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.

ASA600 – K50 LOGIC

IMPORTANT – MANUAL OVERIDE CAP MUST BE ON AT ALL TIMES

GENERAL

ASA600

Motor Voltage – 12 volt
Power Absorbed – 70 watts
Speed – 0,019 metres per second
Maximum Thrust – 1500 N
Protection Level – IP43
Duty Cycle – 90%
Dimensions – 970L x 90W x 185H
Stroke – 60 CM
Maximum Leaf – 5 metres
Maximum Leaf Weight – 250 Kg
Opening Time – 31 Seconds

K50

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

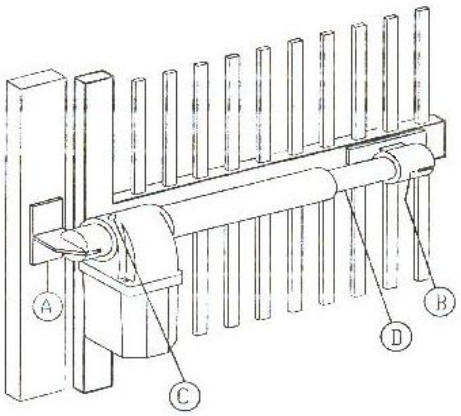
PRELIMINARY CHECKS

In order to make the automation work efficiently; the gate to automate must have the following characteristics:
- It must be balanced.
- It must oscillate fluently.
- You must be able to carry out manual closing and opening of the gate without any effort.
- Make sure that the gate has a solid structure and that there is no friction points in its movement.
- Make sure that the gate/s have both solid opening stops and solid closing stops.

GENERAL ORDER OF INSTALLATION

To ensure a good installation of the gear motors ASA600, 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 360º.
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 inclination.
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.
12 - Place the mechanical limit stops
13 - Connect the gear motors to the logic controller.
14 – Program and test your installation
15 – Attach your safety devices and access devices one by one testing for correct operation at each point.

ASA600 GEAR MOTOR INSTALLATION

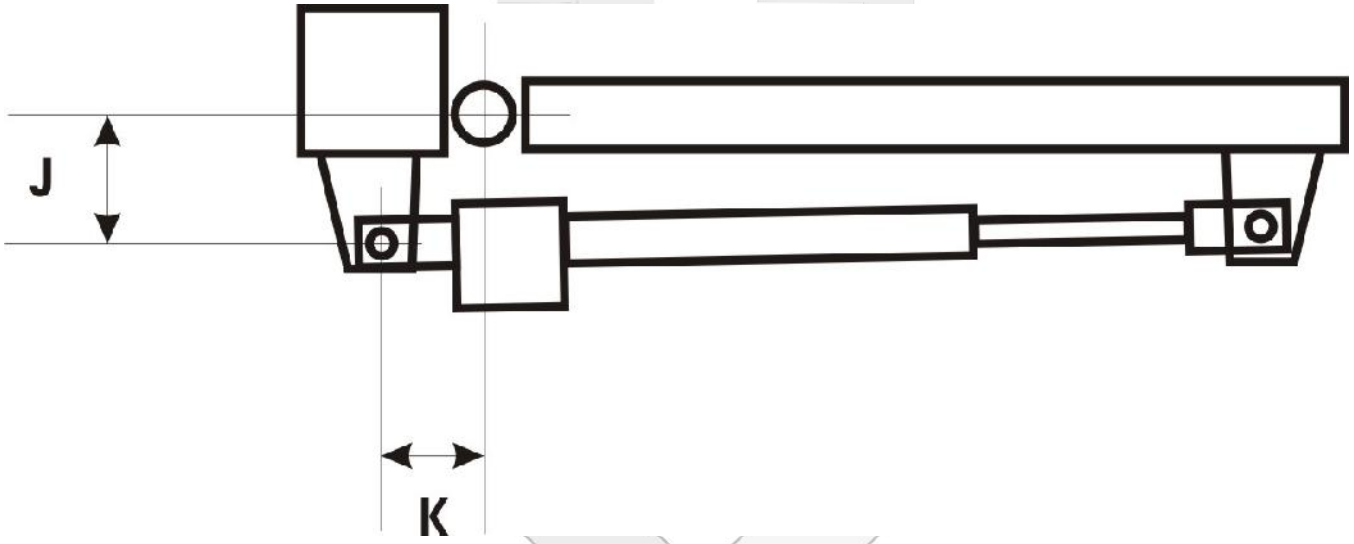


INSTALL POST BRACKET

The position of the post bracket "A" 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 "A" should be 12mm higher than the pivot point of the gate bracket "H" giving the gear motor an incline of approximately one degree.



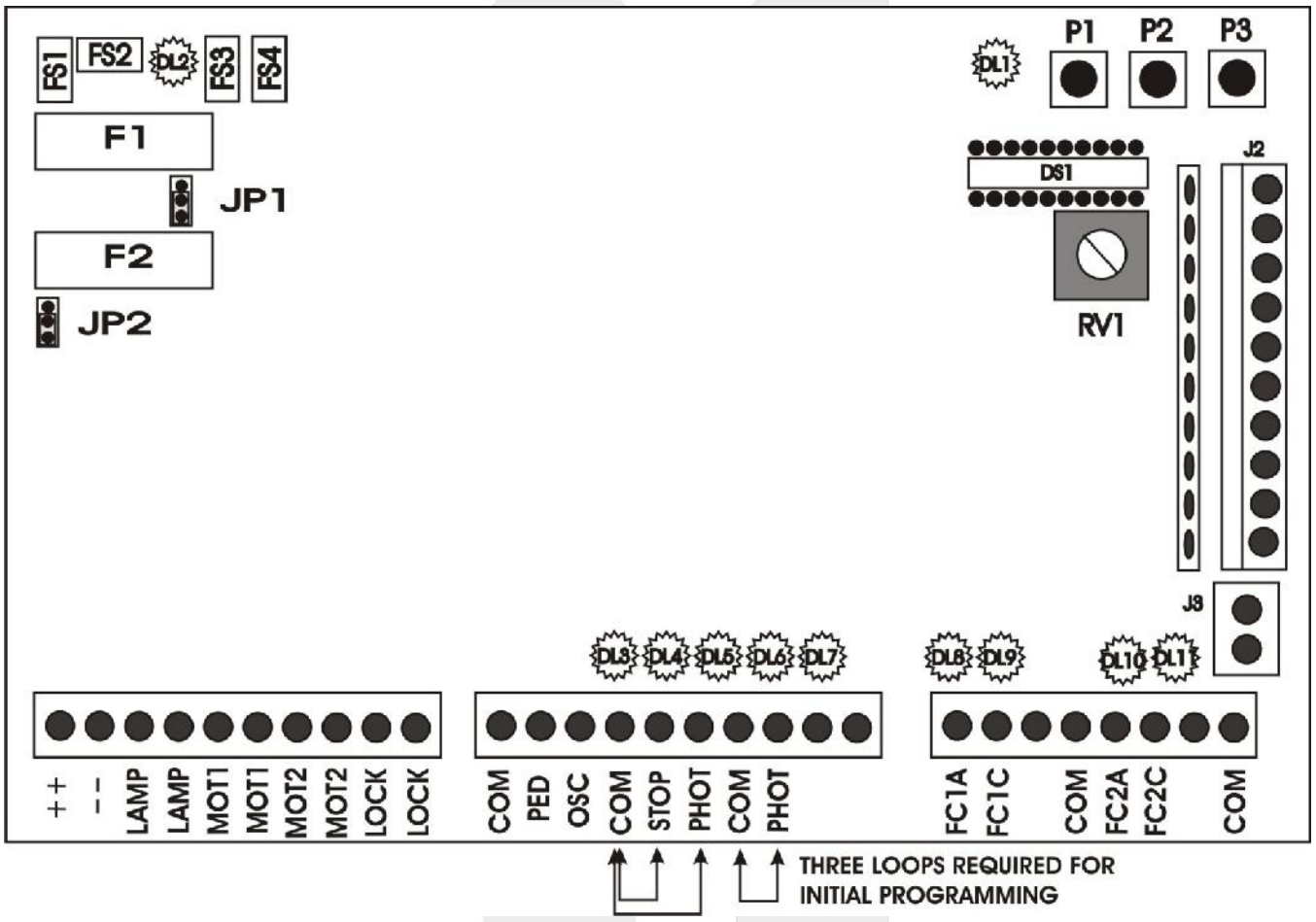
INSTALL GATE BRACKET

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. Wind out shaft "D" all the way till the end. Now turn shaft "D" back one complete turn of 360 degrees. Attach your gate bracket to the shaft end "H" and position on the gate taking careful note of your 12mm fall from the post bracket. Fix your gate bracket at this position. Using your manual override key put the gear motor into manual mode and gently move 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 must 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 critical point is that the stops must be well secured as the gear motors will exert quite a deal of force on them during programming. In summary when your gate/s open they must hit a positive stop point that stop the gate/s from opening any further and the same at the closed point.

K50 LOGIC CONTROL BOARD INSTALLATION



BOARD INTERFACE

COMPONENTS

FS1-2	Battery charge plug 12-24 Vdc
FS3-4	Power supply input 12-20 Vac
F1	Battery Fuse 10A Fast
F2	Output Fuse 2A Slow
JP1	Battery Charge Selector 12/24Vdc
JP2	Output Selector 12/24Vdc
DL1	Programming LED
DL2	Power Supply LED
DL3 DL4	Open Input LED
DL5 DL6 DL7	Stop & Photo LED
DL8 DL9	Motor1 Limit Switch LED
DL10 DL11	Motor2 Limit Switch LED
J3	Antenna Connector

TERMINALS – LEFT TO RIGHT

12Vdc/24Vac	Choose via jumper JP2 Pos 1&2 = 12V
LAMP	Flashing light output
MOT1	Output for motor 1 10A Max
MOT2	Output for motor 2 10A Max
LOCK	Output for electric lock 12Vdc 1A
COM	Common for open inputs PED & OSC
PED	Pedestrian open input (NO)
START	Open/Stop/Close input (NO)
COM	Common for STOP & PHOTO inputs
STOP	Stop input (NC)
PHOTO	Photocell Input (NC)
COM	Photocell 2 common
PHOTO	Photocell 2 Input (NC)

J2	External receiver connector	FC1A	Limit switch 1 opening input (NC)
RV1	Slowing speed regulator	FC1C	Limit switch 1 closing input (NC)
DS1	Setting Up Dip Switches	COM	Common for limit switch 1
P1	Radio code programming button	FC2A	Limit switch 2 opening input (NC)
P2	Working time programming button	FC2C	Limit switch 2 closing input (NC)
P3	Pause time programming button	COM	Common for limit switch 2

CONNECTING THE GEAR MOTORS TO THE LOGIC CONTROLLER

Each gear motor comes with a flexible electrical lead attached with two cores, negative and positive. This lead needs to be connected to motor 2 output (MOT2), and in the case of dual gates also motor 1 output (MOT1) in the control board. NB: Motor 2 is used for single gate installations and in the case of double gates is the gate you may wish to attach an electric lock to as it opens first and closes last. If the control board is positioned close enough it may be possible to connect one motor directly to the control board without joining and/or extending the cable using a suitable cable gland to enter the control board enclosure. In most cases it will be necessary to install electrical conduits and junction boxes to join and extend your motor cables using suitable two core cable. Your Automatic Solutions store can provide the cable or a good local source is generally the large automotive accessory stores as most motor vehicles run 12 and 24 volt systems. We recommend 5mm low voltage cable. No cable run should exceed 10 metres without planning for voltage drop. Ensure all joins are protected from the weather using suitable junction boxes, conduits are adequately clamped and cables are tied to avoid dragging or catching.

Once you have run your motor cables you should have two cores, or in the case of dual gates four cores inside your logic control enclosure and the obvious question is which wire goes into the left terminal and which goes into the right terminal of the motor outputs. There is no easy way of knowing and the answer is it does not matter, we will find out in the next stage and make changes as required then. Make sure you have no power connected to the control board and you can now connect your motor/s to the outputs (MOT2 and/or MOT1) paying attention to which motor will be motor 2 which will open first if so programmed when dual gates overlap. With single gates use motor 2 output only.

INSTALL YOUR INPUT LOOPS

The only other wiring needed before testing your installation is to install a few loops into the “NC” or normally closed inputs. Cut three short lengths (50mm) of single core cable and strip the two ends. Connect one end to the “photo” terminals and one end to the “com” terminal. Do the same with the “stop” terminal and the “com”. 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.

Note: Although we have stated above that we need to install loops into the normally closed inputs and you may note that the limit switch inputs are normally closed it is not necessary to install loops into these inputs. The board tests these inputs for the presence of limit switches and excludes them automatically when they are not found.

FIT AN ANTENNA WIRE

If you intend using a full antenna, install this now into the antenna terminals taking care not to allow the shield to make any contact with the core of your coaxial. Otherwise cut a small length (150mm) of light cable and strip one end. Place the stripped end into the right hand antenna terminal and secure.

SET YOUR DIP SWITCHES AND JUMPERS

Set your dip switches as per the settings below.

Single Gate Initial Settings										
ON			3				7			10
OFF	1	2		4	5	6		8	9	

Double Gate Initial Settings										
ON							7			10
OFF	1	2	3	4	5	6		8	9	

Ensure that jumper “JP1” the clip is installed to cover the 12 Volt pins and the same thing on jumper “JP2”.

CONNECT BATTERY

If you are using backup battery you will need to make two leads with male spade connectors at each end and connect your battery to FS1 and FS2 on the board. Pay attention to polarity – positive to positive and negative to negative.

CONNECT POWER

You can now plug your logic control board into the 240 volt power outlet or have your electrician connect your power via a suitably installed isolation switch and turn your power on.

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 open in pedestrian mode. To program a transmitter to 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

This is where you find out if you were lucky enough to have got your motor output wiring in the correct terminals. With your gear motor/s in manual position them about half way open and lock them into automatic mode. Using the transmitter you programmed press the button and release. Because this is the first activation after a power interruption your gates should open. Press your transmitter again to stop the gates. To correct any leaf which did not open simply turn off the power, disconnect the battery lead and reverse the motor terminals. Apply power and test again.

PROGRAM THE CONTROL BOARD

OPTION 1 - Automatic setting of the work times.

Use your transmitter and drive the gate/s to the fully open position. Set the trimmer RV1 to about half way. Press push button “P2” once for a few seconds until “DL1” lights and release. After a few seconds the logic control will make some tests, and then it will self learn the working time by closing the gate. The board will automatically exit this mode when complete and led “DL1” will go out. Use your transmitter (or pushbutton) to test your installation.

OPTION 2 - Manual setting of the work times.

Use your transmitter and drive the gate/s to the fully closed position. Set the trimmer RV1 to about half way. Press push button “P2” once and hold until “DL1” goes out (approx 10 seconds). After a few seconds the gate/s start opening at a reduced speed. During this phase use trimmer “RV1” to obtain the desired slow down speed. When the gate reaches fully open press “P2” and release. Wait a few seconds for “DL1” to light. Next press “P2” and release as follows to register the following steps.

Dual Gates (With Delay)

Press 1 – Motor 1 Start
Press 2 – Motor 2 Start (delayed)
Press 3 – Motor 1 Slow down start
Press 4 – Motor 2 Slow down start
Press 5 – Motor 1 Stop (Wait 5 seconds after hitting travel stop)
Press 6 -- Motor 2 Stop (Wait 5 seconds after hitting travel stop)

Single Gates or Dual Gates – No delay

Press 1 – Motor 2 Start
Press 2 – Motor 2 Slow down start
Press 3 – Motor 2 Stop (Wait 5 seconds after hitting travel stop)

The board will automatically exit this mode when complete and led “DL1” will go out. Use your transmitter (or pushbutton) to test your installation.

END OF SIMPLE SETUP

If all went well you have finished simple setup.

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

SELF INSTALL - NEED TECHNICAL ASSISTANCE?

OPTION 1: DIRECT WITH THE SERVICE DESK – QUICKEST AND MOST EFFECTIVE METHOD

Submit your enquiry direct with the service desk at – service@automaticsolutions.com.au
The service desk has the most experienced staff in Australia to help with your problem but they need your help.

- **Describe your problem in detail and as clearly as possible. Don't forget to include a telephone number.**
- **Be certain to detail which model or models of you are working with.**
- **Send photos of the installation – they love photos. The people at the service desk are good but they are even better when they can see the installation. Send photos of the overall scene so they can see the entire installation. Also send photos of the wiring to the control board and any other part of the installation you think is relevant.**
- **Send video if appropriate. Smartphone's these days take remarkably good video in small file sizes which can be emailed in a moment. If your problem needs a video to show the issue please feel free to send it.**

NOTE: THIS IS BY FAR THE FASTEST AND MOST SUCCESFUL WAY TO SOLVE YOUR PROBLEM
PHOTOS AND VIDEOS ARE THE NEXT BEST THING TO BEING THERE

OPTION 2: LODGE YOUR ENQUIRY LOCALLY - SLOWER BUT CAN STILL BE EFFECTIVE

Make contact with the store of purchase. Branch staffs are typically not technicians and dependent on their length of service will have varying degrees of technical knowledge. If they cannot help however they will certainly either source help locally from their technicians or make contact with the service technicians on your behalf.

OPTION 3: SERVICE CALL WITH AUTOMATIC SOLUTIONS TECHNICIAN – SLOWEST METHOD

If you fall within the local branch service area it may be possible to book a local technician to look at your installation. Wait times will vary dependent on local workloads. The cost is a service fee which includes the first half hour and the hourly rate thereafter. If any Automatic Solutions provided parts are found to be defective and within warranty these will be provided free of charge.
(NOTE: If you suspect that any parts are defective and within warranty you may wish to consider option 4)

A note on this option: If you decide on this option you will be asked to sign an "authorisation to proceed" which will provide legal authority and payment security. This form has three options available of which only the first two are available to you. The third option is for warranty repairs only for full install customers. Self install customers requiring warranty only service need to refer to option four below.

IMPORTANT: IN SHORT THIS OPTION WILL INCUR CHARGES

OPTION 4: RETURN THE PRODUCT IF BELIEVED TO BE FAULTY

As a self install customer who has purchased product if you believe the product to be faulty rather than an installation or site problem you have the option of returning the product for evaluation and to exercise your right to a replacement, repair or refund as applicable. All returned product is forwarded immediately to the service technicians for evaluation and response. There are two main methods available to return product –

- **Direct to the service centre – this is the quickest method as it cuts out the branch delay**
- **Via the branch of purchase – slower because of the delay at the branch**

When choosing this option you need to complete a product return form. This form gives you all the information on procedure involved and where to send to. These are available at the branch of purchase, can be emailed to you (contact your branch), or available here - http://automaticsolutions.com.au/page/warranty.php