CENTRY TRAFFIC BARRIER

Product Code: CP71

INSTALLATION MANUAL

Latest Revision: 15.03.2004
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CENTURION
THE AUTOMATIC CHOICE

CENTRY TRAFFIC BARRIER
TABLE OF CONTENTS

1.0 INTRODUCTION

A CENTURION ACCESS AUTOMATION system is a quality product designed to give many years of trouble free service.

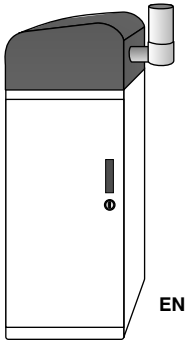
This MANUAL has been compiled to assist you, the customer, with a trouble free installation.

PLEASE READ THE INSTRUCTIONS CAREFULLY

2.0 BASIC KIT

The boom kit comprises of one or more components shown in the identification list below.

ENCLOSURE & GEARBOX COMPONENTS

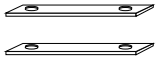


4.5m BOOM ARM

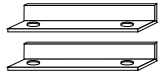
3m BOOM ARM

ENCLOSURE AVAILABLE IN MILD OR STAINLESS STEEL

MOUNTING HARDWARE (PART OF GEARBOX AND ENCLOSURE)

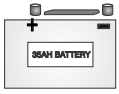


SKID PLATES



HOLDING DOWN ANGLE

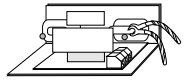
NB. Mounting rawl bolts are not included (use 4 x M16x150)



BATTERY

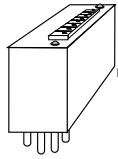
35 A/H LOW MAINTENANCE

ELECTRONICS

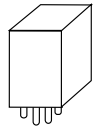


STANDARD CHARGER TRANSFORMER

CP88 CONTROLLER



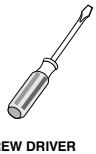
LOOP DETECTOR UNIT



11 PIN MAINS FAIL RELAY

3.0 RECOMMENDED TOOLS

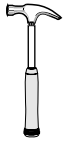
SPANNER
1 x 10mm/2 x 13mm
1 x 17mm/1 x 19mm



SCREW DRIVER
3,5mm FLAT
No 1. PHILLIPS

CRIMPING TOOL
AND PIN LUGS

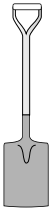
PLIERS/SIDE
CUTTER



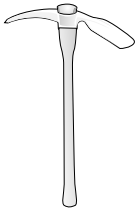
HAMMER

MASONRY BITS
16mm

ELECTRIC
DRILLING
MACHINE

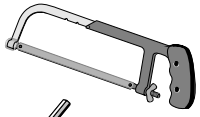


SPADE



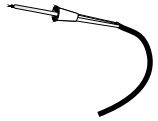
PICK

TAPE MEASURE



HACKSAW

ALLEN KEYS
3mm ACROSS FLATS
10mm ACROSS FLATS

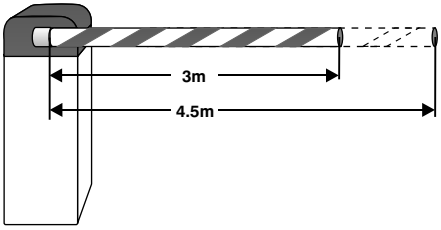


SOLDERING IRON

4.0 TYPES OF BOOM

ARM LENGTH

There are two standard arm lengths available:



OPERATIONAL MODES

Two standard operational modes are available:

SIMPLEX (sometimes called Domestic) - Use BMDV1.X firmware
COMPLEX (sometimes called Commercial) - Use BMCV3.X firmware

The mode is determined by the microprocessor fitted to the CP88 control card as well as selecting which loop detectors are required, (See next section)

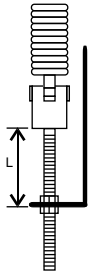
ref. 1012034A.cdr

4.1 CENTRY PRE-TENSION SPRING

CENTRY PRE-TENSION SPRING

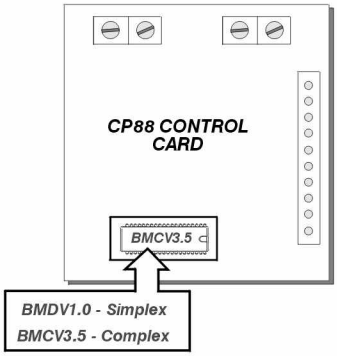
Adjust according to boom
Pole Length
3.0m Pole: L=80mm
4.5m Pole: L=20mm

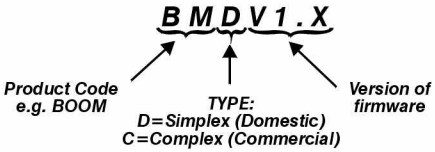
3.0m Barrier L=80mm
4.5m Barrier L=20mm



4.2 DETERMINATION OF OPERATIONAL MODE

The mode is determined by the microprocessor fitted. Locate the label on the microprocessor to find out what operational mode will be effective.





NOTE: The type and version of firmware used will determine what operational modes are available, and what wiring is required.

MAJOR FEATURES OF OPERATIONAL MODES

SIMPLEX MODE (B M D V 1.X)

- Raising and lowering of the boom is done via a remote control or pushbutton.
- Selectable autoclose after thirty seconds.
- Collision detection via motor current limit. When correctly set, it will cause the boom to re-open on hitting an obstruction.
- There is one safety input for use with I/R beams or inductive loop sensors. This input can be used to provide vehicle presence detection and auto close inhibit.
- Potential free contact for external security light etc.

COMPLEX MODE (B M C V 3.X)

- Memory input (MI) for cardreader input etc.
- Non-memory input (NMI) for ticket vendor or cash register input.
- Ticket vend interlock (TVI) via potential free contact to inhibit ticket issue if barrier is opening or open.
- Barrier close /safety input, either loop detector (recommended) or infrared beam.
- 2 seconds rollback protection.
- Mains fail raise input (requires additional relay).

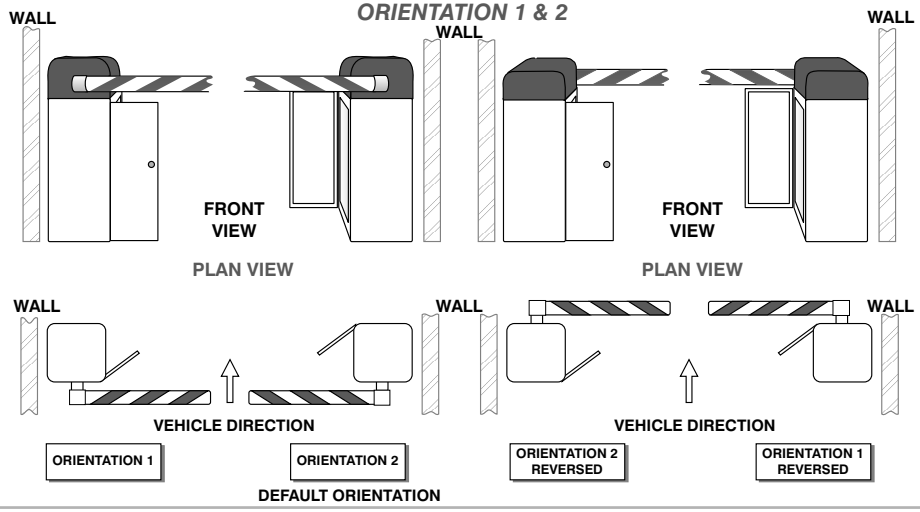
See Glossary, Section 13.0 for definition of non standard terms.

5.0 ORIENTATIONS

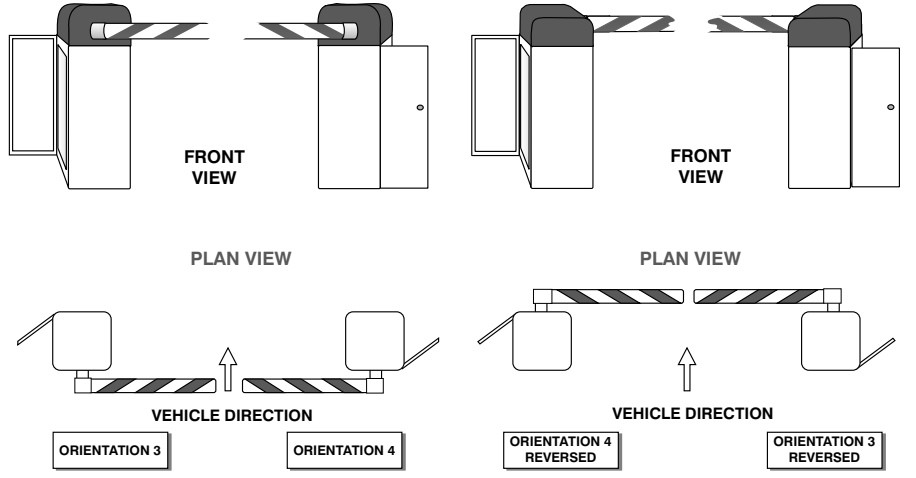
The following orientations are possible:-
The factory default is Orientation 2 for single barriers. See section 7.3 for details of converting to other orientations.

If barriers are to be paired, (e.g. in a wide entrance of say 6 metres, which requires 2 x 3metre booms, then the pairs must be selected as Orientation 1 & 2 or Orientation 3 & 4 (i.e. where the doors will open onto the pavement and not onto the driveway).

ORIENTATION 1 & 2



ORIENTATION 3 & 4



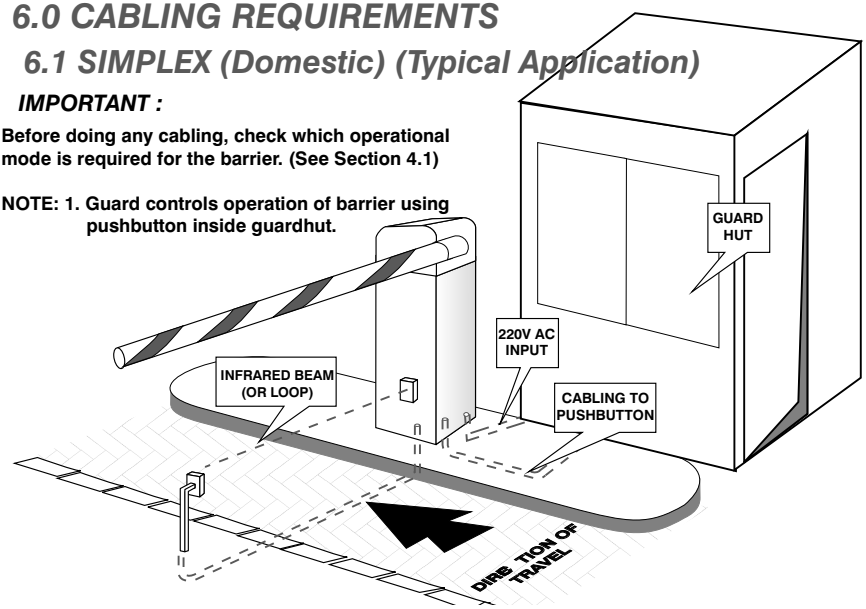
6.0 CABLING REQUIREMENTS

6.1 SIMPLEX (Domestic) (Typical Application)

IMPORTANT :

Before doing any cabling, check which operational mode is required for the barrier. (See Section 4.1)

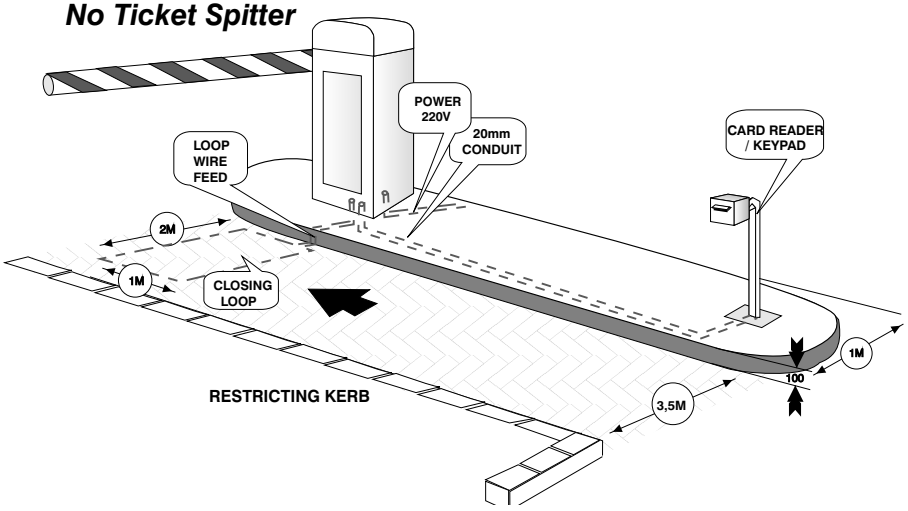
NOTE: 1. Guard controls operation of barrier using pushbutton inside guardhut.



2. Infra red safety beam can be replaced with inductive loop detector, fitted to the "safety loop" relay base
3. Fit BMDV1.X microprocessor to CP88 control card.

6.2 COMPLEX (Commercial) (Basic Application)

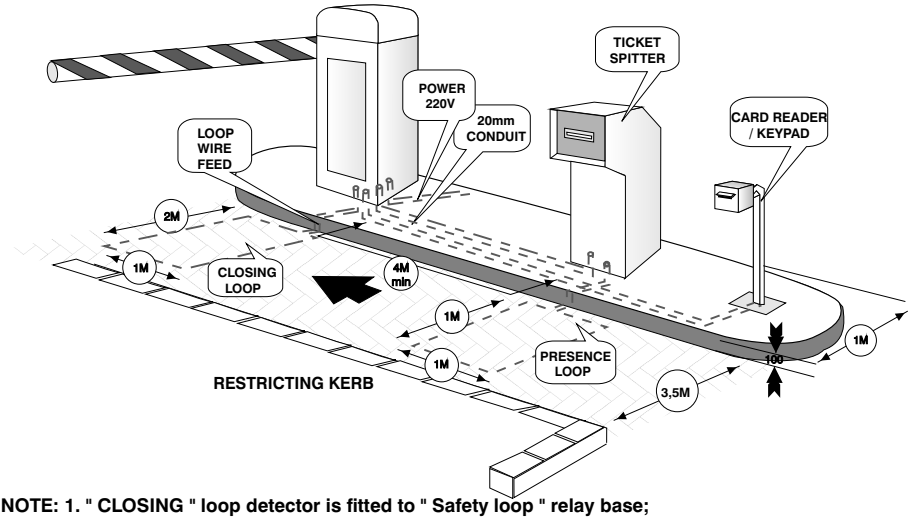
No Ticket Spitter



NOTE - 1. Loop detector is fitted to "safety loop" relay base.
- 2. Card reader is connected to MI input.
- 3. Fit BMCV3.X microprocessor to CP88 control card.

6.2 COMPLEX (Commercial)

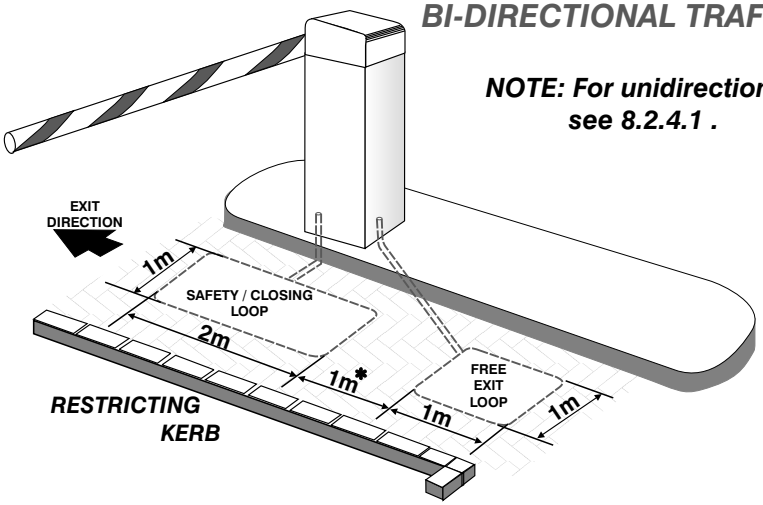
Access to parking area with ticket spitter



NOTE: 1. " CLOSING " loop detector is fitted to " Safety loop " relay base;
2. " Presence " loop is part of ticket spitter;
3. Fit BMCV3.X microprocessor to CP88 control card.

6.3 COMPLEX (APPLICATION WITH FREE EXIT LOOP - BI-DIRECTIONAL TRAFFIC)

NOTE: For unidirectional traffic see 8.2.4.1 .

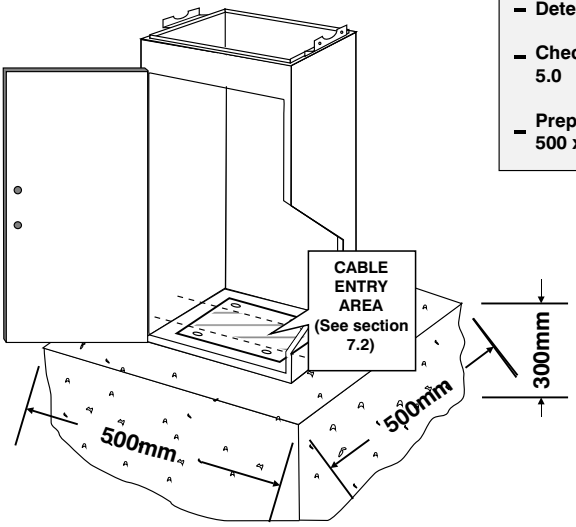


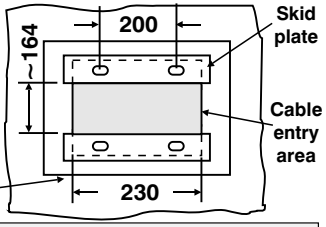
*** NOTE: 1. THIS DISTANCE MUST BE LESS THAN A CAR LENGTH, IF BI DIRECTION TRAFFIC IS REQUIRED.**
2. USE BMCV3.X MICROPROCESSOR.
3. FIT BOTH SAFETY, AND FREE EXIT LOOP DETECTORS.

7.0 INSTALLATION

7.1 POSITIONING

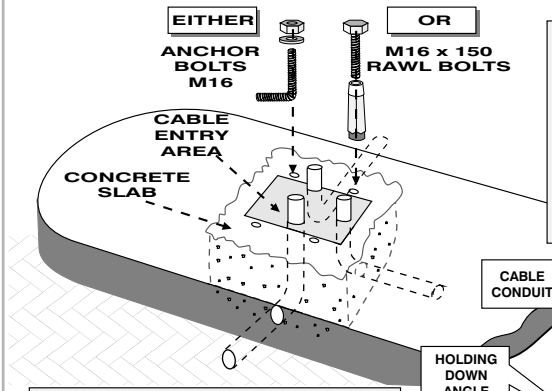
- Determine correct position for barrier .
- Check orientation of door - see Section 5.0
- Prepare hole for concrete foundation 500 x 500 x 300mm.



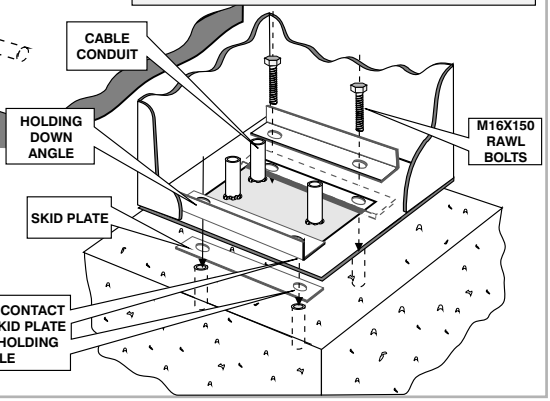


7.2 BOLTING DOWN ARRANGEMENT

7.2.1 Alternative 1

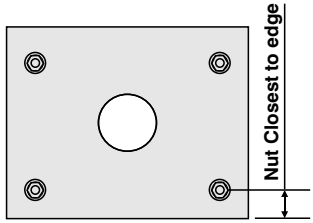


- Throw concrete slab approximately 500 x 500 x 300 mm deep;
- Install cable conduits, make sure conduits exit in cable entry area.
- Leave approximately 50 mm of conduit protruding above concrete base;
- Concrete in anchor bolts or fit rawl bolts later. Use skid plates as templates for anchor / rawl bolt positioning, if required.

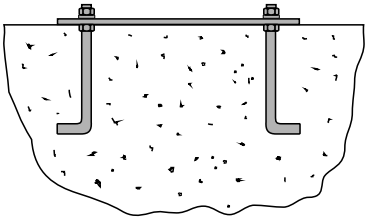


NOTE: Enclosure base is clamped between skid plates and holding down angles.

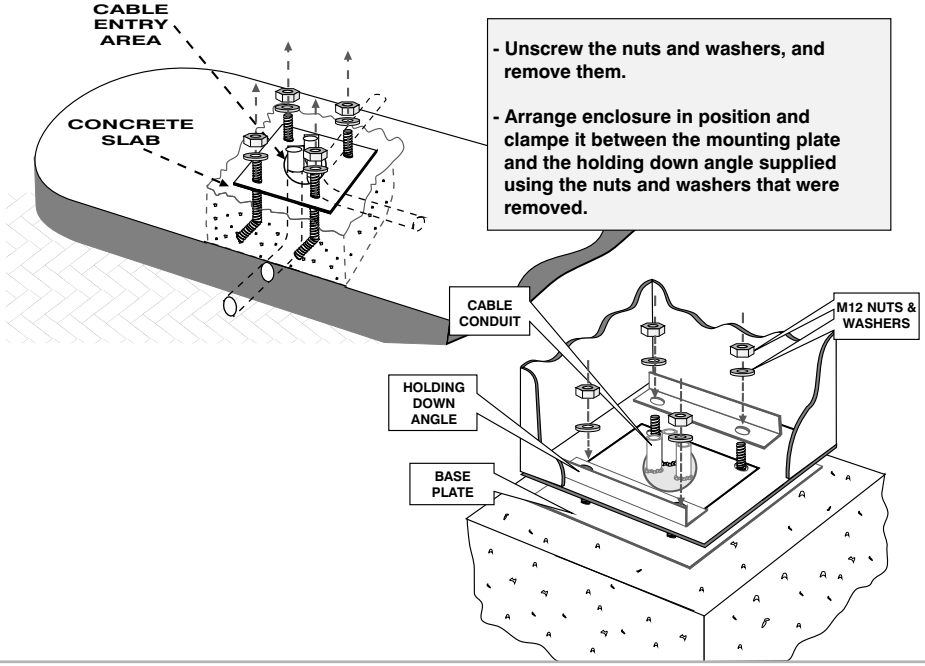
7.2.2 ALTERNATIVE 2



- Before pouring the concrete ensure that the mounting plate is positioned correctly.
- The plate is not symmetrical. The two nuts closest to the plate edge face towards the door of boom enclosure.



- Tighten top and bottom nut to aid in positioning the plate when the concrete is poured.
- Place the plate above surface of concrete.
- Leave the concrete to dry.

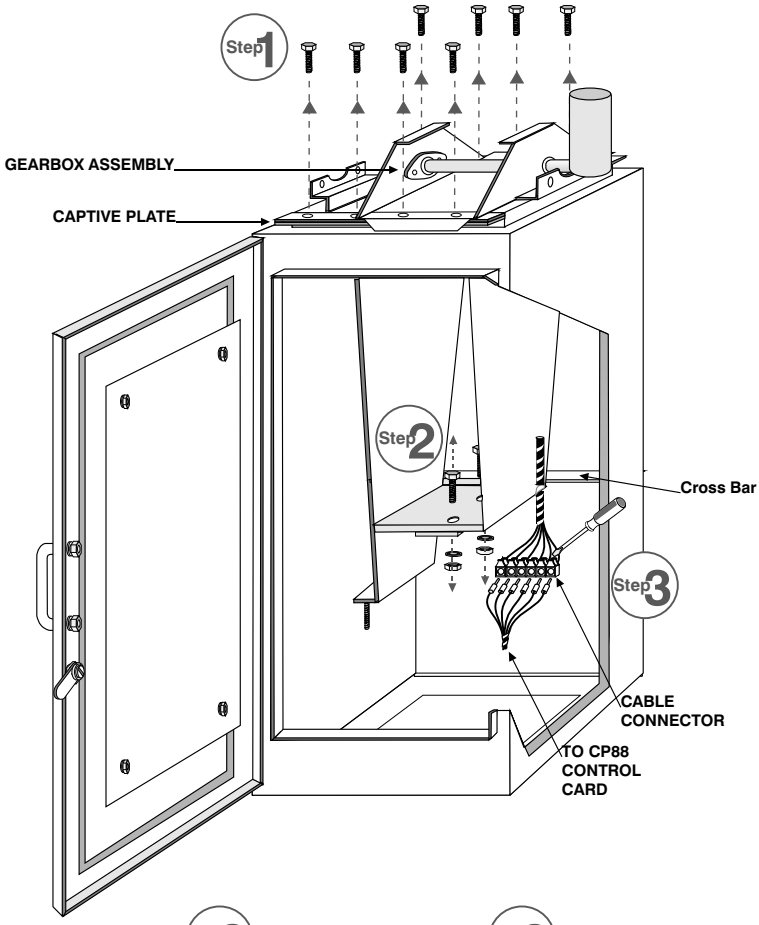


- Unscrew the nuts and washers, and remove them.
- Arrange enclosure in position and clampe it between the mounting plate and the holding down angle supplied using the nuts and washers that were removed.

7.3 REPOSITIONING GEARBOX IN ENCLOSURE

(To convert a factory default orientation 2 to orientation 4)

The following modifications are done only if it is necessary to change the orientation of the gearbox inside the enclosure e.g. the unit has been incorrectly ordered, or site conditions have changed.



Step 1 Remove M6 x 10 bolts holding gearbox to enclosure

Step 2 Remove bolts and nuts securing cross brace to gearbox assembly

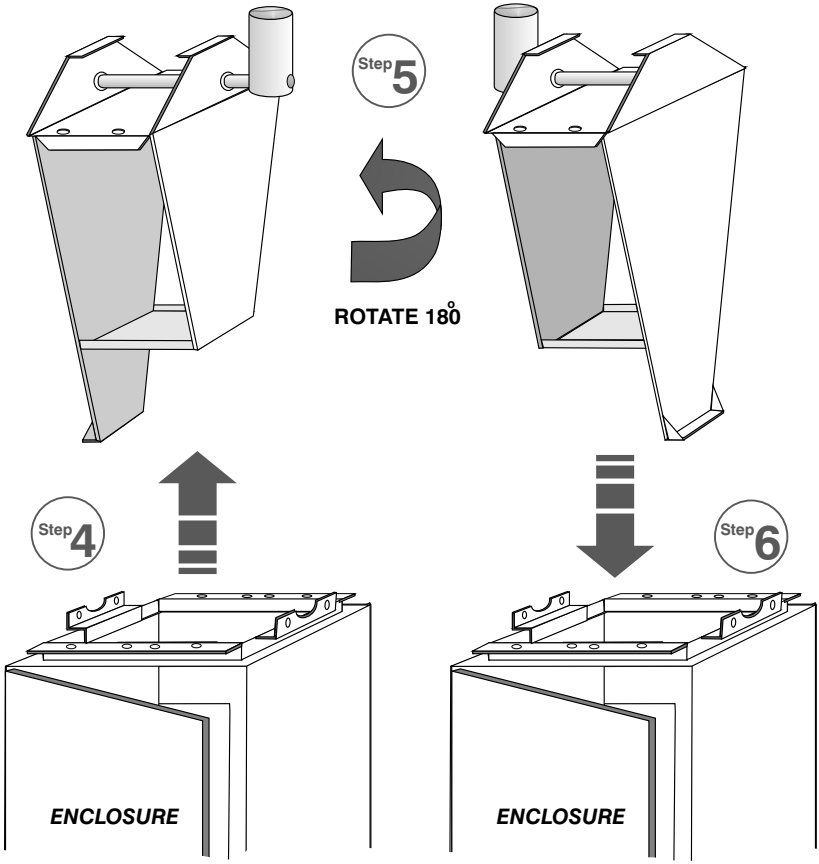
Step 3 Remove cables linking motor and limit switch to CP88 control card

REPOSITIONING GEARBOX IN ENCLOSURE (Continued)

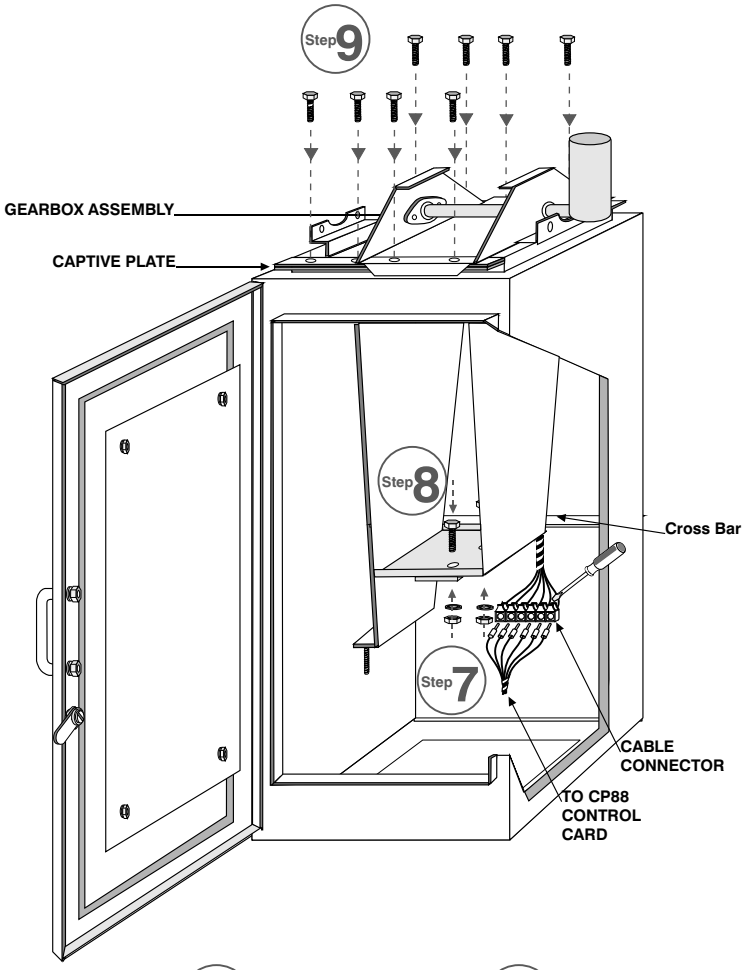
Step 4 Lift gearbox assembly out of the enclosure.

Step 5 Rotate the gearbox through 180°

Step 6 Refit the gearbox back into the enclosure



REPOSITIONING GEARBOX IN ENCLOSURE (Continued)



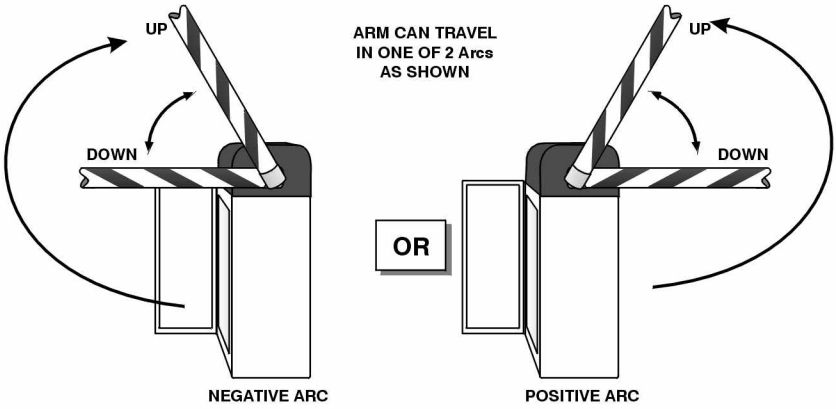
Step 7 Reconnect the cable

Step 8 Tighten cross brace

Step 9 Bolt gearbox back onto enclosure

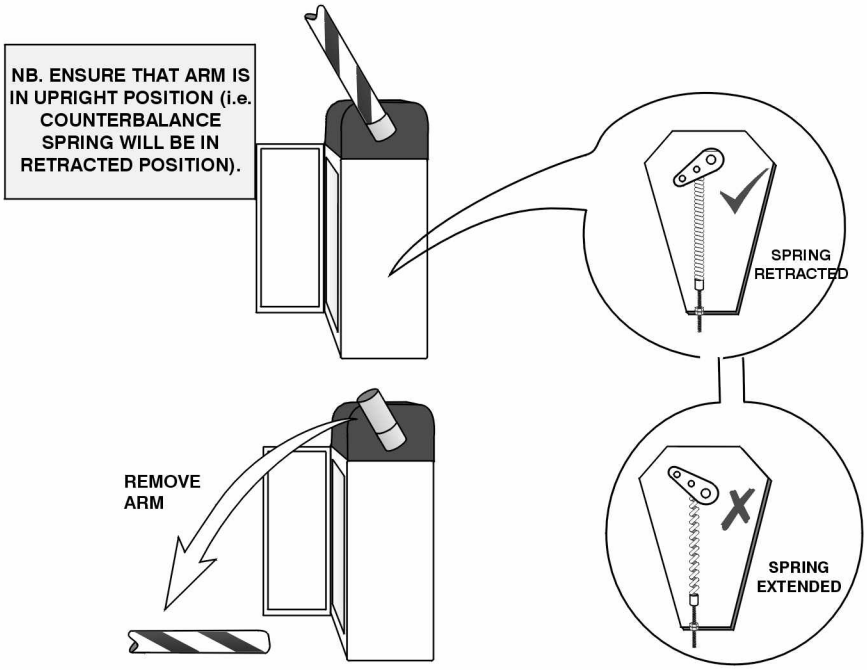
7.4 CHANGING DIRECTION OF ARM ARC OF TRAVEL (IF REQUIRED)

(To convert orientation 2 to orientation 1, or Orientation 4 to orientation 3).

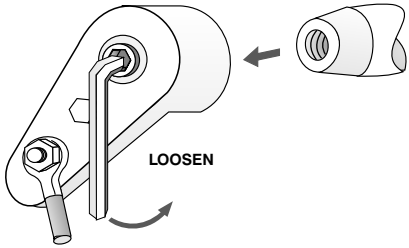


NOTE: NEGATIVE ARC IS DEFAULT SUPPLIED BY THE FACTORY

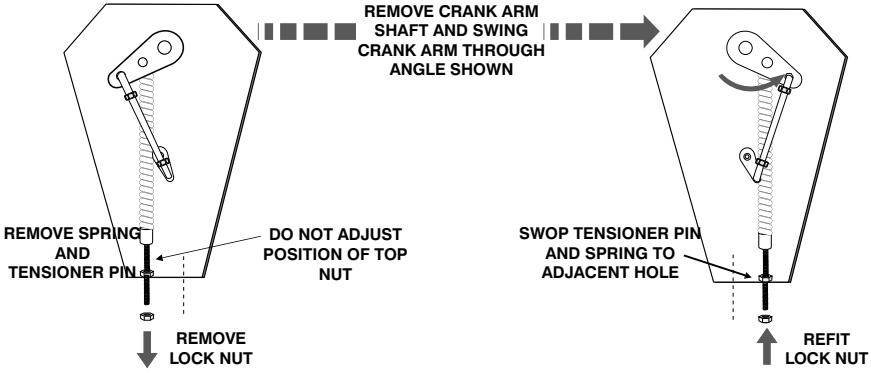
TO CHANGE TO POSITIVE ARC, PROCEED AS FOLLOWS:



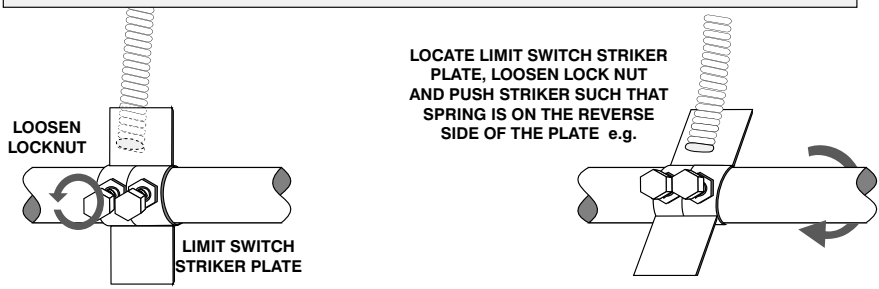
- LOOSEN CAP SCREW HOLDING CRANK ARM OF COUNTERBALANCE SPRING.
- GIVE CRANK ARM A SHARP TAP WITH A RUBBER MALLET TO LOOSEN OFF TAPER SHAFT.



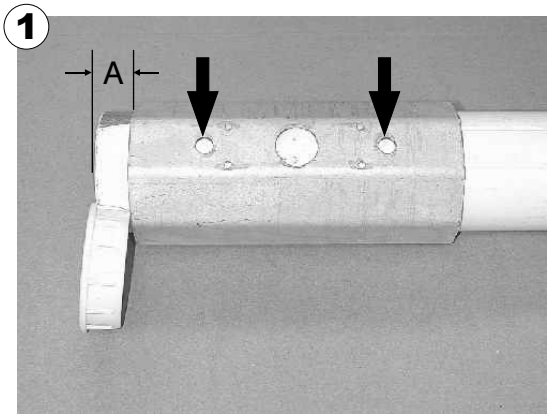
- CHANGE MOUNTING POSITION OF COUNTERBALANCE SPRING.



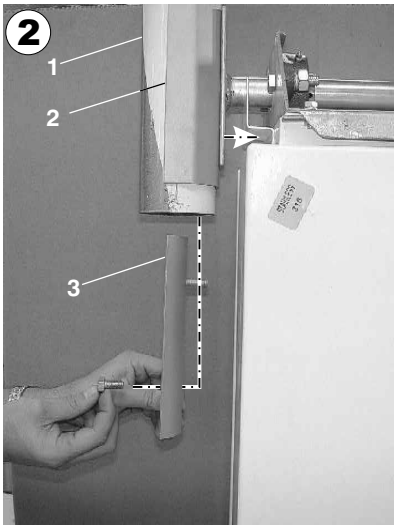
- RE - ADJUST THE LIMIT SWITCH STRIKER PLATE



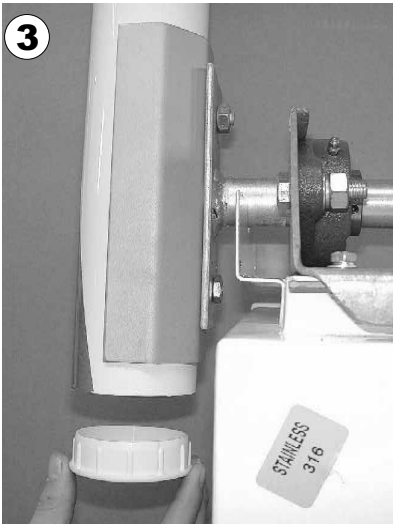
7.5 BOOM ASSEMBLY



If the boom pole has not been supplied pre-drilled, use the external clamping piece as a template, mark and drill the 10.5 mm holes in the boom pole. In order for the end cap to fit correctly, there must be a clearance, the thickness (A) of the end cap, between the end of the boom pole and the clamping piece.



Fit the boom pole (1) into the external clamping piece (2). Fit the M10 bolt through the internal clamping piece (3) and slide the assembly through the end of the boom pole. Locate the bolts in the holes in the boom pole.



Fit the M10 nuts onto the bolts and tighten. Fit the boom end cap into the end of the boom as shown above.

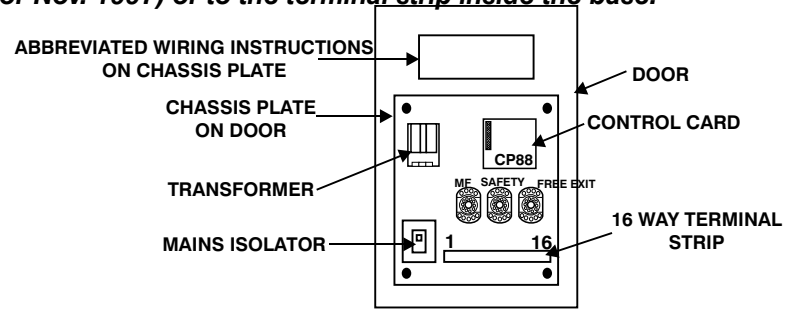
8.0 ELECTRICAL CONNECTIONS

(See section 13 for wiring diagram)

The instructions are broken down into two sections:

- ***SIMPLEX type boom logic (Section 8.1)***
- ***COMPLEX type boom logic (Section 8.2)***

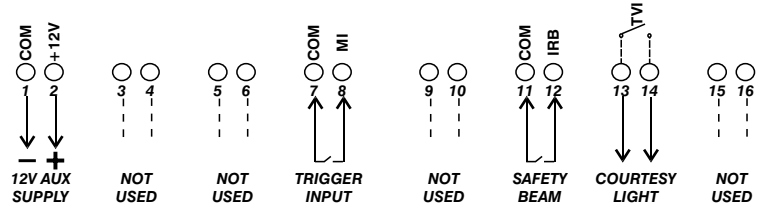
Connections are made to the mains isolator and 16 way terminal strip mounted on the chassis plate fitted to the door, (old version prior Nov. 1997) or to the terminal strip inside the base.



N.B. Before doing any connections check which microprocessor is fitted to the CP88 control card (see section 4.1).

8.1 - SIMPLEX TYPE BARRIER LOGIC

TYPICAL INPUTS FOR DOMESTIC APPLICATION BOOMDV1.X CHIP

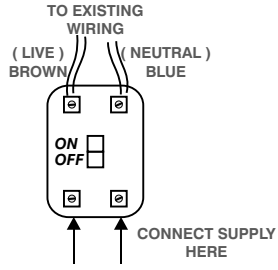


NOTES:

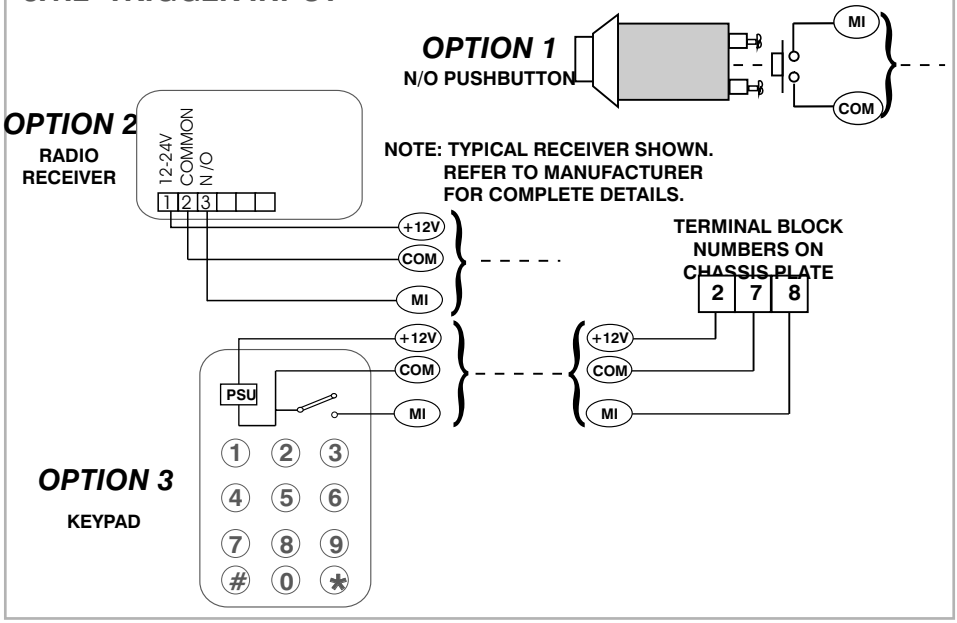
1) TRIGGER INPUT FUNCTIONS AS " START - STOP - REVERSE"
2) SAFETY BEAM PREVENTS BARRIER FROM CLOSING ONTO A VEHICLE
3) 12V AUX SUPPLY CAN BE USED TO POWER SAFETY BEAMS AND RADIO RECEIVER.

8.1.1 AC MAINS SUPPLY

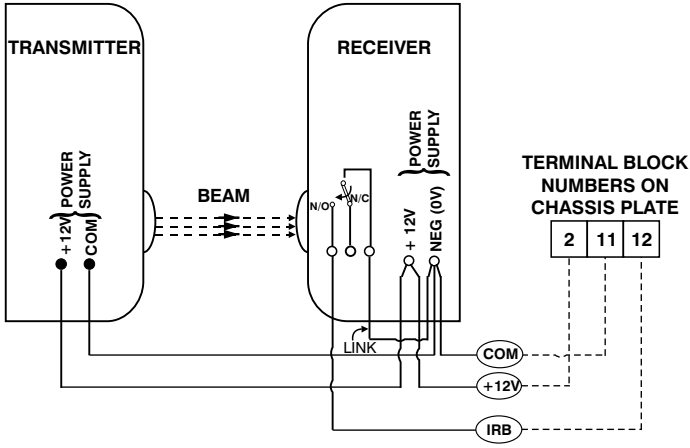
- ***Remove cover from ISOLATOR***
- ***Connect 220V AC, 50 HZ supply as shown.***
- ***Refit cover to isolator***
- ***Switch isolator to " ON "***



8.1.2 TRIGGER INPUT

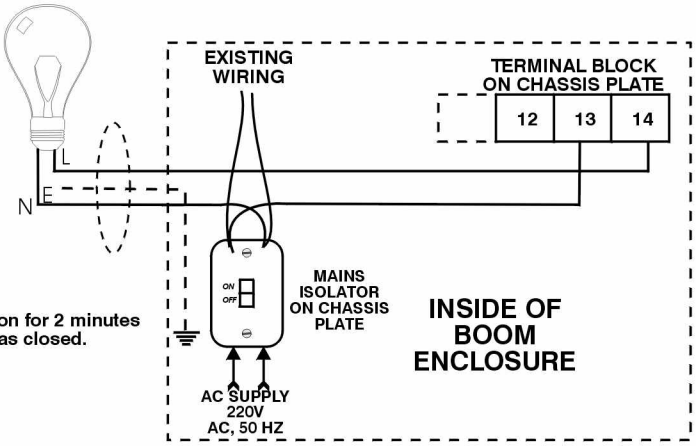


8.1.3. SAFETY BEAM



NOTE - TYPICAL SAFETY BEAM IS SHOWN;
REFER TO MANUFACTURER FOR DETAILS

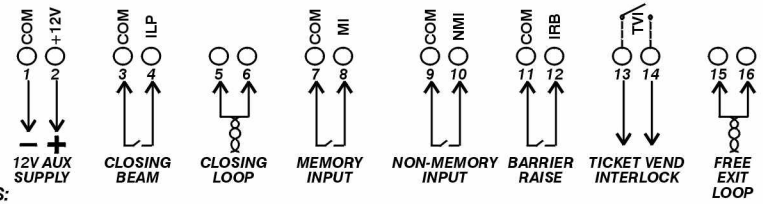
8. 1. 4 COURTESY LIGHT



NOTE: Light stays on for 2 minutes after boom has closed.

8. 2 COMPLEX TYPE BARRIER LOGIC

TYPICAL INPUTS FOR COMMERCIAL APPLICATION BOOMCV3.X CHIP



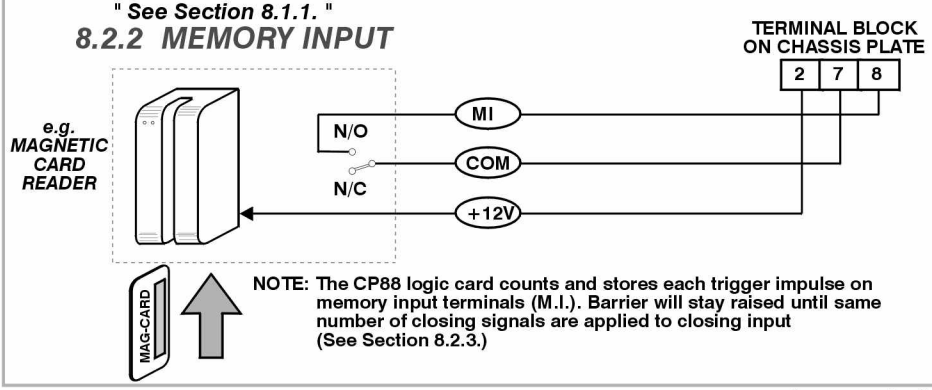
NOTES:

1) CLOSING BEAM CAN BE USED IF LOOP DETECTOR IS NOT FITTED
2) MEMORY INPUT "COUNTS" TRIGGERS
3) NON MEMORY INPUT ACTIVATES WHEN CONTACT IS CLOSED AND THEN RELEASED.
4) BARRIER RAISE WILL KEEP THE BARRIER RAISED WHILE THE CONTACT IS CLOSED.
5) TICKET VEND INTERLOCK IS " THROUGH " WHEN THE BARRIER IS CLOSING OR CLOSED.

8.2.1 AC MAINS SUPPLY

" *See Section 8.1.1.* "

8.2.2 MEMORY INPUT



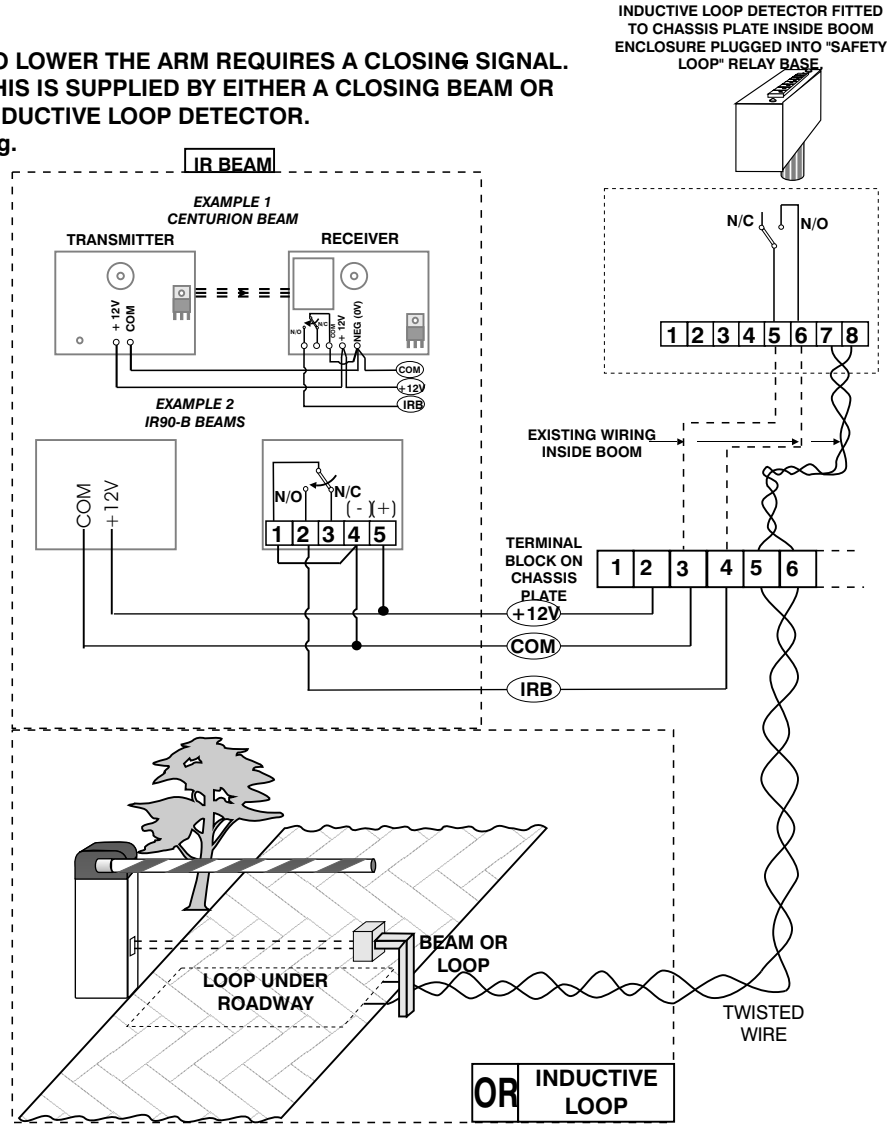
NOTE: The CP88 logic card counts and stores each trigger impulse on memory input terminals (M.I.). Barrier will stay raised until same number of closing signals are applied to closing input (See Section 8.2.3.)

ref. 1012017C.cdr

8.2.3 CLOSING BEAM OR LOOP INPUT

TO LOWER THE ARM REQUIRES A CLOSING SIGNAL. THIS IS SUPPLIED BY EITHER A CLOSING BEAM OR INDUCTIVE LOOP DETECTOR.

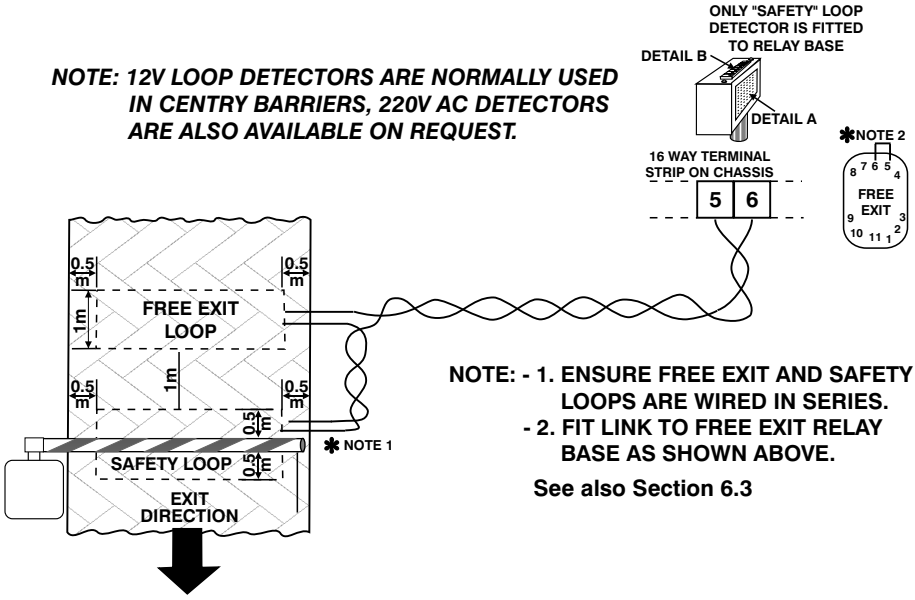
e.g.



N.B. THE CLOSING BEAM, OR LOOP, ALSO ACTS AS A SAFETY. THEREFORE MOUNT BEAM OR LOOP DIRECTLY UNDER BARRIER ARM.

8.2.4.1 UNIDIRECTIONAL TRAFFIC WITH FREE EXIT LOOP

NOTE: 12V LOOP DETECTORS ARE NORMALLY USED IN CENTRY BARRIERS, 220V AC DETECTORS ARE ALSO AVAILABLE ON REQUEST.

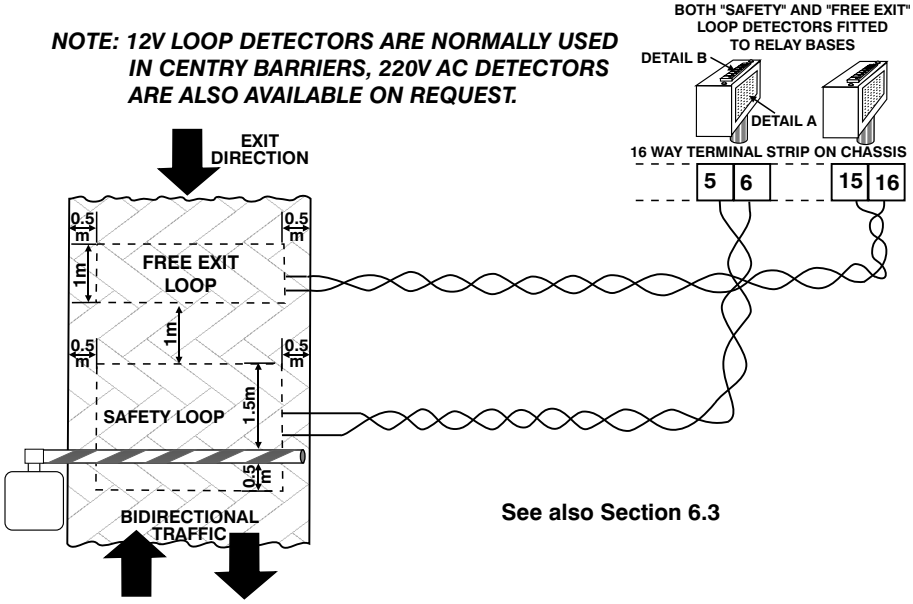


NOTE: - 1. ENSURE FREE EXIT AND SAFETY LOOPS ARE WIRED IN SERIES.
- 2. FIT LINK TO FREE EXIT RELAY BASE AS SHOWN ABOVE.

See also Section 6.3

8.2.4.2 BI-DIRECTIONAL TRAFFIC WITH FREE EXIT LOOP

NOTE: 12V LOOP DETECTORS ARE NORMALLY USED IN CENTRY BARRIERS, 220V AC DETECTORS ARE ALSO AVAILABLE ON REQUEST.



See also Section 6.3

8.2.4.3 LOOP DETAILS

STANDARD FEATURES OF THE DETECTOR ARE:

- ***Reset Switch.***
  The reset switch enables the detector to be manually reset during commissioning and testing.
  This results in the detector re-tuning the sensing loop and becoming ready for vehicle detection.
- ***Selectable Pulse Time.***
  This feature sets the length of time that the pulse relay will be energised for. 1 Second or 0.2 Second.
- ***Pulse Relay Selection.***
  The Pulse relay may be configured to energise on detection of vehicle leaves the loop or when the vehicle leaves the loop.
- ***Switch selectable Sensitivity.*** *Four sensitivity settings are available on the switches to allow flexibility in configuration.*

1	*High*	*- 0.01%*	*5*		*- 0.2%*
2		*- 0.02%*	*6*		*- 0.5%*
3		*- 0.05%*	*7*		*- 1%*
4		*- 0.1%*	*8*	*Low*	*- 2%*

- ***Switch selectable Frequency.***
  Two frequency settings are available to prevent cross-talk between adjacent loops.
- ***Permanent Presence Option.***
  This feature ensures detection of the vehicle will be maintained when the vehicle is parked over the loop for extended periods.
- ***Sensitivity Boost.***
  This feature sets the undetect level to maximum sensitivity and is used to prevent loss of detection of high-bed vehicles.
- ***Filter Option***
  This option is used to provide a delay between detection of the vehicle and switching of the output relay. This delay is normally used to prevent false detection of small or fast moving objects.
- ***Loop Fault Indicator***
  This LED Indicator is illuminated when the loop is either open circuit or short circuit and is used to give a visual indication of a faulty loop.

DETAIL A

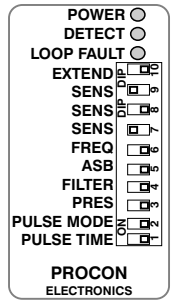
VEHICLE LOOP DETECTOR
LD 102

	ON	OFF
EXTEND	2SEC	OFF
SENS 0,02%	-	S7/S8/S9
SENS 0.01%	S9	S7/S8
SENS 0.05%	S8	S7/S8
SENS 0.1%	S8/S9	S7
SENS 0.2%	S7	S8/S9
SENS 0.5%	S7/S9	S8
SENS 1%	S7/S8	S9
SENS 2%	S7/S8/S9	-
FREQ.	LOW	HI
ASB	ON	OFF
FILTER	2SEC	OFF
PERM.PRES	ON	OFF
PULSE MODE	UNDET	DET
PULSE TIME	1SEC	0.2SEC

WIRING CONNECTIONS

CONNECTION	PIN
+ 11-26V AC/DC	1
− 50/60 Hz 95mA	2
PULSE RLY N/O	3
PULSE RLY COM	4
PRESENCE RLY N/O	5
PRESENCE RLY COM	6
LOOP	7
LOOP	8
EARTH	9
PRES. RLY N/C	10
PRES. RLY N/C	11

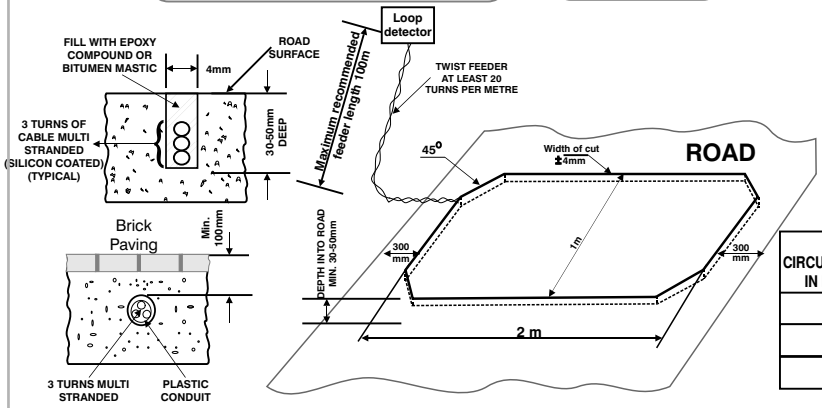
WARNING: DO NOT OPEN HOUSING WITH POWER ON.



DETAIL B

(Recommended settings)

Note: If two detectors are used, set different frequencies (S6)



LOOP CIRCUMFERENCE IN METRES	No. OF TURNS
> 10	2
6 - 10	3
< 6	4

- WIRE: 1.5mm SQUARED MULTI STRANDED CABLE (USE SILICON COATED IF PLACED DIRECTLY INTO THE GROUND)

- SPACING BETWEEN TWO ADJACENT LOOPS > 2 METRES. ALTERNATE ADJACENT LOOPS USING DIFFERENT NUMBERS OF TURNS.

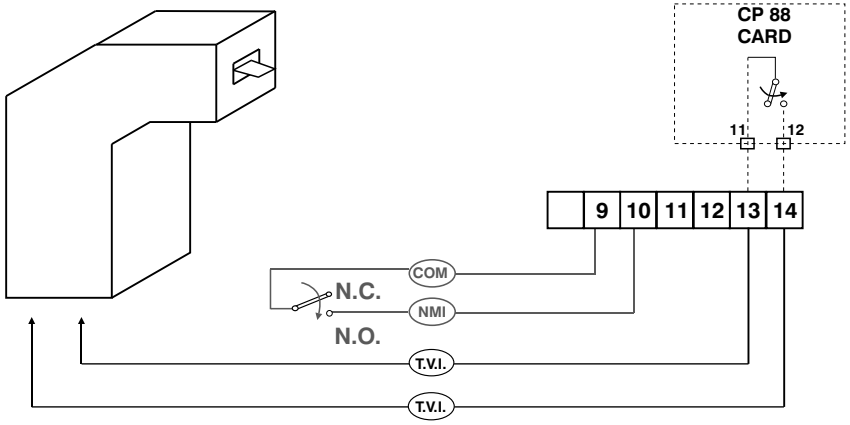
- LOOP AND FEEDER SHOULD COMPRISE ONE LENGTH OF UNJOINED WIRE. IF JOINTS ARE MADE, THEN SOLDER JOINT.

- USE SCREENED FEEDER CABLE IN ELECTRICALLY NOISY ENVIRONMENTS OR WHERE FEEDER RUNS PARALLEL TO POWER CABLES.

8.2.5 NON MEMORY INPUT (NMI)

An example of "NMI" is the signal given by a ticket vending machine.

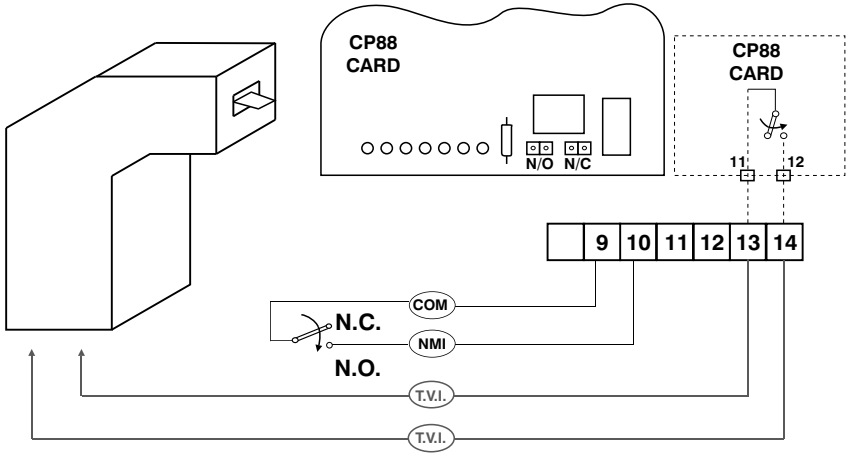
NOTE: NMI responds only when contact goes from CLOSED to OPEN.



8.2.6 TICKET VEND INTERLOCK (TVI)

The " T.V.I " Signal from the CP88 CARD will prevent the ticket spitter from issuing another ticket until the arm is closing or closed.

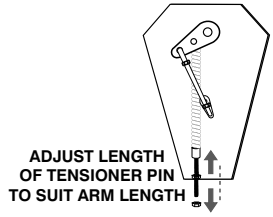
NOTE: The "TVI" contact can be selected as normally open or normally closed by bridging either jumper N/O or N/C on the CP88 card.



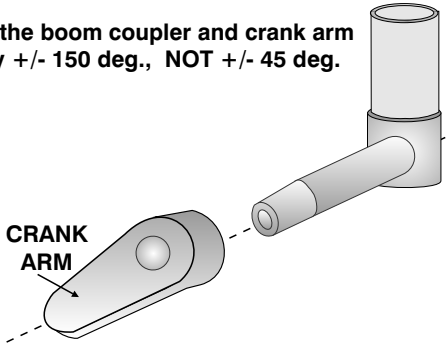
9.0 COMMISSIONING

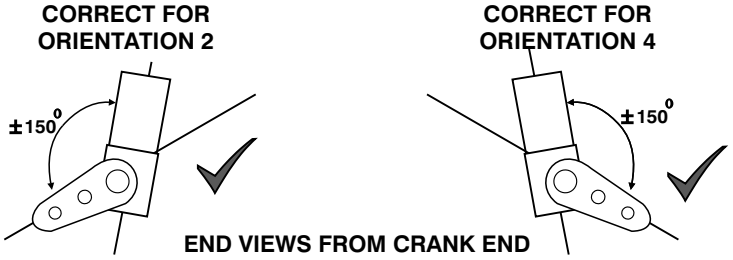
9.1 - Before any commissioning is done it is important to make sure that the counter balancing spring is providing a force to balance the weight of the arm.

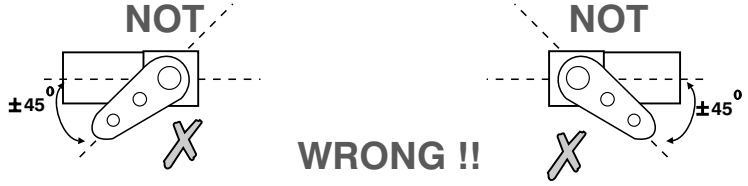
Adjust the spring tension to suit the length of of arm. This can be done by loosening the nuts on the spring tensioner and adjusting the length.



Also make sure the boom coupler and crank arm are displaced by +/- 150 deg., NOT +/- 45 deg.



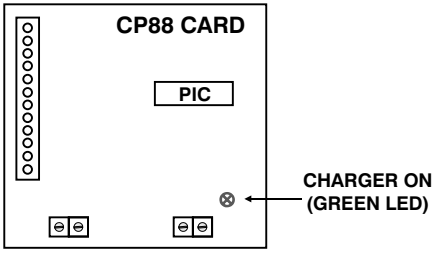




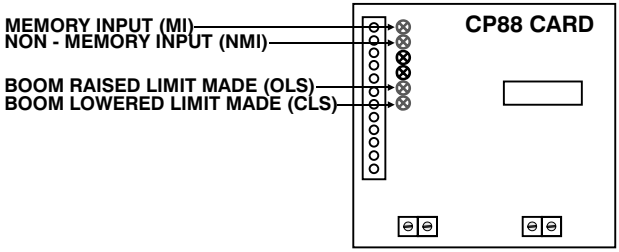
COMMISSIONING (Continued)

N.B. See Section 10 for a summary of the Diagnostic LEDS available on the controller.

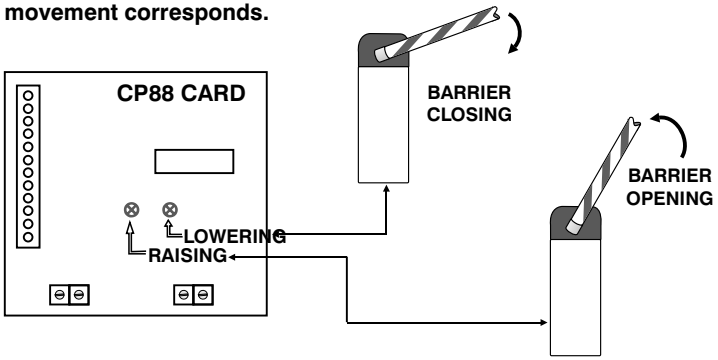
9.2 - Switch on AC power and ensure the green power on LED on the CP88 control card illuminates:



9.3 - Trigger boom and check that " MI " or " NMI "LED illuminates with trigger input. Check that the "RAISED (OLS)" OR "LOWERED (CLS)"limit LED 's illuminate when the L/S microswitches are made.



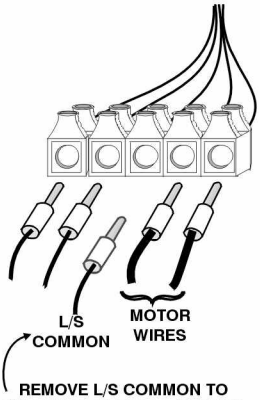
9.4 - Check status of RAISE / LOWER LED 's and see whether the arm movement corresponds.

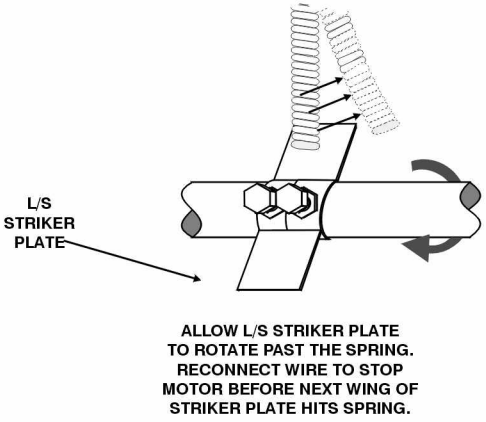


COMMISSIONING (Continued)

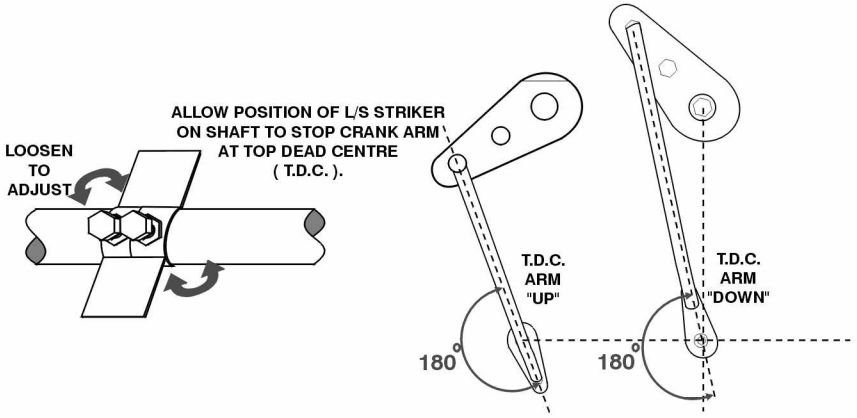
9.5 - If arm movement does not correspond with RAISE / LOWER LED's then loosen the "common " from the limit switch assembly, trigger boom again and allow the L/S striker plate to pass through the spring.

Reconnect the common to stop the motor when the striker next strikes the spring.



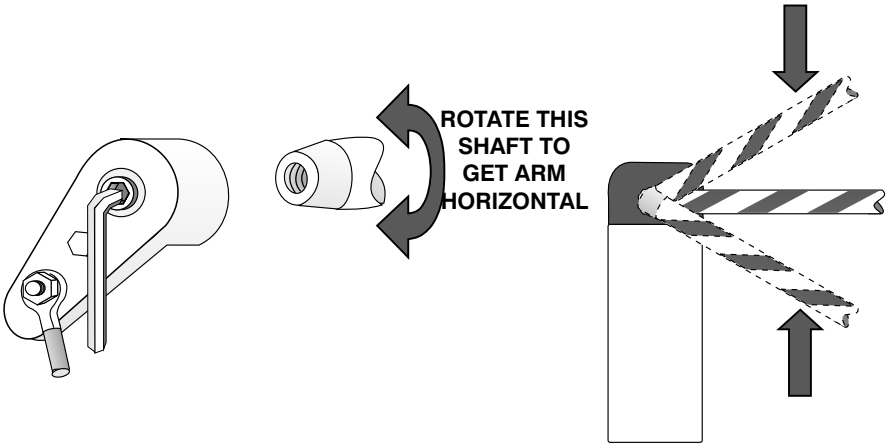


9.6 - Adjust position of L/S striker plate to ensure that arm stops at exactly top dead centre of the crank arm for both arm " up " and arm " down " positions.



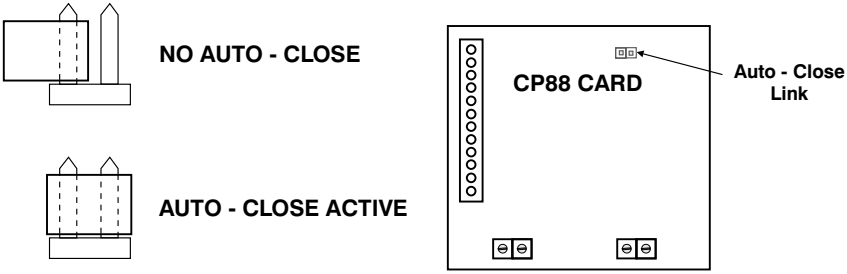
COMMISSIONING (Continued)

9.7 - If arm is not horizontal when the crank arm is at the correct T.D.C. point then loosen cap screw as shown and adjust until the arm is correct.



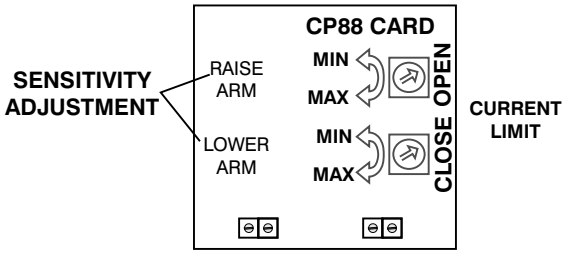
9.8 - AUTO - CLOSE (SIMPLEX MODE ONLY)

Ensure that the auto - close link is fitted onto the pins provided.

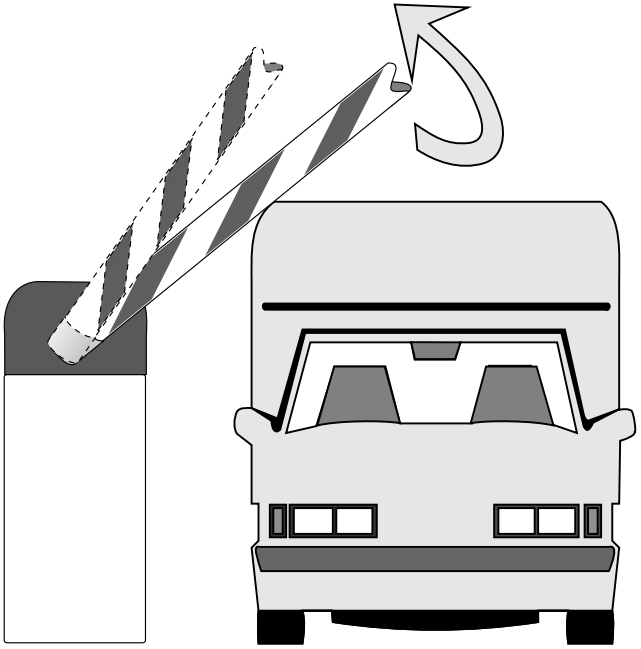


NOTE: In the COMPLEX Mode the Auto - close link can be used to simulate a closing loop. It must therefore always be OFF for normal running conditions in COMPLEX Mode.

9.8 - COLLISION SENSITIVITY



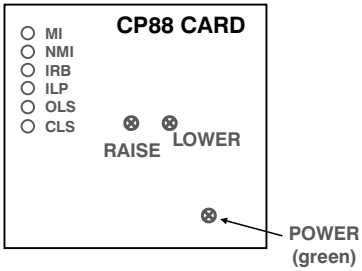
Adjust the collision sensitivity potentiometer to an acceptable closing force when arm moves downwards.



ARM MUST RETURN ON STRIKING AN OBSTRUCTION (SIMPLEX MODE)

STOPS WITHOUT REVERSAL (COMPLEX MODE)

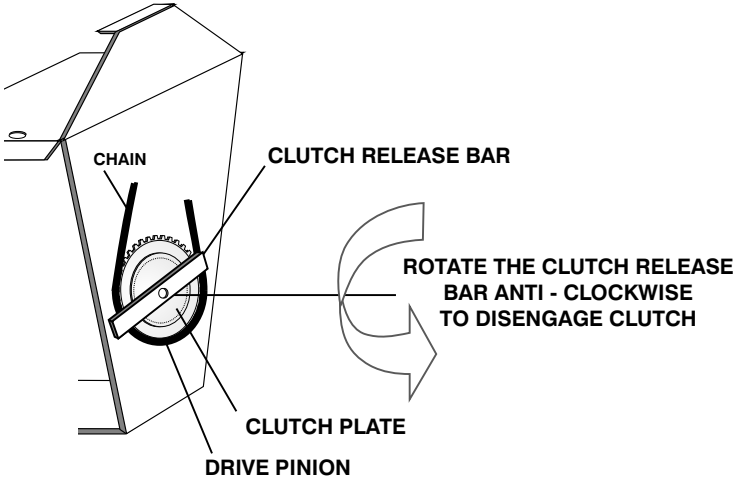
10.0 DIAGNOSTIC LEDS



MI - ON WHEN MI INPUT IS PRESENT.
NMI - ON WHEN NMI INPUT IS PRESENT.
IRB - SIMPLEX - ON WHEN SAFETY BEAM/LOOP BROKEN
COMPLEX - ON WHEN MAINS FAILURE IS DETECTED
(IF MAINS FAIL RELAY IS FITTED).
ILP - COMPLEX - ON WHEN CLOSING LOOP /BEAM IS ACTIVATED.
OLS - ON WHEN OPEN LIMIT SWITCH IS ACTIVATED.
CLS - ON WHEN CLOSED LIMIT SWITCH IS ACTIVATED.
RAISE - ON ONLY WHILE BOOM IS OPENING.
LOWER - ON ONLY WHILE BOOM IS CLOSING.
POWER - ON WHEN MAINS POWER IS PRESENT.

11.0 MANUAL RELEASE

In the event of a total malfunction of the boom it is possible to release the clutch and operate the boom manually.



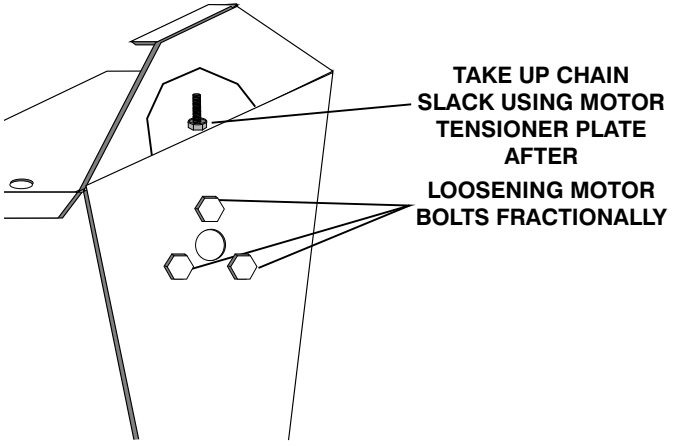
IF JAMMED, PRISE CLUTCH PLATE APART FROM DRIVE PINION.

12.0 MAINTENANCE

The Centurion boom requires a minimum of maintenance.
The following checks should be done periodically:

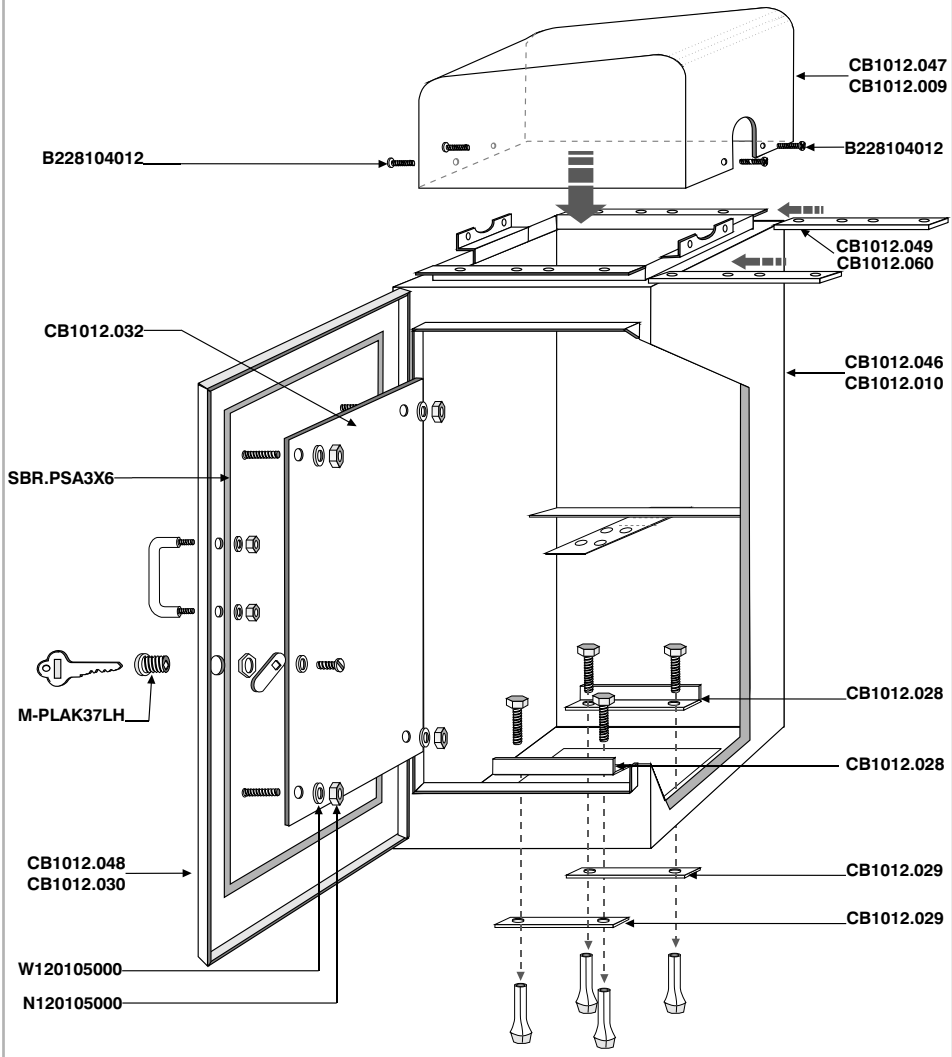
- **Ensure all terminals are tight and that no nuts and bolts are loose.**
- **Check the chain tension, and adjust if necessary.**
- **Check that the battery water level is correct and that battery voltage is 13,6 to 13,8V DC without the charger connected.**

The exploded view of the boom assembly lists all spare part codes if spares are required. (See 12.1 & 12.2)

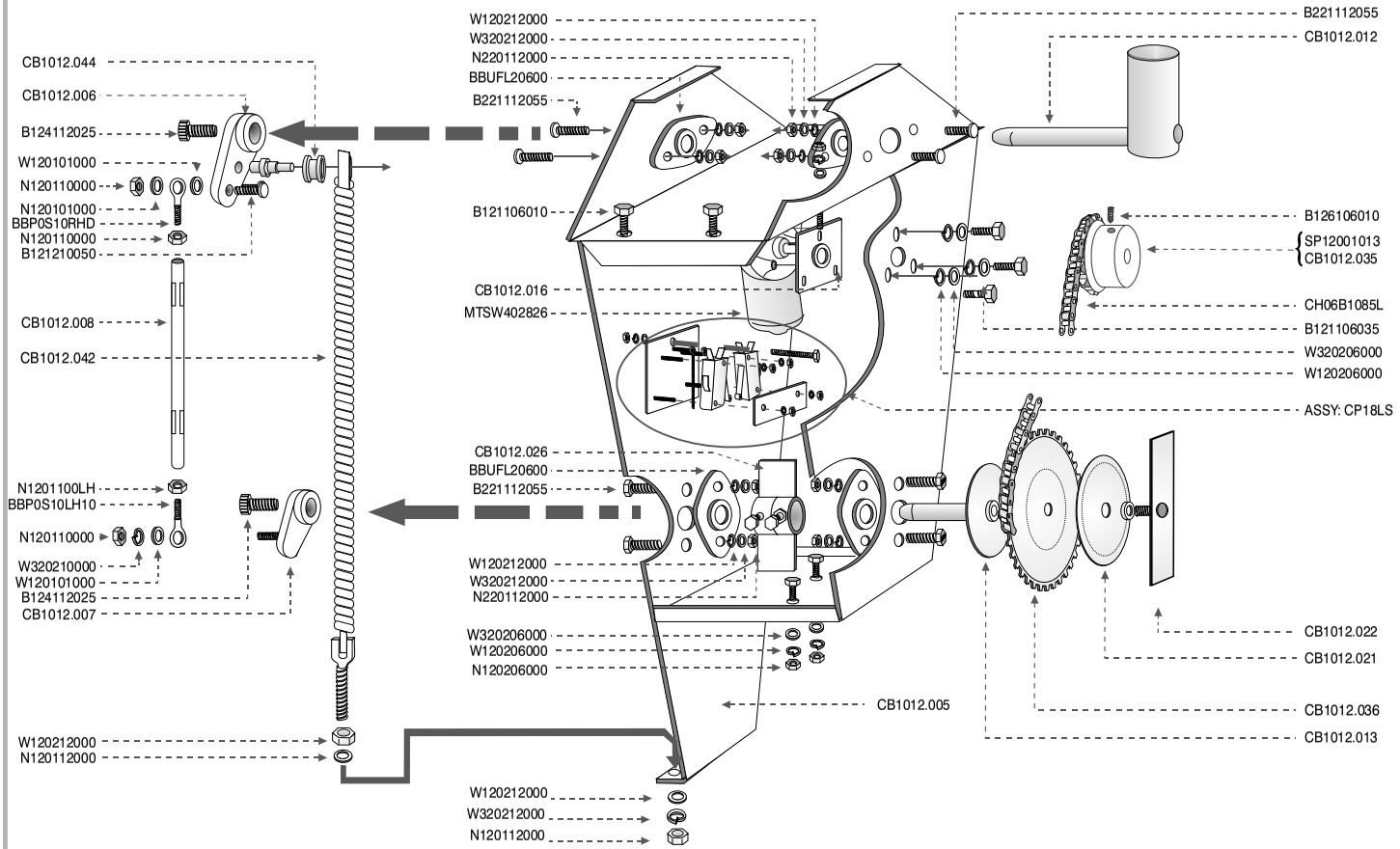


ADJUSTING CHAIN TENSION

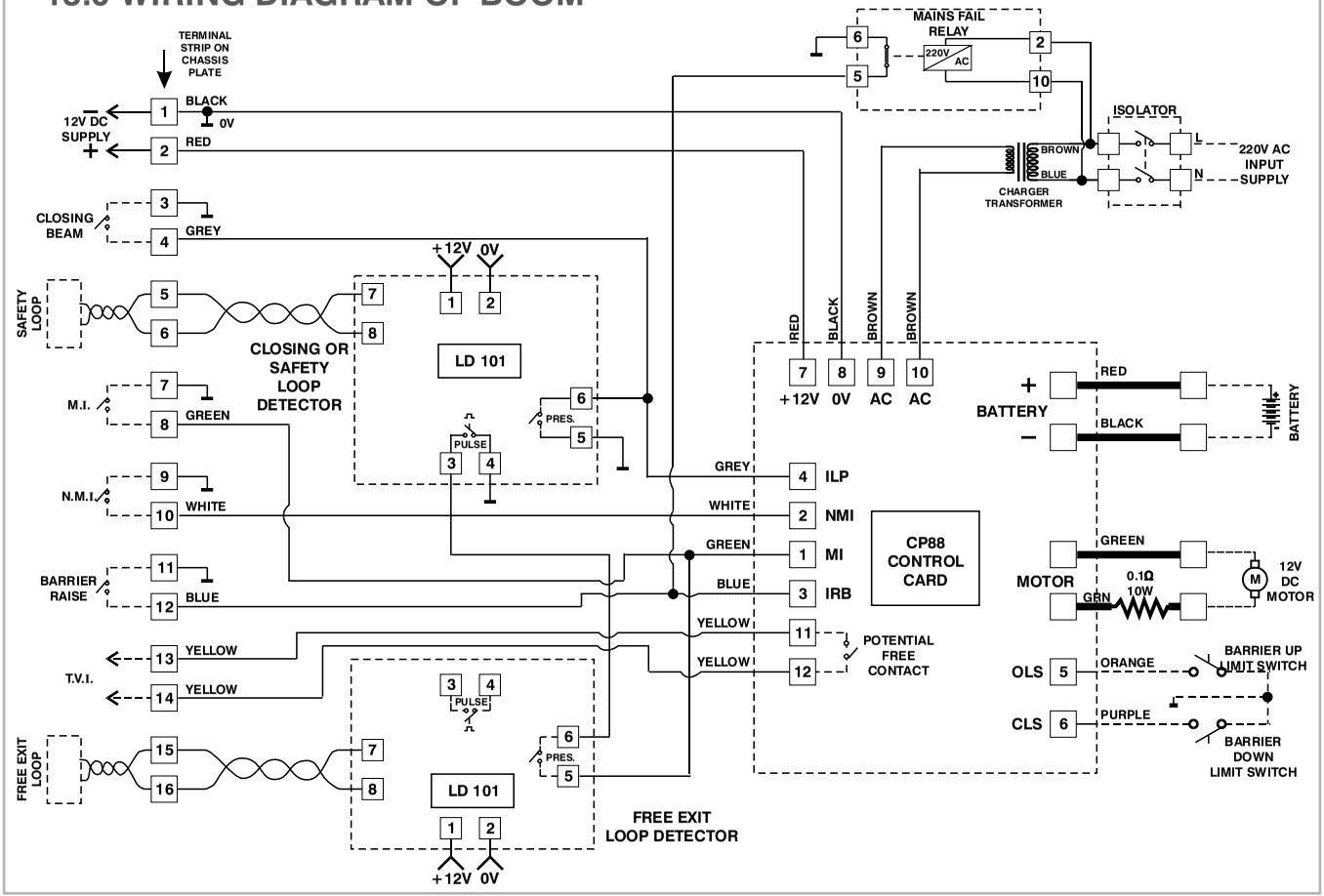
12.1 EXPLODED ASSEMBLY - ENCLOSURE



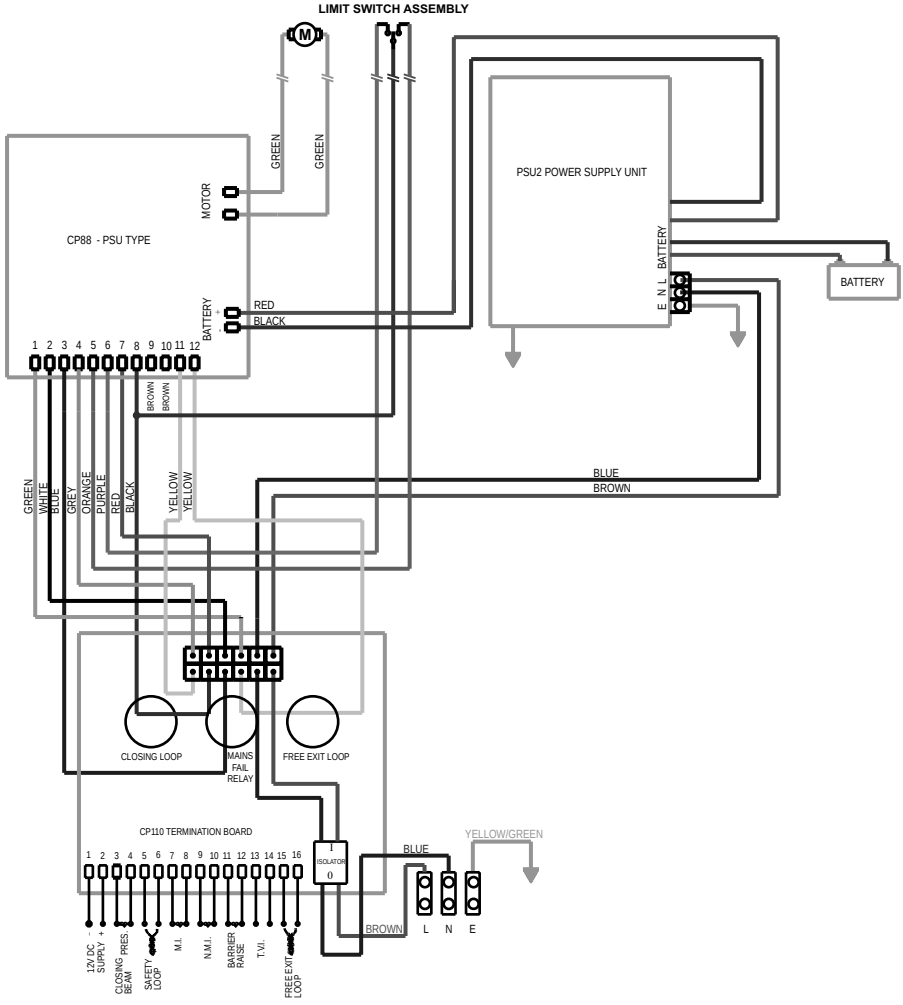
12.2 BOOM GEARBOX - EXPLODED ASSEMBLY



13.0 WIRING DIAGRAM OF BOOM



CENTRY WIRING DIAGRAM PSU2 (CP110 VERSION)



14.0 SPECIFICATIONS

MOTOR

Geared DC motor	Type: SWF 402826 12V DC. Gearbox fitted with bronze wormwheel.
Motor voltage	12V DC.
Motor starting torque	50Nm (Equiv. power +/- 600W).
Motor continuous torque	6Nm (Equiv. power +/- 72W).

POWER SUPPLY

Battery supply	12V DC 35A/H Maintenance free.
AC supply to battery charger	12 - 16V AC (30VA).
Battery charger	Voltage regulated, short circuit protected. Output voltage adjustable.
Maximum charge current	1.5A nominal.
Float voltage	13.7V nominal.

GENERAL

Maximum boom length	4.5m.
Boom cycle time	less than 5 seconds.
Number of operations in the event of mains power failure using standard 35A/H battery	300 operations
Recommended maximum number of boom operations per day	1000 operations.

ENCLOSURE

Material	1.6mm mild steel or stainless steel.
Surface finish	White epoxy powder coat, red cover.
Access door	Lockable, hinged. Surface coating as per main enclosure.

CONTROLLER

Type	Centurion CP88.
Trigger inputs	Memory input for pushbutton, keyswitch, radio control, card reader, keypad and any device with potential free N/O output. Non memory input for ticket vendor or cash register.
Inductive loop input/ IR Beam input	Simplex - Provides safety input Complex - Boom lowers automatically when loop is cleared.
Roll back protection	Programmed 2 second.
Auto - close	Simplex - Programmed 30 seconds, selectable, ON or OFF Complex - Programmed 90 seconds, not selectable.
Interlocks	Tickets vend interlock via potential free contact to inhibit ticket issue when boom is raising or up.
Terminals	Plug in terminals for auxiliaries. Screw type terminals for motor and battery.

15.0 GLOSSARY

Anti Rollback

A protection initiated by a closing loop causing the boom arm to re - open if a vehicle rolls back onto the closing loop. Rollback is usually only effective for about 2 seconds after the arm has started to close. Beyond this time the arm will continue its closing cycle until fully closed.

Anti Passback

Protection on card readers to prevent the same card from being passed back from one vehicle to the vehicle following. The card reader has a memory which will only allow the card to be used for re-entry once the card has first been used to exit the same site.

Auto Close

If selected the electronic controller will cause the boom arm to reclose after a preset time.

Collision Sensing

A means of sensing that the arm has collided with an obstruction. If fitted, it will cause a closing arm to stop or reverse direction and re-open, depending on mode.

Closing Loop

An inductive loop which sends a signal to the electronic controller signalling that the vehicle is clear of the area and that the arm can close.

Firmware

The instruction set (or code) contained in the microprocessor which controls the actions and responses of the electronic controller .

Free Exit Loop

An inductive loop provided for the purpose of automatically opening a barrier to allow a vehicle to exit.

Inductive Loop Detector

An electronic device which is able to detect a change in inductance of a wire loop due to the presence of a metallic object being placed in the vicinity of of the loop.

I R Beam

An infra red beam of light across a driveway. An object breaking the beam causes a relay contact to open (or close) indicating an obstruction.

Loop

A wire loop in the ground connected to an electronic, inductive loop detector to sense the presence of a metallic object (e.g. a vehicle).

Mains Failure Relay

A relay fitted to detect that the 220V AC mains has failed. It will cause a normally closed boom to open. If the mains is reapplied the boom will close after a period of 90 seconds. Although not necessary, on a battery operated boom such as the CENTRY, the mains failure relay ensures that the CENTRY complies with the legal requirements in many municipalities. The fire regulations dictate that barriers must fail to "open" in the event of a power failure (which may have been caused by a fire in the premises).

Memory Input

Electronic controller input which memorises the number of pulses received (e.g. from a card reader). The arm will only close after the same number of "exit" pulses have been received (e.g. from a closing loop).

Non Memory Input

Electronic controller input which will store only one single pulse in memory irrespective of the number of the pulses received. The boom arm must be closing or closed before the next pulse will take effect.

Presence Loop

An inductive loop used to provide an indication to, for example, a ticket spitter that a vehicle is present and that a ticket can be issued. Also often used to "arm" a card reader, such that the card reader will only accept a valid card when a vehicle is present. (To prevent a pedestrian opening a barrier with a card without a vehicle present).

Ticket Spitter

A machine capable of issuing a ticket when signalled to do so.

Ticket Vending Interlock

A relay contact connected to a ticket vending machine to prevent tickets being issued while the boom arm is opening or open. As soon as the arm begins to close the ticket spitter is re - enabled.

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