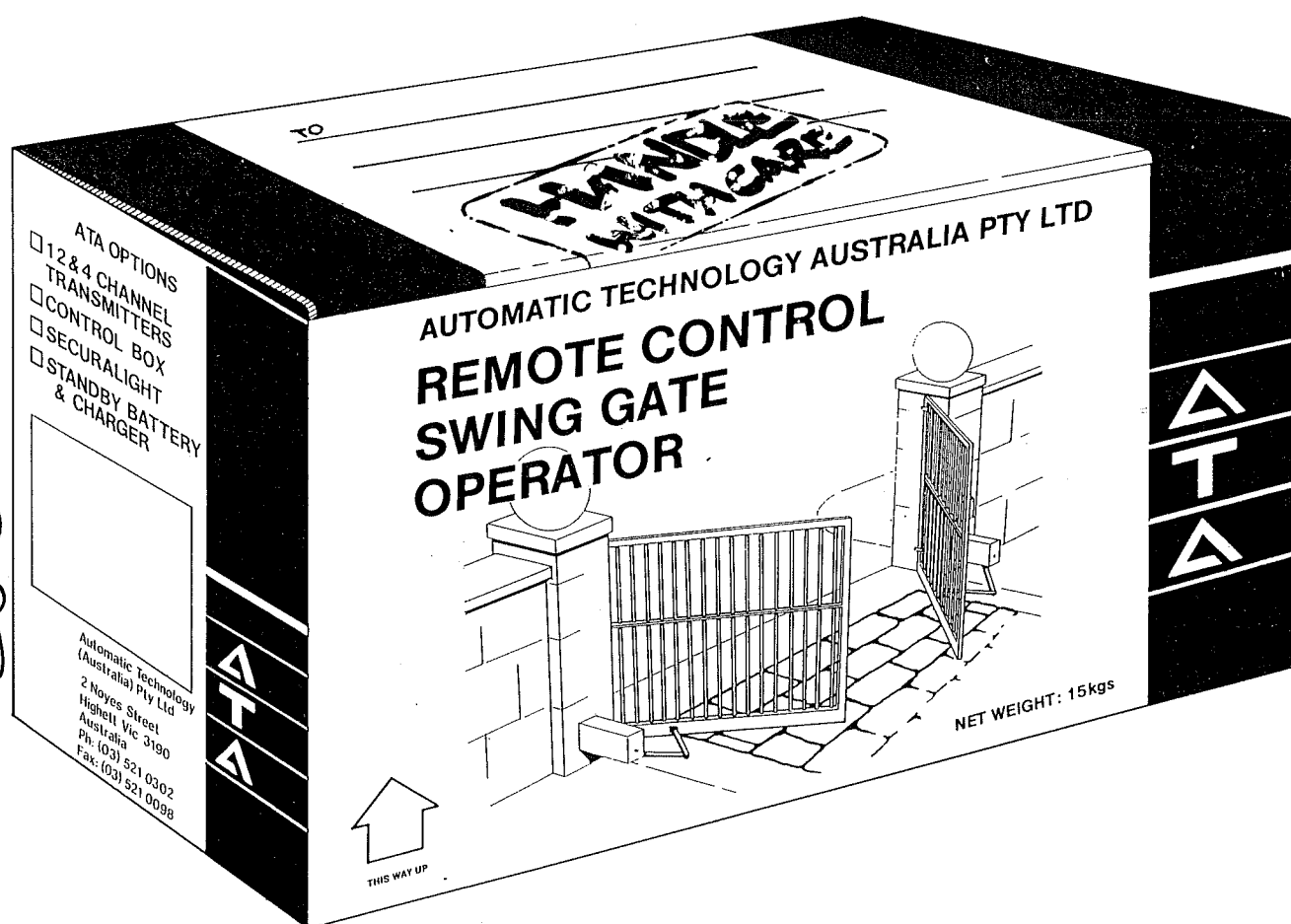


SWING GATE 3 WIRE CB9 V2.

AUTOMATIC TECHNOLOGY AUSTRALIA PTY LTD

REMOTE CONTROL SWING GATE OPERATOR



INSTALLATION INSTRUCTIONS

AND

OWNERS MANUAL



Automatic
Technology
Australia

PLEASE READ THIS INSTRUCTION MANUAL BEFORE ATTEMPTING TO INSTALL THE OPERATOR.

PRODUCT DESCRIPTION

The ATA Swing Gate Operator consists of one electronic control box, hand held transmitter and gate operator drive unit (one drive unit for single gate installation and two drive units for dual gate installations).

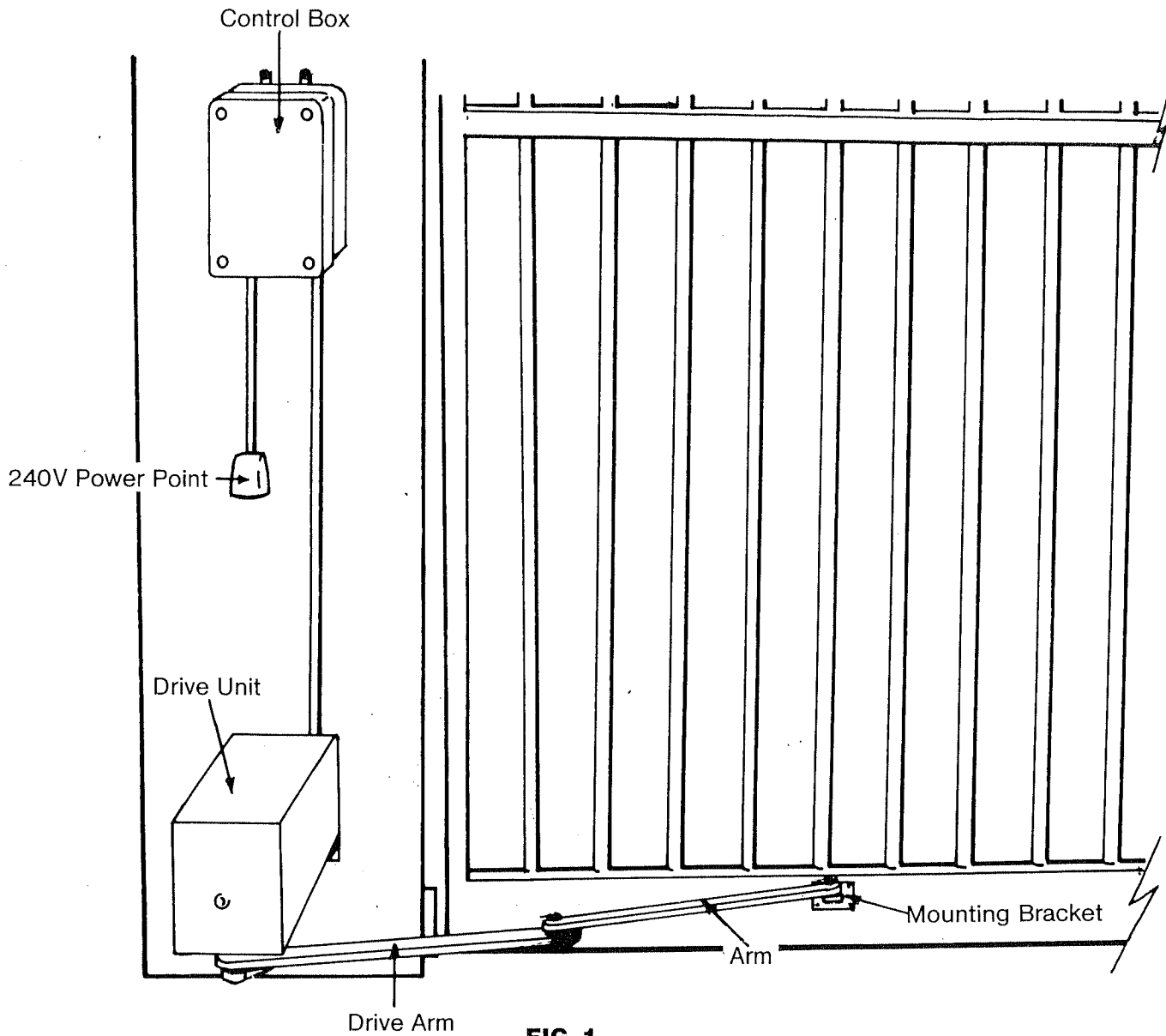


FIG. 1

CONTROL BOX

The Control Box is housed in a weatherproof plastic enclosure with mounting brackets, complete with control board (to drive single or dual gates), remote control receiver, transformer and power cord. It operates from a normal 240V 50Hz general purpose powerpoint.

DRIVE UNIT

The Drive unit consists of a powerful 24V DC motor, gear assembly and limit switch assembly, housed in a lockable enclosure. Each Drive unit has a pair of arms and arm bracket, plus arm assembly hardware.

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FEATURES

The ATA control board is packed with new and exciting features using the latest technology in board design and surface mounted components

OPERATION

Remote control operation is via a hand held transmitter enabling the gate(s) to open or close on activation of the transmitters push button. Activation of the transmitter during closing will re-open the gate(s), while activation during opening will stop the gate(s).

CONTROL BOX

The control box is housed in a weatherproof plastic enclosure and when used with mounting brackets and suitable glands, is designed to meet all the ratings of IP56 enclosures.

OBSTRUCTION DETECTION ON OPENING AND CLOSING

The ATA Control Board not only contains obstruction detection in both opening and closing directions, but also has obstruction detection for each gate leaf. This is ideal for gates with different leaf weights or different forces required to open/close the particular leaf. When the gate(s) strike an object on closing, the gates automatically reverse and when opening the gate(s) stop, awaiting the next command which then closes the gate(s).

AUTOMATIC CLOSE (USER SELECTABLE)

Moving a shunt pin on the ATA Control Board will activate the automatic close mode. This mode will automatically shut the gate after a user selectable time from 1sec to 2minutes. Adjusting the time is simply turning a dial on the control board.

BATTERY PACK WITH CHARGER SYSTEM (SBY-1) (OPTIONAL EXTRA)

An optional charger module plugs into your control board to provide battery operation in case of mains failure. The battery charger module senses AC shutdown and automatically switches to battery backup mode. When AC power returns, the battery charge module senses this state and reverts back to AC operation. Visual indication on the charger module (SBY-1) shows which supply is being used.

Green Light On: Mains Power

Flashing Red Light: Battery Backup Power

The unique charging circuit only charges the battery when required by continuously monitoring the status of the battery's charge.

When fully charged the battery's charger turns off. This unique feature prevents overcharging of the battery and lengthens battery life.

SOLAR PANEL MODULE (OPTIONAL EXTRA)

When connected, the solar panel charges the battery when necessary to retain its fully charged status.

POWER FAILURE RELEASE

The Drive unit(s) can be disconnected for manual operation in the event of power failure by pulling the ring upwards and sliding the motor clockwise.

SOLENOID LOCK RELEASE

The ATA Control Board has provision for a 24V electric solenoid lock with a latching action.

DELAY OPENING

One leaf opens first followed by the second leaf, so there is no need to mount arms at different locations. Both arms can be mounted in the same position on both leaves.

DELAY CLOSING

The gate leaf which opens last closes first followed by the other leaf.

OPTIONAL LIGHT OUTPUTS WITH OPTIONAL L.D.R.

A 24V light can be connected to the control board to automatically switch on for 2-3 minutes after the gate is activated.

An optional L.D.R. (Light Depend Resistor), if required, enables the lights to be turned on only at nighttime. The light sensitivity is adjustable.

PHOTO ELECTRIC INPUTS

When Photo Electric beams are connected they provide an extra safety system.

When the gates are closing and the P.E. is broken the gates re-open and remain open until the obstruction is cleared.

INSTALLATION

The ATA gate operator is designed to operate most domestic swing gates, including solid gates. However, they must be in good operating condition and should be able to be operated by hand relatively freely. While wind loading will not affect the operation of the operator, proper obstruction and reversing detection settings should be chosen at installation in high wind areas to ensure trouble free operation.

STEP 1

Before commencing installation of the Gate Operator check the following:

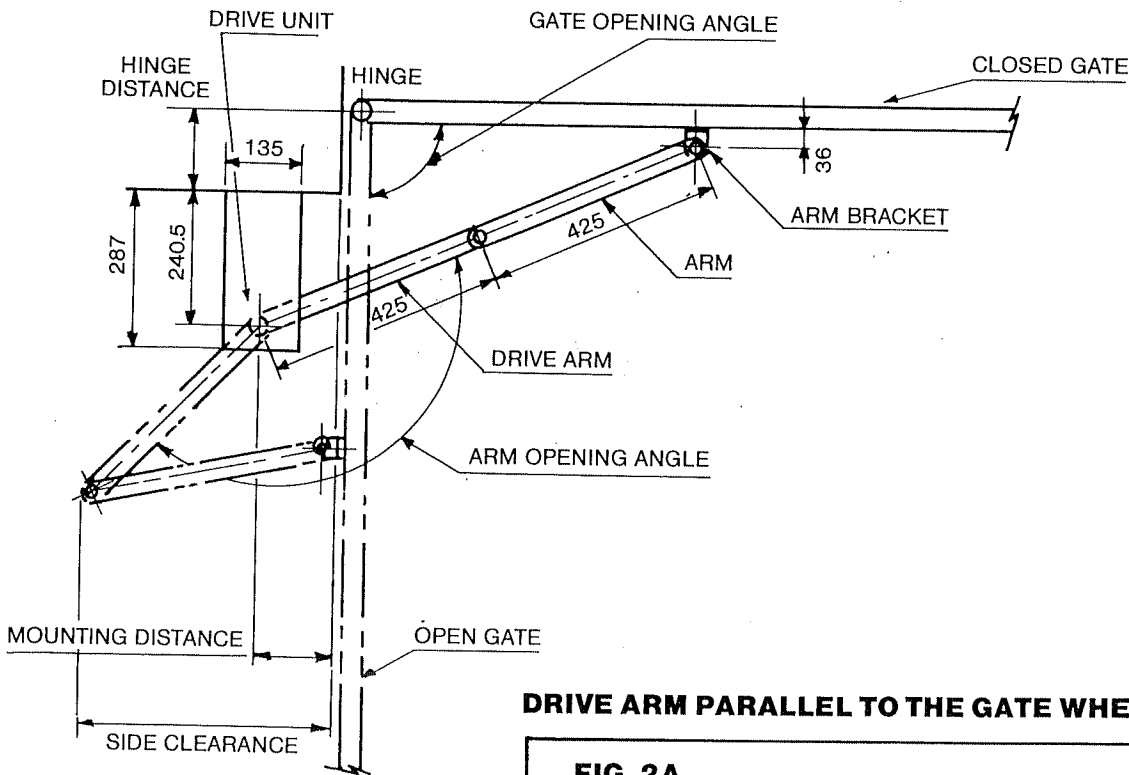
- (a) Pier or gate post must be of solid construction (eg. brick, solid timber or steel), as it has to anchor most of the force applied by the drive unit.
- (b) Availability of weatherproof 240V, 10AMP general purpose powerpoint on or near by the pier.

- (c) If dual gate operators required, provision must be made for underground 3-core electrical cable from one pier to the other.
- (d) If the gate is already installed, measure the distance from the centre of the gate hinge to the pier and side clearance.
- (e) Select from INSTALLATION CHART page 5 optimal mounting distance for the drive unit and opening angle of the gates.

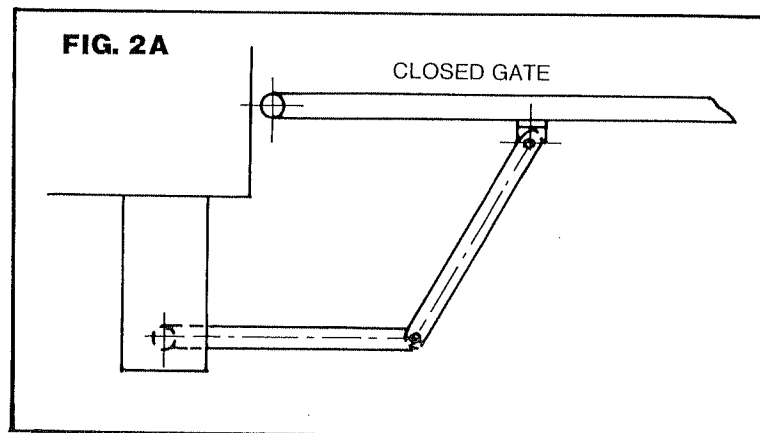
NOTE: centre page can be used as a template to mark position of the Drive Unit and Control Box mounting holes.

Select suitable location on the gate for mounting of the arm bracket. Gate frame or support bar along the gate, which is at least 32mm high will provide a solid base. Draw a line along the gate up to the pier, check with spirit level that line is horizontal and is a minimum of 65mm above the ground.

FIG. 2 DRIVE ARM AND ARM IN LINE WHEN GATE CLOSED



DRIVE ARM PARALLEL TO THE GATE WHEN CLOSED



INSTALLATION CHART

DRIVE ARM AND ARM IN LINE WHEN GATE CLOSED

MOUNTING DISTANCE	HINGE DISTANCE																							
	220			200			180			150			125			100			50			0		
	SIDE CLEARANCE	OPENING ANGLE	ARM ANGLE	SIDE CLEARANCE	OPENING ANGLE	ARM ANGLE	SIDE CLEARANCE	OPENING ANGLE	ARM ANGLE	SIDE CLEARANCE	OPENING ANGLE	ARM ANGLE	SIDE CLEARANCE	OPENING ANGLE	ARM ANGLE	SIDE CLEARANCE	OPENING ANGLE	ARM ANGLE	SIDE CLEARANCE	OPENING ANGLE	ARM ANGLE			
90	480	90°	173°	465	90°	174°	470	90°	172°	470	90°	170°	470	90°	167°	470	90°	164°	470	90°	158°	470	90°	151°
	490	92°	179°	490	92°	180°	490	92°	178°	505	93°	178°	515	94°	177°	515	94°	179°	500	95°	165°	490	95°	162°
120	425	90°	161°	435	90°	161°	460	90°	164°	465	90°	163°	470	90°	162°	480	90°	160°	470	90°	154°	450	90°	148°
	460	92°	167°	470	92°	167°	500	93°	172°	500	93°	171°	515	94°	171°	525	95°	171°	525	95°	164°	585	100°	166°
140	390	90°	151°	420	90°	155°	440	90°	157°	460	90°	158°	465	90°	157°	470	90°	157°	465	90°	152°	470	90°	146°
	425	92°	157°	455	92°	160°	485	93°	165°	500	93°	165°	510	94°	167°	525	95°	167°	525	95°	162°	560	100°	164°
200	250	90°	122°	390	90°	140°	350	90°	133°	400	90°	138°	430	90°	140°	445	90°	142°	465	90°	141°	470	90°	138°
	265	92°	124°	415	92°	144°	390	93°	139°	440	93°	144°	480	94°	149°	505	95°	152°	520	95°	150°	570	100°	156°

DRIVE ARM PARALLEL TO THE GATE WHEN CLOSED

MOUNTING DISTANCE	HINGE DISTANCE																	
	180			150			125			100			50			0		
	SIDE CLEARANCE	OPENING ANGLE	ARM ANGLE	SIDE CLEARANCE	OPENING ANGLE	ARM ANGLE	SIDE CLEARANCE	OPENING ANGLE	ARM ANGLE	SIDE CLEARANCE	OPENING ANGLE	ARM ANGLE	SIDE CLEARANCE	OPENING ANGLE	ARM ANGLE	SIDE CLEARANCE	OPENING ANGLE	ARM ANGLE
90	425	90°	138°	465	90°	146°	470	90°	147°	470	90°	147°	470	90°	144°	470	90°	140°
	460	92°	145°	500	93°	155°	510	94°	158°	510	94°	156°	525	95°	154°	528	95°	148°
120	330	90°	117°	435	90°	134°	460	90°	139°	470	90°	140°	470	90°	140°	470	90°	137°
	-	-	-	465	93°	139°	495	93°	147°	510	94°	150°	525	95°	150°	580	100°	155°
140	270	90°	105°	405	90°	125°	445	90°	132°	460	90°	135°	470	90°	136°	470	90°	135°
	305	93°	110°	450	93°	133°	495	94°	142°	515	95°	147°	520	95°	146°	615	100°	167°
200	-	-	-	270	90°	97°	355	90°	109°	410	90°	116°	455	90°	124°	470	90°	126°
	-	-	-	290	93°	99°	400	94°	115°	470	95°	126°	510	95°	133°	570	100°	144°

NOTE:

Above reference was prepared on gate 40mm thick and centre of gate hinge 35mm from the pier. It may vary in other specification, but will be a reliable guide.

HINGE DISTANCE - distance from the centre of gate hinge to the edge of the pier

MOUNTING DISTANCE - distance from the edge of the pier to the centre of Drive Unit

OPENING ANGLE - angle between open and closed position of the gate

SIDE CLEARANCE - distance from the edge of the pier to extreme position of rotating arms

ARM ANGLE - angle through which Drive Arms rotates between open and closed position at the gate

Drive Arm rotates approximately 8° in 1 sec on single leaf gate.

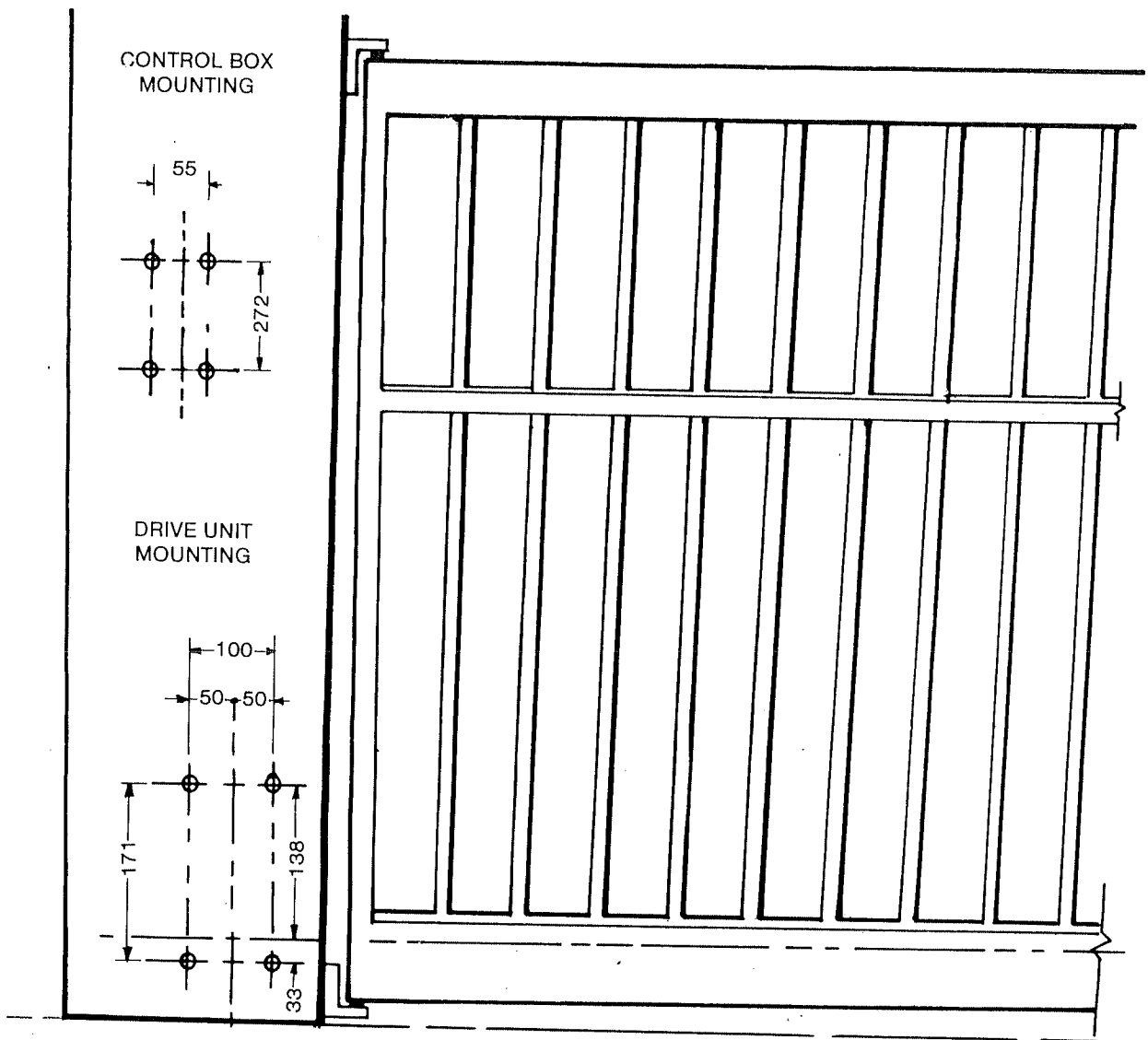


FIG. 3

STEP 2

Marking of the drilling position for Drive Unit and Control Box. (Fig. 3)

(a) When template is used.

Bend template at selected mounting distance, place bend over edge of pier. locate line drawn along the gate and mark centres of 4 holes which corresponds with Drive Unit mounting holes. Reverse side of the template can be used for marking location of the Control Box

For mounting of the Drive Unit use 4x10mm loxins and for mounting of the Control Box use 4x6mm loxins or dynabolts. Allow space around Control Box for easy access and wiring connections.

(b) When template is not used.

Extend line drawn along the gate across the pier. Mark one line 33mm below and one line 138mm above. Draw a vertical line at selected mounting distance from edge of

pier, then draw two parallel lines, 50mm on either side of it. The intersection of two vertical and horizontal lines are drilling positions for Drive Unit mounting.

(Dimension reference 100x171).

Mark Control Box mounting position 55mm horizontally and 272mm vertically. Allow space around control box for easy access and wiring connections.

For mounting of Drive Unit use 4x10mm loxins and for Control Box use 4x6mm loxins or dynabolts.

STEP 3

Unlock cover from the Drive Unit and slide it off. Mount Control box and Drive unit onto the pier. Assemble arms and arm bracket with shoulder screws then secure them on drive shafts of Drive unit (Fig. 4)

DO NOT ENGAGE DRIVE MOTOR AS YET

FIG. 4

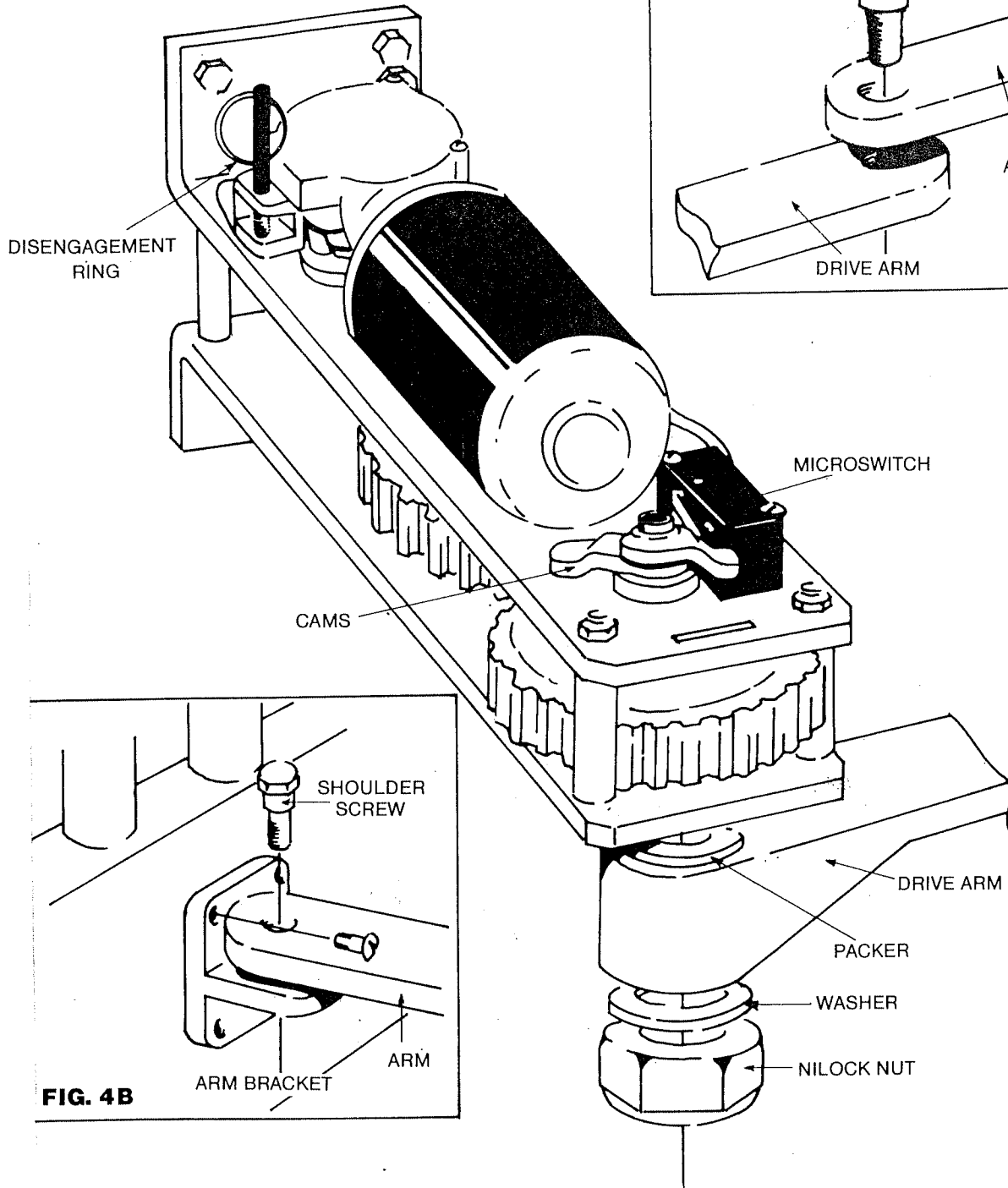


FIG. 4A

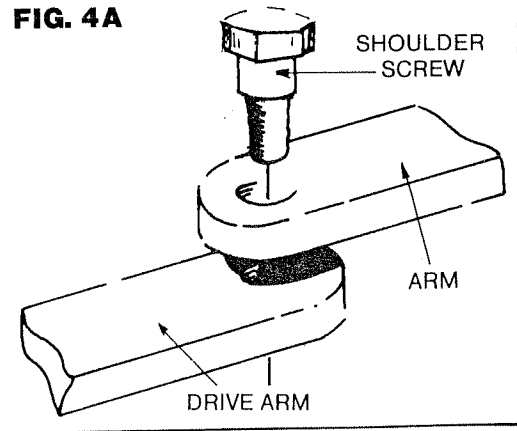
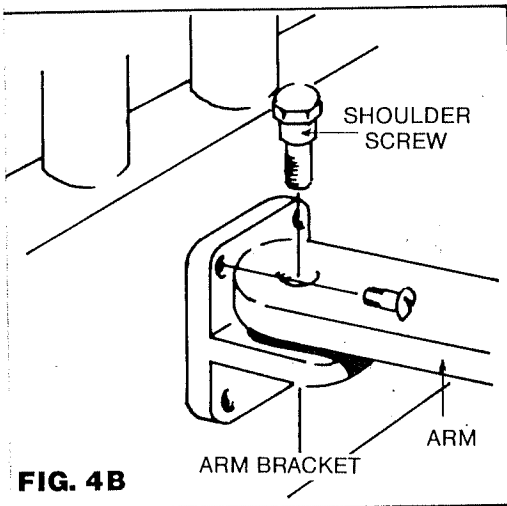


FIG. 4B



STEP 4

With the gate closed, rotate the arms until the arm bracket reaches the gate. Keep arms straight or Drive arm parallel to the gate depending on option chosen and mark position of arm bracket mounting holes on the gate.

STEP 5

Arm bracket mounting. (Fig. 4B)

- (a) Drill and tap for M6 screws in marked position then secure arm bracket with 4 pan or round head screws. (NOT SUPPLIED)
- (b) Drill through the gate in marked position then secure arm bracket with 4 pan or round head screws and nuts.
- (c) If timber gate, use equivalent wood screws.
- (d) If steel or iron gate, arm bracket can be welded on. (Make sure weld is complete and secure.)

MOTOR WIRING DIAGRAM

FIG. 5A

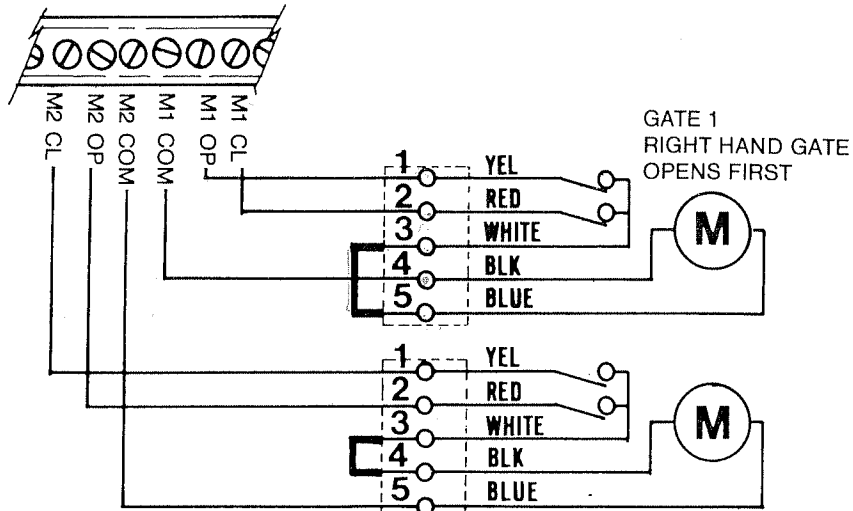
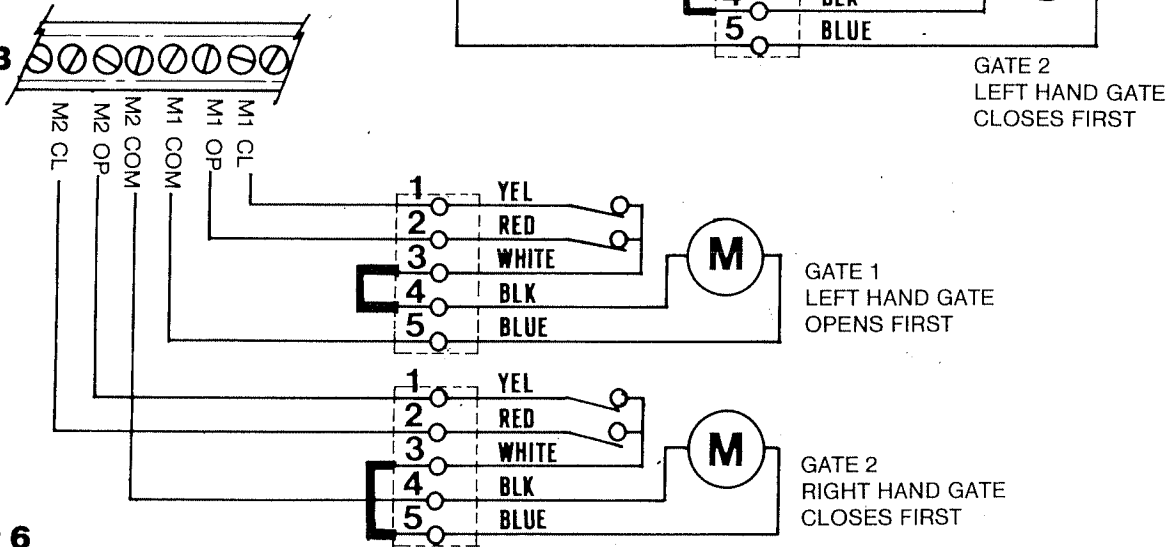


FIG. 5B



STEP 6

Remove cover from control box. Connect by 3 core cable, Control Board with drive unit(s). Determine which leaf you would like to open first and close last. Motor one always opens first and closes last. NOTE: THE INSTALLATION HAND IS DETERMINED FROM INSIDE THE GATE LOOKING OUT TO THE STREET.

Details of electrical installation: for Motor 1 Right Hand installation refer Fig 5a for Motor 1 Left Hand installation refer Fig. 5b

STEP 7

Setting of limits for open and closed position is performed with operator in manual position Fig. 4 DO NOT SWITCH ON POWER OR ENGAGE MOTOR DRIVE AS YET.

For Right Hand side installation:

When gate is closed turn lower cam in clockwise direction until audible click can be heard from lower microswitch.

Open the gate into required opening position and turn top cam in anticlockwise direction till click can be heard from top microswitch.

For Left Hand side installation:

When gate is closed turn upper cam in clockwise direction until audible click can be heard from upper microswitch.

Open the gate into required opening position and then turn bottom cam in anticlockwise direction till click can be heard from bottom microswitch.

STEP 8

Engage motor drive in Drive assembly, switch power on at power point and activate operator. Perform final adjustment of cams (as Step 7) to obtain most satisfactory position, then lock cams with screw above them, slide back drive unit cover and lock it by key.

STEP 9

To set obstruction sensors.

Resist by hand the closing of gate 1 until the gates stop and reverse. Turn the CLOSE 1 dial on the Control Board to alter the maximum force of gate 1 (clockwise to increase force). Re-test closing force until satisfactory setting of CLOSE 1 dial is obtained. Use same procedure to set closing force for gate 2 using the CLOSE 2 dial.

Resist by hand the opening of gate 1 until the gates stop. Turn the OPEN 1 dial on the control board to alter the maximum force of gate 1 (clockwise to increase force). Re-test closing force until satisfactory setting of OPEN 1 dial is obtained. Use same procedure to set opening force for gate 2 using the OPEN 2 dial.

NOTE: Gates should exert a fair amount of force before obstruction sensing activates. Too light a setting will cause nuisance stopping on wind gusts and/or friction.

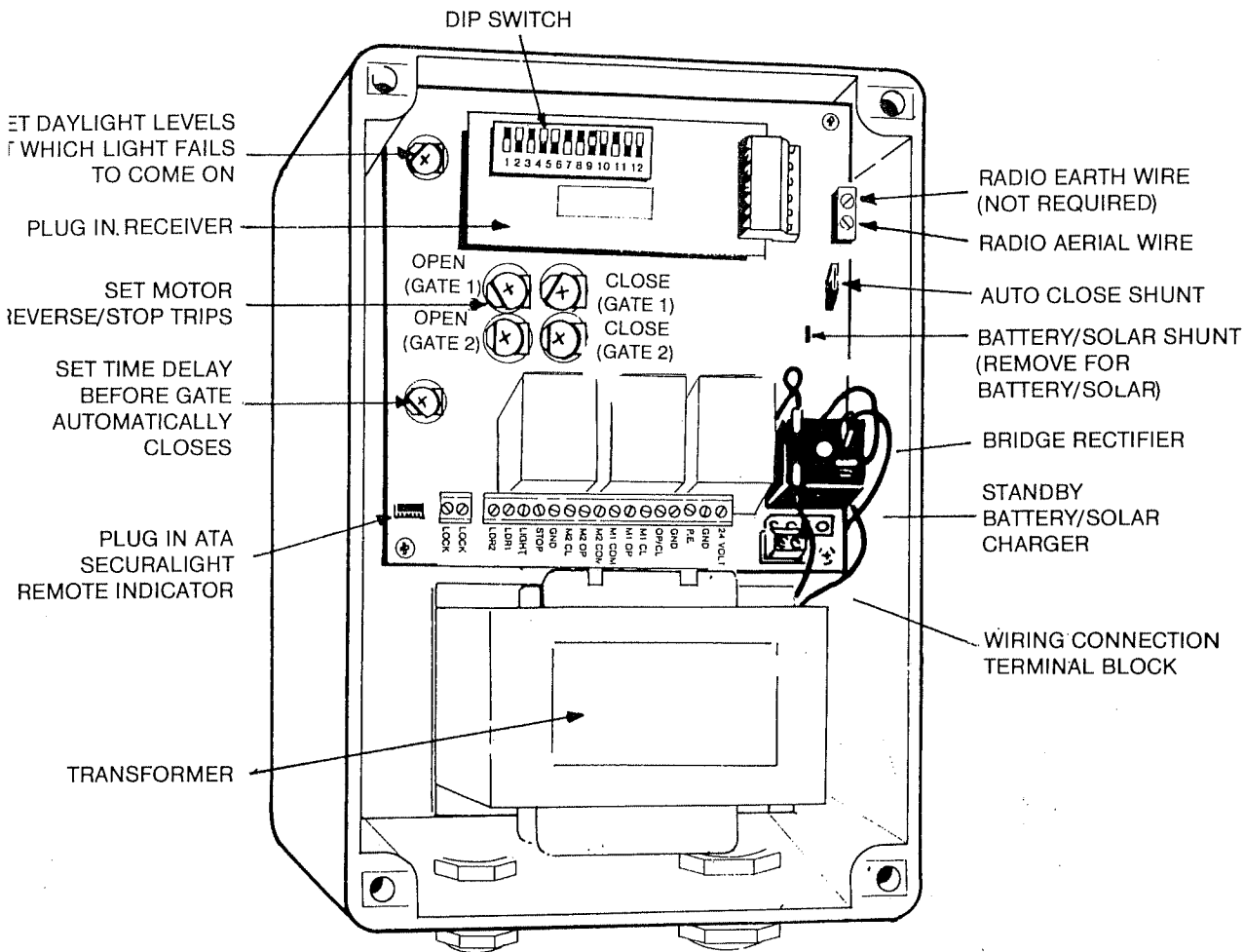


FIG. 6

STEP 10

To set Auto Close if required.

To enable Auto Close move jumper shunt on Control Board to AUTO CLOSE position. Turn the AUTO CLOSE DELAY ADJUST dial to set the delay before gates close (clockwise to increase delay). When very short delays are set, gates will reverse and close before fully opened.

NOTE: when using the AUTO CLOSE mode we recommend the use of Photo Electric Beams.

STEP 11

Your Control board has provision to fit a Light Dependant Register (L.D.R.) to only activate the light at night if required.

If light sensor (L.D.R.) is not fitted, the light(s) will always illuminate when gates move. If the L.D.R. is fitted, turn SET LDR dial to change ambient light level at which light(s) operate (clockwise to come on in brighter daylight). Mid position of SET LDR is usually suitable for most requirements.

STEP 12

Code the transmitter and receiver. Check the numerical code on the receiver is identical with the code inside the hand transmitter. Numbers may be correspondingly changed at will by moving the small switches up or down with a pen or similar instrument. Test operation of remote control with handset.

STEP 13

Battery Charger/Solar module (when used). Plug in Battery Charger/Solar module (SBY-1) into the control board, and wire as per wiring diagram on Page 10 Fig. 7. Remove shunt pin labelled Battery/Solar Shunt.

STEP 14

Securalight (when used). Plug in Securalight module (KU-3) and wire as per wiring diagram on Page 10 Fig. 7. Locate Securalight monitor in position required and affix to wall.

SYSTEMS OPTIONS

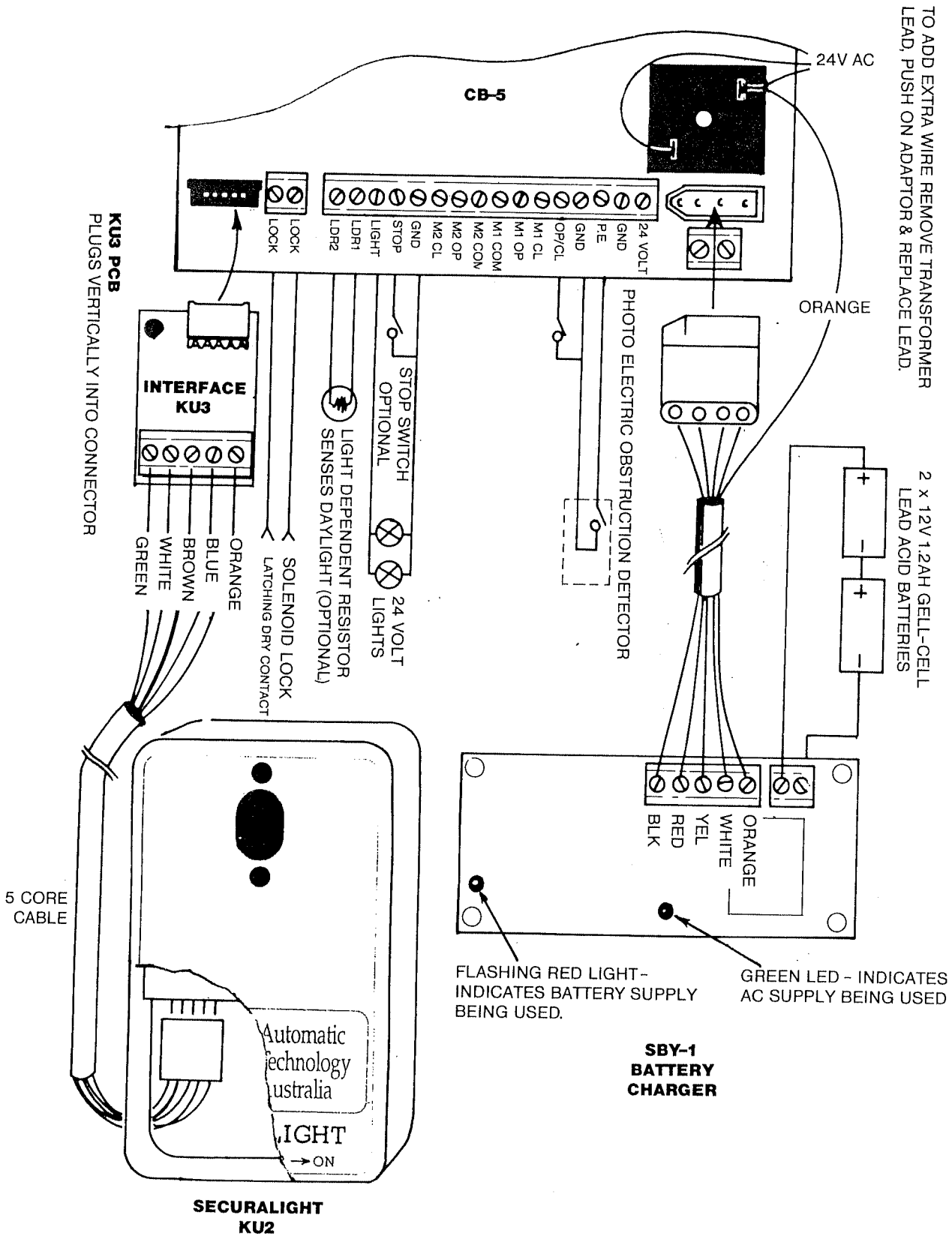
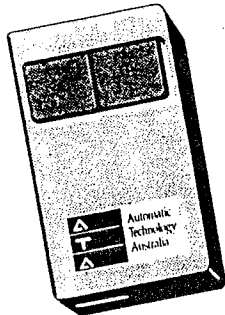


FIG. 7

ACCESSORIES

TX SERIES

Two and four channel standard transmitters



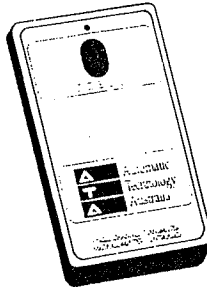
MODEL TXA-2



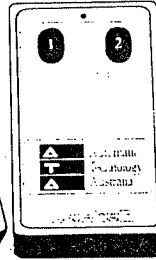
MODEL TXA-4

AT-1 SERIES Transmitters

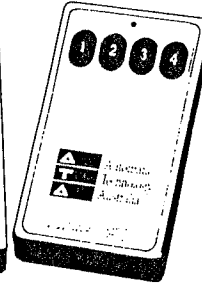
One, two and four channel hand-held transmitters.



MODEL T-1



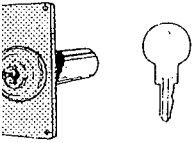
MODEL T-2



MODEL T-4

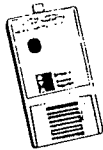
Electronic Keyswitch

For manual control

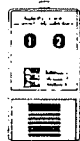


AT-1 SERIES Transmitters

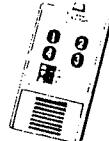
One, two and four channel pendant transmitters.



MODEL PT-1



MODEL PT-2



MODEL PT-4

AT-1 SERIES Receiver

Industry standard, plug-in receiver to suit AT-1 transmitters.



MODEL R-1

FAULTS AND REMEDIES

FAULT

REMEDY

Gates do not open and/or close.

Check that control box is plugged into mains power.
Check that motor is engaged for auto operation.
Check all wiring from motor and microswitches to the control board.

Gates reverse when closing.

Check reversing sensitivity adjustment (see Page 8).

Gates stop when opening.

Check stopping sensitivity adjustments (see page 8).

Remote transmitter not functioning.

Check battery in transmitter.
Check code settings match between receiver and transmitter.
Check code has been stored in receivers memory. (If using AT-1 series receiver/transmitter combination)

Unauthorized operation.

Change transmitter dip switch codes.