

MODEL 371 CAPACITY COUNTER

OWNERS MANUAL

INTRODUCTION:

The Model 371 Capacity Counter has been designed to provide accurate count data for monitoring and controlling traffic within a parking facility. A typical controlled parking facility has all inputs and outputs controlled by a gate arm with a loop detector or other equipment that recognizes when a vehicle is entering or exiting the parking facility. When a vehicle enters or exits, the information can be sent to the Capacity Counter (as a switch closure) which is then processed, stored and displayed. The Capacity Counter is capable of counting up to 16 separate sensor inputs (lanes).

Incorporated into the high speed microprocessor design is true anti-coincidence logic to ensure that all inputs are recognized. In addition, all inputs are filtered to eliminate errors due to contact bounce from switches or relays.

Additional features of the Capacity Counter include: all sixteen input signals can be set to "COUNT UP" or "COUNT DOWN"; lot capacity of 9,999 with a counting range from -99 to 9,999; front panel display of "REMAINING SPACES"; output relay with separate NORMALLY OPEN and NORMALLY CLOSED contacts used to control a "LOT FULL" sign and/or disable the entrance gate when the remaining spaces are equal to zero; an internal battery to protect the counter data during power outages for up to 5 days.

The Model 371 Capacity Counter will provide simple operation and flexibility for any counting application.

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OPERATING INSTRUCTIONS:

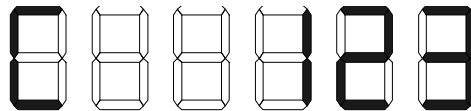
- Apply power by plugging in the power pack
- Program the maximum (or current) number of available parking spaces.
- Program the lanes being used as either IN (1) or OUT (0).
- Exit program mode.

PROGRAMMING:

The model 371 uses a three button system of programming. When in the programming mode one button increases the value displayed, another decreases the value displayed, and the third SETS the value displayed into memory. The SET button advances to the next programming field without changing the setting that is displayed.

ENTERING THE PROGRAMMING MODE:

Press and hold both SET and INCREMENT buttons simultaneously for approximately 3 seconds, then the display changes by showing the current number of parking spaces remaining prefaced with the letter "C" which indicates programming mode, as shown below.

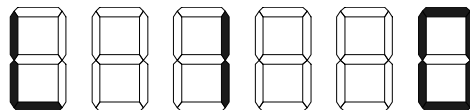


COUNT ADJUSTMENT:

To increase the number press and release the INCREMENT (top) button once to increment the count 1 or press and hold the INCREMENT button and the counter will automatically increment 1 approximately ever ½ second for 5 counts, then approximately every 1/10 second, *et cetera*. The longer the button is held the faster the count is increased.

To decrease the number press and release the DECREMENT (center) button once to increment the count 1 or press and hold the DECREMENT button and the counter will automatically decrement with the same timing as explained in the preceding paragraph.

When the **C**ount is correct press and release the SET button to set the value into memory. When the SET button is pressed the display shows the lane settings beginning with lane 1, prefaced with an "L", as in the following figure which shows lane 1 being set as an OUT lane.



LANE SETTING:

First enter the programming mode. If the **C**ount is correct just press and release the SET button so the "L" appears in the left most character position.

To change the Lane setting press and release either the INCREMENT or DECREMENT button. This changes the right most character from 0 (out lane) to 1 (in lane), or 1 to 0 as the case may be.

EXITING THE PROGRAMMING MODE:

The programming mode may be exited at any time by first pressing and holding the SET button then pressing and holding the INCREMENT button for approximately 8 seconds. When a letter no longer appears in the left most display position release the SET and INCREMENT buttons. The counter will now count, (the counter does not count while in the programming mode).

MAINTENANCE:

The only maintenance required by the Model 371 Capacity Counter is changing the 2 Lithium Cells (CR2025) once per year if there have not been any extended power outages.

SPECIFICATIONS:

Operating Power	9V DC External Power Pack
Operating Temperature	-10°C to +70°C
Display	Bright 6 character LED
Count Range	-99 to 99,999
Input Pulse	25 milliseconds or longer
Output Relay, becomes active when the count is 0 or less	
Normally Open Contacts	4 Amps @ 30VDC, 4 Amps @ 250VAC
Normally Closed Contacts	4 Amps @ 30VDC, 4 Amps @ 250VAC
	[Contacts are separate, i.e. there is no common relay contact]
	[N.O. and N.C. Contacts are paralleled with a snubber circuit]
Internal Battery	2 each 20 mm Lithium Coin Cells

INSTALLATION:

1. Define the parking facility's configuration including the number and location of all entrance and exit points.
2. Place the Capacity Counter in a central location where the display can be viewed and the Counter operated easily.
3. Connect one of the external equipment's (i.e. loop detector) Normally Open relay or switch contacts the input lines to the appropriate lane connector Number 1 through 16. Connect the other external equipment Normally Open relay or switch contacts to one of the 4 common connectors.
4. Connect the Counter's output relay contact(s) to the equipment to be operated or disabled by the counter such as a "LOT FULL" sign, card reader, ticket machine, gate, *et cetera*.
5. Connect the power pack (supplied) to the 9VDC connectors.
6. Double check all wiring.
7. Plug in the power pack (9 VDC), and test the system.

TYPICAL 2 LANE CONNECTIONS:

