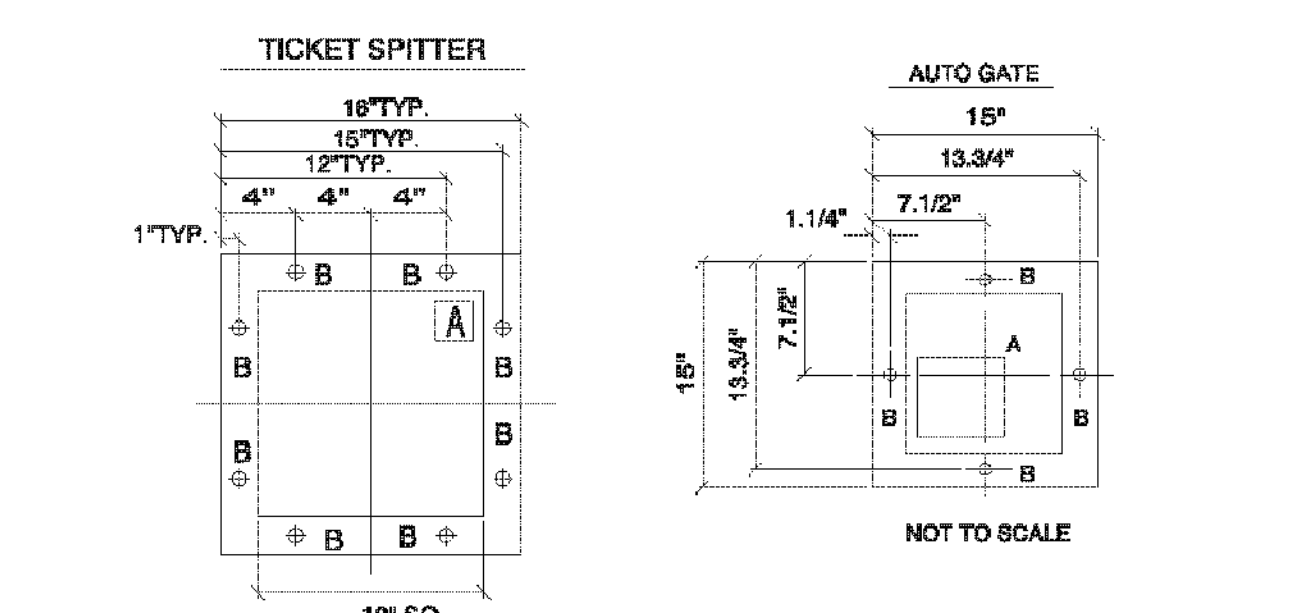
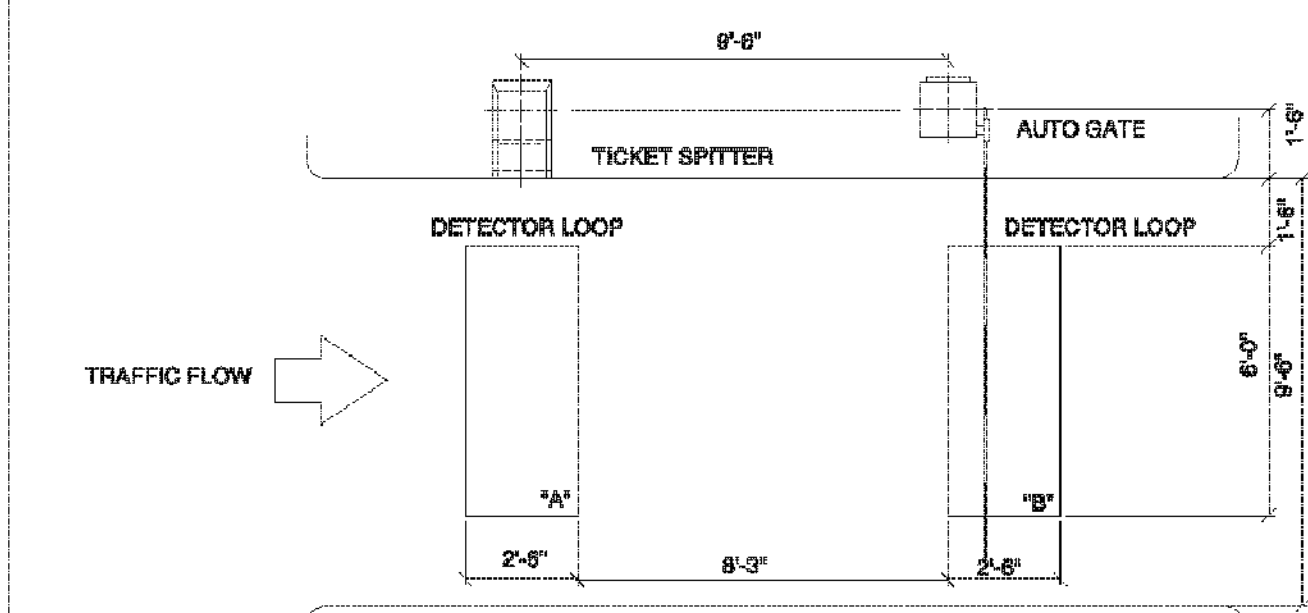


ELB-4799



CAUTION
AUTOS ONLY
NO MOTORCYCLES, BICYCLES
OR PEDESTRIANS

FEDERAL APD
Federal Signal Corporation
42775 Nine Mile Rd. • Novi, Michigan 48375 • Tel: (248) 374-9600 • Fax: (248) 374-9610

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PROJECT:	SCALE: NONE	DATE: 11/23/02	DWG BY: MARY	FAPD W.O.#	DRAWING # ELB-4799
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Parking Barrier Gate Model G-90 CD Series



Design and Function
The Model G-90 CD Series Barrier Gate provides microcomputer intelligence, multiple programming options, and on-board controls for a complete and user-friendly information center providing total lane management.

Protect Your Investment
The Model G-90 CD Series Gate continues the outstanding tradition of high quality that you depend on from Federal APD. The gate is extremely durable, protected from the harshest environments with a heavy gauge aluminum cabinet armored with an abrasion-resistant finish which keeps your installation looking clean and new for years of rust-free service.

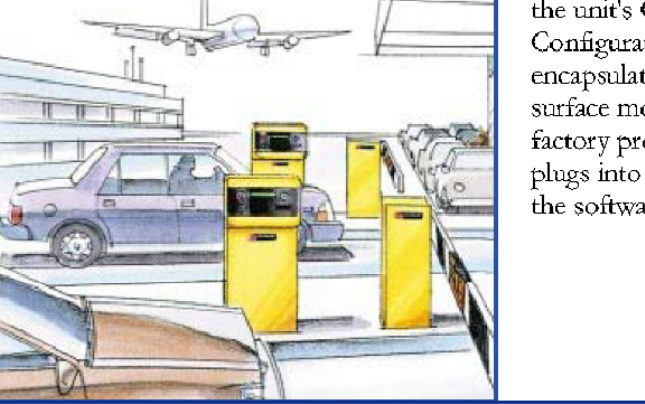
Omega LCD Controller
The heart of this gate is the Omega LCD Controller. This fully integrated controller provides a systems approach for convenient, accurate and cost-effective lane management.

Lane Configuration
The Model G-90 CD Series Gate can handle any type of lane configuration possible - including reversing lanes and lanes with three vehicle detectors with software options embedded into the unit's Configuration Module. The Configuration Module is an encapsulated PC board that utilizes surface mounted technology. This factory programmed microcontroller plugs into the power board and defines the software options used in the gate.

Counts You Can Count On
The Model G-90 CD Series allows you to design an on-board information center with counting functions packaged in one self-contained device. The controller's software logic integrates optional counting functions such as restorable and non-restorable totalizing counts, single and dual differential counts, hourly counts, and a host of statistical counts. These counts are displayed on the controller's visual display and are accessed by the user-friendly, menu driven keypad.

Vehicle Detectors
Three built-in and automatically self-tuning vehicle detectors are available. These high-speed detectors provide a sensitive tailgate recognition system that is capable of recognizing two separate vehicles traveling over a detector loop simultaneously. Diagnostics and metering tools are also built into the controller.

Sensitive Reversing Logic
An advanced, maintenance-free safety and monitoring system is designed into every gate. The Sensitive Reversing Logic (SRL) system provides safer gate operations by instantly sensing gate arm obstructions, limit switch failures, and gate arm position - without the use of electro-mechanical systems. The SRL sensing system also features self-tuning capabilities.



Specifications

1. Purpose
The Model G-90 CD Series Barrier Gate shall be a microprocessor-based parking control device that shall restrict access within a vehicle traffic lane by means of a wooden gate arm. The gate shall be activated by a valid signal from an access or revenue control device. The Model G-90 CD Series Barrier Gate shall additionally act as a programmable lane controller, generate and store counts, monitor lane operations, and provide reporting capabilities.

2. Features/Functions
The Model G-90 CD Series Barrier Gate shall contain an Omega LCD Controller that shall provide all logic control and monitoring functions of the gate.

3. Dimensions
The Model G-90 CD Series Barrier Gate shall be 15 inches W x 40 inches H x 15 inches D (381mm W x 1016mm H x 381mm D) with a flange arm height of 35 1/2 inches (902mm) to allow for compact or incompact type vehicles from passing under the arm when in the closed position.

4. Electrical
Power requirements shall be 115 VAC at 15 Amps as standard. Other power requirements shall be available as specified. The power supply shall consist of a Power Board and a power supply cover.

5. Construction
The Model G-90 CD Series Barrier Gate shall be constructed of heavy gauge aluminum and finished in a powder coat paint in either Federal APD Safety Yellow or Federal APD White (as specified) for maximum visibility and safety. Other colors shall be available upon request.

Parking Barrier Gate Model G-90 CD Series

6. Mechanical
The Model G-90 CD Series Barrier Gate shall be driven by a 1/2 HP heavy-duty high torque, 115 VAC, single phase inverter running motor. Other power requirements shall be available as specified. The motor shall be connected by double V-belts to a heavy-duty 60:1 single reduction speed reducer. The motor shall provide a breakdown torque of 230 ounce-foot. Mechanical stops shall be provided to allow adjustment of gate arm travel.

7. Sensitive Reversing Logic (SRL)
The Sensitive Reversing Logic (SRL) shall ensure that the gate arm will automatically reverse its downward motion should any object strike the gate arm during its descent and shall immediately return to the upright position and remain up until automatic reset by a visible force control.

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http://www.FederalAPD.com

Freedom for Control

Pay-In-Lane Device
Operate Your Parking Facility Without An Attendant



Features:

- On-line or off-line operation
- Self-replenishing coin system
- Flexible Payment Methods:
- Coin or Paper Currency
- Debit Card
- Credit Card
- Merchant Validation
- Vouchers
- Value Cards
- Receipt Issued on demand

Exit Operations:
Model 9000S - Standard Unit
This model is an unmanned Exit Cashiering device. User-friendly features prompt patron to insert their parking ticket into the device. When the fee is displayed your customer can choose their method of payment. Standard payment features for the Model 9000S include paper currency, coins, vouchers, merchant validations, or debit ValueCards.

Model 9000C - Credit Card Unit
This model includes all the payment options that the Model 9000S has and can also process Credit Cards.

Entry Operations:
Model 9000P - Pre-Pay Unit
This model is used for point of entry operation. When a patron drives up to the Model 9000P the required fee is displayed. The parking fee is a programmable flat rate. Payment can be made with paper currency, coins or credit card.

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Specifications

1. Purpose:
The Pay-In Lane models are unmanned devices that provide complete automation of cashiering services to parking patrons at the lane. The Model 9000S and Model 9000C are exit devices that read magnetic stripe tickets, ValueCards, vouchers and hole punch validations. The Model 9000C also reads credit cards. The Prepay Entry Device, Model 9000P processes credit cards as well as coin and paper currency as the method of payment.

2. Features:

- Automatically calculates and displays parking fees, accepts payment, issues change in coins or credit and vouchers.
- Incorporated the following standard components:
 - SST Ticket Validator (Model 9000S and 9000C)
 - Coin Changer (accepts and dispenses Coins)
 - Up to five Auto-Replenishing coin denomination dispenser tubes
 - Note Acceptor and validator
 - Programming Interface
 - Receipt Printer
 - Credit Card on Model 9000C and 9000P
- The following components are optional:
 - Journal Printer
 - Intercom
 - Comprehensive financial and statistical reports are available at the device or from a PC running the Federal APD ScanNet® Central Parking Management System
 - Processes up to 14 different bank notes and up to 5 different coin denominations
 - Operates independently offline, or online with Federal APD ScanNet® Central Parking Management System
 - LCD display guides the user through all transactions.

3. Mechanical:

- The standard Model 9000S and the Credit Card Model 9000C reads magnetic stripe parking tickets, ValueCards and hole punch validations using Federal APD SST Transport mechanism.
- All the Pay-In Lane devices allow patrons to terminate the cashiering transactions at any time prior to completing a transaction.
- The bank Note Acceptor accepts up to 14 different bank note denominations and

Table 1: Max. fill by coin changer

Coin	Max. fill by coin changer	Max. fill manually (per coin meter)
5¢	77 coins (\$3.85)	87 coins (\$4.35)
25¢	14 coins (\$3.50)	16 coins (\$4.00)
1.00	69 coins (\$69.00)	81 coins (\$81.00)

Table 2: Standard coin cassette holds

two-dollar tubes	two-quarter tubes and one nickel tube
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The capacity of each are as follows:

4. Dimensions:

- The Pay-In Lane cabinet is 24.21 inches W x 24.21 inches H x 16.53 inches D (615 mm W x 615 mm H x 420 mm D).
- The Pay-In Lane pedestal base is 10 inches W x 25 inches H x 10 inches D (447.7 mm W x 790 mm H x 254 mm D).

5. Electrical:

- The Pay-In Lane is available in 115 VAC or 220 VAC power requirements. It also provides a 24 VDC and a 5 VDC Power supply for the cash handling system, the SST Ticket Validator and the Credit card reader.
- Construction:**
 - The Pay-In Lane housing is a weatherproof steel cabinet mounted on a steel pedestal.
 - The cabinet is finished in powder coat paint in either Federal APD Safety Yellow or White for maximum visibility and safety. Other colors are available, when specified.
 - To discourage tampering, the Note Vault is constructed of metal and provides a secure storage area for bank notes. The Note Vault is locked into place, and an additional key is needed to unlock the vault.
 - Exterior operator controls are clearly laid out with easy-to-follow instructions, visual display and push button controls.

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Automation Equipment Vendor Notes

- VENDOR SHALL HAVE A PERMANENT LOCAL (TALLAHASSEE) PRESENCE.
- VENDOR MUST BE ABLE TO RESPOND TO PERIODIC SERVICE CALLS WITHIN TWO HOURS OF NOTIFICATION.
- VENDOR SHALL MAINTAIN THE FURNISHED AUTOMATION EQUIPMENT FOR A MINIMUM OF 12 MONTHS.
- VENDOR SHALL PROVIDE WARRANTY ON FEDERAL APD EQUIPMENT FOR 24 MONTHS AND LABOR AND OTHER PARTS FOR 12 MONTHS.

Universal One



Features:

- Magnetic ticket dispensing, exit verifying
- Qualifies payment processing
- Online or offline operation
- Proven lane logic for superior revenue control
- Backlit LCD display
- Service-friendly internal layout
- Proven components for reliability

Specifications

1. Purpose:
The Universal One is a patron service-friendly kiosk that delivers efficient performance in a wide range of parking applications. Ticket dispenser or exit verifier. The Universal One can be configured to dispense or verify magnetic tickets in entry or exit lanes. The kiosk is optimized for a wide range of vehicle heights, while the easy-to-read display and membrane pushbutton ensure quick, easy and reliable transaction processing. Automated ticketing when a vehicle is present remains a configuration option, eliminating the need for the patron to "Press for Ticket".

2. Features:
The thermal printer - which is built into the patron - can be configured to print promotional messages and/or redundant time and date, while the magnetic head reads and writes the magnetic. And the Universal One offers the lightest lane logic on the market, reducing the potential for loss of or tampering with and maintaining the highest integrity in the revenue stream.

3. Construction:
The Universal One can also be configured as a credit card-only payment station. It offers comfortable ergonomics for patrons using the kiosk whether on foot or in a vehicle. And, in addition to traditional payment applications, the configuration options allow it to function in Credit In, Credit Out (CICO) or Pre-Pay modes. With this flexibility, the Universal One can provide efficient cashless payment processing in the entry lane, the exit lane or the lobby.

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Freedom for Control

Universal One Specifications

Intelligence

- Configurable remotely over network from ScanNet™
- Configurable locally from PowerPad terminal
- Configuration options:
 - Patron display messages
 - Programmable outputs
 - Receipts
 - Networkable via optional configuration kit
 - RS-485 serial loop
 - Ethernet
 - Fully functional when online or offline
 - Buffers up to 1900 credit card and 7700 cash transactions

Patron Interaction

- Bright backlit LCD display directs patron through transaction workflow
- Let Patrons for ticket button uses membrane contact for long life
- Accepts (optional configurations):
 - Magnetic tickets, vouchers, validations via transport
 - Patron ID via prox reader
 - Credit cards via insertion reader
 - Thermal printer provides patron receipt upon request
 - ADA compliant

Electrical

- 90-130VAC or 180-240VAC
 - Maximum draw - fully configured - 90-130VAC, 8A
 - Maximum draw - fully configured - 180-240VAC, 4A
- 24VDC internal circuit for low voltage components
- Segregated AC circuit for optional UPS unit

Mechanical

- 55" H x 14" W x 20" D (147cm H x 36cm W x 51cm D)
- Weight - fully configured, 170lbs (81kg)
- Heavy gauge steel frame construction
- Aluminum cladding construction
- Insulated, heated and vented to maintain internal temperature and humidity ranges
- NEMA 3R cabinet

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Freedom for Control

For more information: federalapd.com 800.521.9330

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