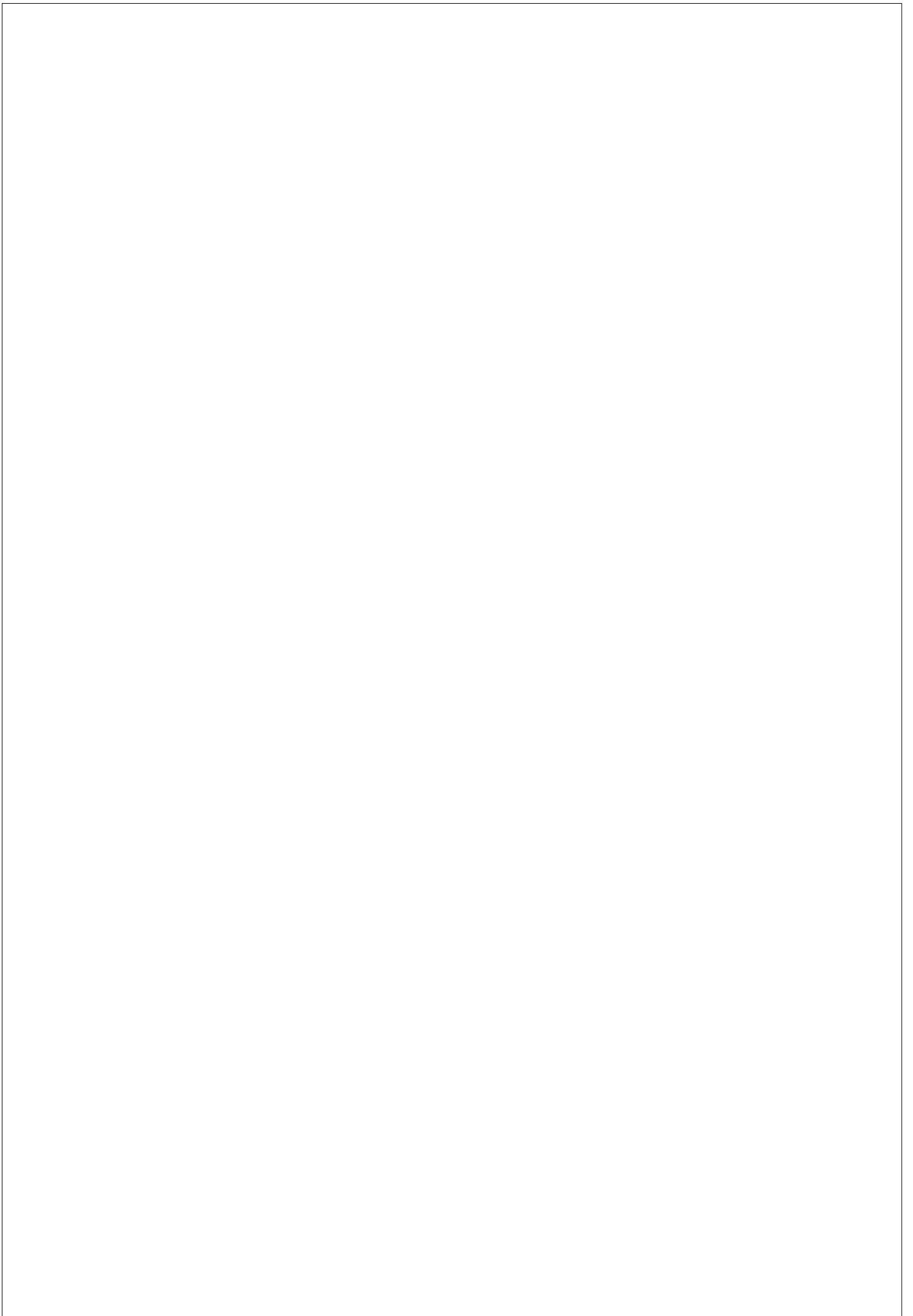


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**SWING GATE CONTROLLER
SINGLE & DOUBLE**

PRELIMINARY



Single & Double Swing Gate Controller

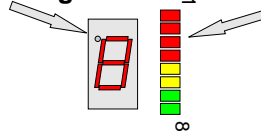
Introduction:

The controller board was designed to cater for most of the basic requirements of single and double swing gates. It requires very little intervention on the part of the installers as a set of pre-defined parameters may be selected at installation time. The installer can choose between 6 different types of installation. The different options and default values are shown in the tables below.

Installation, alignment and self learning cycle

The installation is very simple! An initial learning cycle automatically checks limit switches position, measures open / close timing and maximum current overload. All the installer has to do is to follow these simple instructions on page 2.

Furthermore during normal it is possible to supervise different functions / levels by changing the display mode. **All information is displayed using a 7 Segment digit and an 8 Led Array**



The factory default values (before a learning cycle) are:

NORMAL CYCLE PARAMETERS	VALUES
OPEN / CLOSE RUN TIME	20 SEC
STAY-OPEN TIME OUT (time before closing)	5 SEC
LIP TIME (delay between first and second motor)	2 SEC
MAXIMUM CURRENT ALLOWED MOTOR 1	10 A
MAXIMUM CURRENT ALLOWED MOTOR 2	10A
COURTESY LIGHT DURATION	4 MINUTES

PEDESTRIAN CYCLE PARAMETERS	VALUES
OPEN / CLOSE RUN TIME FOR PEDESTRIAN CYCLE	5 SEC
STAY-OPEN TIME OUT FOR PEDESTRIAN CYCLE	2 SEC
COURTESY LIGHT TIME (IF SELECTED -DIPSW 3)	30 SEC

The factory default input options are as follows

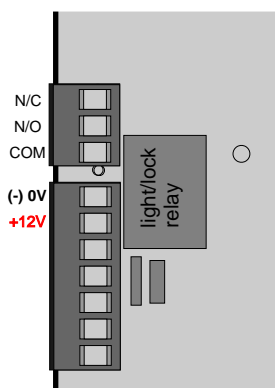
INPUTS	ACTIVATION
"OPEN" LIMIT SWITCH GATE 1	ON CLOSING
"CLOSED" LIMIT SWITCH GATE 1	ON CLOSING
"OPEN" LIMIT SWITCH GATE 2	ON CLOSING
"CLOSED" LIMIT SWITCH GATE 2	ON CLOSING
INFRARED SAFETY BEAM	ON CLOSING
TRIGGER 3 (PEDESTRIAN)	ON CLOSING
TRIGGER2 (CONDOMINIUM)	ON CLOSING
TRIGGER 1 TO OPEN GATE /AUTO-OVERRIDE	ON OPENING
TRIGGER 1 TO CLOSE GATE	ON CLOSING

COURTESY LIGHT / LOCK OPERATION

A general purpose relay provides the facility for controlling either a courtesy light or a lock.

Furthermore the installer may choose between a striker lock or a magnetic lock operation.

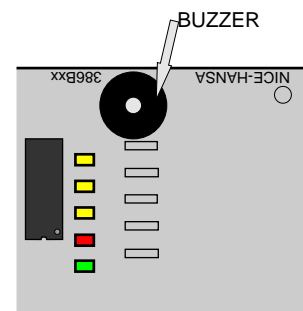
The relay contacts are voltage free and are rated at : 10A / 220V AC or 10A / 28V DC



BUZZER OPERATION

The controller has also the facility of warning the user before any opening or closing cycle by means of a buzzer mounted on board.

The buzzer also indicates different "error" conditions with a different number of beeps.

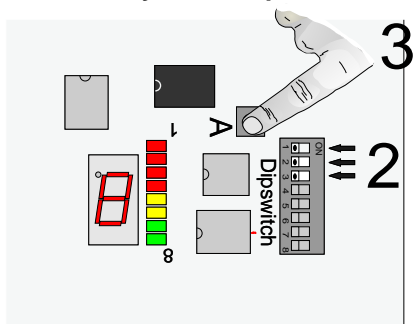


IMPORTANT!!!:

WHEN APPLYING POWER FOR THE FIRST TIME THE UNIT WILL FLASH THE LEDS (4 AT THE TIME) TO INDICATE THAT THE SYSTEM HAS TO "LEARN" THE OPEN AND CLOSE CYCLE AND STORE IT IN MEMORY. CAREFULLY FOLLOW THE 3 STEPS DESCRIBED BELOW FOR A CORRECT INITIAL SETUP

STEP 1- SELECTING THE INSTALLATION TYPE

- 1- Ensure Power is OFF
 - 2- Select the installation Type using dipswitches 1,2 and 3 (see Table1)
 - 3- Hold button "A" while..
 - 4- Applying power
 - 5- Wait for LED's to flash
 - 6- Remove power
- NOTE: After this operation A new learn cycle is required !!**

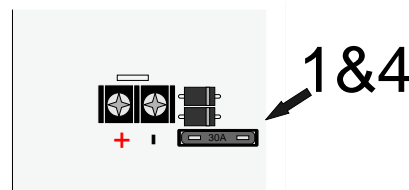
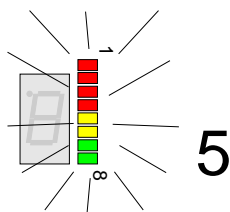


2

These are the different options for the different presets

(Table1)

OPTIONS / PRESET NO.	TWO MOTORS			ONE MOTOR		
	0	1	2	3	4	5
Maximum CURRENT Detection	X	X		X	X	
Clutch SENSOR Detection	X		X	X		X
dip switch settings (only 1,2 and 3 shown)						



STEP 2 -INITIAL AUTOMATIC SETUP USING A LEARNING CYCLE

LOOSEN THE CONNECTING ARM SCREWS ON THE SHAFT OF THE 2 MOTORS

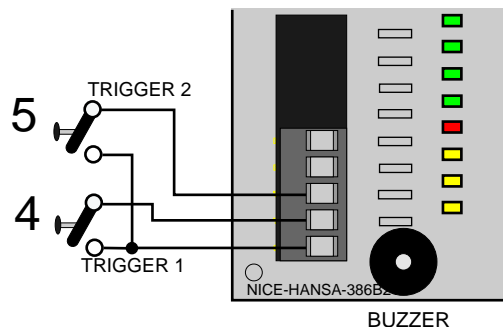
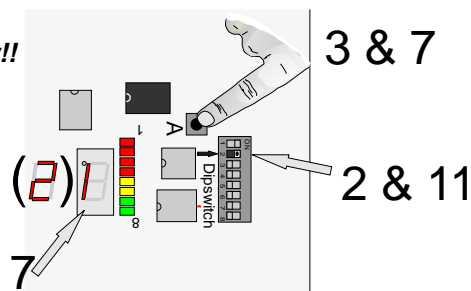
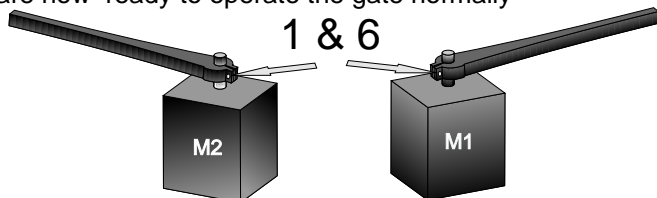
- 1- Apply Power and wait for the "0" to appear on the display (see page 3)
- 2- Move dip-switch 2 to ON (all other switches= off)
- 3- Hold button "A" until leds flash and P-R-G-1- is displayed

Note: if a "b" appears on the display the battery voltage is too low!!

- 4- Using Trigger 1 close gate 1 until the "close " limit sw is activated
- 5- Using Trigger 2 close gate 2 until the "close " limit sw is activated

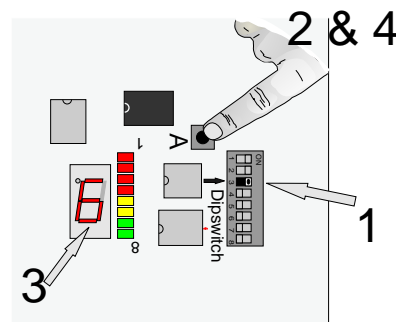
Note that releasing the button will invert the direction

- 6- ENSURE THE GATES ARE CLOSED THEN TIGHTEN THE TWO SCREWS ON THE SHAFT
- 7- Wait for the number of the motor you want to start first to appear on the display and press the "A" button.
- 8- The motors will **individually** open and close at **Low speed** (to test the limit switches)
- 9- The motors will **individually** open and close at **Full speed** (to measure the time and the overload)
- 10- the display will show R-D-Y and
- 11- **!!! move dip sw 2 back to OFF !!!**
- 12- You are now ready to operate the gate normally



STEP 3 - SETTING THE "STAY-OPEN" TIME

- 1- Move dip-switch 3 to ON (all other switches= off)
- 2- Hold button "A" until leds flash and P-R-G-2- is displayed
- 3- count the seconds you would like the gate to stay open (the least significant digit in seconds is shown on the display)
- 4- Hold button "A" until leds flash and R-D-Y is displayed followed by
- 5- **!!! move dip sw 3 back to OFF !!!**



Power up sequence

WHEN POWER IS APPLIED THE GATE , IF OPEN, WILL AUTOMATICALLY CLOSE AT A LOW SPEED.

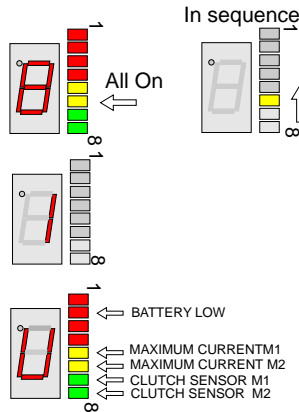
NORMAL OPERATION:

At power up the system will automatically step through :
1= LED TEST (all led's lit up simultaneously and in sequence)

2= DISPLAY DEFAULT NO (FLASHING 5TIMES)

3= SHOW UTILITY LEDS

Utilities LED'S
ALARM CONDITION

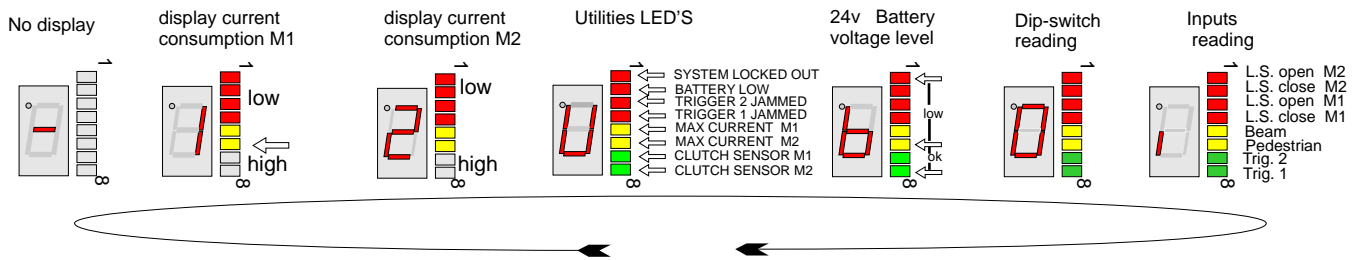


IMPORTANT NOTE: when the battery voltage reaches 23.6 Volts the control board will automatically shut down and turn the battery-low LED on

Display modes SWING GATE

While in CLOSED POSITION it is possible to select different type of data to be displayed on the 8 led array
Pressing button "A" will cycle the display through:

- = NO DISPLAY
- 1 = DISPLAY CURRENT OF MOTOR 1
- 2 = DISPLAY CURRENT OF MOTOR 2
- U = DISPLAY CURRENT UTILITIES LEDS STATUS (EMERGENCY STOPS)
- b = DISPLAY BATTERY LEVEL
- O = SHOW DIP SWITCH READING BY CPU
- i = SHOW INPUTS READING BY CPU



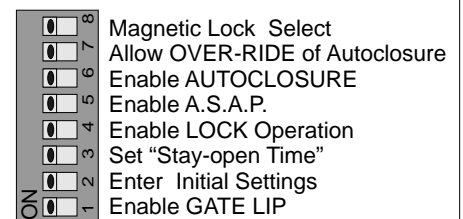
Dip-Switch option selection

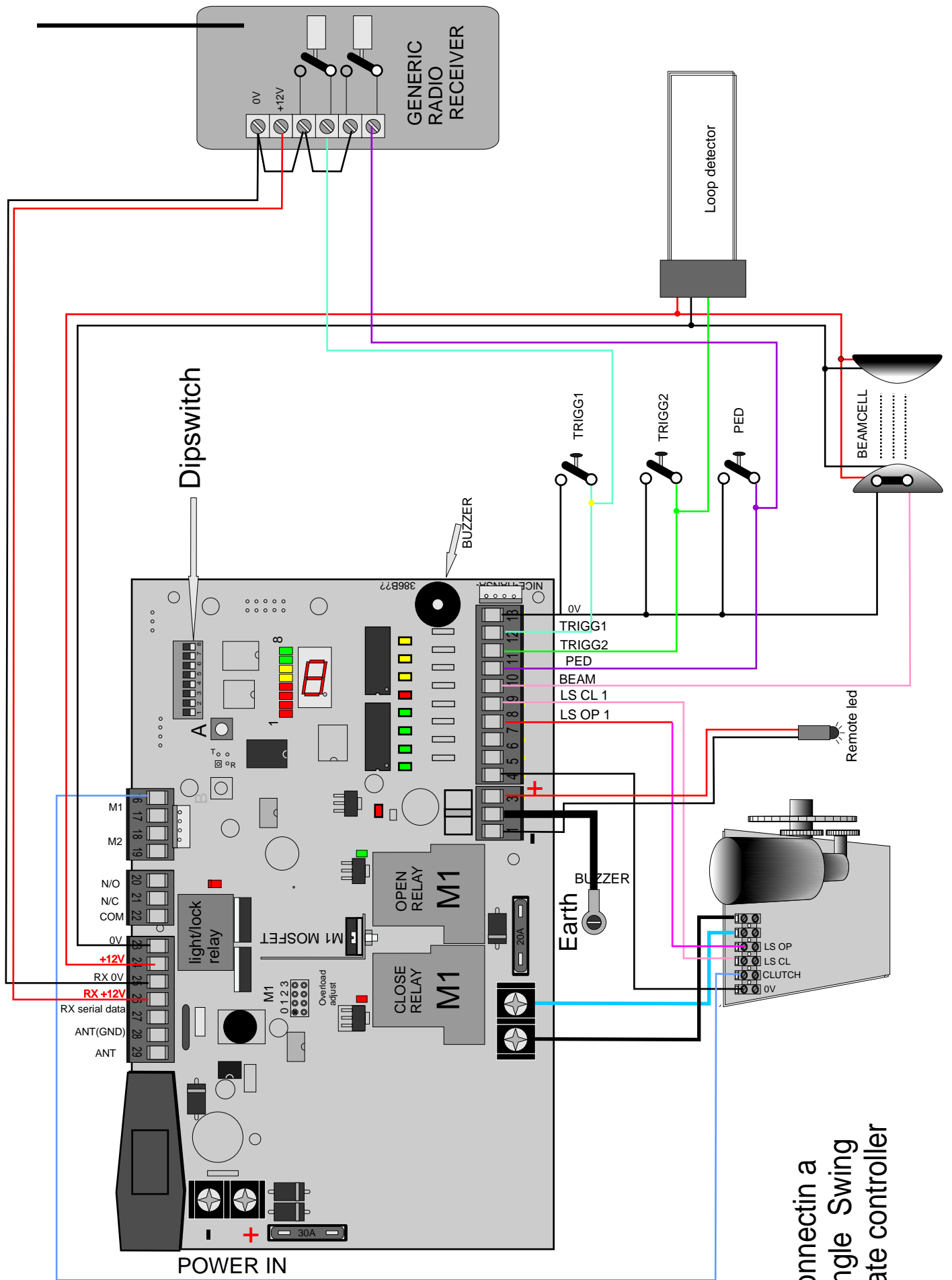
Different options can be changed using the 8 slide switches (8 way DIP SWITCH) mounted on board.

NOTE: most options become selectable only when the gate is in the "closed" position.

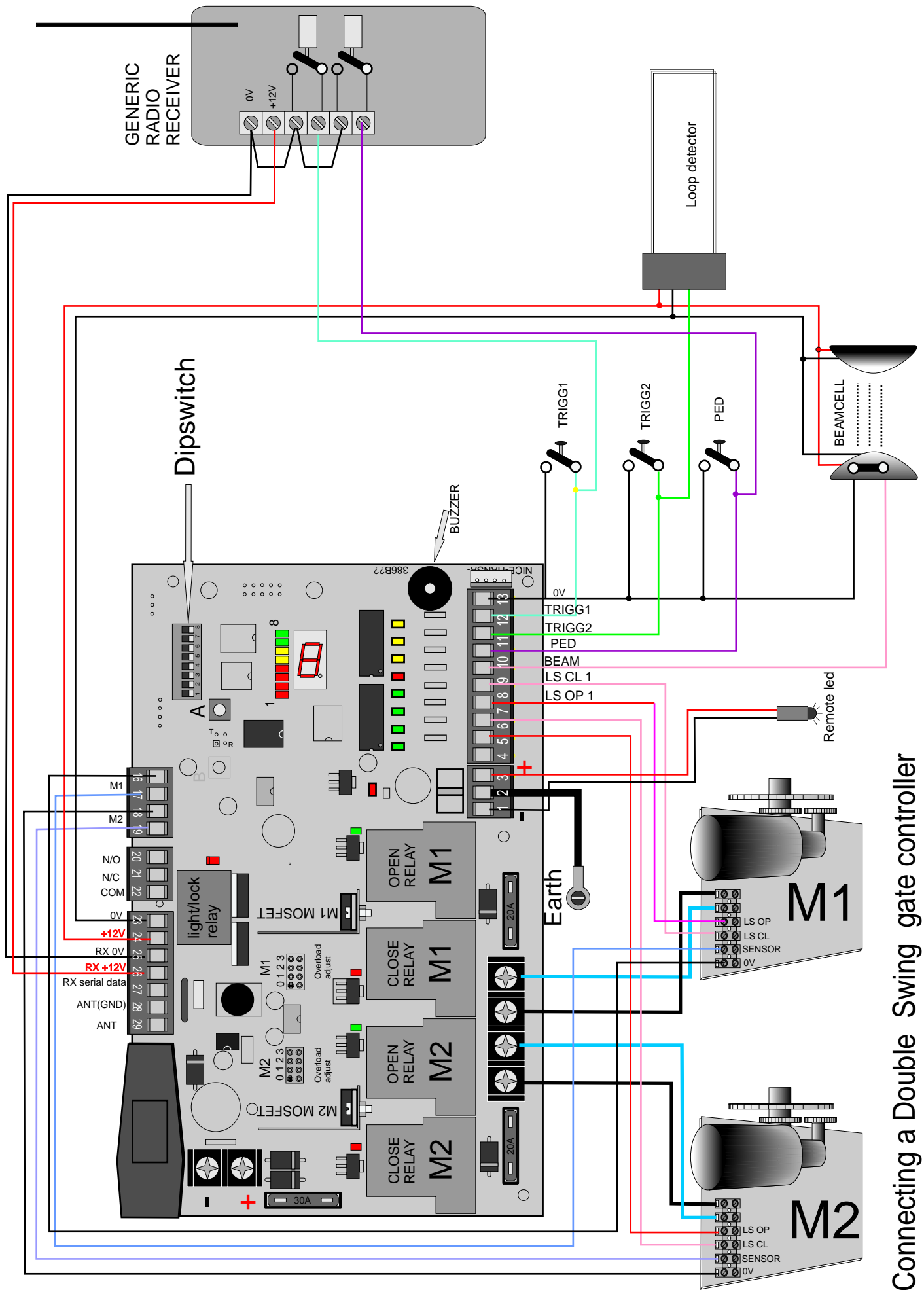
For security reason during the pedestrian cycle the safety beam is INACTIVE!!! (only the overload is active)

SWITCH NO.	FUNCTION	DESCRIPTION OF FUNCTION
8	MAGNETIC/STRIKE LOCK SELECT	(DIP-SWITCH 4 MUST BE ON) When ON the LOCK RELAY will operate for the duration of the cycle When OFF the strike lock will operate for 1 Sec before opening
7	FORCE "STAY-OPEN"	When ON, if TRIGGER 1 is held in for longer then 3 seconds the gate will open and stay open even if the AUTO-CLOSURE SWITCH 6 is ON
6	ENABLE "AUTO-CLOSURE"	When ON, the gates will AUTOMATICALLY close after the preprogrammed "STAY-OPEN" time has elapsed
5	A.S.A.P. "AUTO-CLOSURE"	When ON, the gates will AUTOMATICALLY close after the SAFETY BEAM has been interrupted (will open while beam is broken but will re-close immediately if beam is clear - If beam is not broken will close after 5 sec.
4	"LOCK SELECT" / COURTESY LIGHT	When ON the relay will activate a lock for 1 sec before the gate opens When OFF the relay will activate the courtesy light for 4 minutes
3	PROGRAM "STAY-OPEN" TIME	If ON while pressing button "A" - program the duration the gates will stay open before closing automatically (if auto-close is selected)
2	ENTER INITIAL MOTOR SETUP	If ON while pressing button "A" - test and learn opening and closing time - measure current overload for each motor
1	"LIP" FUNCTION	When ON, one of the two gates will open and close 2 seconds earlier then the other - the FIRST motor is selected during the initial setup (pag...)





Connectin a
Single Swing
gate controller



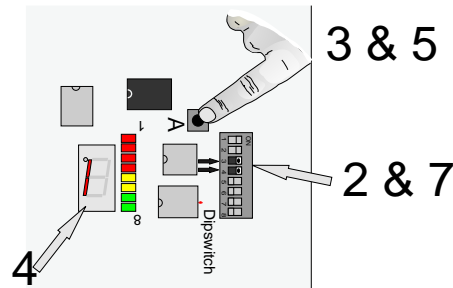
Connecting a Double Swing gate controller

PROGRAMMING THE RADIO REMOTE CONTROL CODES

The controller has the capability of storing the codes of up to 100 remote cotrols

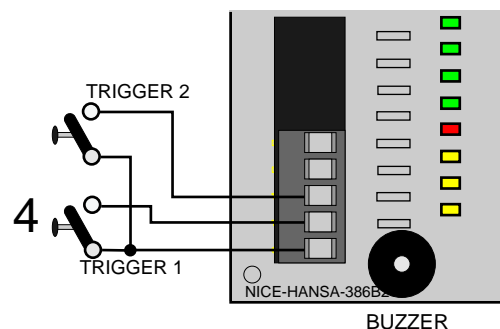
STORING THE REMOTE CONTROLS IS VERY EASY

- 1- ensure that the gate is in the closed condition.
- 2- set dip-switches 3 and 4 to ON
- 3- hold button A until " P r g r c " is displayed
- 4- using trigger 1 (UP) and trigger 2(DOWN) select the location in memory where you want to store the new remote control code
or
hold trigger 1 for longer then 2 seconds to access to the next free location in memory (the new location will be displayed)
- 5- press and hold button A while transmitting with the new remote control. Once stored the display will show
- 6- if you require to store more then 1 transmitter repeat sequence from point 4
- 7- to exit programming simply switch dipswitches 3 and 4 to OFF



REMOTE CONTROL BUTTONS:

- button 1 will activate TRIGGER 1
- button 2 will activate the PEDESTRIAN trigger
- button 3 will lock the Gate (disable all activations except radio)
- buttons 1 and 3 will unlock the gate (enable all triggers)
- button 4 will activate the courtesy light



THINGS TO REMEMBER:

BEFORE THE LEARN CYCLE:

When applying power for the first time the unit will flash the leds (4 at the time) this indicates that the system has to "learn" the open and close cycle and store it in memory.

During the learn cycle triggers 1 and 2 buttons will CLOSE the gate . EACH TIME THE BUTTONS ARE Released the direction of the motors is inverted

If at power up a "b" appears on the display the battery voltage is too low to do the "learn" cycle. The learn cycle must be performed with FULLY CHARGED BATTERY for a correct current measurement

DURING THE LEARN CYCLE:

During the full speed procedure of the learning cycle it is possible to change the "slow-down " points of the gate while opening and while closing. To do this:

- 1 - Press Trigger one to start the full speed cycle
- 2 - as the gate approaches the open position press button A

AFTER THE LEARN CYCLE:

when power is applied or AFTER A MAINS FAILURE the gate , if open, will close automatically at low speed.

When the battery voltage reaches 23.6 volts the control board will automatically shut down and turn the battery-low led on . No operation is possible under this condition

During the pedestrian cycle the safety beam is not implemented and only the overload safety is active

NOTES:

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