gear motor moves smoothly through the entire travel range then you are ready to proceed to the next point. If you are having difficulty or hitting sticking points at any point in the travel you may need to adjust your post bracket pivot point to facilitate a smoother run.



INSTALL GATE STOPS

This is a critical point in ensuring long trouble free operation of your automation system, yet it is relatively simple. Each gate should have a positive and well secured opening stop and closing stop. There are a range of stops available over the counter or you can make them yourself but the main point is that the stops should be well secured. The Alpha does use limit switches which makes it possible to install without stops however to protect the install from possible damage stops should be installed if possible.

LOGIC CONTROL MOUNTING AND CABLING

Mount the logic control box at a point as close as possible to a motor giving consideration to the position of your power source. Ideally you would place the logic control directly next to your power point however no single motor cable run should exceed 10 metres. Bring the power source to the logic control!

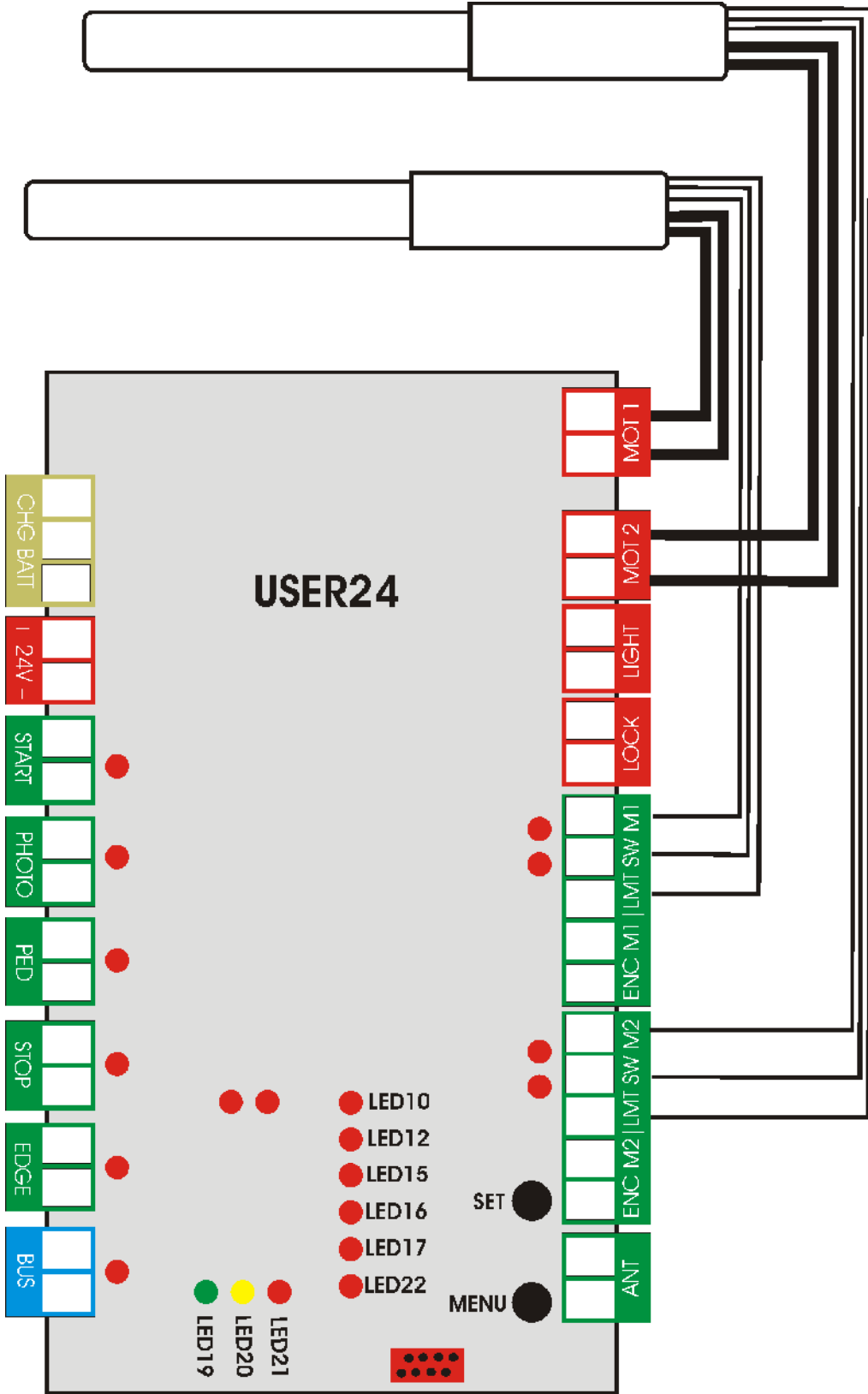
Using suitable electrical conduits (20mm) underground and in exposed areas plan and install cabling from motors and accessories to the logic control board. Use electrical junction boxes and/or suitable weather resistant glands to terminate connections. Do not connect anything in the logic control board at this point.

IMPORTANT:

USE LOW VOLTAGE MULTI STRAND CABLE – 3MM FOR MOTOR CONNECTIONS
NEVER RUN MAINS VOLTAGE CABLE IN THE SAME CONDUIT AS LOW VOLTAGE

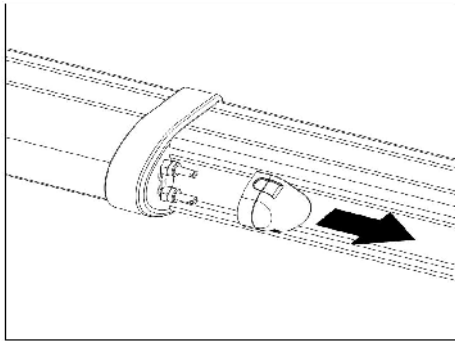
CONNECT THE MOTOR/S TO THE LOGIC CONTROLLER

Each motor needs to be connected via the five cores of cable being the two motor wires and three limit switch wires. Motor-1 terminates at connector M1 and Motor-2 terminates at connector M4. Do not worry at this point which core goes to which output as they can be reversed later. Connect limit switches for M1 at connector M11 and M2 at M14. In each case terminal 3 is open, terminal 4 is close and terminal 5 is common.



Put the gate/s in manual or unlocked mode and move the gate/s through the arc of travel until the corresponding light goes out. To increase the travel return the gate to a position where the light is on and using a screwdriver turn the open or close screw (open screw if adjusting the open and close screw if adjusting the close) towards the “+” positive mark. To decrease the range turn away from the “+” positive mark. Adjust each gate until satisfied with the positioning. Fine tuning may be done following programming using the same procedure.

- LED4 = MOTOR1 OPEN LIMIT
- LED5 = MOTOR1 CLOSE LIMIT
- LED11 = MOTOR2 OPEN LIMIT
- LED13 = MOTOR2 CLOSE LIMIT



PROGRAM LEARN MODE

Turn off the mains power

Put the gates into manual using the override key and close to within 300mm of the closing stop.

Lock the motors using the override key.

Turn on the power.

Press the MENU button once – LED10 will illuminate.

Press SET and hold until both motors start closing and release.

(NB: If one or both motors open instead of closing – turn off the power – reverse your motor wires as required and terminal blocks M1 and/or M4 and then return to the top of this section.)

Once the motors reach the stops they will automatically perform an opening cycle.

After reaching the opening stops they will automatically perform a closing cycle.

Once the closing cycle is complete the work time programming phase is complete.

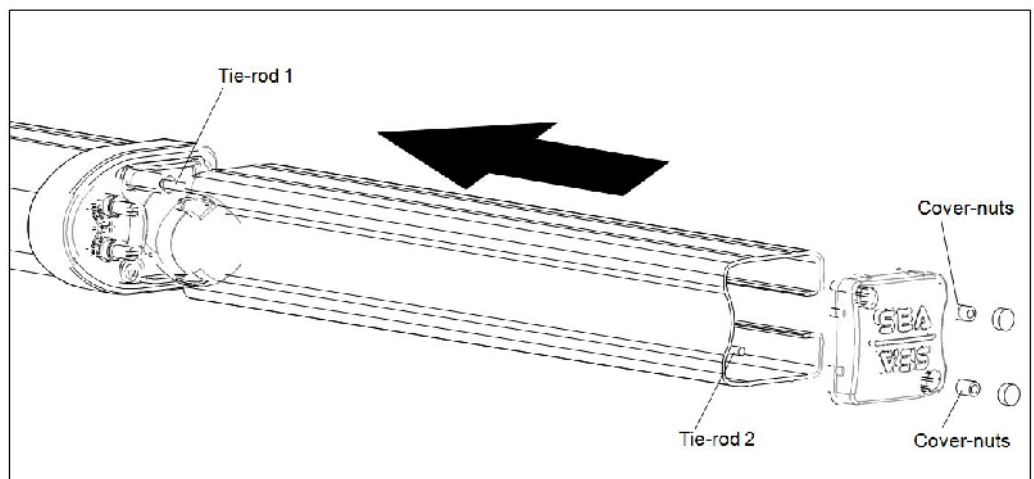
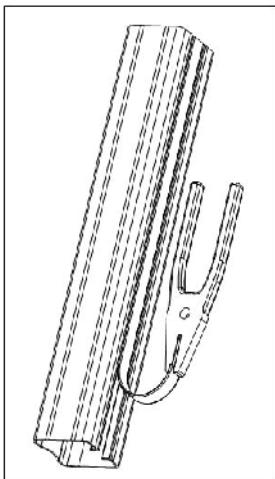
INSTALL MOTOR SHAFT COVER

Remove the pull tongue from the shaft cover and fit the cover to the motor through the two tie rods without excessively tightening the two cover nuts.

END OF SIMPLE SETUP

If all went well you have finished simple setup. On the following pages you will find some more detailed information and wiring diagrams to enhance and add to your installation.

CONNECT OPENING

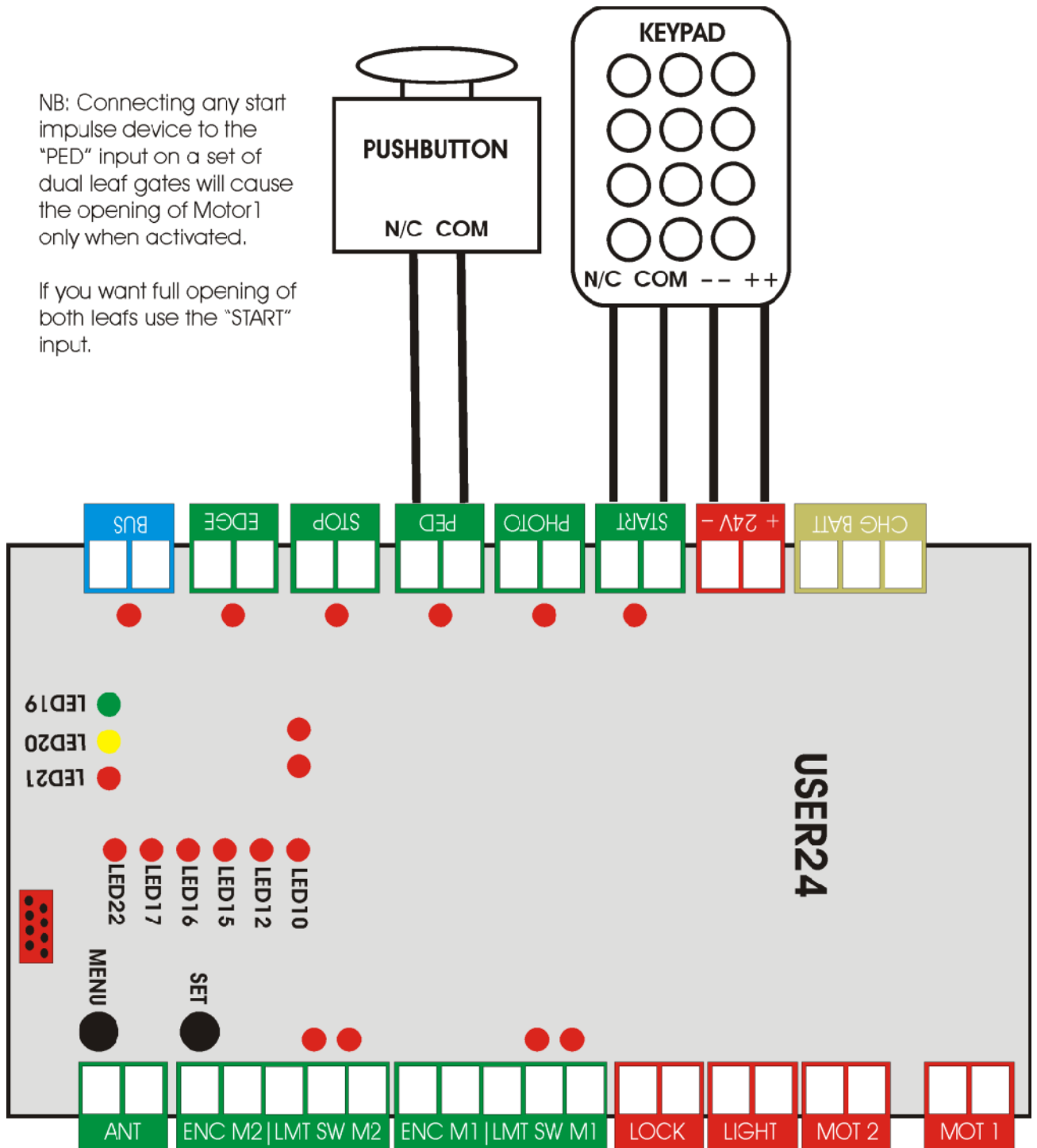


DEVICES

You can now attach any opening devices you have including keypads and pushbuttons etc. Connect these one at a time and test the installation after each addition. Opening devices are to be **normally open dry contacts** and may be connected at the terminal blocks marked START and/or PEDESTRIAN (NB: any opening command is momentary).

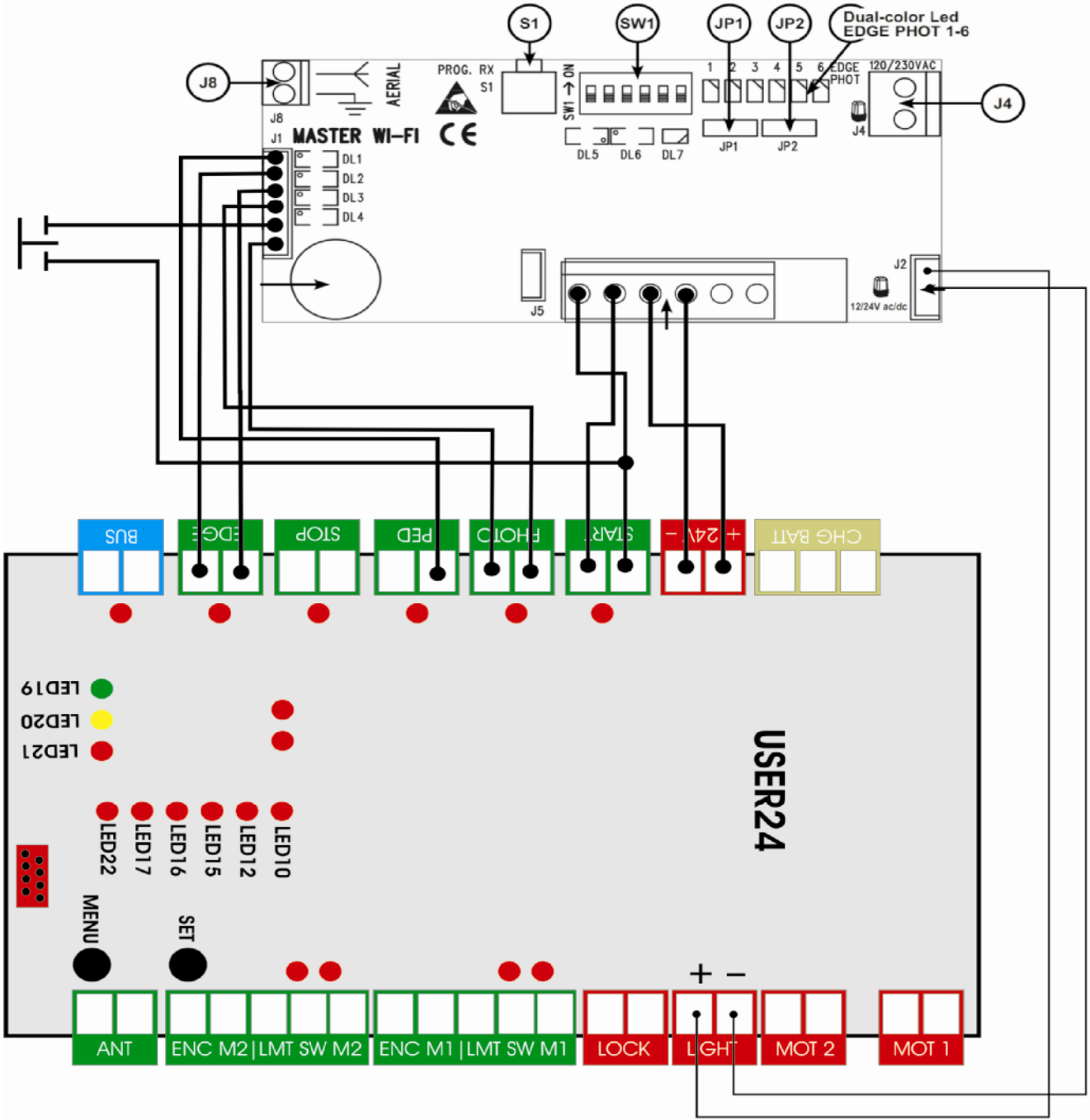
NB: Connecting any start impulse device to the "PED" input on a set of dual leaf gates will cause the opening of Motor1 only when activated.

If you want full opening of both leafs use the "START" input.



RIB WIFI MASTER AND NOVA PHOTOCELLS

1. CONNECTING THE MASTER RECEIVER TO THE LOGIC CONTROL BOARD (POWER DOWN THE CONTROL BOARD BEFORE MAKING CONNECTIONS) –



TERMINATION OF RIB WIFI RECEIVER TO USER2 24V LOGIC

1. Pay attention to polarity from the "light" on the logic board to the 24 volt connector on the WiFi receiver.

2. Cables from the receiver if the plug is inserted correctly are from top to bottom -

- Green
- Grey
- Yellow
- Black
- White
- Brown

2. SETUP AND POWER NOVA PHOTOCELLS – RECEIVER (RX) AND TRANSMITTER (TX)

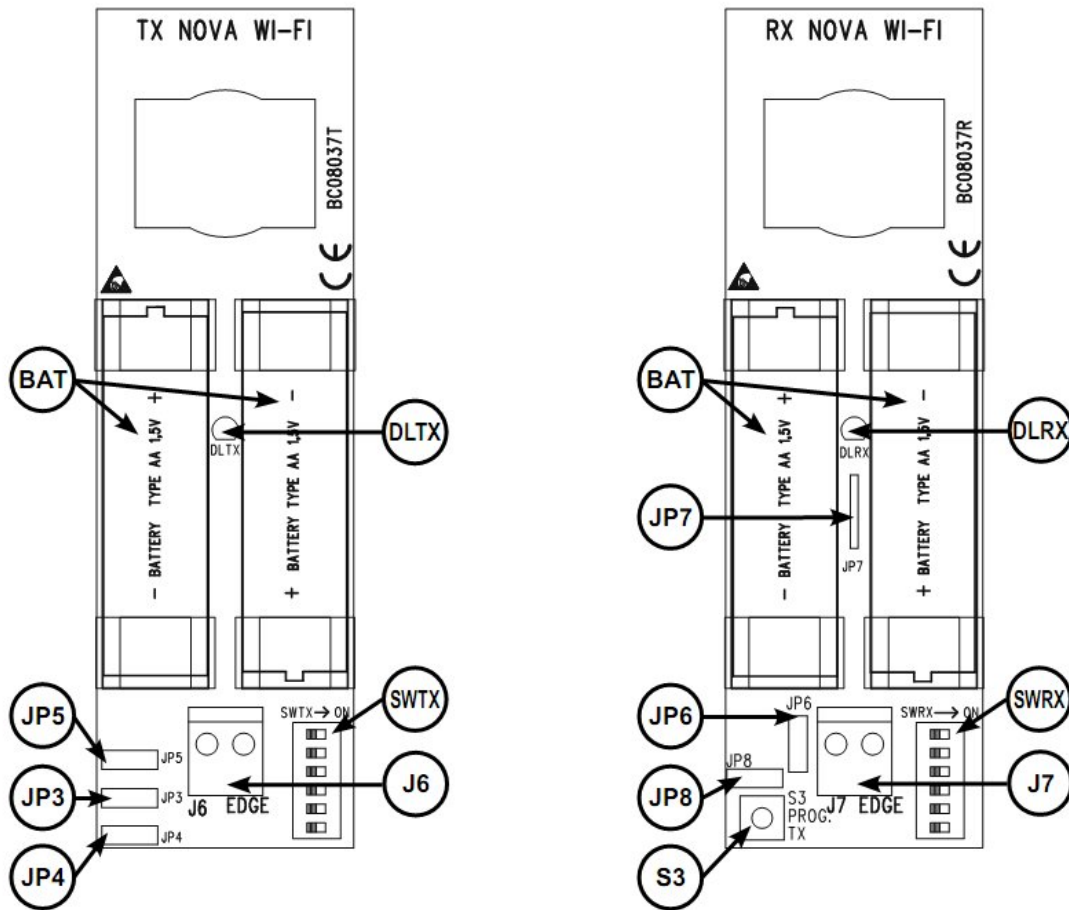
Up to six sets of photocells or combination of WiFi devices may be installed to one WiFi Master. Each set of photocells need to be given a number (channel) from one to six. After mounting your photocells paying attention to alignment set the receiver (RX) and transmitter (TX) to the same chosen channel (example: turn on dip switch number 1 on both the RX and TX).

On the TX make sure Jumpers 5, 3 and 4 are as follows – JP5 to cover the left two pins – JP3 to cover the right two pins and JP4 to cover the left two pins.

On the RX make sure that jumper 6 is as follows – JP6 to cover the top two pins.

3. INSERT BATTERIES - Insert the batteries into the TX and RX. Upon inserting the batteries the TX led should flash green for ten seconds. Upon inserting the batteries in the RX the red led will flash for 3 seconds. If the red led then stays on your alignment is good. If the red led goes out then you need to adjust your alignment.

NB: The red led will stay on for three minutes during alignment check – if it goes out simply press the S3 program button in the bottom left corner to start the three minutes again.



4. POWER THE RECEIVER – Before applying power to the receiver you need to enable any channels you intend to use. In our example we are using channel one so on the receiver we need to turn on dip switch (channel) one.

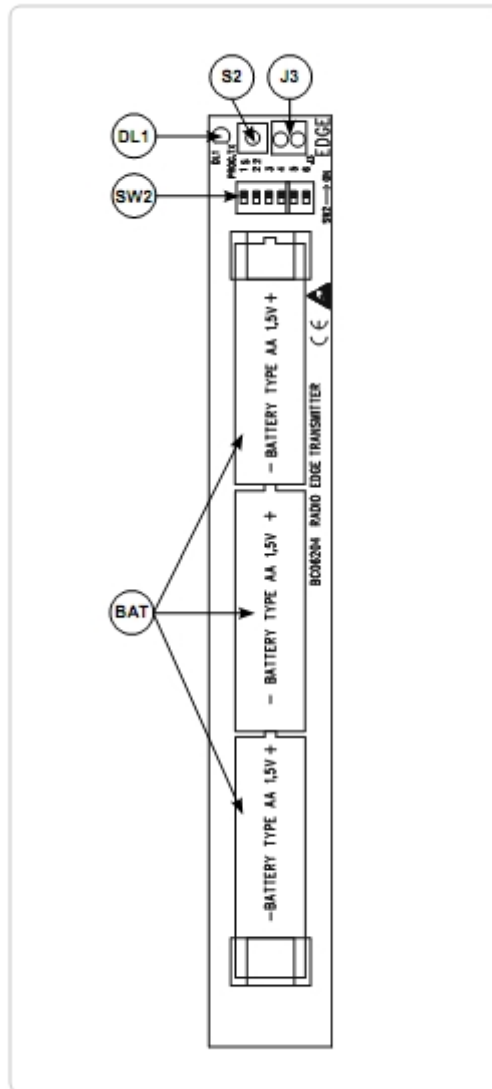
You can now turn on power to the gate logic control board which in turn will provide power to the receiver. You should hear a single beep and yellow led DL6 will light. At this point no remote control transmitters have been memorized so led DL7 will flash red and green.

5. PROGRAM ANY REMOTE CONTROL TRANSMITTERS YOU WISH TO USE – Press and hold for at least three seconds the program button on the receiver – DL7 led will go solid red for the next ten seconds. In the next ten seconds press and release any button on your remote control transmitter that you intend to use. You can then add any further remote control transmitters by simply pressing them in turn but within the next ten seconds. Every time the receiver learns a new remote control transmitter it resets the ten seconds. If no new codes are received after ten seconds the receiver will exit this mode and led DL7 will go out.
6. PROGRAM THE PHOTOCELLS TO THE RECEIVER – Press and release the program button on the Master receiver – channel selection led number one should flash red – in the next minute press and release the program button on the photocell RX marked S3 – at the Master receiver the led for channel one should turn green, a buzzer sounds to indicate that the photocells have been learnt and the led for channel two will start flashing red in readiness for you to learn further devices if available. Wait one minute and the Master receiver will exit program mode and all the channel leds will be off. At the Master receiver leds DL2 and DL3 should be lit red.
7. PROGRAM THE LOGIC CONTROL TO LEARN THAT THE RECEIVER IS THERE – Set your logic control into program mode and exit this mode. Then run “PROGRAM LEARN MODE” as described on page 8. After the system exits learn mode it should now see the WiFi Master receiver and respond to all programmed devices.
8. TEST YOUR INSTALLATION

RIB WIFI MASTER AND WIFI EDGE STRIP

1. SETUP AND POWER WIFI EDGE STRIP

Up to six edge strips or combination of WiFi devices may be installed to one WiFi Master. Each edge strip needs to be given a number (channel) from one to six. Install the batteries in the edge strip and set the edge strip dip switch to the same chosen channel as the WiFi Master (example: turn on dip switch number 1 on both the Master and the edge strip). Re assemble the edge strip paying attention to the calibration and that the roller is over the second micro switch pin (Fig16).

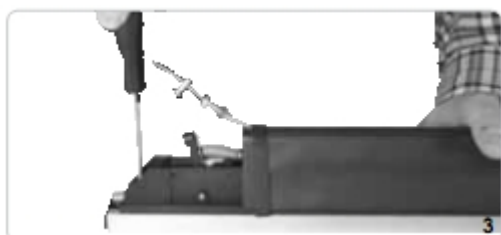


2. POWER THE RECEIVER – Before applying power to the receiver you need to enable any channels you intend to use. In our example we are using channel one so on the receiver we need to turn on dip switch (channel) one.

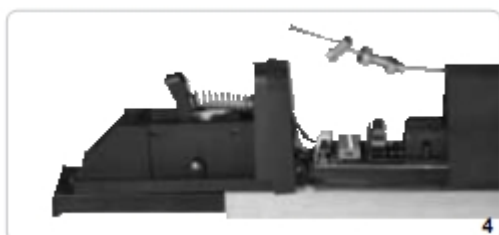
You can now turn on power to the gate logic control board which in turn will provide power to the receiver. You should hear a single beep and yellow led DL6 will light. At this point no remote control transmitters have been memorized so led DL7 will flash red and green.

3. PROGRAM ANY REMOTE CONTROL TRANSMITTERS YOU WISH TO USE – Press and hold for at least three seconds the program button on the receiver – DL7 led will go solid red for the next ten seconds. In the next ten seconds press and release any button on your remote control transmitter that you intend to use. You can then add any further remote control transmitters by simply pressing them in turn but within the next ten seconds. Every time the receiver learns a new remote control transmitter it resets the ten seconds. If no new codes are received after ten seconds the receiver will exit this mode and led DL7 will go out.

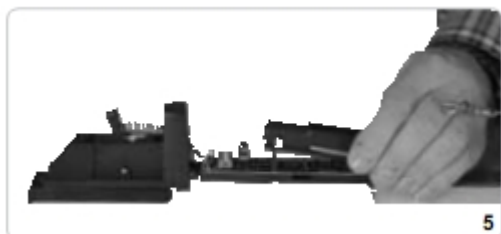
4. PROGRAM THE EDGE STRIP TO THE RECEIVER – Press and release the program button on the Master receiver – channel selection led number one should flash red – in the next minute press and release the program button on the edge strip marked S2 – at the Master receiver the led for channel one should turn green, a buzzer sounds to indicate that the photocells have been learnt and the led for channel two will start flashing red in readiness for you to learn further devices if available. Wait one minute and the Master receiver will exit program mode and all the channel leds will be off. At the Master receiver leds DL2 and DL3 should be lit red.
5. TEST YOUR INSTALLATION



3



4



5



6



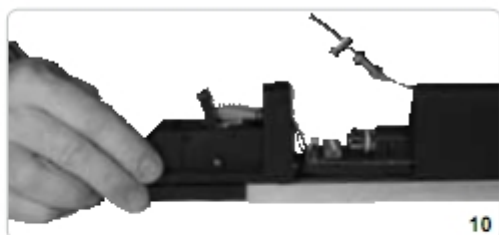
7



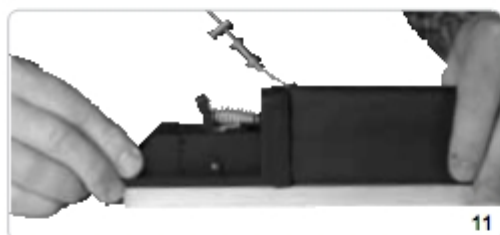
8



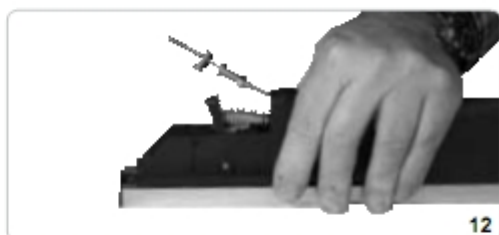
9



10



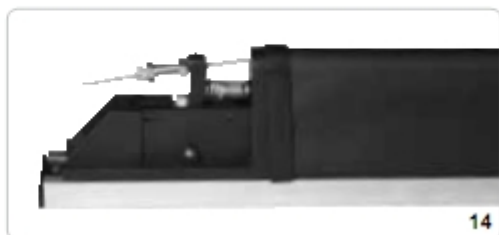
11



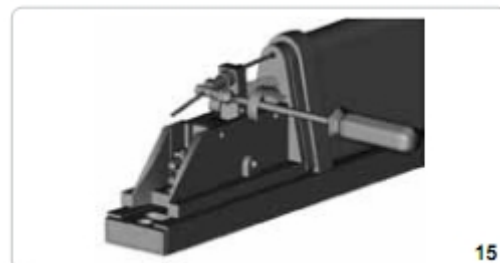
12



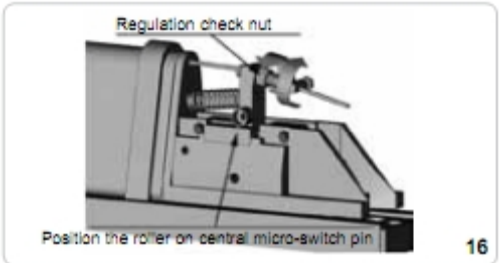
13



14

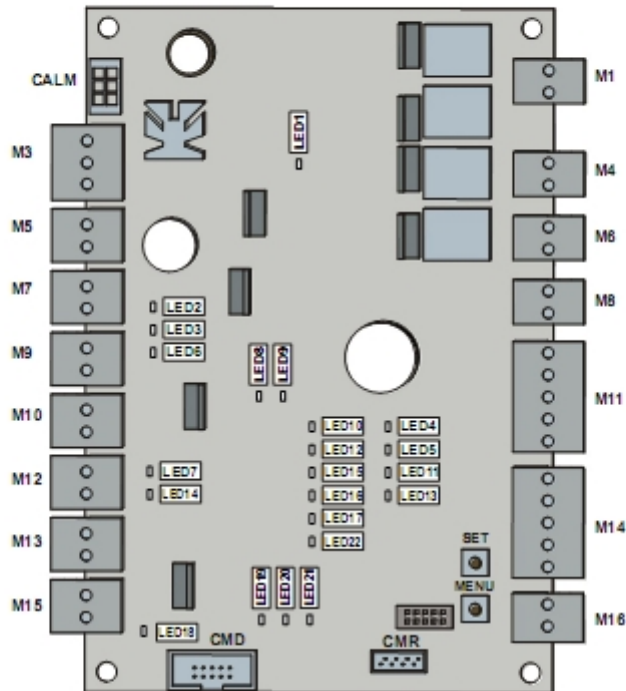


15



16

DESCRIPTION OF THE COMPONENTS



LED1 = Fuse breaking signal
 LED2 = Start
 LED3 = Photocell
 LED4 = Limit switch opening M1
 LED5 = Limit switch closing M1
 LED6 = Pedestrian Start
 LED7 = Stop
 LED8 = Battery
 LED9 = 24Vdc Power supply
 LED10 = Using modality
 LED11 = Limit switch opening M2
 LED12 = Time of pause
 LED13 = Limit switch closing M2
 LED14 = Safety edge
 LED15 = TX Programming
 LED16 = Leaf delay adjustment
 LED17 = Functioning logics
 LED18 = BUS Indicator
 LED19 = Function indicator
 LED20 = Function indicator
 LED21 = Function indicator
 LED22 = Motors' speed adjustment
 SET = Setting
 MENU = Selection

M1 = Motor 1 power supply
 M3 = Battery card connection
 M4 = Motor 2 power supply
 M5 = 24Vdc exit
 M6 = 24V 15W Warning lamp
 M7 = Start
 M8 = Electric lock exit
 M9 = Photocell connection
 M10 = Pedestrian start
 M11 = Encoder / Limit switch M1
 M12 = Stop
 M13 = Security edge
 M14 = Encoder / Limit switch M2
 M15 = BUS accessories connection
 M16 = Antenna
 CMD = Display module connection
 CMR = Receiver module connection
 CALM = 24Vdc power supply connection

AUTOMATIC SOLUTIONS AUSTRALIA PTY LTD
PO BOX 1034 CANNING VALE WESTERN AUSTRALIA 6970
TECHNICAL HELP – service@automaticsolutions.com.au