ParkLite
Ticket Dispenser

INTESTAZIONE/HEADER 1
INTESTAZIONE/HEADER 2
INTESTAZIONE
INTESTAZION

Data : 22

Ora : 1

NOTA/A
NOTA/A
NOTA/A
NOTA/A
NOTA/A

FAAC

TD: 001

INTESTAZIONE/HEADER 1
INTESTAZIONE/HEADER 2
INTESTAZIONE/HEADER 3
INTESTAZIONE/HEADER 4

0 3 5 0 5 9 9 1 1 2 4 4 7 8 9 5 2 3 3 6 5 4

Data: VEN 10-02-2006
Ora: 18:40:37

NOTA/ADVISE 1
NOTA/ADVISE 2
NOTA/ADVISE 3
NOTA/ADVISE 4
NOTA/ADVISE 5

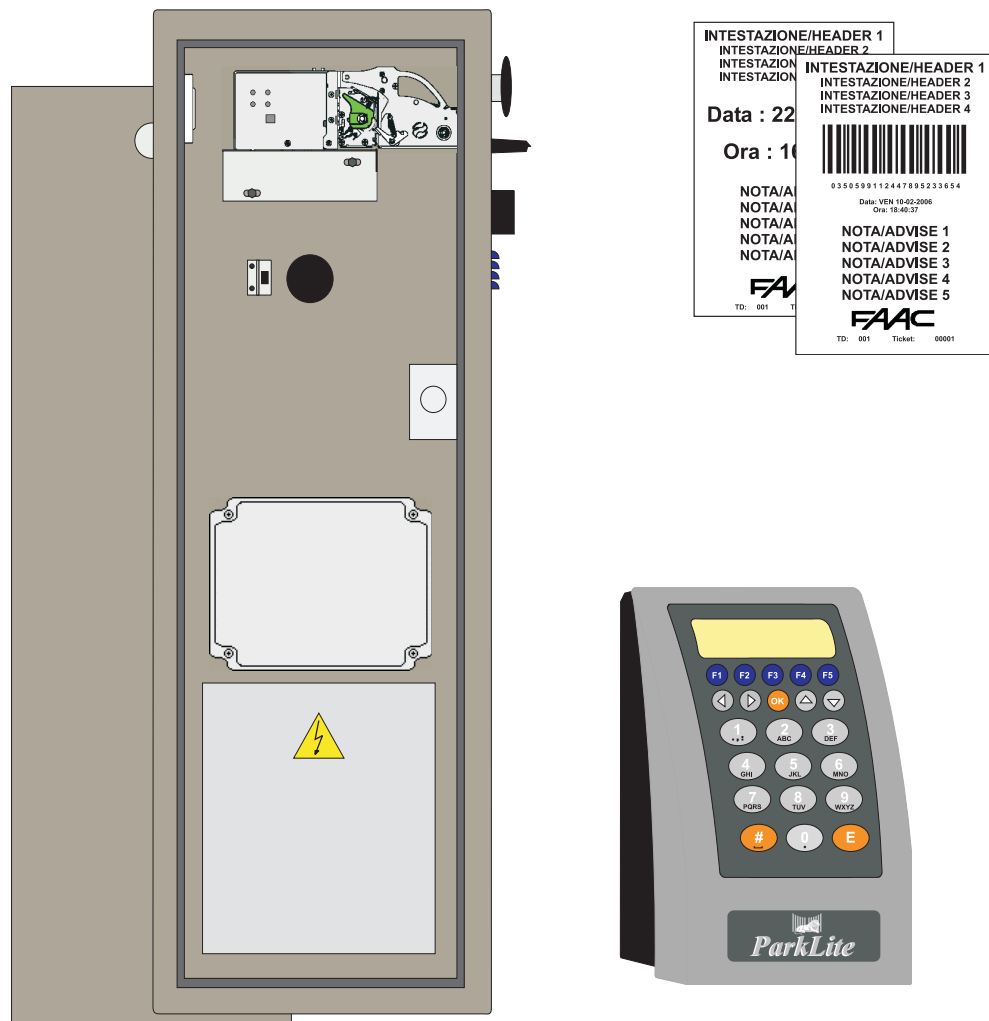**FAAC**

TD: 001   Ticket: 00001

ParkLite

INSTALLATION MANUAL

FAAC

TD ParkLite rev. B

CE DECLARATION OF CONFORMITY

Manufacturer: FAAC S.p.A.

Address: Via Benini, 1
40069 - Zola Predosa
BOLOGNA - ITALY

Declares that: the ParkLite Ticket Dispenser

• conforms to the essential safety requirements of the following EEC directives:

73/23/EEC and subsequent amendment 93/68/EEC.
89/336/EEC and subsequent amendment 92/31/EEC and 93/68/EEC

• and also conforms to the following standards:

EN 50081 -1   EN 60555 - 2   IEC 801 - 2
EN 50082 -1   EN 60555 - 3   IEC 801 - 3
EN 60335 -1   EN 55022   IEC 801 - 4
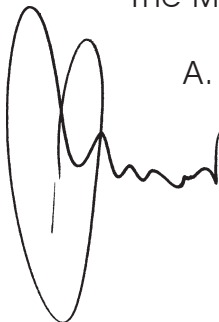EN 60204 -1   EN 55014

Additional notes:
This product underwent a test in a typical, uniform configuration (all products of FAAC S.p.A.).

Bologna, 01 January 2006

The Managing Director

A. Bassi

FAAC

WARNINGS FOR THE INSTALLER

GENERAL SAFETY OBLIGATIONS

1) **IMPORTANT! To ensure the safety of people, it is important that all the instructions be carefully read. Incorrect installation or incorrect use of the product could cause serious harm to people.**

2) <u>Carefully read the instructions</u> before beginning to install the product.

3) Packing materials (plastic, polystyrene, etc.) must not be left within the reach of children, because these materials are potential danger sources.

4) Keep the instructions for future reference.

5) This product was designed and built exclusively for the use indicated in this documentation. Any other use not expressly indicated could compromise the condition of the product and/or be a source of danger.

6) FAAC declines any responsibility due to improper use or use other than the use for which the product is intended.

7) Do not install the equipment in an explosive atmosphere. the presence of gas or inflammable fumes is a serious danger to safety.

8) FAAC is not responsible for failure to use Good Workmanship in installing the product.

9) The installation must be carried out by observing standards EN12453 and EN12445.

10) Before attempting any action on the system, cut out the electrical power supply.

11) Install an omnipolar switch upstream of the power supply line for the ParkLite Ticket Dispenser with contact opening distance of 3 mm. or more. We advise you to use a 6A thermal breaker with omnipolar switching.

12) Make sure that a differential switch with a threshold of 0.03A is installed upstream of the system.

13) Make sure that the earthing system is expertly made and connect to it the Yellow/Green earth terminal of the Ticket Dispenser.

14) FAAC declines all responsibility for the safety and efficient operation of the Ticket Dispenser, if system components not produced by FAAC are used.

15) For maintenance, strictly use original FAAC parts.

16) Do not in any way modify the components of the ParkLite Ticket Dispenser.

17) The installer must supply all information on the operation of the system and hand over to the user, the "User's Guide" which accompanies the product.

18) The user must not in any way attempt to repair or to take direct action and must contact qualified personnel only.

19) **Anything not expressly specified in these instructions is not permitted.**

Contents

1. DESCRIPTION AND TECHNICAL SPECIFICATIONS

1.1 DESCRIPTION

The ParkLite Ticket Dispenser was designed to manage the entrance lane of a parking area. This function can be performed by the equipment in different ways:

- stand-alone
- slaved to another "Master" unit
- slaved to the "ParkLite" management software.

The services offered by the system depend on the type of mode selected.

The unit controlling access to the gate in stand-alone mode, or the unit connected to a "Master" unit, can be configured and managed by a "PL programming Keyboard"; without the need for connection to a PC and to the relevant application program. This characteristic makes it possible to create simple, economic systems.

Alternatively, the Ticket Dispenser can be connected to a personal computer, on which the ParkLite software has been installed.

This type of connection makes it possible to exploit all the services offered by the system, thanks to the support of the parking area management program.
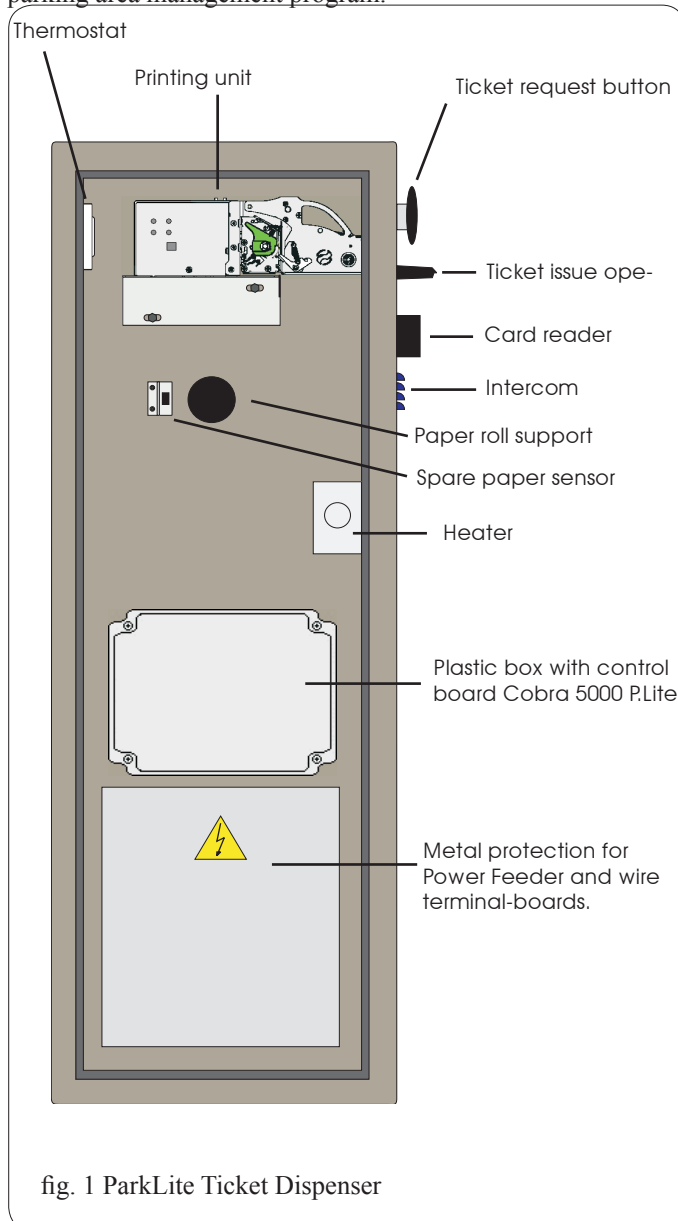

fig. 1 ParkLite Ticket Dispenser

The ParkLite Ticket Dispenser is available in three versions:
- **ParkLite TD**
- **ParkLite TD-TAG**
- **ParkLite TD-MAG**

All models are provided with the ticket issue module, for managing single-stay users. You can choose from 6 different types of available ticket lay-outs, so that the required information is printed on the issued ticket. Two models have been created showing very clearly the date and time of the user's entry, and four models which indicate a 22-character barcode, containing all the information about the moment when access is performed. In addition to the essential data which the Ticket Dispenser prints on the ticket, according to the chosen lay-out, up to 4 header lines can be pre-set (name, park address, etc) and 5 lines of notes (warnings, agreements, publicity, etc.), so that they are printed by the equipment on every issued ticket. The printing unit constructs the ticket, taking thermal paper from a roll, and then transforms it by means of the various devices it contains (printing head, cutter, expeller, control electronics). Thermal paper rolls of 80gr/sq.m, or 140 gr./sq.m. can be used. The TD's ticket issuing capacity varies according to the type of paper used.

"ParkLite TD-TAG" has a reader of passive proximity cards, which detects memory-stored codes at a frequency of 125 Khz.

"ParkLite TD-MAG" has a magnetic card reader, which reads magnetic bands coded on a Standard 2 ISO track.

The Ticket Dispenser can be connected to a specific intercom control unit (optional), which enables the operator to remotely communicate with the user situated on the entrance lane.

The unit can manage an available/full panel (optional), to signal the availability of a car space to the user.

Connection with two magnetic loops, able to detect the presence and transit direction of the vehicle, is obligatory for all models. The engagement and disengagement of these sensors, allows the Ticket Dispenser to enable the ticket issue/card reading modules, control the car's travelling direction, supply the closing command to the beam and do the counting. The location of the loops, in common with the equipment for controlling access in the entrance lane, must observe to the letter the instructions in the following chapters.

The Ticket Dispenser directly opens/closes the beam with an impulsive logic, providing the open/closed command. For this reason, when creating entry gates for vehicles, solely beams which manage the car park logic must be used.

The vehicles-only lanes must be provided with appropriate horizontal and vertical signs indicating "transit by pedestrians forbidden". Likewise, if there are any pedestrian crossings on the lanes, all the beams must be made safe and suitable warning signs must be installed. See the current legal regulations on the matter (in particular standards: EN12453 and EN 12455).

To avoid damage to transiting vehicles, the barriers must be equipped with a safety option, which makes it possible to connect the "vehicle present" signal, received from the transit loop, to avoid accidental closure. This characteristic must be enabled also when photocells installed under the beam are used.

Labels in figure:
- Thermostat
- Printing unit
- Ticket request button
- Ticket issue ope-
- Card reader
- Intercom
- Paper roll support
- Spare paper sensor
- Heater
- Plastic box with control board Cobra 5000 P.Lite
- Metal protection for Power Feeder and wire terminal-boards.

1.2 TECHNICAL SPECIFICATIONS

Tab. 1 Characteristics present on all ParkLite Ticket Dispenser models

DIMENSIONS	350x1050x170 (Width x Height x Depth in mm)
WEIGHT	30 Kg
CABINET PROTECTIVE TREATMENT	Cataphoresis
CABINET PAINT	Opaque grey and blue micalised polyester
POWER SUPPLY	230 Vac (+6% - 10%) 50 Hz
OPERATING AMBIENT TEMPERATURE	-20°C / +50°C
ABSORBED POWER WITH HEATER	100 Watt
ABSORBED POWER WITHOUT HEATER	45 Watt
INPUT/OUTPUT CONNECTIONS	Through pull out terminal-boards, on control board
METAL DETECTOR FOR LOOP CONNECTION	Integrated,with two channels and doubled outputs
POWER SUPPLY	Switching on 2 channels; 115Vac - 230Vac
HEATER	Yes
TEMPERATURE MAINTENANCE THERMOSTAT	Yes (value range from 0° to 30° Celsius)
DATA TRANSMISSION LINE	RS485 (or RS232 for one equipment only at max 12mt from the PC)
CONTROL UNIT	COBRA 5000 P.Lite board
RAM CONTROL UNIT	512 KByte
USER CAPACITY	5000
EVENT CAPACITY	15000
SPARE PAPER SENSOR	Yes
PRINTING UNIT	Consist of: THERMAL PRINTER + CUTTER + EXPELLER
PRINTER RESOLUTION	200 DPI (8 dot/mm)
PRINTING SPEED	140mm/sec
TYPE OF PAPER	White Thermal: 80gr/sq.m or 140gr/sq.m
ROLL DIMENSIONS	Diameter 280mm
PAPER ROLL WITH ISSUING CAPACITY OF	6000 Tickets with 80gr/sq.m paper, 3000 Ticket with 140gr/sq.m paper
ISSUED TICKET DETECTION	Barcode with 22 characters 2/5 interleaved or with entry date /time
TEXTS PRINTABLE ON TICKET	Up to 4 header lines and 5 lines of notes, 28 characters per line
TICKET DISPENSING SPEED	Up to 21 tickets per minute

Tab.2 Characteristics present only on ParkLite TD TAG

TYPE OF CARD READER	Contact Less reader of Passive Transponders
CARD DETECTION FREQUENCY	125 KHz
TYPE OF READ CARDS CODING	UNIQUE
CARD DETECTION DISTANCE	Max. 10cm.
CARD FORMAT	ISO (86x54x0,78mm)

Tab. 3 Characteristics present only on ParkLite TD MAG

|	
TYPE OF CARD READER	Magnetic card swipe reader (100% of track)
TYPE OF READ CARDS CODING	Standard 2 ISO track (from 1 to 37 characters)
CODING CODE	High coercitivity 4000 Oe
CARD FORMAT	ISO (86x54x0,78mm)

2. INSTALLATION OF COMPONENTS

2.1 LANE CHARACTERISTICS

All the components of an entrance lane of a ParkLite automated parking system, are directly managed by the Ticket Dispenser.

The entrance lane of a parking area consists of:

• **Nr. 01 ParkLite Ticket Dispenser.**
• **Nr. 01 620 rapid barrier RH.**
• **Nr. 02 Magnetic loops.**
• **Nr. 01 Parking Available/Full panel.**
• **Nr. 01 Pair of photocells.***
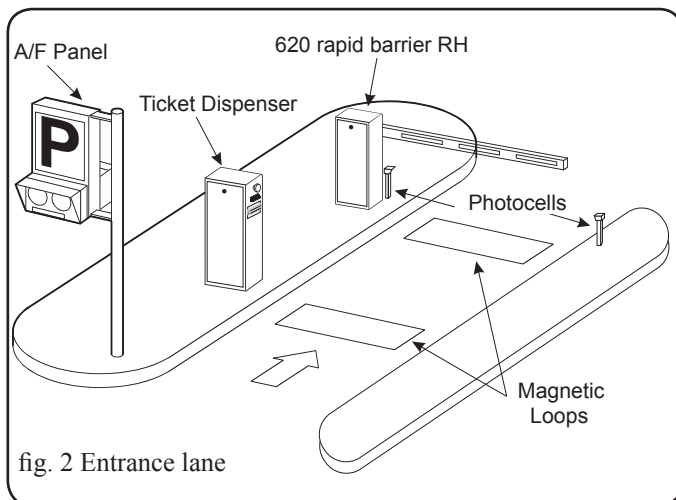
fig. 2 Entrance lane

* optional

2.2 ESSENTIAL REQUIREMENTS

• The entrance lane to a parking area managed by the Ticket Dispenser must be constructed so that the vehicles coming from different directions can easily get close to the column, to enable the user to withdraw the ticket or show a valid transit ticket without any difficulty.

• The equipment must be installed on an island 15 cm. above road level. If this is not possible, protective structures must be installed around the base of the two columns (TD and barrier 620) and the Ticket Dispenser must be raised 15 cm. above the lane paving, so that the devices for issuing and treating the tickets for access to the parking area are located at the right height.

• The Ticket Dispenser operates only if the magnetic loops have been correctly connected to it. In fact, the column was designed to manage all the user access to lane stages, exploiting these two elements, which are generally defined as: presence loop and transit loop.

The construction and deployment of the loops is fundamentally important to ensure that the system functions correctly. For this reason, observe to the letter all the instructions described in the following paragraphs:
2.3 Making the Magnetic Loops
2.7 Positioning the equipment.

• The power cables and the cables for connecting the equipment in the parking system must have the characteristics indicated in paragraph:
3.2 Type of cables.

Furthermore, all the instructions in paragraph "General safety rules" on page 3 must be respected, and, with reference to the specific electrical preparations, as described in paragraph:
3.1 Safety rules.

• The Ticket Dispenser was designed to manage automatically the entry of vehicles to a parking area. Therefore, transit by pedestrians must be forbidden in the area reserved for transit of vehicles. Moreover, appropriate signs prohibiting transit by pedestrians must be installed. Where it is not possible to have an entrance/exit gate reserved exclusively for pedestrians, the current legal regulations on the subject must be absolutely observed; (in particular standards: EN 12453 and EN 12445)

• The lane must not allow access by two or more vehicles side by side. For this reason, the width of the lane must be appropriately sized, according to the type of vehicle generally used.

• Sufficient space must be provided for every equipment of the parking system, so that all the necessary installation and maintenance operations can be smoothly carried out.

• The A/F panel must be installed in a point visible to users coming from various directions.

• Appropriate signs (not supplied by FAAC), indicating the tariffs and the car park rules must be visibly shown on the entrance lane to the car park.

NB.: All the equipment which can be used in the ParkLite parking system, were designed and tested by FAAC, in observance of the points mentioned above. In order to avoid any kind of unforeseen behaviour, all the rules shown in this manual must be observed.

2.3 CONSTRUCTION OF LOOPS

2.3.1 INSTALLATION

The following instructions must be respected:

• Lay the loops at least 15 cm. from fixed metal objects.

• Lay the loops at least 15 cm. from fixed metal grilles.

• Lay the loops at least 50 cm. from moving metal objects.

• The loops must be laid at a depth of 30mm. to 50mm. from the road surface.

• The loop must be made with a single cable, without making any joints or shunts inside the pits.

• The two ends of the cable issuing from the loop perimeter must be twisted or intertwined with each other at least 20 times per meter, up to the connection inside the Ticket Dispenser.

• The twisted cable of the loop must be laid in pipes or cable ducts separated from those used for other purposes (power etc.).

2.3.2 CONSTRUCTION

The shape of the loops must be 'rectangular'. The corners must be cut at 45° to prevent the cable breaking, due to the vibrations of transiting vehicles or possible settling of the road paving.
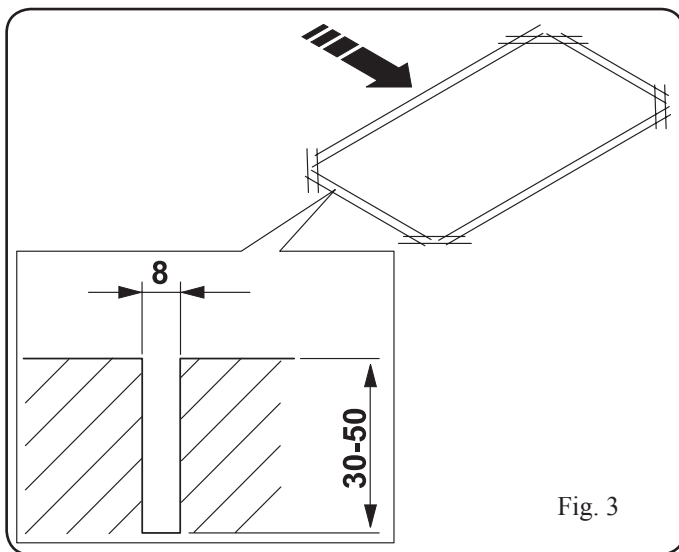

Fig. 3

There are two methods for making them:

• Lay a single single-pole cable with a cross section of 1.5 mm^2, with double insulation, directly in a chase made in the existing road paving.

• First construct a cable duct in PVC of the necessary shape, insert a single-pole single-insulation cable with a cross-section of 1.5 mm^2 inside it, and then lay the loop thus constructed inside the chase.

NB.: in both cases, respect the requirements specified in point 2.3.1.

2.3.3 NUMBER OF WINDINGS

The loop must consist of a precise set of windings of the cable

described up to here, around the perimeter in which it must be constructed.

Procedure for the above operation: insert the cable end from the sharp edge providing access into the chosen seat, next run it inside for a set of full 'circuits', to make a coil, and then make the same cable come out from the point where it had been inserted.

Loop consisting of 4 windings
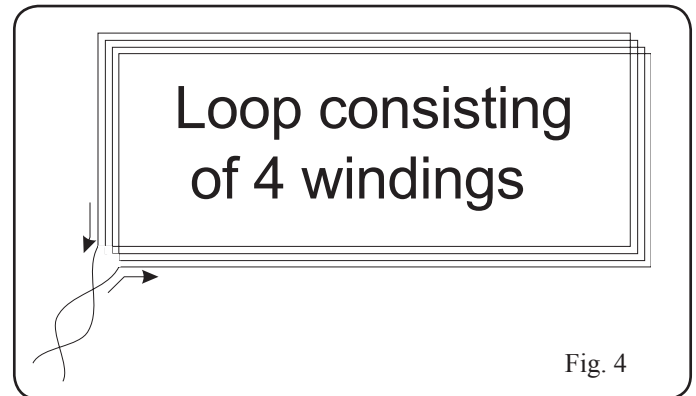
Fig. 4

The windings which must be made in order to construct the loop correctly, depend on the dimension of the perimeter. The dimensions of the loops to be laid on the lane managed by the Ticket Dispenser, shown in the following chapters, call strictly for the construction of **4 windings**.

In fact, the system detects all the transit stages of the vehicles on the entrance lane, making use of these devices. As a result, fewer than specified windings will not make the equipment, assigned to control the lane, operate correctly.

NB.: if there are metal nets under the paving (see the distance of the metal grilles previously referred to), we advise you to add 2 windings to the 4 obligatory windings.

2.4 MASONRY PREPARATIONS

2.4.1 LAYING THE FOUNDATION PLATES

The foundation plate for securing the Ticket Dispenser is identical to the one used for installing the 620 barrier. The drawing below shows the dimensions and methods for laying them both.

Dimensions in mm.
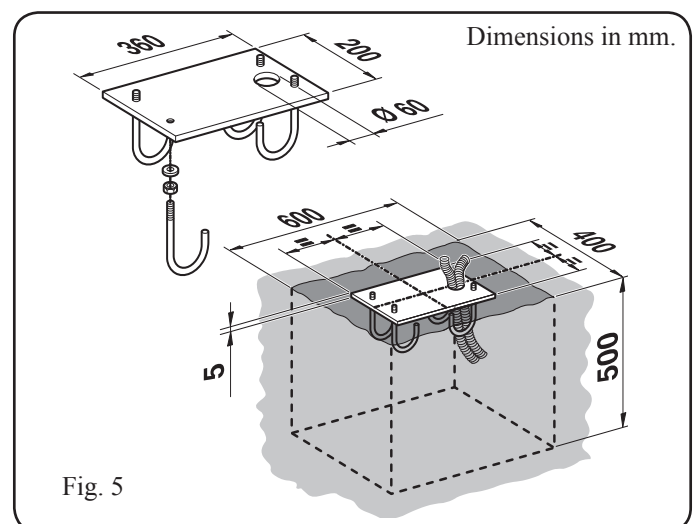
Fig. 5

The following figure shows how to make the foundation plinth of the support stake of the A/F Panel. The pole has a height of 4,100 mm. and an external diameter of 102 mm.

Fig. 6
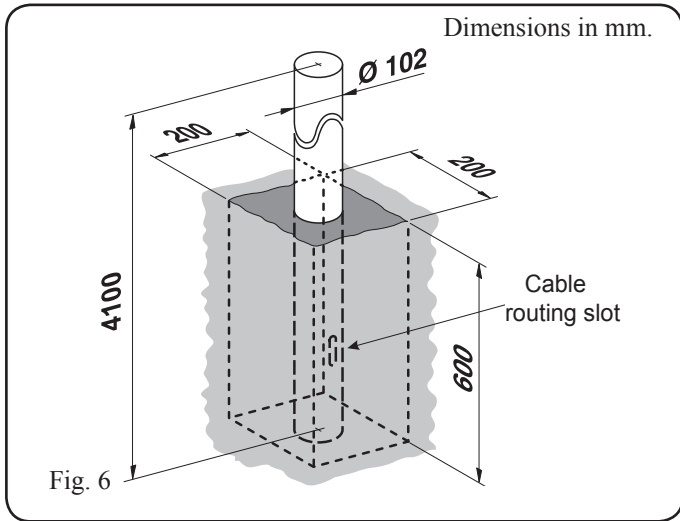
The dimension of the support stake was chosen so that the A/F Panel is as visible as possible to users approaching the entry to the parking area.

2.4.2 FASTENING

Ticket Dispenser and/or 620 Barrier

• Using a level, check if the foundation plate is perfectly horizontal before installing.

• Secure the upright to the plate with suitable nuts and washers.

A/F Panel
This device can be fitted either on the wall or on the support stake. In the latter case the following are necessary:

• Make sure that the pole is perfectly perpendicular with respect to the road surface and check if it is stable.

• Use the counter-plates as shown in the following picture.

Fig. 7
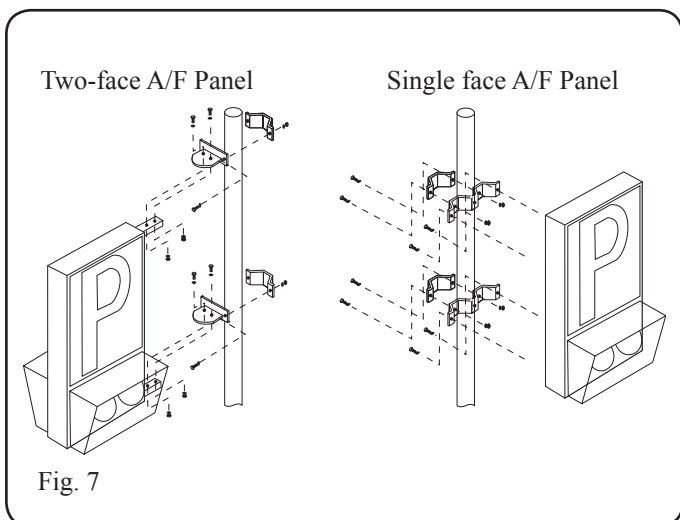
2.5 COMPONENT DIMENSIONS

The following pictures show the dimensions in millimetres of the main lane equipment.

Fig. 8

Fig. 9

Fig. 10

FAAC
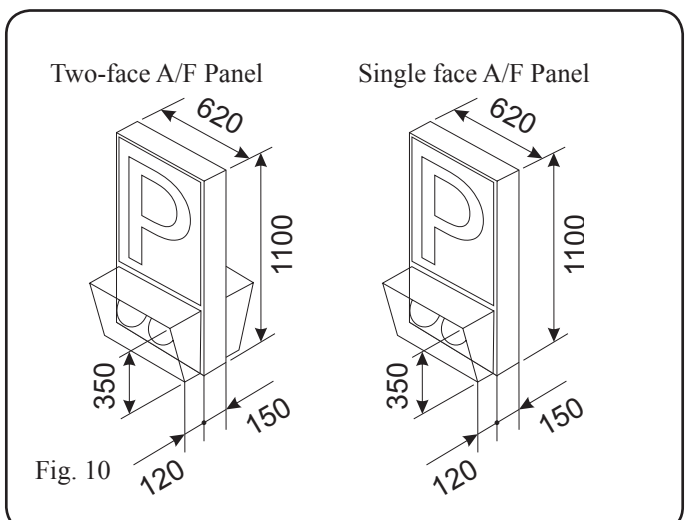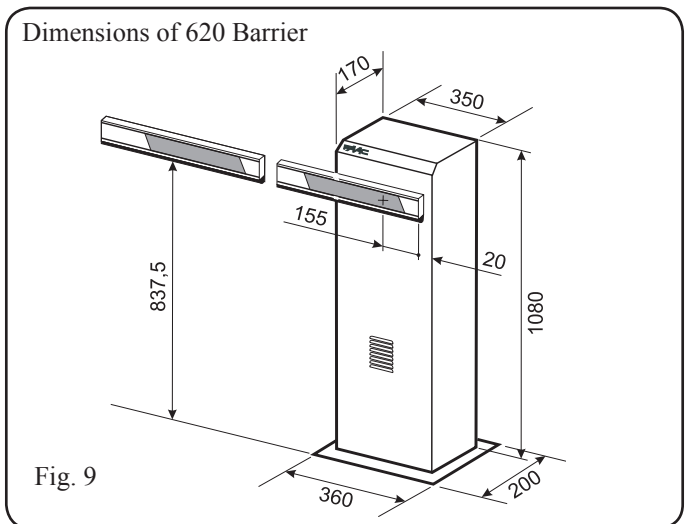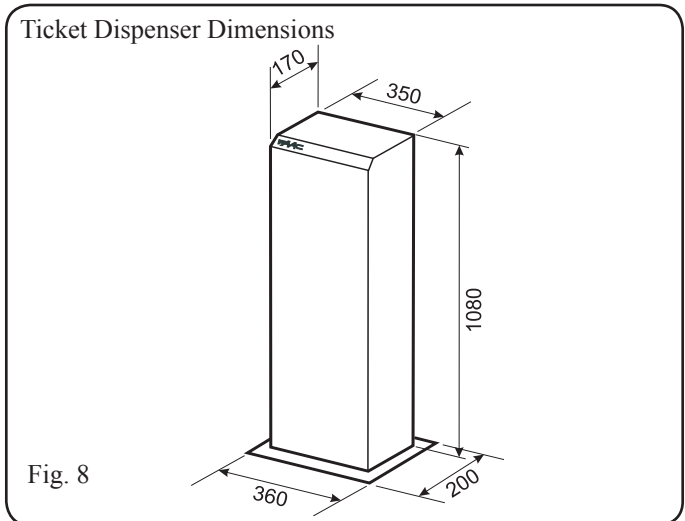
2.6 PREPARATION OF CHANNELS

Before carrying out the masonry works required to make the lane, prepare all the channels/ducts/raceways essential for cable routing, for electrical connection of the system's equipment.

Lay the cable ducts, scrupulously observing the indications shown in the lay-out below.

Separate ducts must be provided between: high voltage (230 Vac power cables) and low voltage (cables for: commands, safety, intercom, serial data line, etc.).

Furthermore, appropriately size the diameter of the cable ducts to be laid, in relation to the cross-section and number of cables to be inserted. To this end please refer to section **3. Electrical preparations** of this manual.

Channel lay-out for Entrance lane

⬛(red)	1	**Input of Ticket Dispenser power cables**
⬛(blue)	2	**Input and output of cables for data transmission line on RS 485 protocol**
⬛(pink)	3	**Input for intercom line cables**
⬛(brown)	4	**Input of area count reduction contact, (ONLY Master TD)**
⬛(grey)	5	**Parking Available/Full panel connection line**
⬛(cyan)	6	**Vehicle Presence loop**
⬛(orange)	7	**Vehicle Transit loop**
⬛(green)	8	**Open/Closed barrier commands + transit loop safety contact**
⬛(black)	9	**Input of barrier power cables**

Fig. 11

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2.7 POSITION OF EQUIPMENT

To ensure the parking system operates correctly, all the equipment of the entrance lane <u>must be positioned, strictly</u> observing the dimensions shown in the lay-out below:

Equipment lay-out for managing vehicles on entrance lane

Foundation plate for 620 rapid barrier (RH version)

Foundation plate for ParkLite column

550mm

200mm

3200mm

300mm

100mm

600mm (min)

1000mm

1000mm

2200mm

2000mm

Presence loop

Transit loop

Driving direction
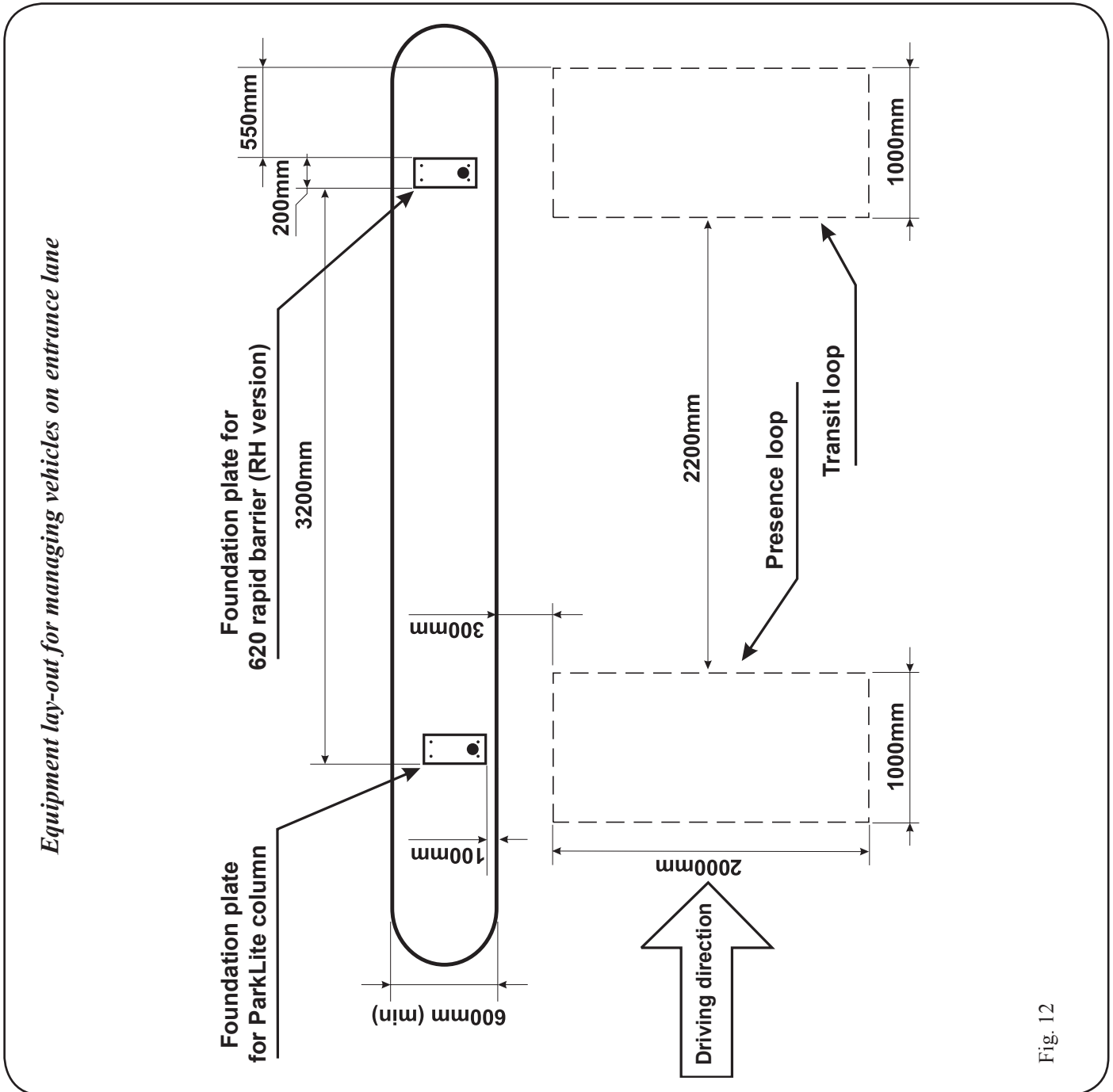
Fig. 12

3. ELECTRICAL PREPARATIONS

3.1 SAFETY INSTRUCTIONS

• Before attempting any action on the system, cut out the electrical power supply.

• Install an omnipolar switch upstream of the power supply line for the device, with contact opening distance of 3 mm. or more. We advise you to use a 6A thermal breaker with omnipolar switching.

• Make sure that a differential switch with a threshold of 0.03A is installed upstream of the system.

• Make sure that the earthing system is expertly made and connect to it the metal parts of the closing element.

• Apply all the instructions described in the preceding points to all the lane devices, in addition to the Ticket Dispenser.

FAAC

3.2 TYPE OF CABLES

The characteristics of the cables, to be used for connecting the Ticket Dispenser, are determined to ensure that the equipment and all the devices connected to it operate well.

For this reason, you must use only the conductors with the characteristics described in the table below:

Electrical preparations for the ParkLite Ticket Dispenser lane

1	Flame-retardant cable 2 x 1,5 mm² + earth (power supply)
2	Single-pole cable 1,5 mm² with single or double insulation of the presence loop
3	Single-pole cable 1,5 mm² with single or double insulation of the transit loop
4	Cable Belden 9841 or CEAM Y09842 with twisted pairs and screened for transmission on data network with RS 485 protocol. All devices must be multidrop-connected as shown in lay-out "Data Line Connections"
5	Shielded cable for intercom 2 x 1,5 mm² (if Legacy model). Telephone pair 0,4 mm² - 275 Ohm/Km Line (Double wire), or telephone pair 0,6 mm² 122 - Ohm/Km Line (Double wire) (if Deluxe model)
6	Flame-retardant cable 2 x 0,5 mm² (area reduction input). NB: for Master TD only
7	Flame-retardant cable 4 x 1,5 mm² + earth (power supply to parking available/full panel)
8	Flame-retardant cable 2 x 0,5 mm² (input for barrier closure safety)
9	Flame-retardant cable 3 x 0,5 mm² (open/closed barrier commands)

A/F panel

Safety contact STOP

Safety contact STOP

Open/Closed commands Closed Open

Token acceptor 620E

Intercom control unit

RS 485 Data Line — TD Slave TR Slave — Personal Computer — Controller PL — Converter

Transit loop — Transit Loop

Presence loop — Presence Loop

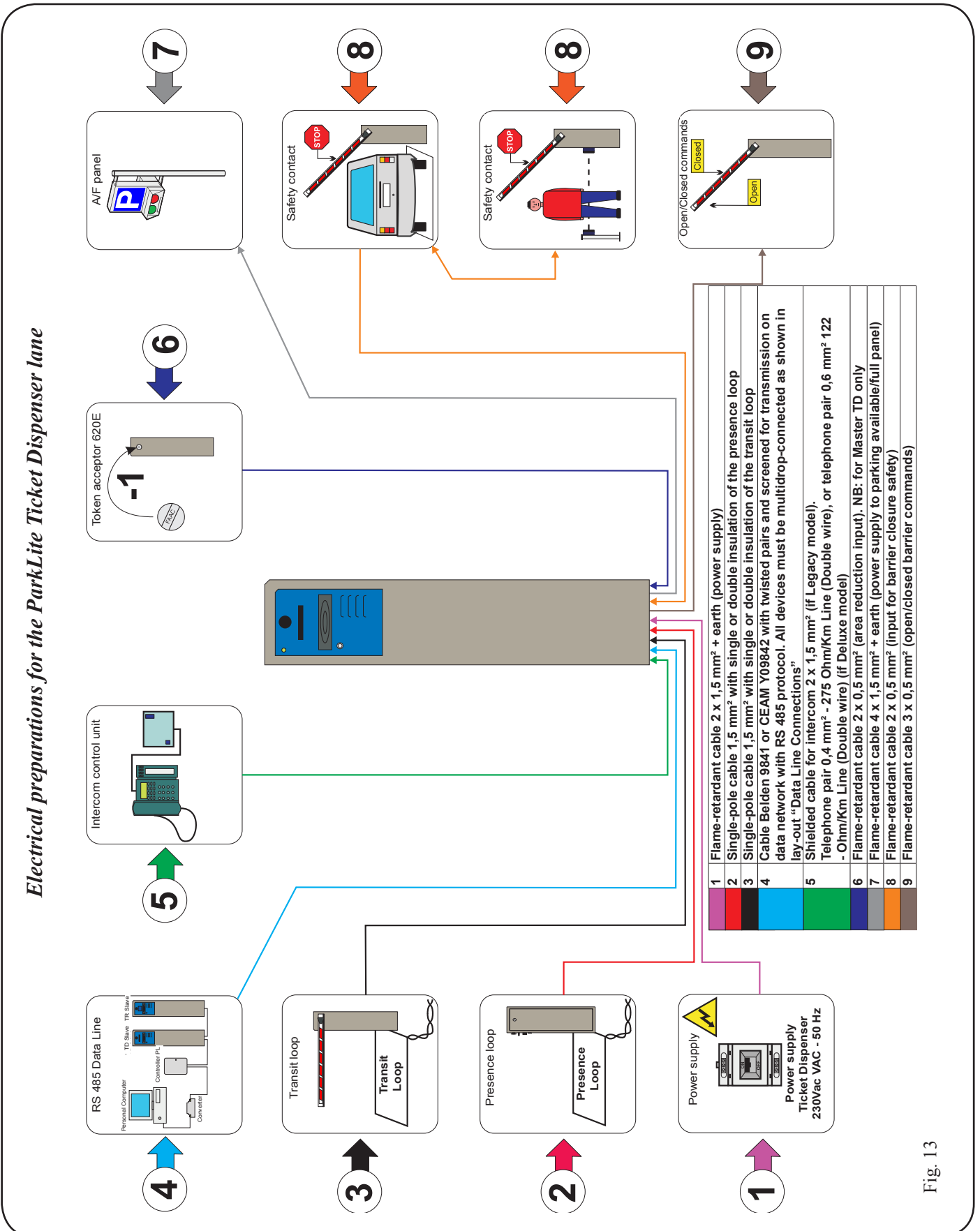Power supply — Power supply Ticket Dispenser 230Vac VAC - 50 Hz

Fig. 13

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4. ELECTRICAL CONNECTIONS

4.1 CONNECTIONS ON INTERFACE BOARD

Most of the devices managed by the Ticket Dispenser are connected via the Interface board. The lay-out below shows all the connections that can be made, for all the types of uses for which the equipment was designed.
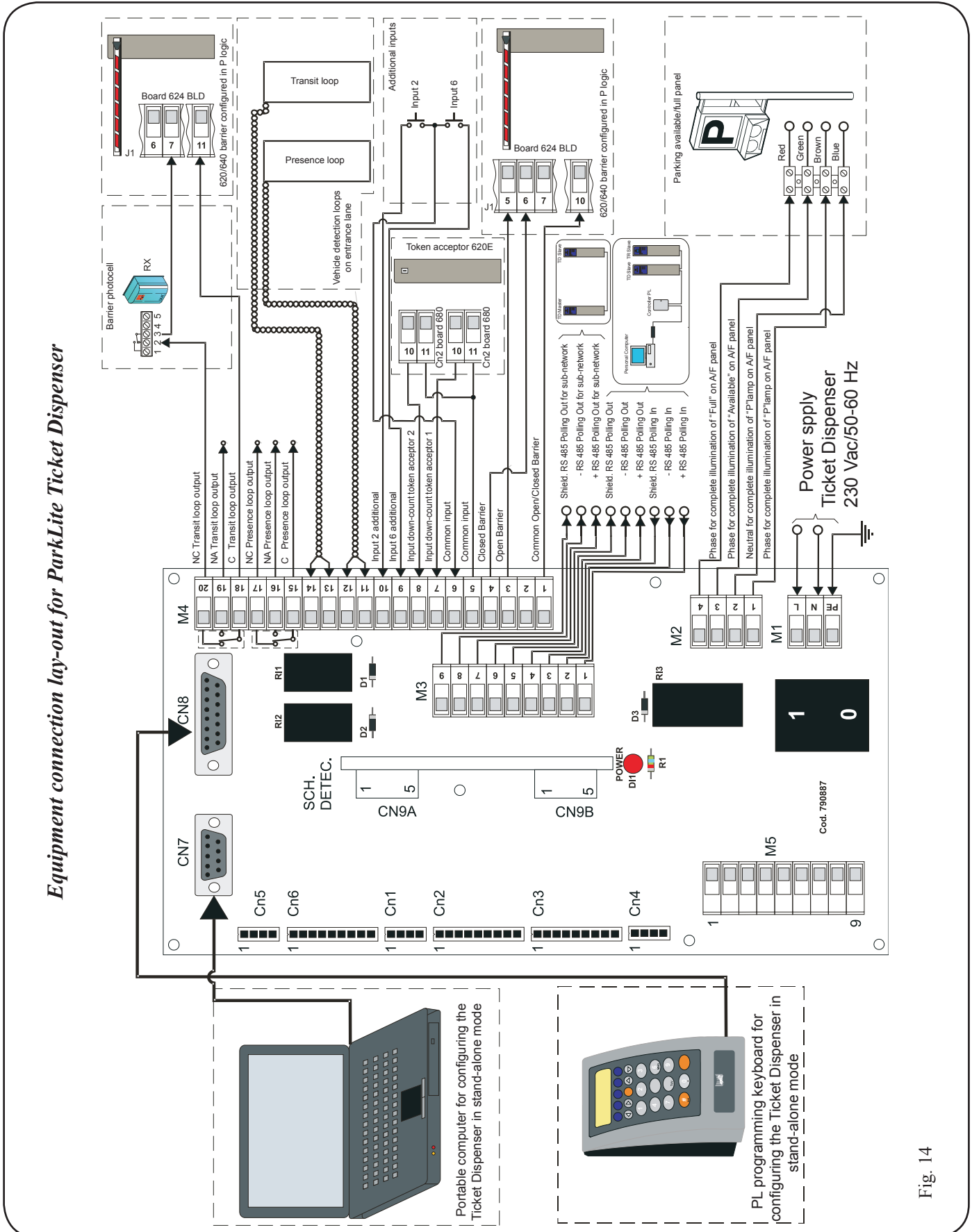

Equipment connection lay-out for ParkLite Ticket Dispenser

Fig. 14

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4.2 DATA TRANSMISSION LINES

The Ticket Dispenser can be connected to a data transmission line, so that all the necessary information can be transmitted/received, in a specific management unit, to which the equipment will be slaved. In the higher performance systems, all the devices which control entrance/exit to/from the parking area, are controlled by a Personal Computer (data controller) by means of the ParkLite software. The lay-out in the following figure shows the connection of the various types of equipment which can be connected to the data transmission line. In addition to this, a table summarises the characteristics required for operation of the data communication networks.

Connection of data lines in a system operating on-line with controller PC and ParkLite management software
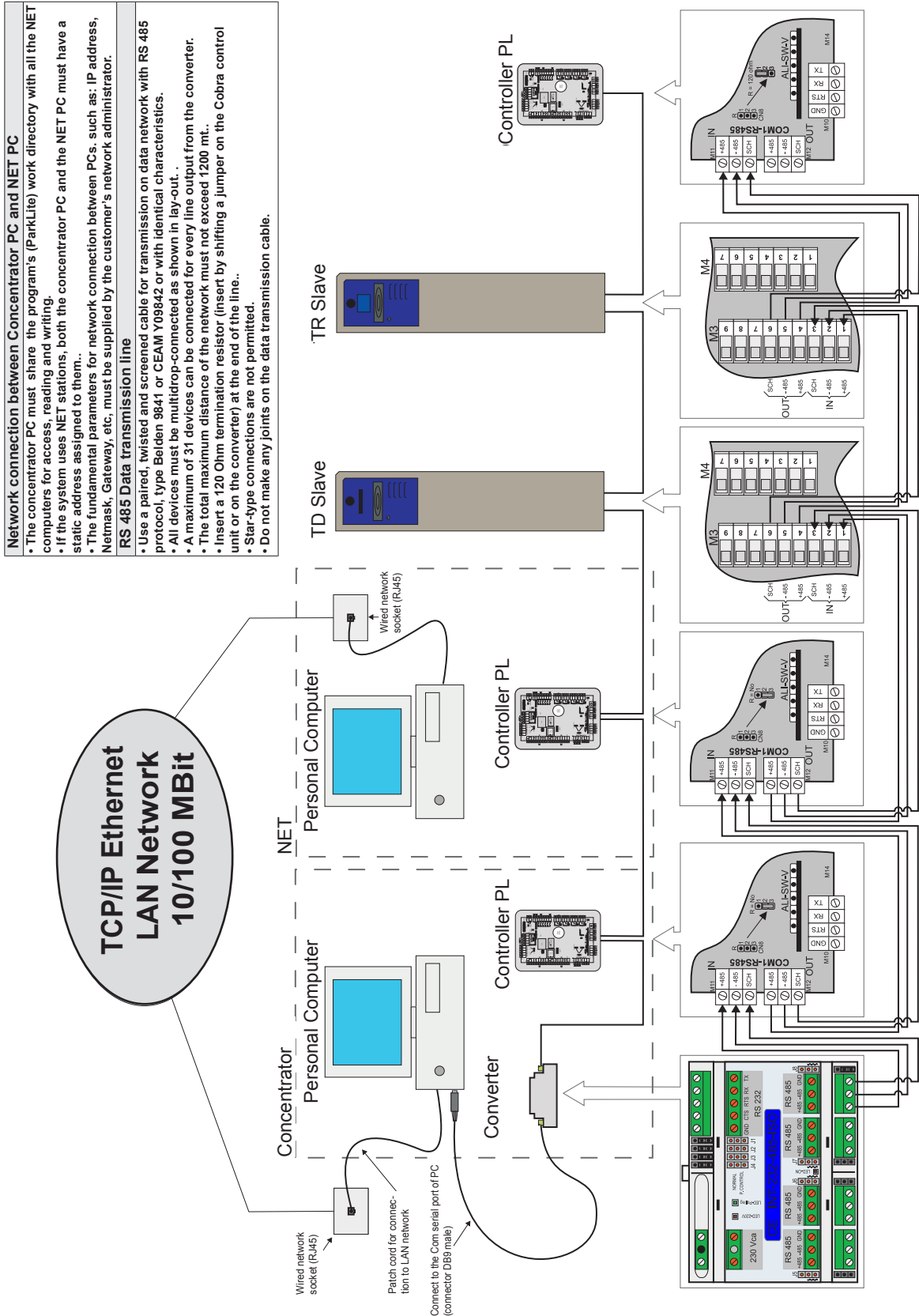
Network connection between Concentrator PC and NET PC
• The concentrator PC must share the program's (ParkLite) work directory with all the NET computers for access, reading and writing.
• If the system uses NET stations, both the concentrator PC and the NET PC must have a static address assigned to them..
• The fundamental parameters for network connection between PCs. such as: IP address, Netmask, Gateway, etc, must be supplied by the customer's network administrator.

RS 485 Data transmission line
• Use a paired, twisted and screened cable for transmission on data network with RS 485 protocol, type Belden 9841 or CEAM Y09842 or with identical characteristics.
• All devices must be multidrop-connected as shown in lay-out. .
• A maximum of 31 devices can be connected for every line output from the converter.
• The total maximum distance of the network must not exceed 1200 mt..
• Insert a 120 Ohm termination resistor (insert by shifting a jumper on the Cobra control unit or on the converter) at the end of the line..
• Star-type connections are not permitted.
• Do not make any joints on the data transmission cable.

Fig. 15

TCP/IP Ethernet LAN Network 10/100 MBit

Controller PL

TR Slave

TD Slave

NET

Personal Computer

Controller PL

Concentrator

Personal Computer

Controller PL

Converter

Wired network socket (RJ45)

Patch cord for connection to LAN network

Connect to the Com serial port of PC (connector DB9 male)

Wired network socket (RJ45)

FAAC

Where a Personal Computer for managing the parking area cannot be used, its work can be delegated to a single Ticket Dispenser, defined as Master TD. However, we should emphasise that the functions provided by this type of system are limited both by the specified functions and by the equipment which can be connected.

Only other Slave TDs or other PL Slave Controllers (the latter only for managing subscriber users) can be connected to the Master unit.

No type of Cash Desk or Ticket Reader can be connected to this system. The lay-out in the following figure shows the connection of the various types of equipment, which can be connected to the data transmission line.

Connection of a data line as a sub-network to Master TD

**RS 485 Data transmission line**
- Use a paired, twisted and screened cable for transmission on data network with RS 485 protocol, type Belden 9841 or CEAM Y09842 or with identical characteristics.
- All devices must be multidrop-connected as shown in lay-out. .
- A maximum of 31 devices can be connected to the Master TD output line.
- The total maximum distance of the network must not exceed 1200 mt..
- Insert a 120 Ohm termination resistor (insert by shifting a jumper on the Cobra control unit or on the converter) at the end of the line..
- Star-type connections are not permitted.
- Do not make any joints on the data transmission cable.

Controller PL Slave

TD Slave

TD Master

Cobra P.Lite board

Interface board

Interface board

Subnetwork Out

Fig. 16

4.3 INTERCOM CONNECTION

The intercom is an optional item and can be supplied in two different models, named:
- **LEGACY**
- **DELUXE**

The connection of the intercom line for both models must be made via a terminal-board installed on a DIN guide, which is located under the interface board. To connect the conductors, refer to the lay-out shown in the following figure:

Intercom connection

Common contact

Line

Fig. 17
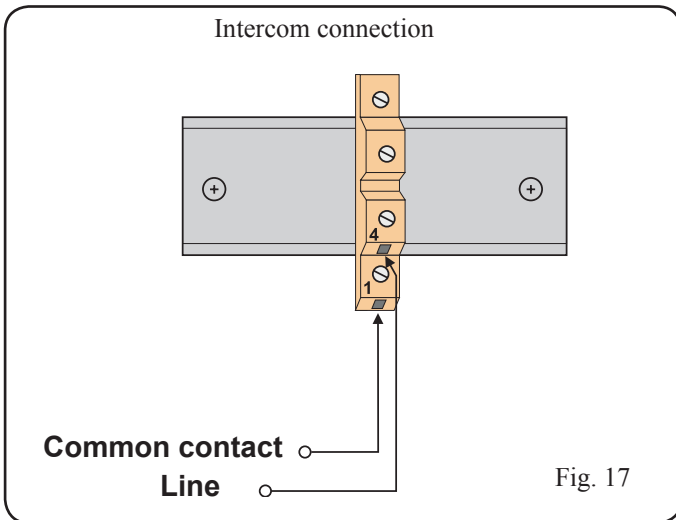
NB.: connection to the intercom control unit depends on the model used. To this end, consult the manual of the intercom that was bought.

5. SETTING OF COMPONENTS

5.1 DETECTOR CONFIGURATION

The ParkLite Ticket Dispenser is supplied with the built-in DP2 two-channel detector. This device is fitted in the interface board and detects vehicles transiting on the entrance lane. The following image shows the board's essential components:

Detector DP2

Fig. 18
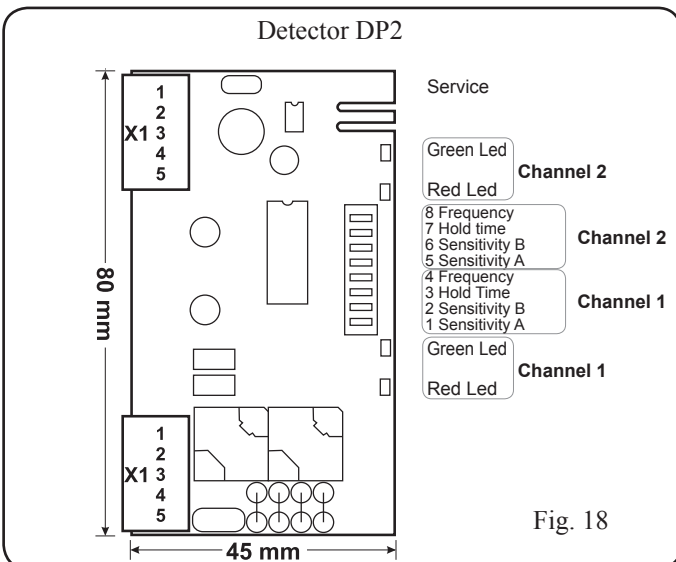
The detector can be set by using the 8 dip-switches located at the side of the control board. Varying the position of each dip-switch enables you to change the operational characteristics of this component. The following steps show all the configurations that can be performed. In addition to this, the tables show the recommended value in blue.

Sensitivity

For each channel, you can change the inductivity sensitiveness which a vehicle must vary to activate the relevant output of the detector. This parameter is adjusted separately for each channel, with the aid of two dip-switches

Sensitivity	Channel 1	Channel 2
Low	DIP 01 = OFF DIP 02 = OFF	DIP 05 = OFF DIP 06 = OFF
Medium-Low	DIP 01 = ON DIP 02 = OFF	DIP 05 = ON DIP 06 = OFF
Medium-high	**DIP 01 = OFF DIP 02 = ON**	**DIP 05 = OFF DIP 06 = ON**
High	DIP 01 = ON DIP 02 = ON	DIP 05 = ON DIP 06 = ON

Frequency

The operating frequency of the detector can be configured on two levels, by dip-switches 4 and 8, separately for each channel. It is essential to differentiate the frequency among the channels of the detectors which command the loops of two adjacent lanes, in order to avoid any kind of noise.

Frequency	Channel 1	Channel 2
Low	**DIP 04 = OFF**	**DIP 08 = OFF**
High	DIP 04 = ON	DIP 08 = ON

Presence time and reset

Dip-switches 3 and 7 enable you to set a continuous detection time of 5 minutes, after which a reset and a consequent self-set are performed automatically. This type of setting is normally not recommended for parking systems, because the cars may stay on the loops for some time, e.g. waiting for a vehicle to come out when the area is full.

Presence time	Channel 1	Channel 2
5 minutes	DIP 03 = OFF	DIP 07 = OFF
Infinity	**DIP 03 = ON**	**DIP 07 = ON**

Signalling LEDs

The green LED signals that the detector channel is operating, whereas the red LED supplies information on the status of the relay according to loop condition. Signals are shown separately for each of the 2 channels.
The following table summarises the detected conditions.

Detector Status	Green Led	Red Led
Not powered	OFF	OFF
Self-setting	Flashing light	OFF
Loop free	ON	OFF
Loop engaged	ON	ON
Faulty loop	OFF	ON

NB: for further information about the DP2 detector, please consult the manual of this device

5.2 THERMOSTAT ADJUSTMENTS

A temperature of 22°C must be maintained inside the column in order to obtain good ticket printing quality and good bar code readings on the installed devices. This characteristic will ensure that the thermal printer operates at its best, when the ticket is printed. This is in addition to eliminate any condensation accumulated inside, due to possible temperature ranges between day and night. We therefore advise you to always feed the Ticket Dispenser and adjust the thermostat knob to 22°C.

6. CONTROL UNIT

6.1 P.LITE COBRA BOARD

The Ticket Dispenser electronic control unit is defined as: **Cobra P.Lite**. It has specifically created firmware for commanding all devices which need to be controlled on the entrance lane to the parking area.

The board manages some processes in a fully independent way, whereas others can be subordinated through the board to the ParkLite management software.

We must underscore the fact that every equipment for treating tickets and cards in the ParkLite system uses this type of unit. The various devices of the system (Ticket Dispenser, Ticket Reader, Cash Desk, etc) make use of this control board with the same firmware. The function to which the equipment is addressed, is acquired by inserting a jumper, located on the board's CN1 connector.

6.2 JUMPER FUNCTION

Whenever the Ticket Dispenser is powered up, the Cobra P.Lite control unit controls the function to which it is delegated, through the jumper fitted on the CN1 connector, and it sets itself to manage all the specified devices for that use. Therefore this jumper must be correctly fitted.

Obviously, the Ticket Dispenser is supplied with the jumper already set in the right position. Fig.19 shows all the settings which can be carried out on the management unit. This figure is included in order to be used, if this board has to be replaced on the equipment.

6.3 RS485 LINE TERMINATION

On the Cobra P.Lite board, there are two connectors which make it possible to fit a 120 Ohm termination resistor on the RS485 data transmission line.

We should stress that this resistor must be fitted <u>only if the equipment is located on one of the ends of the line section</u>. Use the CN8 connector to insert the resistor if the unit is a slave with respect to the Controller PC or with respect to a Master TD.

Use the CN6 connector to insert the resistor on the sub-network on the Master unit when other Slave TDs are connected to it.

Figure 19 shows the insertion of this characteristic.

Set-up of function jumper and insertion of termination resistor

Set-up of function Jumper

Position of Jumper in CN1	Description of function
A	TICKET DISPENSER
B	CASH-DESK (ON LANE OR DECENTRALISED)
C	SUBSCRIPTION (VEHICULAR)
D	SUBSCRIPTION (PEDESTRIAN)
E	TICKET READER

NB: make sure that the jumper is positioned between A and B of CN1.

Termination resistor on RS485 network

Position of Jumper in CN8	Description of function
DOWN (Toward ALI board)	120 OHM RESISTOR NOT INSERTED
R (UP)	120 OHM RESISTOR INSERTED

Termination resistor on RS485 sub-network

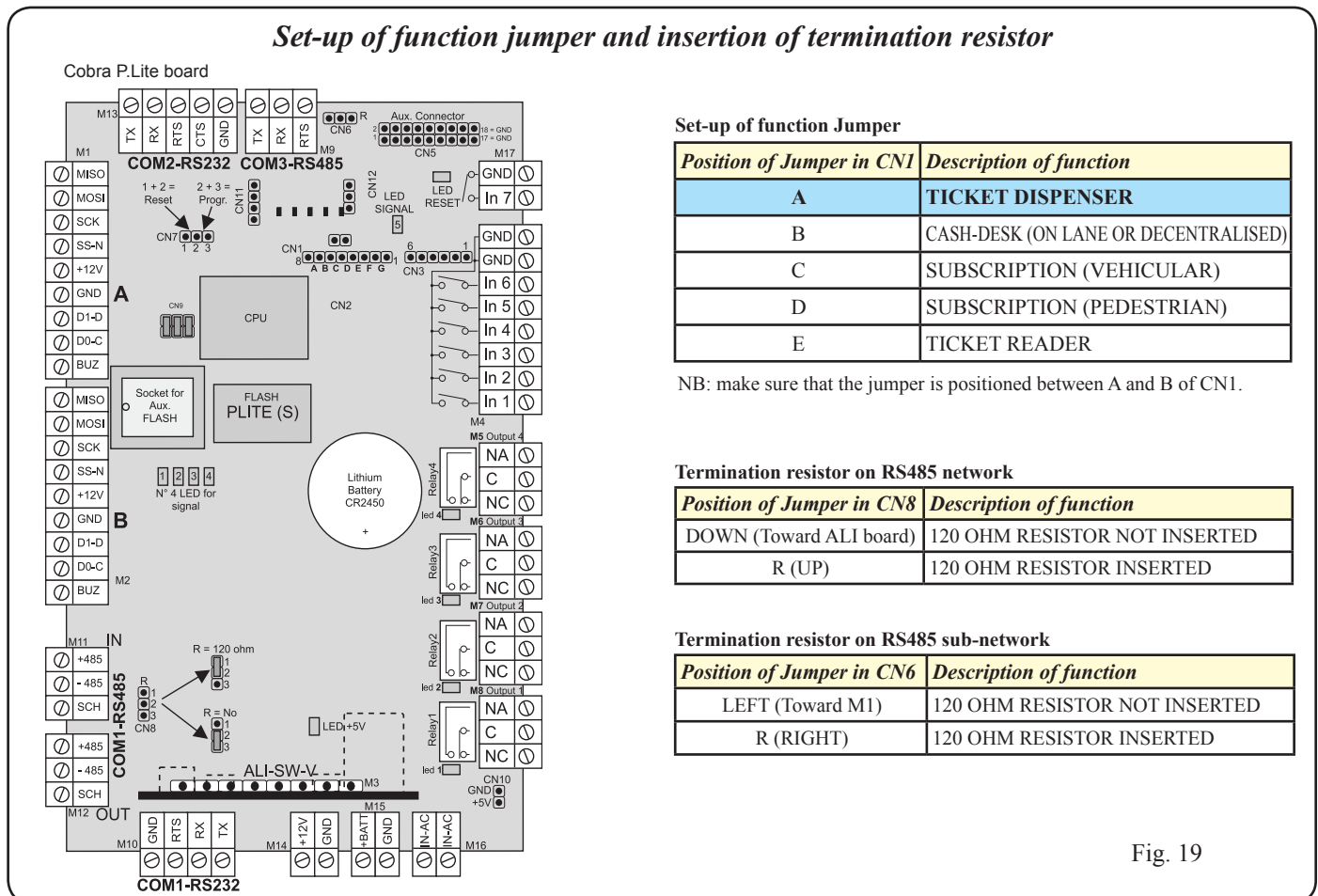| Position of Jumper in CN6	Description of function
LEFT (Toward M1)	120 OHM RESISTOR NOT INSERTED
R (RIGHT)	120 OHM RESISTOR INSERTED

Fig. 19

6.4 CONTROL UNIT WIRING

The table in the following figure shows the various internal connections with the electronic control unit housed in the Ticket Dispenser. The table includes the connectors on the board, and the relevant description of cable destinations and the function of the connection.
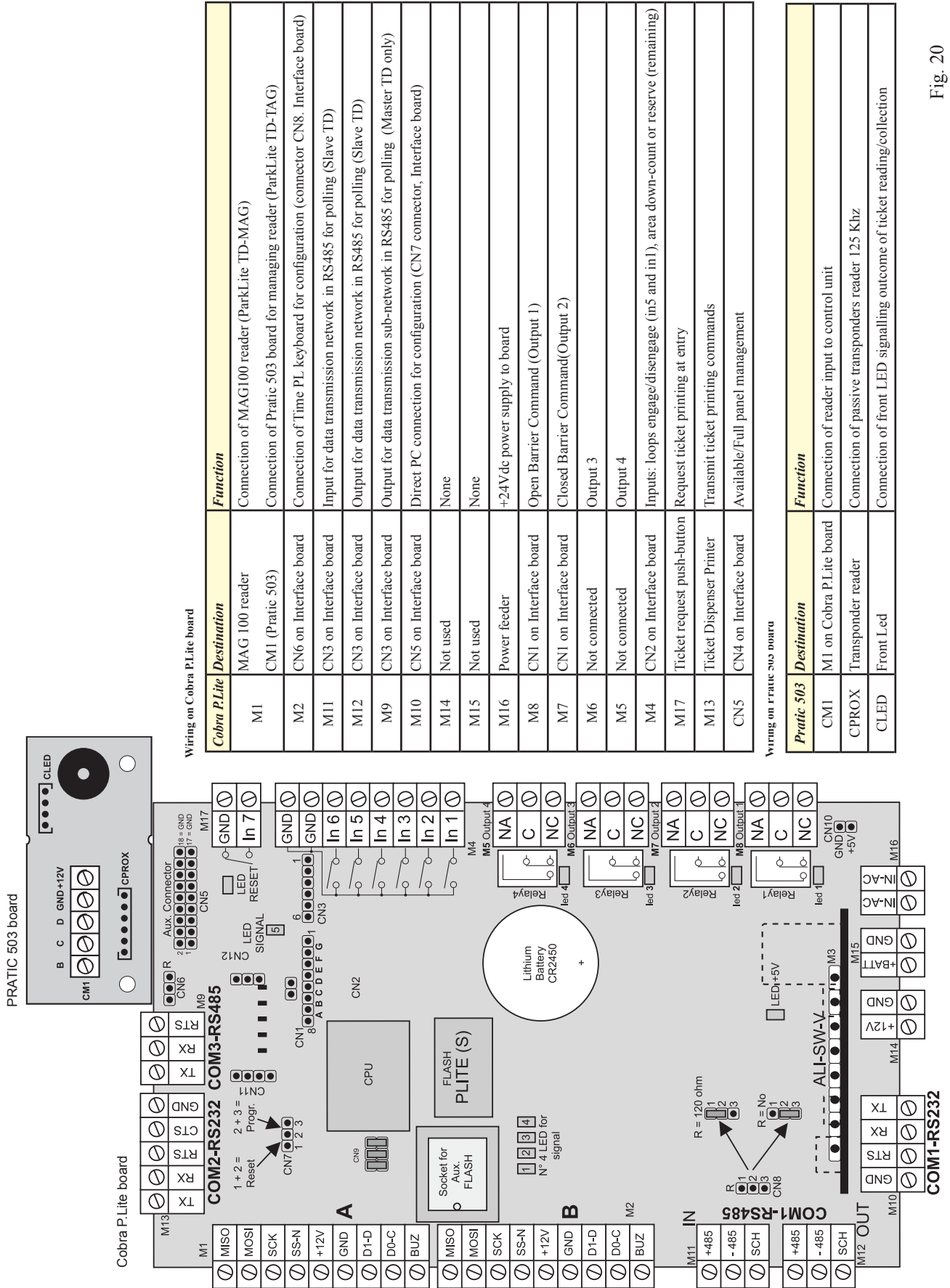
Wiring on the electronic control board

Wiring on Cobra P.Lite board

Cobra P.Lite	Destination	Function
M1	MAG 100 reader	Connection of MAG100 reader (ParkLite TD-MAG)
M2	CM1 (Pratic 503)	Connection of Pratic 503 board for managing reader (ParkLite TD-TAG)
M11	CN6 on Interface board	Connection of Time PL keyboard for configuration (connector CN8. Interface board)
M12	CN3 on Interface board	Input for data transmission network in RS485 for polling (Slave TD)
M9	CN3 on Interface board	Output for data transmission network in RS485 for polling (Slave TD)
M10	CN5 on Interface board	Output for data transmission sub-network in RS485 for polling (Master TD only)
M14	Not used	Direct PC connection for configuration (CN7 connector, Interface board)
M15	Not used	None
M16	Power feeder	None
M8	CN1 on Interface board	+24Vdc power supply to board
M7	CN1 on Interface board	Open Barrier Command (Output 1)
M6	Not connected	Closed Barrier Command (Output 2)
M5	Not connected	Output 3
M4	CN2 on Interface board	Output 4
M17	Ticket request push-button	Inputs: loops engage/disengage (in5 and in1), area down-count or reserve (remaining)
M13	Ticket Dispenser Printer	Request ticket printing at entry
CN5	CN4 on Interface board	Transmit ticket printing commands
		Available/Full panel management

Wiring on Pratic 503 board

Pratic 503	Destination	Function
CM1	M1 on Cobra P.Lite board	Connection of reader input to control unit
CPROX	Transponder reader	Connection of passive transponders reader 125 Khz
CLED	Front Led	Connection of front LED signalling outcome of ticket reading/collection

Fig. 20

7. PROGRAMMING KEYBOARD

7.1 KEYBOARD CHARACTERISTICS

The "PL programming Keyboard" is used to execute the configuration of the unit which operates independently (i.e. without connection to a personal computer with the ParkLite management software) or subordinately to another Master Ticket Dispenser.

The device is supplied with a cable, which is used for connection to the Ticket Dispenser.

The connection must be made on the female 15-pin connector, defined as CN8, which is located on the interface board of the Ticket Dispenser; (see fig. 14 on page 13 of this manual).

IMPORTANT: all keyboard connection and disconnection operations must be made when the Ticket Dispenser is not powered. Failure to observe this precaution can damage the device permanently.

PL programming Keyboard

Connect to CN8 in the interface board of the Ticket Dispenser
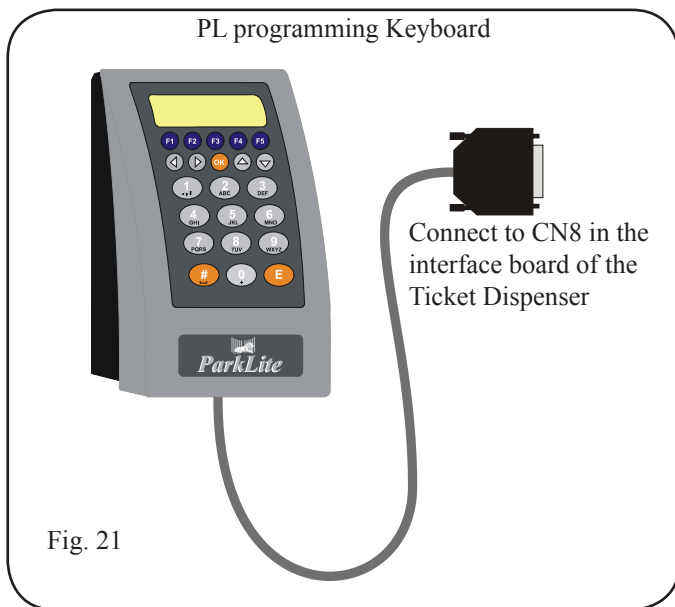
Fig. 21

7.2 DISPLAY OF INFORMATION

In the standard use mode (i.e. when the unit is not being programmed), the keyboard display shows a set of information items which can be exploited by the operator to control correct operation of the system. These messages can be subdivided essentially into three categories:
• Vehicle presence management..
• Information which can be retrieved with the keyboard's push-buttons.
• Display of events.

7.2.1 VEHICLE PRESENCE MANAGEMENT

The keyboard displays has two types of viewings, which depend on the chosen operational function, which can be:
• Master Ticket Dispenser.
• Slave Ticket Dispenser.

For obvious reasons, more sets of information are shown on the display of a Master Ticket Dispenser, compared to the device which operates as a Slave, because this unit has the task

of independently managing the parking area.

In this case, the programming keyboard is exploited by the operator, both for controlling the operation of the system, and for executing the configuration of the parameters.

Master Ticket Dispenser
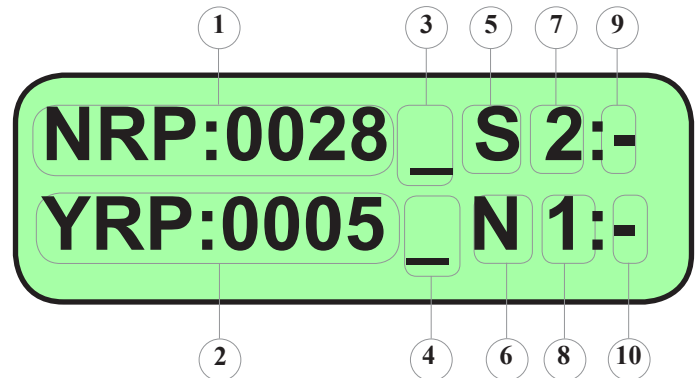
1. Counter of users without a reserved place: users without a reserved place (single stay and subscribers) who are currently inside the parking area, are continuously reported and updated.

2. Counter of users with a reserved place: subscriber users with a reserved place who are currently inside the parking area, are continuously reported and updated.

3. NRP area status: when the parking area assigned to users who do not have a reserved place, is free, the display shows an underlining "_" hyphen, instead when it is full, the display shows and asterisk"*****". We must emphasise that the Ticket Dispenser prevents access to this user category, when full status has been reached.

4. YRP areas status: when the parking area assigned to users who have a reserved place, is free, the display shows an underlining "_" hyphen, instead when it is full, the display shows and asterisk"*****". We must emphasise that the Ticket Dispenser does not prevent access to this user category, when full status has been reached.

5. Connection status to Personal Computer: The letter "**S**" indicates that the Ticket Dispenser is operating in stand-alone mode (the normal operating status of a Master unit). Letter "**O**" indicates that the Ticket Dispenser is connected and is communicating on-line with a PC (this is the condition when using the PC with ParkLite software to configure the unit).

6. Barrier Status: letter "**N**" indicates that the barrier is managed by the Ticket Dispenser in normal mode. Letter "**A**" and letter "**C**" respectively indicate that the barrier was forced to remain: "always open" or "always closed".

7. Transit loop: number "**2**" refers to the transit loop of the lane.

8. Presence loop: number "**1**" refers to the presence loop of the lane.

9. Transit loop status: hyphen "**-**"shows that the transit loop does not detect any metallic mass, whereas the asterisk "*****" indicates a vehicle was detected.

10. Presence loop status: hyphen "**-**"shows that the presence loop does not detect any metallic mass, whereas the asterisk "*****" indicates a vehicle was detected.

Slave Ticket Dispenser
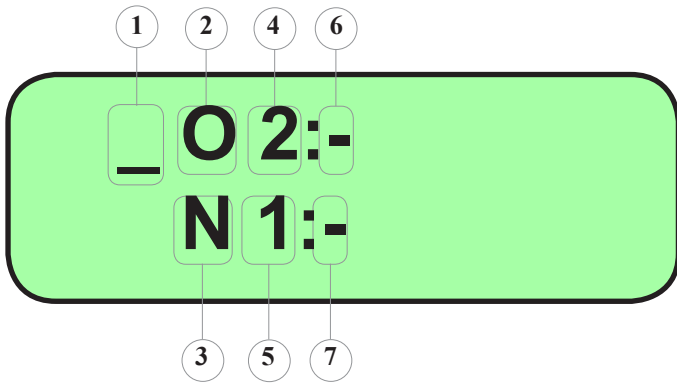
1. Area Status: when the parking area is free, the display shows an underlining "_" hyphen, instead when it is full, the display shows and asterisk "*****". We must emphasise that the Ticket Dispenser prevents access to this user category, when full status has been reached.

NB.: the status of the area is communicated by the data controller PC when the free/full status or vice versa changes.

2. Connection status to Personal Computer: the letter "**S**" indicates that the Ticket Dispenser is operating in stand-alone mode, whereas letter "**O**" indicates that the Ticket Dispenser is connected and is communicating on-line with a PC.

3. Barrier Status: letter "**N**" indicates that the barrier is managed by the Ticket Dispenser in normal mode. Letter "**A**" and letter "**C**" respectively indicate that the barrier was forced to remain: "always open" or "always closed".

4. Transit loop: number "**2**" refers to the transit loop of the lane.

5. Presence loop: number "**1**" refers to the presence loop of the lane.

6. Transit loop status: hyphen "**-**"shows that the transit loop does not detect any metallic mass, whereas the asterisk "*****" indicates a vehicle was detected.

7. Presence loop status: hyphen "**-**"shows that the presence loop does not detect any metallic mass, whereas the asterisk "*****" indicates a vehicle was detected.

7.2.2 INFORMATION WHICH CAN BE RETRIEVED WITH THE PUSH-BUTTONS

Push-button with arrow

For permanently showing date and time on the display. It operates alternatively, changing over from "Vehicle presence management" to "Display date/time" and vice versa.

The display shows time as follows:
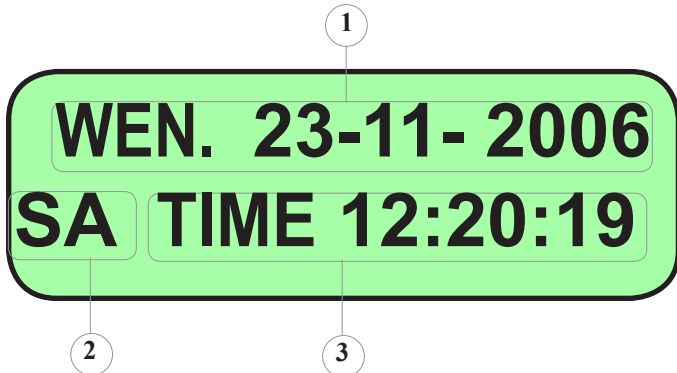
1. Date
2. Communication Status: nothing = On-line, **SA** = Stand-alone
3. Time

'Hash' sign push-button

If you press this push-button, the display will show some information about: serial node number, communication method, firmware version.

The display of these parameters is timed and remains for 5 seconds, from the time it was requested.
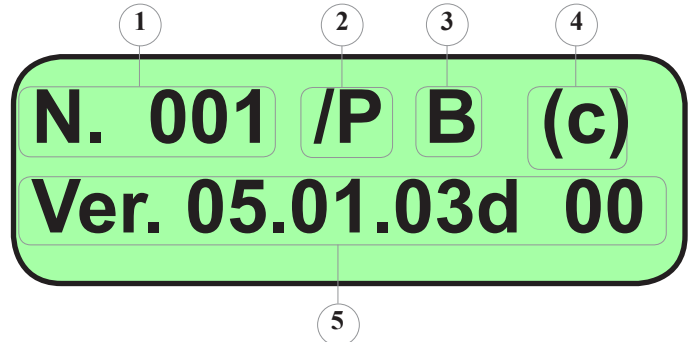
1. Serial node number: this field shows the serial address assigned to the unit (permitted values from 001 to 255).

2. Communication method: indicates the setting of the communication method; /P = Polling, /T=Modem or LAN (permitted in special cases only).

3. Reader input: shows the reader input of the management unit to which the programming keyboard is connected.

4. Board type: shows the type of control unit.

5. Firmware Version: indicates the firmware version being used.

Function keys

The function keys are essentially used on the Master Ticket Dispenser to carry out operations controlling communication, which occurs on the subline.

F1 Push-button F1

Used for showing which subline panels communicate with the Master unit:
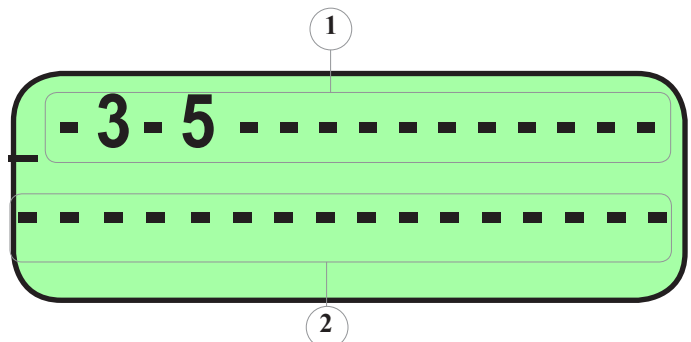
1. First line: this function shows the panels numbered from 2 to 16 which are communicating by polling on the subline; (panels 3 and 5 in the example).

2. Second line: this shows the panels numbered from 17 to 32, which are communicating by polling on the subline.

F2 Push-button F2

This is used for commanding off-loading of archives to panels connected to the Master unit on the subline.
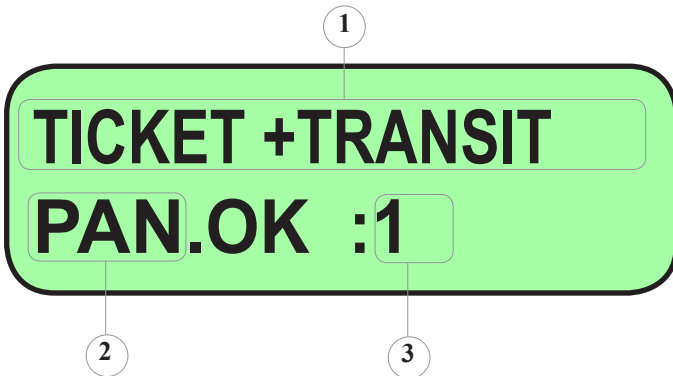
F3 Push-button F3

Used for forcing the opening/closure of the barrier, on the unit to which the keyboard is connected. You can choose from:

• **DONORMAL**   (standard operating mode)
• **DOALWAYS OPEN**   (barrier forced to stay open)
• **DOALWAYS CLOSED** (barrier forced to stay closed)

7.2.3 DISPLAY OF EVENTS

Transit with Ticket request on Master TD

```
        (1)
 ┌─────────────────────┐
 │ TICKET +TRANSIT     │
 │ PAN.OK  :1          │
 └─────────────────────┘
  (2)              (3)
```
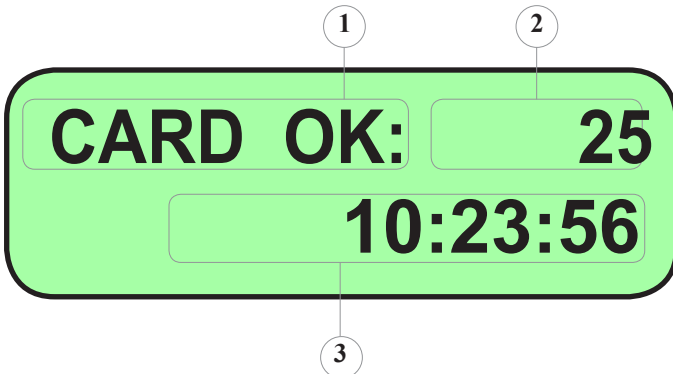
The display of the PL Keyboard shows the following information following a ticket request by the user:
1. TICKET+TRANSIT: this string is shown when the Ticket Dispenser detects a transit by a user, following a ticket request.
2. Result: OK is shown if the user who had requested a ticket, consequently effected a valid transit. If the transit was not effected correctly, or if the ticket was not even collected, **ERR** is shown.
3. Panel No.: indicates the serial node assigned to the unit, where the event was registered.

Transit with Card reading on Master TD

Stage 1 (Result of card reading)

```
    (1)         (2)
 ┌─────────────────────┐
 │ CARD  OK:      25   │
 │          10:23:56   │
 └─────────────────────┘
              (3)
```

Following detection of a card code, the PL Keyboard display generally shows the information items, in two distinct stages: reading result, transit result.
1. CARD OK: this string is shown when the Ticket Dispenser detects the reading of a valid card.
2. Card No.: the number of the card read by the unit is shown.
3. Reading time: the time when the card was read is shown.

Other messages shown during card reading:

Message	Description
NOT IN ARCHIVE CARD N. ?????	Indicates that the read card was not inserted in the Ticket Dispenser card archive, or that it is not valid.
WRONG SITE CODE CARD N. 2345	Indicates that the system code detected on the track of the magnetic card is incorrect

Message	Description
SUSPENDED CARD N. 2345	Indicates that the card reading is invalid because card has expired
ANTIPASS-BACK F. CARD N. 2345	Indicates that the card reading is invalid because card has already entered
FULL CARD N. 2345	Indicates that the card reading is valid, but entry was not enabled because the area is full

Stage 2 (Result of card transit)

```
             (1)
 ┌─────────────────────┐
 │ CARD +TRANSIT       │
 │ PAN. OK :1          │
 └─────────────────────┘
  (2)              (3)
```
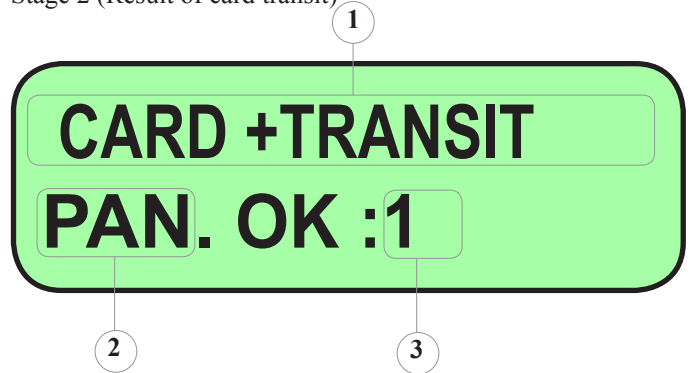
The display of the PL Keyboard shows the following information after card reading by the user:
1. CARD+TRANSIT: this string is shown when the Ticket Dispenser detects a transit by a user, following a card reading.
2. Result: OK is shown if the user who had done the reading, consequently effected a valid transit. If transit was not effected correctly, **ERR** is shown.
3. Panel No.: indicates the serial node assigned to the unit, where the event was registered.

Breached transit

```
                  (1)
 ┌─────────────────────┐
 │ P.BREACH     :1     │
 │ FORWARD             │
 └─────────────────────┘
```

The display of the PL Keyboard shows the following messages, whenever it detects a breached transit (i.e. the characteristics of a correct transit were not respected):

Message	Description
P.BREACH :1 FORWARD	Indicates that the Ticket Dispenser detected an irregular transit of a vehicle in the correct forward direction
P.BREACH :1 BACK	Indicates that the Ticket Dispenser detected an irregular transit of a vehicle in reverse direction

1. the number of the panel or device which detected the breach is shown.

Count reduction from input

```
┌─────────────────────────────┐
│  ┌───────────────────────┐  │  ① 1
│  │   NRP REDUCTION       │  │
│  ├─────────────────┬─────┤  │
│  │ FROM INPUT:     │  3  │  │
│  └─────────────────┴─────┘  │
└─────────────────────────────┘
        ① 1          ② 2
```
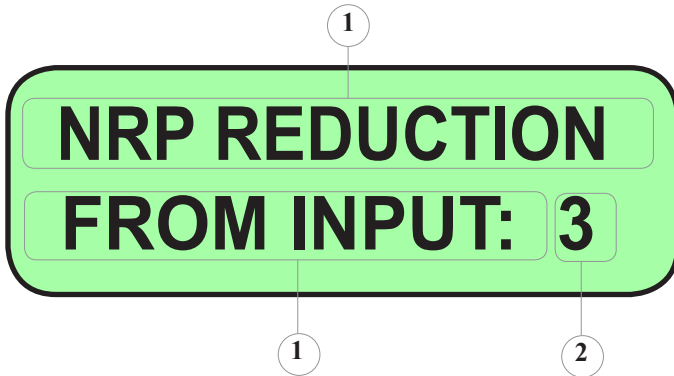
The display of the PL Keyboard shows the following information after detection of closure of inputs assigned to carry out the reduction of the area. This command is traditionally given by the coin box on the exit lane, or by the push-button used by the operator to open the gate for the user, for which the stay amount was already collected.
1. NRP REDUCTION FROM INPUT: this string is shown when the Ticket Dispenser detects the closure of one of the inputs designed to manage the reduction of the area.
2. Reduction input No.: the number of the reduction input which was used is shown (possible values: 3 or 4).

Messages detected by subline panels

The display of the PL Keyboard, connected to the Master Ticket Dispenser, also shows messages linked to the events detected by the units, connected to the unit via the subline.
The displayed strings essentially show the same wordings already explained in the preceding points.
Generally the following word is added to the string:
SUBLINE
and the serial node number assigned to the device from which the event originates.
We must underline that the display of the unit can contain a maximum of 16 characters per line. For this reason, some of the definitions described up to here, which are traced for the events on the subline, can be abbreviated.
NB: the "card reading Result" - in regard to transactions executed on the subline panels, is not shown on the PL Keyboard.

7.3 CONFIGURATION WITH PL KEYBOARD

7.3.1 ACCESS TO/EXIT FROM PROGRAMMING

The Ticket Dispenser can be configured from the PL Keyboard.
How to access programming:
• Hold down for at least 5 seconds, any key on the device's membrane keyboard.
• Select the menu you need by using the arrow keys.
• Confirm your choice with key E.

 How to exit programming:
• Access the sub-menu or menu, confirming the data you wish to configure.

• Repeatedly press the "hash" key, until you access the main menu.
• Hold down the "hash" key for at least 5 seconds, until the selected display mask is shown on the keyboard display; (Vehicle Presence, or Date/Time).

7.3.2 STRUCTURE OF MAIN MENU

6 main menus are available to execute the configuration of the parameters required for putting into service the parking system managed by the Master Ticket Dispenser:
• **1. Main Settings**
• **2. Card Management**
• **3. Date - Time Setup**
• **4. Language**
• **5. Technical Parameters Setup**
• **6. End of Programming**

NB.: Key "**E**" enables you to enter one of the above menus, in addition to accessing the relevant sub-menus.
The other keys (arrow, function, and numeric) are used for: scrolling the menus/sub-menus, displaying information, and setting parameters.

7.3.3 "1-MAIN SETTINGS" MENU

The display of the sub-menus it consists of varies according to the selections made. For this reason, one can describe the "Main Settings" menu as dynamic.
This section contains the necessary guidance for setting all the present parameters, with the relevant sub-menu code shown on the display, at every changeover to the next step.
As explained above, do not be surprised by any inconsequential passages, because the selection of a parameter can entail skipping to various sub-menus, because they does not pertain to the selected function.
NB: before we begin to clarify the configurable characteristics, we should first of all explain the function method of the function keys:
• **F1** for skipping to the first step of the sub-menu.
• **F4** for displaying the numeric code of the sub-menu step.
• **F5** for skipping to the last step of the sub-menu.

Menu 1-1 [PANEL NUMBER]
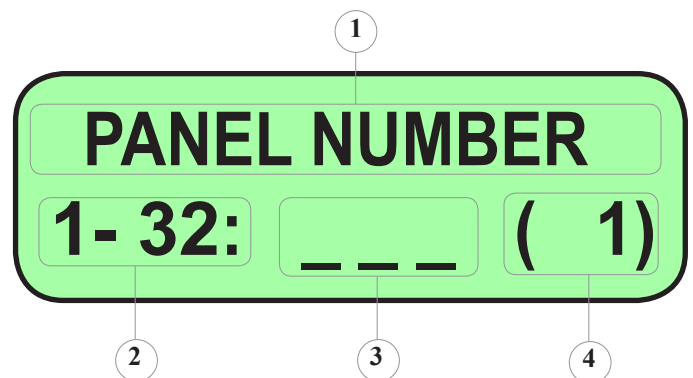
```
┌─────────────────────────────┐
│  ┌───────────────────────┐  │  ① 1
│  │   PANEL NUMBER        │  │
│  ├──────┬───────┬────────┤  │
│  │ 1-32:│ _ _ _ │  ( 1)  │  │
│  └──────┴───────┴────────┘  │
└─────────────────────────────┘
     ② 2     ③ 3     ④ 4
```

1. Description of function
2. Range of permitted values
3. Value insertion field
4. Set value

FAAC

The serial address or panel number, which should be typed in, must be unique. That is to say, no other device with the same assigned number can exist on the RS485 data transmission network or on the subline.

The permitted default range is 1- 32, because a maximum of 31 panels on the subline can be connected to the Master unit. For this reason, node No.1 must be assigned to the Master unit, whereas the consequent codes (i.e. from 2 to 32) must be assigned to the slave devices connected to them.

NB: consider that all the supplied devices are set by default to the same serial address (No.255). Consequently, to avoid any type of conflict, we advise to always re-name the panel.

Menu 1-2 [SITE CODE]
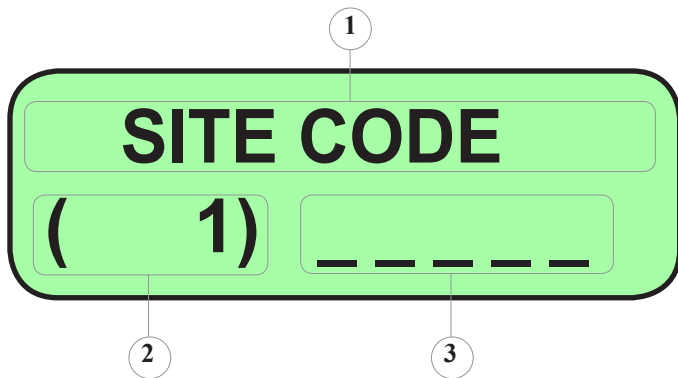
1. Description of function
2. Set value
3. Value insertion field

This parameter must be appropriately set. If the Ticket Dispenser has a magnetic reader (TD ParkLite MAG), type in the 5 figure code supplied by FAAC together with the cards (see enclosed cardboard badge).

Otherwise, assign a unique parameter, so that tickets supplied by a unit of the same type, perhaps installed in the vicinity, cannot be considered as issued by the system.

Menu 1-3 [MASTER ?]
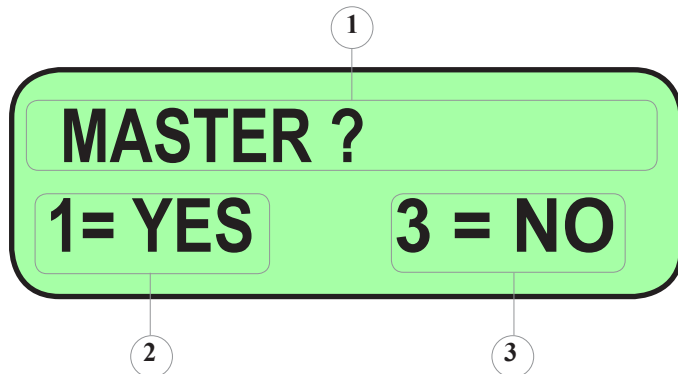
1. Description of function
2. Sets the Ticket Dispenser as Master
3. Sets the Ticket Dispenser as Slave

The selection executed by pressing key 1 or key 3, configures the operating status of the unit.

If you have chosen Yes, the Ticket Dispenser prepares to manage the parking area independently; (vehicle presence, confirmation of transits on slave equipment, etc.).

If you have chosen No, the Ticket Dispenser prepares to operate subordinately with a PC, by means of ParkLite software, or with another Master device.

Menu 1-4 [N. PANELS SUBLINE]
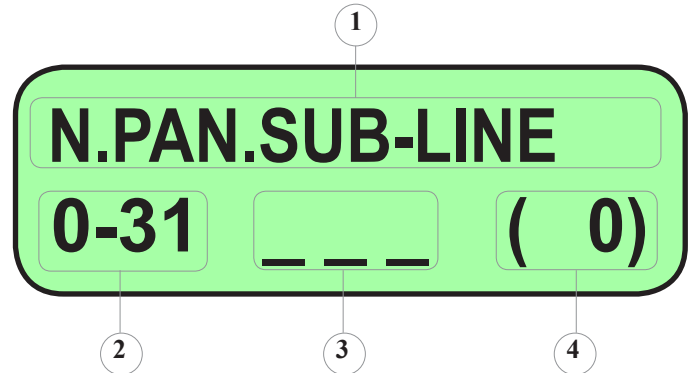
1. Description of function
2. Range of permitted values
3. Value insertion field
4. Set value

The above menu configures the unit to manage communication to the devices (Ticket Dispenser, PL Controller) subordinated to it. We must underline that polling on the subline is effected consequentially, starting from node No.2 (because we have established that the No.1 was assigned to the Master node), for the number of panels input.

For example, if value 2 is entered in field **3**, the Master TD will execute polling on the subline for panels No.2 and No.3.

Menu 1-5 [READER PRESENT]
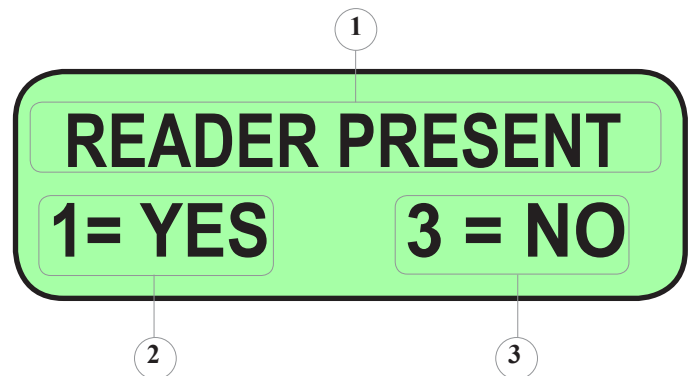
1. Description of function
2. Prepares the Ticket Dispenser to control the reader
3. Sets the Ticket Dispenser not to control the reader

The selection made by pressing key 1 or key 3, configures the unit to manage users who use the card to enter/exit from the parking area.

This selection automatically prepares various parameters, in addition to enabling/disabling menu 2, which is used for entering and modifying the card archive.
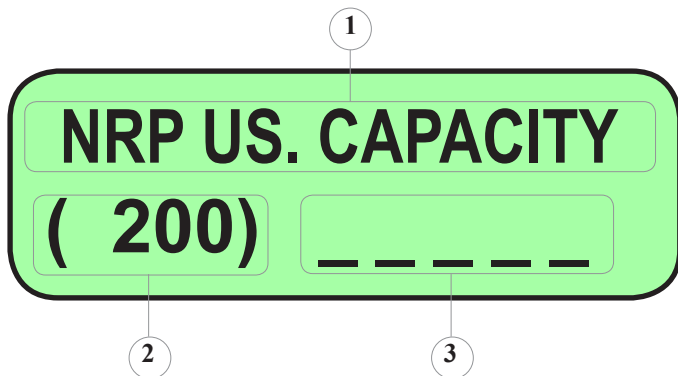
Menu 1-6 [READER TYPE]

①

3=PROXIM.READER
1=MAGNETIC READER

②
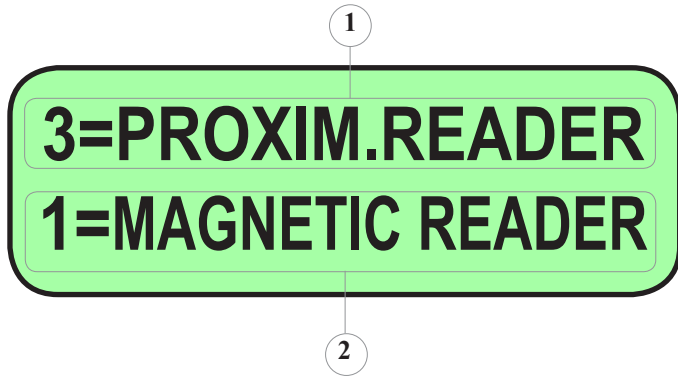
1. Configures the proximity card reader.
2. Configures the magnetic card reader
The selection made by pressing key 1 or key 3, configures the unit to manage the correct type of card reader installed.

Menu 1-7 [NRP USERS CAPACITY]

①

NRP US. CAPACITY
(200) _ _ _ _ _

② ③

1. Description of function
2. Set value
3. Value insertion field
This menu should be used to enter the total capacity of places available in the parking area, as regards the NPR (No Reserved Place) user category.
Permissible range 0 - 65535.

Menu 1-8 [YRP USERS CAPACITY]

①

YRP US. CAPACITY
(50) _ _ _ _ _

② ③
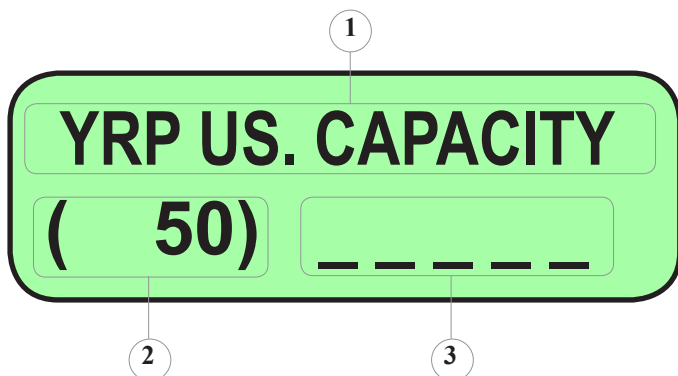
1. Description of function
2. Set value
3. Value insertion field
This menu is should be used to enter the total capacity of places available in the parking area, as regards the YRP (Yes Reserved Place) user category.
Permissible range 0 - 65535.

Menu 1-9 [ANTIPASSBACK]

①

ANTIPASSBACK
1= YES   3 = NO

② ③
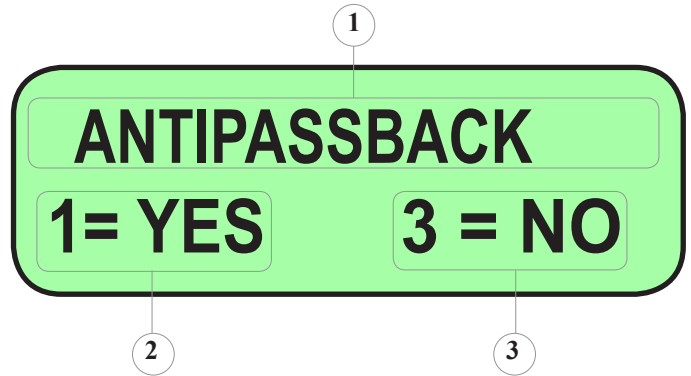
1. Description of function
2. Enables antipassback control
3. Disables antipassback control
By enabling this parameter, you can control transit consequentially.
When this function is active, after a card is read, it is always verified if the reading previously registered by the system was in the opposite direction, compared to the reading detected at that moment.
In practice, antipassback management prevents a subscriber user from consequently executing several entries or exits, and does not allow him to use the same card in order to enter/exit simultaneously with two or more vehicles.

Menu 1-10 [EXIT ALWAYS OK]

①

EXIT ALWAYS OK
1= YES   3 = NO

② ③
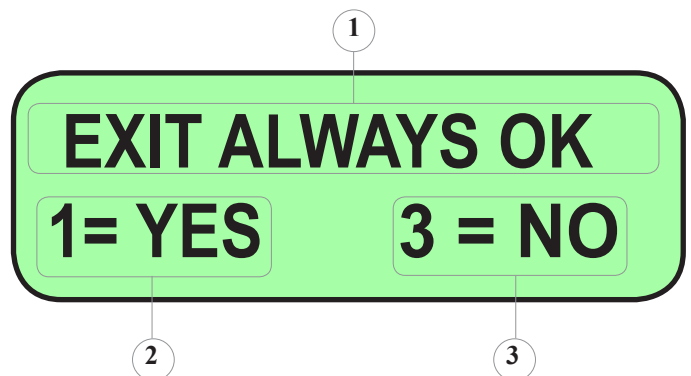
1. Description of function
2. Enables the EXIT ALWAYS OK function
3. Disables the EXIT ALWAYS OK function
If this parameter is enabled, users with a card can exit, even if validity has expired during the stay in the area.
Otherwise, the subscriber is blocked, by the device which manages this category, on the exit lane (typically a PL Controller), until the subscription is renewed.
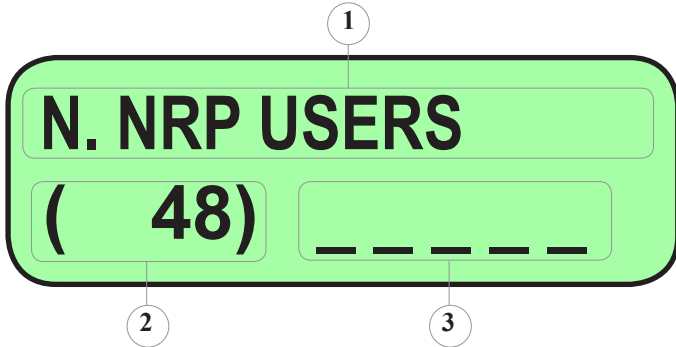.

Menu 1-11 [N. YRP USERS]
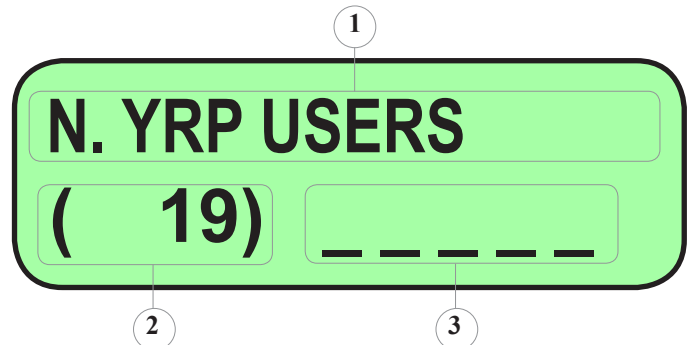
①

N. YRP USERS
(19) _ _ _ _ _

② ③

FAAC

1. Description of function
2. Set value
3. Value insertion field

This menu should be used to enter the number of vehicles present in the parking area, as regards the YRP (Yes Reserved Place) user category.
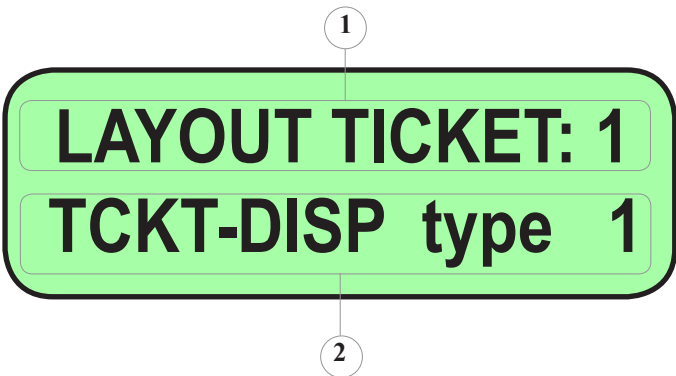
Permissible range 0 - 65535.

Menu 1-12 [N. NRP USERS]

```
        (1)
┌──────────────────────────┐
│  N. NRP USERS            │
│                          │
│  (   48)    _ _ _ _ _    │
└──────────────────────────┘
     (2)          (3)
```

1. Description of function
2. Set value
3. Value insertion field

This menu should be used to enter the number of vehicles present in the parking area, as regards the NRP (No Reserved Place) user category.

Permissible range 0 - 65535.

Menu 1-13 [LAYOUT TICKET]

```
        (1)
┌──────────────────────────┐
│  LAYOUT TICKET: 1        │
│  TCKT-DISP  type   1     │
└──────────────────────────┘
          (2)
```

1. Description of function
2. Set value

The Ticket Dispenser manages six different types of ticket lay-outs.

These include 2 models without barcode, very clearly showing the ticket issue date and time, and 4 models with a barcode. You can select the model you require by directly pressing the number of the selected lay-out, or you can use the RH/LH arrow keys, to scroll through the available options.

Every type of ticket that can be selected, has a set of characteristics directly managed by the unit's firmware (barcode printing, date/time printing, sequential numbering printing, etc) and others which can be configured by the user with the PL keyboard (heading lines, lines referring to the notes).

The number of texts that can be printed varies according to the lay-out of the chosen ticket.

Figure No.22 shows the types of available tickets, and the relevant definition:

Available Ticket Lay-outs

Fig.22

Menu 1-14 [EDIT TICKET TEXTS]
Stage 1

```
        (1)
┌──────────────────────────┐
│  EDIT TICKET TEXT        │
│  1= YES      3 = NO      │
└──────────────────────────┘
     (2)          (3)
```
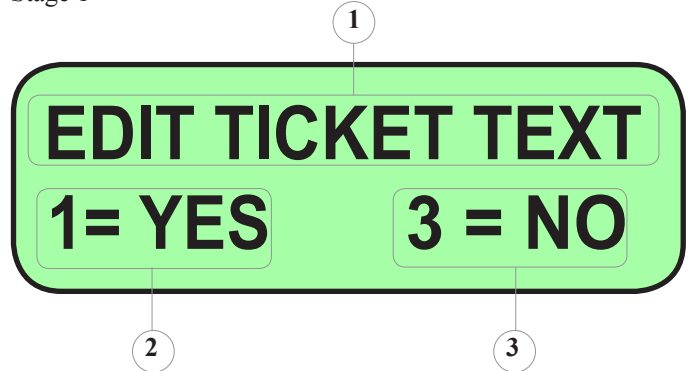
1. Description of function
2. Used for entering/varying Ticket texts
3. Goes to next menu

It should be stressed that you change over to stage 2, only if you select **1 = YES.** In that case, the display will show:

Stage 2

```
        (1)
┌──────────────────────────┐
│  INTESTAZIONE/HEA        │
│  DER 1        < T 1      │
└──────────────────────────┘
   (1)        (2)(3)(4)
```
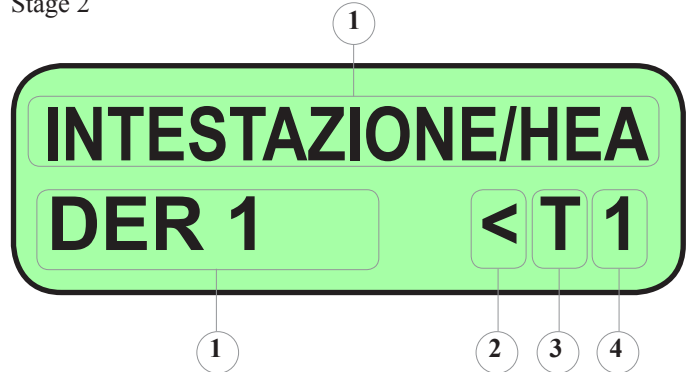
1. Text contents
2. Separation symbol
3. Character format
4. Text number

The 9 strings (8 strings for model type 6) which Ticket Dispenser can print on the ticket can be edited and then modified sequentially.

Every text line can contain a maximum of 28 alphanumeric characters (including spaces).

The last two characters of the second line on the display respectively show: the format of the characters with which the text is entered, and the string number being programmed.

Press key E to confirm entry and pass on to the next text.

Every single character must be input with the multi-function keys on the PL keyboard. The writing mode is similar to the one used for SMS on mobile phones.

Furthermore, appropriate characteristics have been assigned to the function keys, summarised in the following points:

- **Key F1:** for passing to the next text.
- **Key F2:** takes the cursor alternately to the start/end of the string.
- **Key F3:** adds a space on the right of the cursor.
- **Key F4:** deletes the character on the left of the cursor.
- **Key F5:** Allows you to vary the type of character to be typed in; you can choose from among**:**
  T: upper case alphabet characters.
  t: lower case alphabet characters.
  2: numbers.

You can use the following push-buttons to execute symbols or spaces:

- **Key 1:** used for inputting a given series of punctuation symbols.
- **Key 0:** used for inputting a given series of symbols relating to mathematical operators.
- **"Hash" key:** used for inserting a space, by shifting the cursor forward.

Menu 1-15 [EXIT MENU ?]

EXIT MENU ?
1= YES   3 = NO
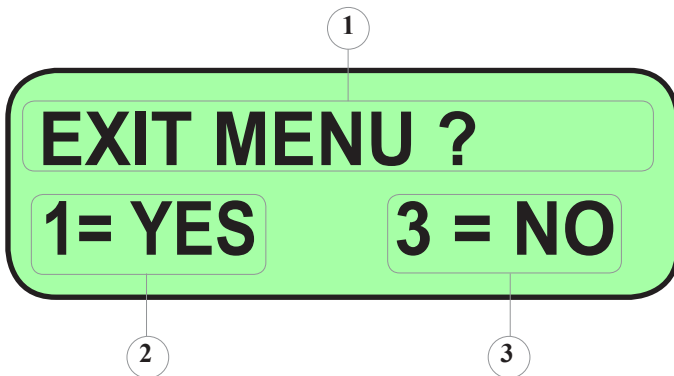
1. Description of function
2. Used for returning to the main menu
3. Returns to the first step of menu entitled "Main Settings"

This is the last step of menu "Main Settings", which must always be set in all units which must be configured from the PL Keyboard (obviously only in the systems for which management by means of the ParkLite was not specified).

The other menus must be used for managing specific characteristics, such as:

- Card reader presence
- Date/time setting
- Language change

7.3.4 MENU "2 - CARD MANAGEMENT"

You can enter this menu only if you have selected "Reader Present = Yes" in the "Main settings"; (see step 1-5 of page 23).

It essentially consists of 7 sub-menus:

- **2-1 Cards Input**
- **2-2 Enable/Disable Cards**
- **2-3 Modify Card**
- **2-4 Card Self-reading**
- **2-5 Reset Antipassback**
- **2-6 Delete all Cards**
- **2-7 Return to previous menu**

Each of these may have one or more steps, to enable you to execute the settings required for correct application of the function.

Menu 2-1 [CARDS INPUT]
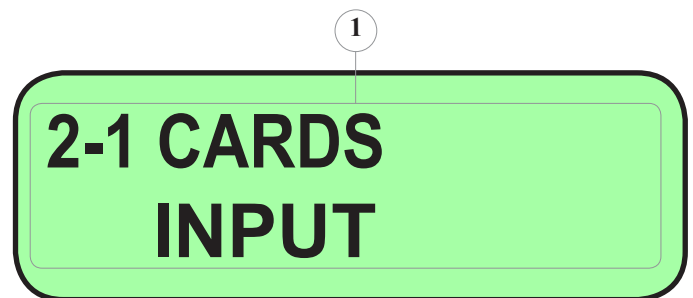
2-1 CARDS
INPUT

1. Description of function
Press key "E" to enter the sub-menu. Use the arrow keys to scroll through the different choices, or the hash # key to return to the main menu.

With this function you can input subscriber users in the Ticket Dispenser personal data archive.

The control unit is set to manage up to a maximum of 5,000 cards in stand-alone. The input is effected by entering the number you wish to assign to the first and last card of the range to be input. The system stores the units sequentially, (registering them from the first to the last location of the memory section assigned for this purpose) considering also the numbers assigned at configuration time).

Consequently, as we said, two parameters will be assigned to each card;

- **Location number of memory**
- **Assigned Card Number**

Step 1

MODIFY ?
1= YES   3 = NO
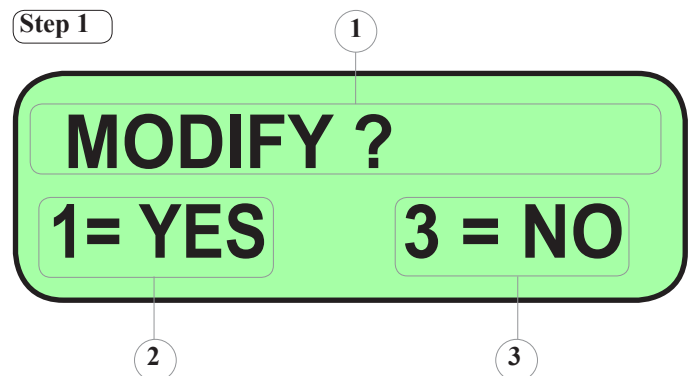
1. Description of function
2. Enables execution of the entry

FAAC

3. Returns to the first step of menu entitled "2-1 Card insertion"

Step 2

FIRST CARD
(24) **_ _ _ _ _**

1. Description of function
2. Shows the number assigned to the last card previously entered
3. Used for inserting the number of the first card of the range which you wish to input
We advise you to use numbered FAAC cards, and to input in field 3 the number shown on the first card of the range to be inserted.

Step 3

LAST CARD
(5000) **_ _ _ _ _**

1. Description of function
2. Shows the last number of the card which can be input (to complete maximum capacity)
3. Used for inserting the number of the last card of the range which you wish to input
We advise you to use numbered FAAC cards, and to input in field 3 the number shown on the last card of the range to be inserted.

Step 4

ALL CARDS VALID ?
1= YES   3 = NO

1. Description of function
2. Sets the entire card range input as "valid"
3. Sets the entire card range input as "non valid"

Step 5

DATE   DD-MM-YY
START   20-12-06

1. Description of function
2. Used for entering the "validity start" date

Step 6

TIME   hh-mm
START   10-00

1. Description of function
2. Used for entering the "validity start" time

Step 7

DATE   DD-MM-YY
END   31-12-79

1. Description of function
2. Used for entering the "validity end" date

Step 8

TIME   hh-mm
END   23-59

1. Description of function
2. Used for entering the "validity end" time

FAAC

27

Step 9

YES RESER. PLACE ?
1= YES   3 = NO
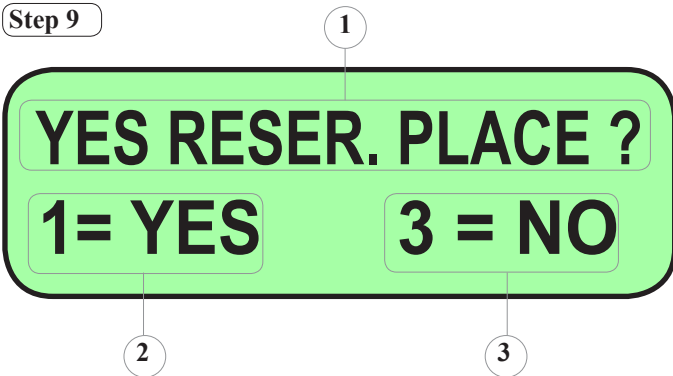
1. Description of function
2. Sets the entire card range input as "Yes Reserved Place"
3. Sets the entire card range input as "No Reserved Place"
If you choose "Yes", the inserted cards will increase/reduce the YRP counter and will never be blocked at entry when the parking area is full.
If you choose "No", the inserted cards will increase/reduce the NRP counter and will be blocked at entry when the parking area is full.

Menu 2-2 [ENABLE/DISABLE CARDS]
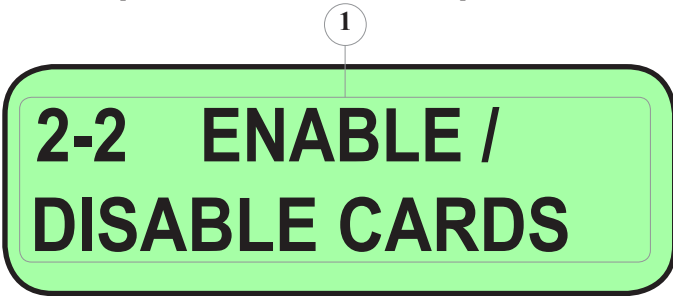
2-2   ENABLE /
DISABLE CARDS

1. Description of function
Press key "E" to enter the sub-menu. Use the arrow keys to scroll through the different choices, or the hash # key to return to the main menu.
This function enables you to vary characteristics already configured, through a defined range of subscriber users, in the Ticket Dispenser personal data archive.
The parameters which can be set for the series of selected cards are indicated in the points below:
•   **Enable (Yes/No)**
•   **Type YRP/NRP**
•   **Status (Present, Absent, Undefined)**
•   **Validity (from/to)**

Step 1
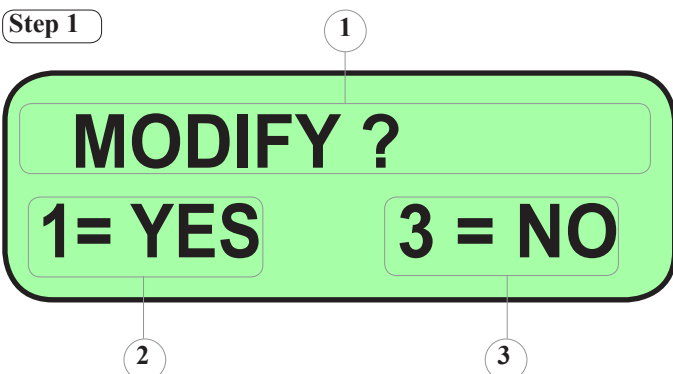
MODIFY ?
1= YES   3 = NO

1. Description of function
2. For accessing the modification stages
3. Returns to the first step of menu entitled "2-2 Enable/ Disable Cards"

Step 2
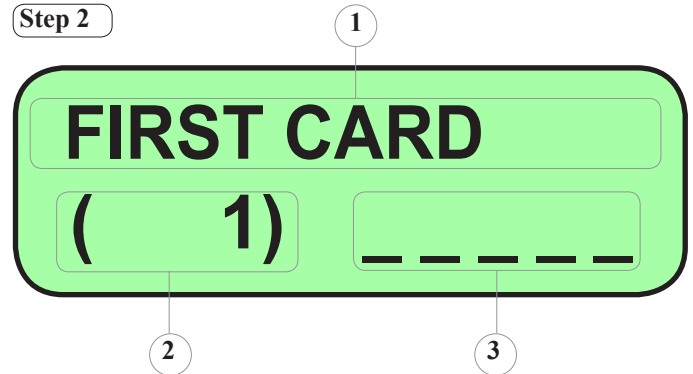
FIRST CARD
(1)   _ _ _ _ _

1. Description of function
2. Always shows value 1
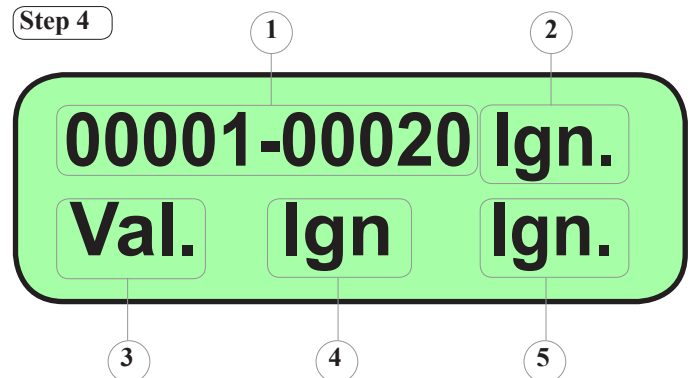**3. Used for inserting the number of the first card of the range which you wish to modify**

Step 3
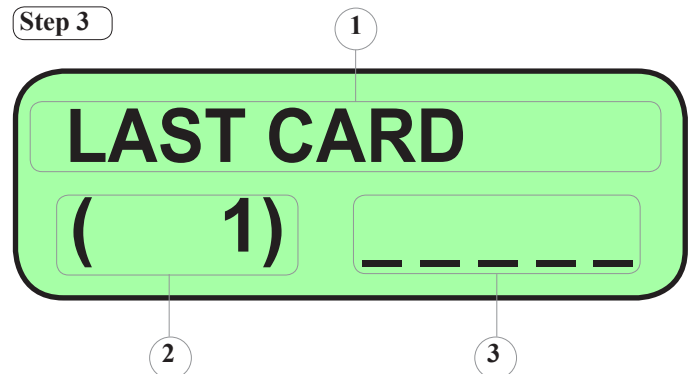
LAST CARD
(1)   _ _ _ _ _

1. Description of function
2. Always shows value 1
3. Used for inserting the number of the last card of the range which you wish to modify

Step 4

00001-00020 Ign.
Val.   Ign   Ign.

1. Selected card range
2. Used for varying the validity period of the range
3. Used for enabling/disabling the range
4. Sets the category (YRP/NRP)
5. Configures the status (Present/Absent/Undefined)
The parameters of fields from 2 to 5 can be configured by the function keys.
If you choose "**Ign**" (Ignore) - present for all characteristics - the parameter stays unchanged, i.e. set on the present value (card by card), without making any modifications.
The following points summarise the variations that can be made by using the respective function keys:

FAAC

- **Key F1:** for selecting:
  Val = Sets the valid cards range
  NoV = Sets the non-valid cards range
  Ign = Leaves the parameter set as it is configured

- **Key F3:** for selecting:
  NRP = Sets the card range as NRP (No Reserved Place)
  CPR = Sets the card range as YRP (Yes Reserved Place)
  Ign = Leaves the parameter set as it is configured

- **Key F4:** for selecting:
  From-to = After you have confirmed with "E", you will be prompted to supply the date/time of validity start/end, to be imposed on the selected card range
  Ign = Leaves the parameter set as it is configured

- **Key F5:** for selecting:
  Pres = Sets the card range as "Present"
  Abs = Sets the card range as "Absent"
  Res = Sets the card range in an undefined state; "Reset Antipassback"
  Ign = Leaves the parameter set as it is configured

Menu 2-3 [MODIFY CARD]

①

2-3 MODIFY CARD
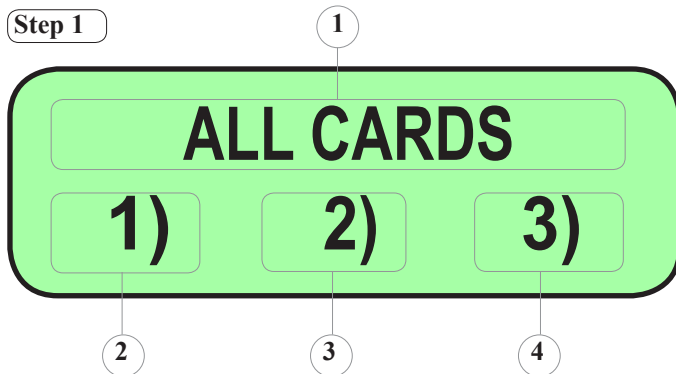
1. Description of function
Press key "E" to enter the sub-menu. Use the arrow keys to scroll through the different choices, or the hash # key to return to the main menu.
This function enables you to vary characteristics already configured, for every single user present in the Ticket Dispenser personal data archive.
The parameters which can be set for each selected card are indicated in the points below:
- **Enable (Yes/No)**
- **Type NRP/YRP**
- **Status (Present, Absent, Undefined)**
- **Validity (from/to)**

Step 1   ①   ②

00001   (00001)
Val.   YRP   Abs
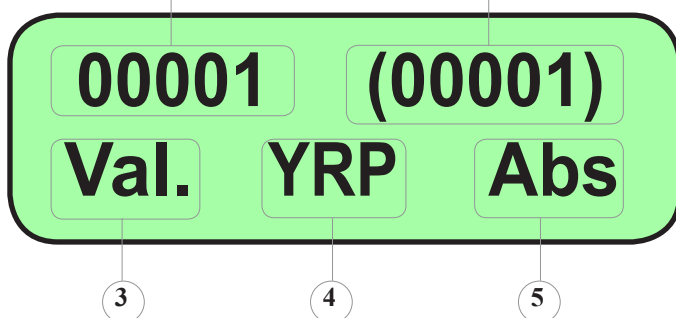
③   ④   ⑤

The up/down keys are used to scroll through the loaded anagraphic archive, so that you can choose the card on which to make the modifications you require.
Alternatively, you can press the RH arrow key to view a screen where you can directly type in the number of the card to be modified.
1. Card Number
2. Memory location number of management unit
3. Used for enabling/disabling the card
4. Sets the category (NRP/YRP)
5. Configures the status (Present/Absent/Undefined)
The parameters of fields from 3 to 5 can be configured by the function keys.
If you choose "**Ign**" (Ignore) - present for all characteristics - the parameter stays unchanged, i.e. set on the present value (card by card), without making any modifications.
The following points summarise the variations that can be made by using the respective function keys:

- **Key F1:** for selecting:
  Val = Sets the valid cards range
  NoV = Sets the non-valid cards range
  Ign = Leaves the parameter set as it is configured

- **Key F2:** enables alternative filtering:
  ALL = Does not use any filter
  Valid cards only = Filters valid cards only
  Non-valid cards only = Filters non-valid cards only

- **Key F3:** for selecting:
  NRP = Sets the card range as NRP (No Reserved Place)
  YRP = Sets the card range as YRP (Yes Reserved Place)
  Ign = Leaves the parameter set as it is configured

- **Key F4:** for displaying the date/time of validity start/end of the selected card.

- **Key F5:** for selecting:
  Pres = Sets the card range as "Present"
  Abs = Sets the card range as "Absent"
  Res = Sets the card range in an undefined state; "Reset Antipassback"
  Ign = Leaves the parameter set as it is configured

NB.: after you have executed the modification and confirmed it with key "E", you will be prompted to input the date/time of validity start/end.
Menu 2-4 [CARD SELF-READING]

①

2-4 CARD SELF READING

1. Description of function
Press key "E" to enter the sub-menu. Use the arrow keys to scroll through the different choices, or the hash # key to return to the main menu.

This function is used to execute (card by card) self-reading of the codes stored on the passive transponder or the entire character sequence of the magnetic track.
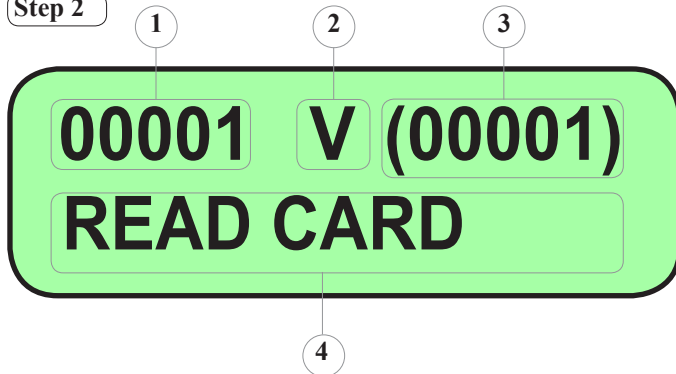**NB:** if using FAAC magnetic cards, this operation is not necessary.

Step 1

ALL CARDS

1)   2)   3)

1. Description of selection
2. If key 1 is pressed, no filter is imposed
3. If key 2 is pressed, only non-valid cards are filtered
**4. If key 3 is pressed, only valid cards are filtered**

Step 2

00001   V (00001)

READ CARD

1. Card Number
2. Display of validity (N = Not Valid, V = Valid)
3. Memory location number in the management unit
4. Description of function
The Up/Down arrow keys are used to select the card for which code acquisition is required. After having read the card, the system passes automatically to the next card.
This function makes it possible to consecutively enter the codes of a card range with sequential numbering.
NB: there is no need to engage the presence loop to carry out the above operation.

Menu 2-5 [RESET ANTIPASSBACK]
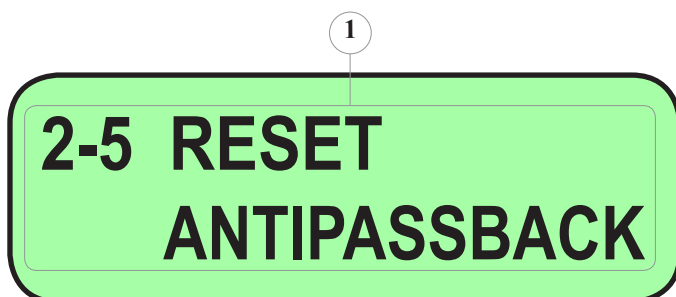
2-5 RESET

   ANTIPASSBACK

1. Description of function
Press key "E" to enter the sub-menu. Use the arrow keys to scroll through the different choices, or the hash # key to return to the main menu.
This function is used to set all the cards in the archive of the electronic control unit, in an "undefined" status. In fact, after this operation, no subscriber will be considered entered or exited, and the system (only for the first time) will accept the reading at both entry and exit. Consequently the system will assign the Ent/Ex direction to every card, after the first transaction is executed.
The operation therefore makes it possible to correctly arrange the transit direction on all the cards, if the direction had gone out of phase.

Step 1

MODIFY ?

1= YES   3 = NO
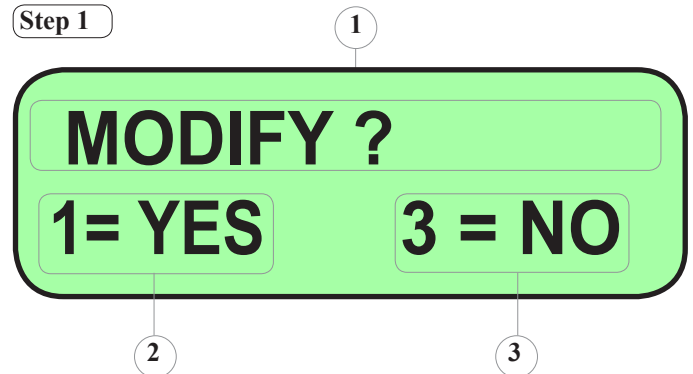
1. Description of function
2. Executes Reset Antipassback on all cards
3. Exits function

Menu 2-6 [DELETE ALL CARDS]

2-6 DELETE

   ALL CARDS

1. Description of function
Press key "E" to enter the sub-menu. Use the arrow keys to scroll through the different choices, or the hash # key to return to the main menu.
IMPORTANT: the function completely deletes the whole card archive loaded on the electronic control unit.

Step 1

MODIFY ?

1= YES   3 = NO

FAAC
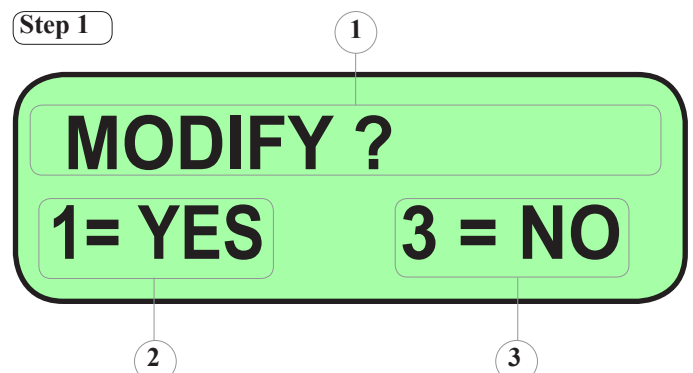
1. Description of function
2. Deletes all cards in the archive
3. Exits function

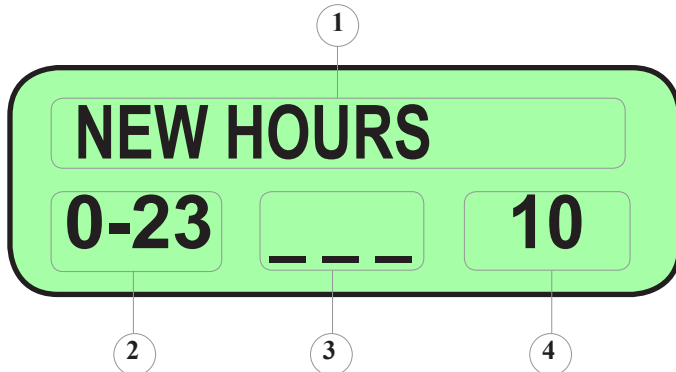**Menu 2-7 [RETURN TO PREVIOUS MENU]**

①

2-7 RETURN TO PREV. MENU
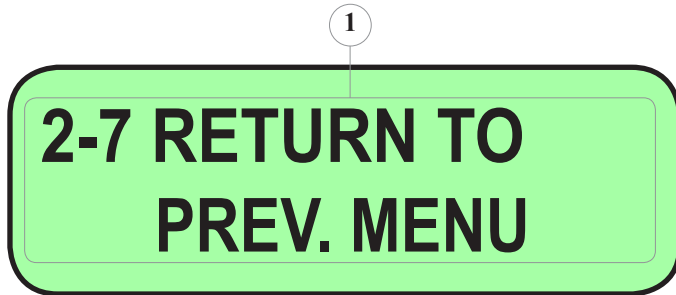
1. Description of function
Press key "E" to return to menu 2.

**7.3.5 MENU "3 - SETUP DATE/TIME"**

For configuring: the date, time, and time change parameters
on the electronic control unit of the Ticket Dispenser.
The messages for the menu steps, shown on the display, are
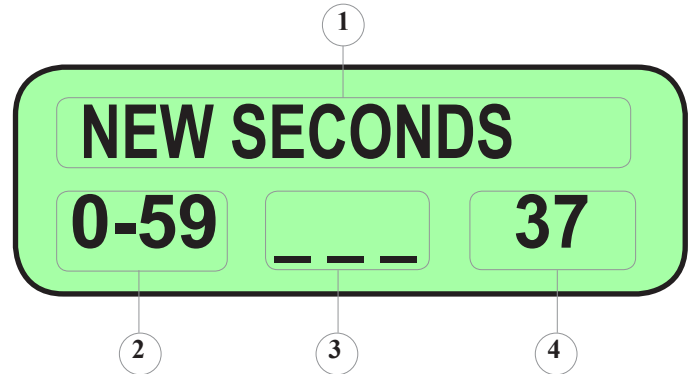indicated below.

Menu 3-1 [NEW HOURS]

①

NEW HOURS

0-23   _ _ _   **10**

②   ③   ④

1. Description of function
2. Range of available values
3. Field for entering required value
4. Current value

Menu 3-2 [NEW MINUTES]
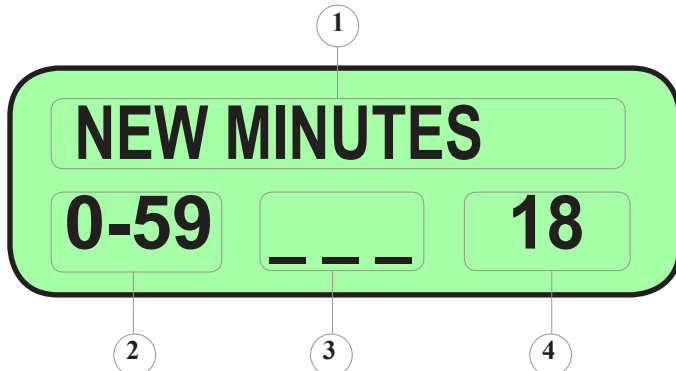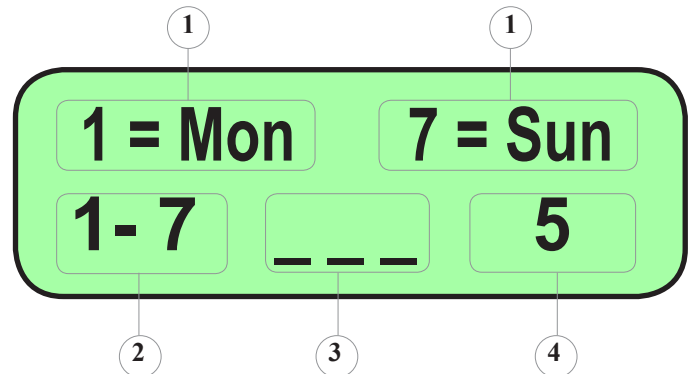
①

NEW MINUTES

0-59   _ _ _   **18**

②   ③   ④

1. Description of function
2. Range of available values
3. Field for entering required value
4. Current value

Menu 3-3 [NEW SECONDS]
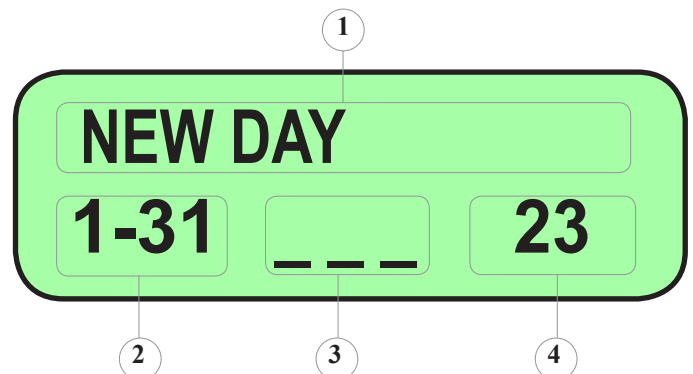
①

NEW SECONDS

0-59   _ _ _   **37**

②   ③   ④

1. Description of function
2. Range of available values
3. Field for entering required value
4. Current value

Menu 3-4 [DAY OF WEEK]

①   ①
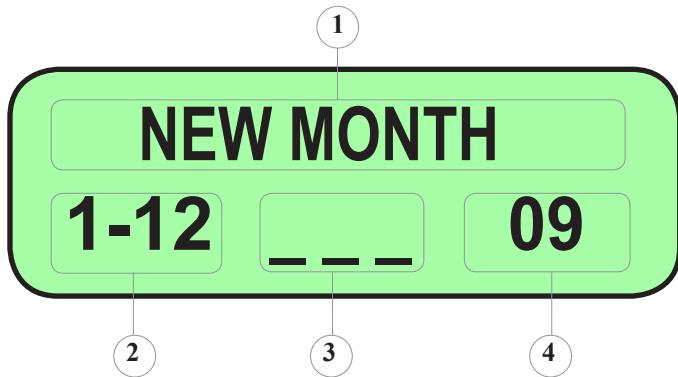
1 = Mon   **7 = Sun**

1- 7   _ _ _   **5**

②   ③   ④

1. Description of function
2. Range of available values
3. Field for entering required value
4. Current value

Menu 3-5 [NEW DAY]

①

NEW DAY

1-31   _ _ _   **23**

②   ③   ④

1. Description of function
2. Range of available values
3. Field for entering required value
4. Current value

FAAC

Menu 3-6 [NEW MONTH]

①

NEW MONTH

1-12 _ _ _ **09**
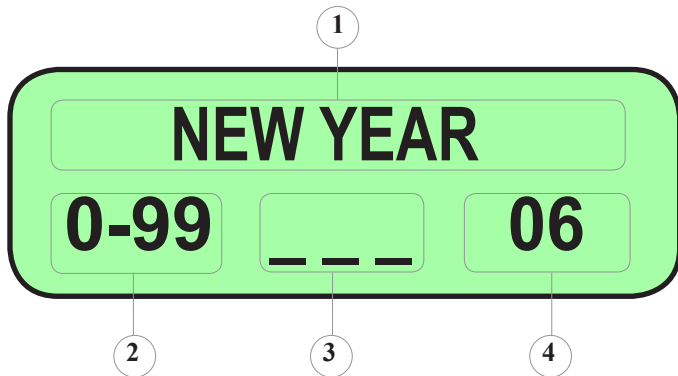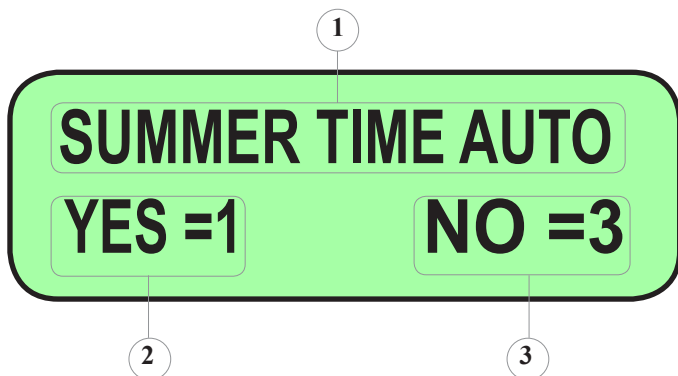
② ③ ④

1. Description of function
2. Range of available values
3. Field for entering required value
4. Current value

Menu 3-7 [NEW YEAR]

①

NEW YEAR

0-99 _ _ _ **06**

② ③ ④
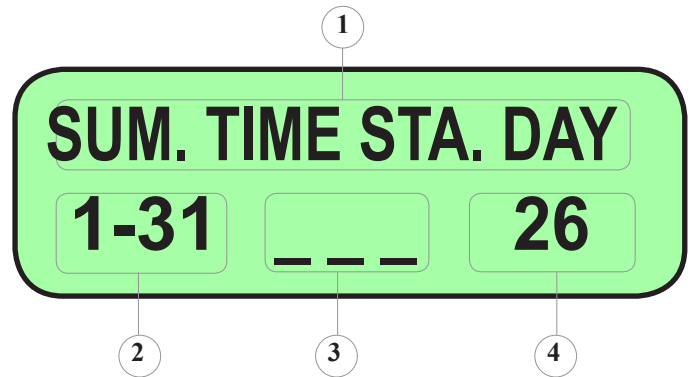
1. Description of function
2. Range of available values
3. Field for entering required value
4. Current value

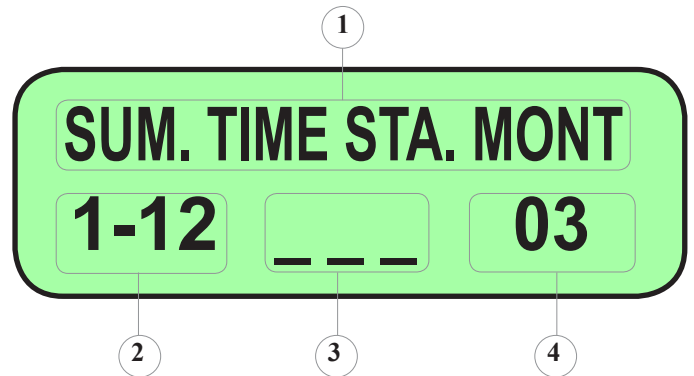**Menu 3-8 [SUMMER TIME AUTO]**

①

SUMMER TIME AUTO

YES =1 **NO =3**

② ③

1. Description of function
2. Automatically sets time change
3. Does not change time automatically

Menu 3-9 [SUMMER TIME START DAY]

①

SUM. TIME STA. DAY

1-31 _ _ _ **26**

② ③ ④
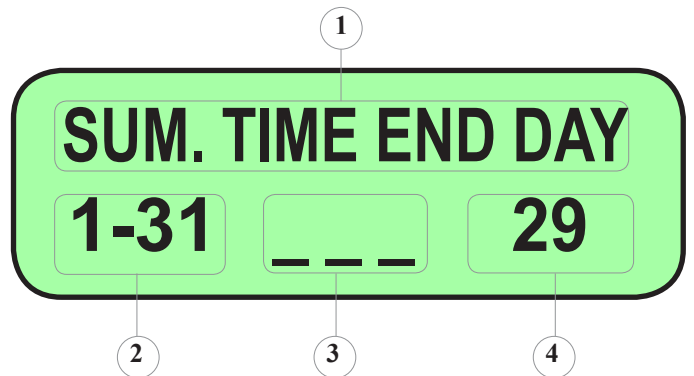
1. Description of function
2. Range of available values
3. Field for entering required value
4. Current value

Menu 3-10 [SUMMER TIME START MONTH]

①

SUM. TIME STA. MONT

1-12 _ _ _ **03**

② ③ ④

1. Description of function
2. Range of available values
3. Field for entering required value
4. Current value

Menu 3-11 [SUMMER TIME END DAY]

①

SUM. TIME END DAY

1-31 _ _ _ **29**
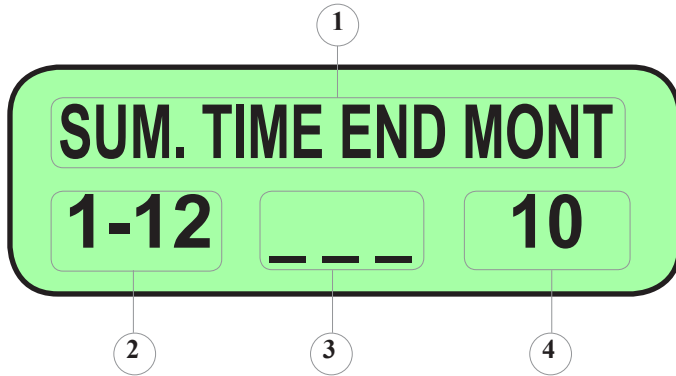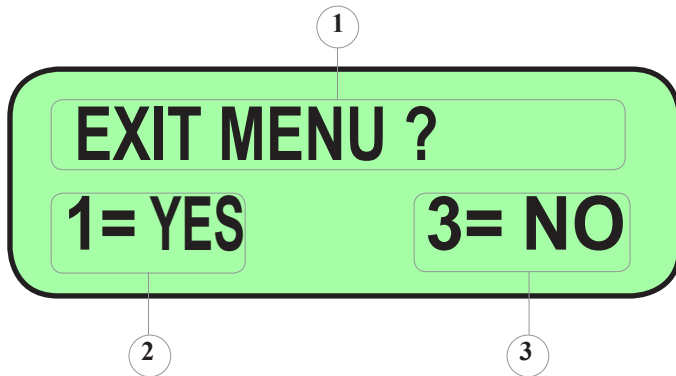
② ③ ④

1. Description of function
2. Range of available values
3. Field for entering required value
4. Current value

FAAC

Menù 3-12 [SUMMER TIME END MONTH]

```
               ①

   ┌─────────────────────────────┐
   │  ┌───────────────────────┐  │
   │  │ SUM. TIME END MONT    │  │
   │  └───────────────────────┘  │
   │ ┌─────┐ ┌───────┐ ┌───────┐ │
   │ │ 1-12│ │ _ _ _ │ │   10  │ │
   │ └─────┘ └───────┘ └───────┘ │
   └─────────────────────────────┘
       ②        ③        ④
```

1. **Description of function**
2. **Range of available values**
3. **Field for entering required value**
4. **Current value**

Menu 3-13 [EXIT MENU ?]

```
               ①

   ┌─────────────────────────────┐
   │  ┌───────────────────────┐  │
   │  │ EXIT MENU ?           │  │
   │  └───────────────────────┘  │
   │ ┌──────────┐   ┌──────────┐ │
   │ │ 1= YES   │   │ 3= NO    │ │
   │ └──────────┘   └──────────┘ │
   └─────────────────────────────┘
        ②              ③
```
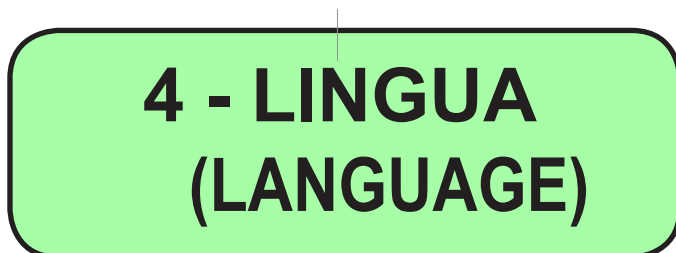
1. **Description of function**
2. **Goes to main menu**
3. **Returns to the first step of menu**

7.3.6 MENU "4-LANGUAGE"

By pressing the enter key, you can directly enter the function which configures the language on the device.
Use the Up/Down keys to select the following languages:
1. **Italian**
2. **English**
3. **Spanish**
4. **French**
5. **German**

```
   ┌─────────────────────────────┐
   │                             │
   │      4 - LINGUA             │
   │     (LANGUAGE)              │
   │                             │
   └─────────────────────────────┘
```

7.3.7 MENU "5 - SETUP TECHNICAL PARAMETERS"

This menu must be used strictly with the technical support of personnel delegated to FAAC Parking servicing.
IMPORTANT: as regards the above explanations, no configuration instruction is provided.

7.3.8 MENU "6-END OF PROGRAMMING"

Press key "E" to exit from the device's configuration.
You can obtain the same effect by holding down the hash # key (for at least 5 seconds).

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