



Ramp Controller 2



Facility Control

The Federal APD Ramp Controller 2 is a multi-functional parking control device capable of tracking either one-way or two-way traffic on internal lanes and ramps in a parking facility.

By monitoring traffic flow at

strategic points, the Ramp Controller 2 provides the central management system with the data necessary to maintain an accurate, real time vehicle inventory for each of the facility's parking areas, lots and zones.

Each Ramp Controller 2 has the ability to be set up in various lane configurations, which can support as many as five uni-directional lanes, two bi-directional lanes, or a combination of the two. The I/O Ports are mappable using the PDA, making the RC2 a flexible control device.

Ramp controllers help to direct traffic into or away from parking areas by activating or deactivating "full" signs. This type of control enables you to maximize lot capacity, providing your parking patron with easy notification of any parking spaces available or full conditions.

Vehicle counts (forward and reverse), loop status and system status are transmitted to Federal APD's Central Management System, ScanNet. The Central Management System remotely controls the "full" signs, which are operated by the Ramp Controller 2.

Features

The Ramp Controller 2 package contains a microprocessor-based control board that is enclosed in a factory-sealed package that is easily changeable as a plug-in controller module. The controller is equipped with LED indicator lights to provide the status of the vehicle detectors and to ensure a power supply voltage is being generated.

Also included with the enclosure are well-marked terminals for ease of installation and servicing. The Ramp Controller 2 receives power from a separate power supply unit that is capable of delivering power to 10 Ramp Controllers. The power supply is also enclosed in a separate steel NEMA Type 12 Enclosure.

Communication Interface

Programming the Ramp Controller 2 is easy with a PDA (personal digital assistant) using the Ramp Controller Programming Utility. Programming is transferred between the PDA and RC2 via serial infrared communications. With online communication to the ScanNet Central Management System, you receive the complete control you need to maintain the fullest possible occupancy along with the highest possible revenues from your parking enterprise.



Features:

- Counts vehicles in multiple lanes or ramps in parking facility.
- Five mappable self-tuning vehicle detectors monitor up to two bi-directional lanes or five uni-directional lanes.
- Controls up to four high voltage relays, such as Federal APD's "Full" Signs at 115/220V.
- Eight digital outputs (pulsed or latched) are mappable for various lane-control. (Standard usage would be "Full" Signs or counters.)
- Communicates counts, loop status and device status for each lane to the ScanNet Central Management System.
- Programming with a PDA (personal digital assistant) via an infrared interface.
- Tune and reset vehicle detectors.
- Steel NEMA Type 12 enclosure.



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Specifications

Ramp Controller 2

1. Purpose

The Federal APD Ramp Controller 2 is a parking control device used to count cars traveling on internal lanes and on ramps in a parking facility. By monitoring traffic flow at strategic points, Ramp Controllers provide the ScanNet Central Management System with the data necessary to maintain an accurate, real time vehicle inventory for each of the parking areas, lots and zones.

2. Features/Functions:

- a. Monitors one-way traffic in lanes equipped with one detector loop or two-way traffic in lanes equipped with two detector loops.
- b. Five self-tuning vehicle detection loops enable monitoring of up to two bi-directional lanes, five unidirectional lanes, or other various lane configurations between the two.
- c. Federal APD's Tailgate Recognition System is capable of distinguishing two vehicles within 6 inches (152 mm) of each other on a standard 2.5 ft. x 6 ft. (0.762m x 1.828m) vehicle detection loop.
- d. Eight digital outputs (pulsed or latched) are selectable through the PDA.
- e. One to four digital outputs are capable of operating "full" signs when used in conjunction with the count system option in the ScanNet system.
 - 1) Four A.C. relays are provided, each with 1-form C contact, rated at 120 V.A.C. at 10 A. This is to accommodate large incandescent full signs.
- f. Easily field-configurable using a PDA (personal digital assistant with 8 MB internal memory or higher), and Palm OS software (V4.0 or higher) connected via an infrared interface.
- g. PDA programming abilities:
 - 1) Upload or download configuration
 - 2) Reset or Initialize device
 - 3) Turn full sign on/off
 - 4) Lane configuration options:
 - a) Enable lane (enable/disable)
 - b) Set lane address (0-31)

- c) First loop (disable/map to loop input 1-5)
 - d) Second loop (disable/map to loop input 1-5)
 - e) Forward count pulse output 1 (disable/map to output 1-8)
 - f) Forward count pulse output 2 (disable/map to output 1-8)
 - g) Latch output 1 (disable/map to output 1-8)
 - h) Latch output 2 (disable/map to output 1-8)
- 5) Loop configuration options:
 - a) Vehicle Detection Sensitivity
 - b) Tailgate Detection Sensitivity
 - c) Tailgate Detection (enable/disable)
 - d) Loop (enable/disable)
 - 6) Set date and time
 - 7) Set password
- h. Communicates the following status to ScanNet in real time:
 - 1) Vehicle counts: forward and reverse.
 - 2) Loop status: loop presence/frequency
 - 3) System activity monitor device status

3. Electrical Requirements:

- a. Power Supply Unit: The Ramp Controller receives power from a separate power supply unit, which can accept input voltage ranging from 85-264 V.A.C. at 47-63 Hz at 2 Amperes and produces output of 24 VDC. The Power Supply unit is capable of delivering power to 10 Ramp Controller units. Each Ramp Controller unit may be switched on and off independently.
- b. The Ramp Controller Unit can accept voltage input of 24 V.D.C +/-10%. Current consumption is 0.5 Amps or less.
- c. The power supply is housed in a steel NEMA Type 12 Enclosure: 13.35 in. H (339mm) x 12.12 in. W (309mm) x 6.25 in. D (159mm).

4. Construction:

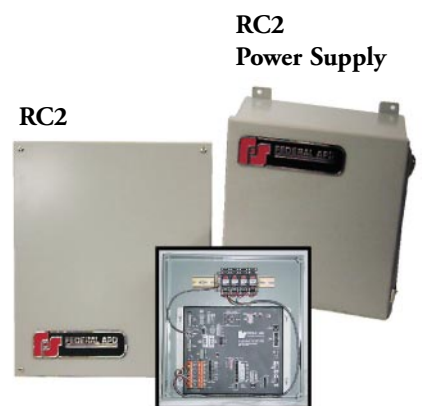
- a. All electronic components of the Federal APD Ramp Controller 2 Board are contained in one factory-sealed package,

which is readily changeable as a plug-in controller module.

- b. The Ramp Controller package is housed in a 17.25 in. H (438mm) x 15.25 in. W (387 mm) x 3.4 in. D (86mm), steel NEMA Type 12 enclosure.
- c. Equipped with LED indicator lights to provide operational status of the vehicle detector loops and the controller including: Loops A, B, C, D and E presence; Loops A, B, C, D, E and tuning.
- d. A separate LED indicator light to show that a proper power supply voltage is being generated.

5. Field Connections:

- a. The Ramp Controller 2 contains terminals to allow neat and orderly connection of field wires.
- b. All terminals are labeled in a manner which facilitates ease of installation and service.



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