
Development Guide

Omega JR Protocol

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HISTORY OF DOCUMENTATION CHANGES & REVISIONS

Version 1.0 — May 2016

Initial Release

Version 1.1 — January 2019

Remove Card Reader Commands

PURPOSE OF THIS DOCUMENT

This manual describes in detail the protocol used to with the Omega JR systems.

Instructions for installing or servicing Omega JR controllers, electronic dispensers and POS terminals are not included. Additional documentation is available from PIE for Omega JR hardware installation. For more detail on any product not manufactured by PIE, always refer to that product's accompanying documentation.

NOTICE

Progressive International Electronics reserves the right to revise and improve this document as required. This publication details our Omega JRs at this time, and may not accurately describe these products at all times in the future. Specifications are subject to change without notice.

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EXPLANATION OF DOCUMENT STANDARDS

The following documentation standards are applied throughout this document.

I Comments are noted in *italics*.

X Variable data formats are represented by X(s).

Dollar fields are described by \$. Data fields are described by v. The required fixed length and format of these fields is indicated in each command format. Decimals are implied only.

Spaces In formats for commands, spaces between fields are used for clarification only.

Spaces should not be included in the actual string sent to the controller.

[] Numbers shown in square brackets represent hex values, such as [0x20].

These abbreviations are used.

MOP Method of payment.

MPD Multiple product dispenser.

PIE Progressive International Electronics, Inc.

POS Point of sale terminal.

SPD Single product dispenser.

General Protocol**Introduction to Omega JR**

This document contains the protocol used to communicate with Omega JR systems. The entire process of controlling fueling positions is accomplished with a few commands to the Omega JR. This protocol may be used to control up to 99 fueling positions with eight grades on each position. Currently, Omega JR systems support 32 fueling positions with eight hoses per position.

The Omega JR Protocol uses a simple "2's" complement check byte. Command and response data are transferred in a formatted frame, beginning with a **Start of Text** (ASCII STX [0x02]), followed by the command and data or response, followed by **End of Text** (ASCII ETX [0x03]) and the check byte. All data (except the check byte) are ASCII characters. All commands are one character. The pump number is comprised of two characters; the hose number is one character. All commands are "ACKed" (0x06) "NAKed" (0x15). However, the responses are not. If the controlling device finds an error in the response, simply request the response again.

General Protocol

Table of Omega JR Commands

A	Authorize	G	Reset
B	Sale Information	H	Blend
C	Stop	I	Polled Totals
D	Resume	J	PPU
E	Error	K	System Version
F	Status Request		

Protocol Command Format

STX CMD [Pump#] [Hose#] [. . . Data . . .] ETX CD

STX	0x02
CMD	Command Code (one character)
Pump #	Fueling Position (two characters)
Hose #	Grade Number (one character)
Flag	Flag Digit (one character)
Data	Programming Data or Action
ETX	0x03
CD	Check Digit

The check digit is constructed by adding all of the characters of the string, starting with the STX and ending with the ETX, then subtracting the value from "00" and sending the result. The check digit is masked off to seven (7) bits. Pump and reader numbering are from 01 - 32. A reader number of "00" is used to indicate global addressing for those commands that support this feature.

Omega JR Commands

Authorize

A — *Initiates a fueling operation*

Authorize Command Character A

Purpose of Authorize Command

Initiates a fueling operation. A limit may be set to dollar, volume amount or no limit (Fillup). If a Fillup operation is requested, the dollar and volume fields are ignored. All decimal points are implied rather than actually being sent. A hose number of zero allows any hose to be authorized.

New Limit and Multi-Grade Lock Authorization features of the Authorize command, as well as the Authorize command process for implementing them, are discussed on the following pages.

The Authorize Command also includes an Extended capability. The purpose of the Extended option is to increase the preset amount. The Extended option 'E' increases amounts from 6 to 10 digits of both Dollar and Volume. This option applies to all flags of the Authorization Command. The implied decimal points remain the same (2 for Dollar and 3 for Volume) when the option 'E' is implemented. Extended Authorization commands are documented in the following Formats for Authorize Command

To deauthorize a fueling position, the Stop and Resume commands are used. First, the Stop command is sent. The Resume command is sent only after a Stop status is indicated for the fueling position.

Format for Authorize Command

STX A Pump# Hose# Flag \$\$\$\$.\$\$ vvv.vvv ETX CD

In the actual command, decimal points are implied only.

Extended Format for Authorize Command:**STX A Pump# Hose# E Flag \$\$\$\$.\$\$ vvv.vvv ETX CD***In the actual command, decimal points are implied only.*

Authorize Command Character=A

Pump #=XX (01 to 32)

Hose #=X (0 to 8, with 0 authorizing any hose — also see Multi-grade Lock Authorization which follows)

Flag=X (Type of authorization — see Description)

Dollar Limit Amount=\$\$\$.\$\$ (0000.01 to 9999.99)

Volume Limit Amount=vvv.vvv (000.001 to 999.999)

Description of Flag Operation

0	Dollar Limit	(Credit price)
1	Dollar Limit	(Cash price)
2	Volume Limit	(Credit price)
3	Volume Limit	(Cash price)
4	Fillup	(No limit)
9	New Limit	(Only dollar preset amount may be changed, not MOP — see New Limit section which follows)

Response to Authorize Command

ACK/NAK only

Authorize Command Example

- Pump 1
- Any Hose
- \$25.00

Command:
STX A 0101002500000000 ETX CD
Response:
ACK

Authorize — Implementing New Limit Feature

Authorize Command Character A

Purpose of Authorize Command Implementing New Limit

Progressive International has implemented a feature of the Authorize command which enables the user to change the preset value for a fueling transaction after an Authorize command has been sent to the controller. This New Limit feature is commonly known as Preset-On-The-Fly.

Format for Authorize Command

STX A Pump# Hose# Flag \$\$\$\$.\$\$ vvv.vvv ETX CD

Flag Operation — New Limit

9 New Limit *(Only preset amount may be changed, not MOP)*

Special Considerations:

- Due to the nature of this operation, MOP changes are not permitted.
- New Limit field must be the limit field for which the original preset was sent.
- When using New Limit, all fields must exist.
- Some dispensers can have their presets changed after flow has begun. Caution should be exercised using this option with the amount of fuel presently being dispensed is marginally close to the original preset limit. With this scenario, a possibility for an overrun condition exists.

Error Notes:

- A system error 06 will occur if this flag is used without a previous authorization being sent for that pump #.
- A pump error 08 will occur if the controller cannot change the preset due to dispenser-specific situations.

Authorize — Implementing Multi-Grade Lock Feature

Authorize Command Character A

Purpose of Authorize Command Implementing Multi-Grade Lock

To initiate a fueling transaction with specific grade combinations.

To implement this feature, Hose# must be set to 0x3f. This alerts the controller to expect a bit pattern of grades to restrict. This bit pattern is appended to the normal Authorize command as two bytes representing the hoses to restrict: 0x3X₁ 0x3X₂

First byte 0x3X₁

X= bit 0 = grade 5

bit 1 = grade 6

bit 2 = grade 7

bit 3 = grade 8

Second byte 0x3X₂

X= bit 0 = grade 1

bit 1 = grade 2

bit 2 = grade 3

bit 3 = grade 4

Format for Authorize Command Implementing Multi-Grade Lock

STX A Pump# Hose# Flag \$\$\$\$.\$\$ vvv.vvv 0x3X 0x3X ETX CD

Format for Extended Authorize Command Implementing Multi-Grade Lock

STX A Pump# Hose# E Flag \$\$\$\$.\$\$ vvv.vvv ETX CD

Example 1 — Authorize Command Implementing Multi-Grade Lock

grades restricted:
1, 2 & 5

Command:
STX A Pump# 0x3f Flag \$\$\$\$\$\$ vvvvvv 0x31 0x33 ETX CD
Response:
ACK

Example 2 — Authorize Command Implementing Multi-Grade Lock

grade restricted:
1 only

Command:
STX A Pump# 0x3f Flag \$\$\$\$\$\$ vvvvvv 0x30 0x31 ETX CD
Response:
ACK

Example 3 — Authorize Command Implementing Multi-Grade Lock

grades restricted:
1 through 8

Command:
STX A Pump# 0x3f Flag \$\$\$\$\$\$ vvvvvv 0x3f 0x3f ETX CD
Response:
ACK

Omega JR Commands

Sale Information

B — *Reads the sale data or clear the Sale Ready flag*

Sale Information Command Character B

Purpose of Sale Information Command

Used to read the sale information or clear the Sale Ready flag. This command may be used at any time during a sale in progress. All known fields will be filled in. Once the sale is complete, the information in this response indicates what actually took place at the fueling position. The R flag indicates a Read Sale operation and the C flag indicates a Clear Sale Ready operation.

Due to the limitations of some dispensers, the information displayed will not necessarily be what was authorized via the Authorization command.

Format for Sale Information Command

STX B Pump# Flag ETX CD

Sale Information Command Character=B

Pump #=XX (01 to 32)

Flag=X (Type of sale information — see below)

Description of Flag Operation

R Read Sale Information

C Clear Sale Ready Status

E Extended Sale Information

(See Format for Extended Sale Information Command and Response to Extended Sale Information Command on following page(s))

The Clear Sale Ready status may only be accomplished when the Sale Ready status is set.

Response to Sale Information Command**For Read Operation:****STX Pump# Hose# Flag \$\$\$\$.\$\$ vvv.vvv ETX CD**

Pump #=XX	<i>(Fueling position — 01 to 32)</i>
Hose #=X	<i>(Hose number — 0 to 8)</i>
Flag=X	<i>(Type of sale, cash or credit — 0 or 1)</i>
Dollar Amount=\$\$\$\$.\$\$	<i>(Amount, using 2 decimal points)</i>
Volume Amount=vvv.vvv	<i>(Amount, using 3 decimal places)</i>

Description of Flag Indicators

0	Credit Sale
1	Cash Sale

For Clear Operation:**ACK/NAK** only**For Extended Sale Operation:***(See Command Format and Response which follow.)*

Format for Extended Sale Information Command

STX B Pump# Tag(s) ETX CD

In the actual command, decimal points are implied only.

Description of Extended Sale Field Tags		
Tag	Tag Description	Tag Response Data Format
H	Hose Number	X (0 to 8)
M	MOP of Sale	X
\$	Dollar Amount of Sale	\$\$\$\$\$\$\$\$\$
V	Volume of Sale	vvvvvvvvvv
P	Unit Price of Sale	\$\$\$\$\$\$
S	Current Pump Status	XX <i>Refer to Status Request Command</i>
T	Pump Polled Totals	Fvvvvvvvvvv\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$ (Above data returned in following order: F=Totals type, 10 digits of volume totals, 10 digits of credit dollar totals, and 10 digits of cash dollar totals)
L	Preset Limit	\$\$\$\$\$\$

Response to Extended Sale Information Command

When a Sale Information Command is issued with an E tag, it is treated as an extended sale command and will return data in the following format:

STX Pump#Tag1Data1 . . . Tag_nData_n ETX CD

The Extended Sale Information Command will return the requested information in the order in which the fields were requested. Each field is a fixed length as shown in the Tag Response Data Format column of the table above.

Sale Information Command Example

- Pump 1
- Read
- Hose 2
- Cash
- \$25.75 sale
- 24.315 gal

Command:
STX B 01R ETX CD
Response:
ACK STX 0121002575024315 ETX CD

Extended Sale Information Command Example

- Pump 1
- Hose 1
- Credit
- \$15.00 sale
- 14.164 gal
- Pump idle
- 3 Cash & Credit Totals
- Vol. Totals
1234567.890
- Credit Dollar Totals
\$54321543.21
- Cash Dollar Totals
\$12312312.35

Command:
STX B 01EHM\$VPSTL ETX CD
Response:
ACK STX 01H1M0\$0000001500V0000014164P001059S02 T3123456789054321543211231231235L005000 ETX CD

Omega JR Commands

Stop

C—*Terminates action at one or all fueling positions*

Stop Command Character C

Purpose of Stop Command

Used to terminate the action at one or all fueling positions. Once this command is issued, a Resume command must be issued to clear the Stop status. A fueling position of '00' indicates an All Stop operation.

When Stop command is initiated, the fueling position may or may not go to an End of Sale status, depending upon the brand and type of dispenser.

Format for Stop Command

STX C Pump# ETX CD

Stop Command Character=C

Pump #=XX (01 to 32)

Response to Stop Command

ACK/NAK only

Stop Command Example

- Stop
- Pump 5

Command:
STX C05 ETX CD
Response:
ACK

Omega JR Commands

Resume

D — *Restarts action at one or all fueling positions*

Resume Command Character D

Purpose of Resume Command

Restarts action at one or all fueling positions. A fueling position of '00' indicates an All Resume operation. This command is used in response to a Stop status.

The Resume command will allow the fueling position to resume dispensing after a Stop command has been issued only if the pump handle has not been hung up.

Format for Authorize Command

STX D Pump# ETX CD

Resume Command Character=D

Pump #=XX (01 to 32)

Response to Resume Command

ACK/NAK only

Resume Command Example

- Resume
- Pump 5

Command:
STX D05 ETX CD
Response:
ACK

Omega JR Commands

Error

E — *Reads queued pump, reader or system errors*

Error Command Character E

Purpose of Error Command

Reads queued errors related to the dispensers or system and is useful in diagnosing problems with dispenser operations. Each error response includes the fueling position number (00=System Error) and an error code. Errors should be read and then cleared one at a time. If the Error Queue status bit is still set, another error is queued.

Always read and then save errors to a log file which is date and time stamped. When seeking technical assistance from Progressive International Electronics, this log file enables PIE to identify problems more quickly and accurately.

If the Error Command is issued with a flush flag (C), all error information is cleared.

Format for Error Command

STX E Flag ETX CD

Error Command Character=E

Flag=X *(Operation type — see below)*

Description of Flag Operation

R	Read the Error
E	Extended Error Read
S	Extended String Read <i>(Returns a data string 25 bytes long)</i>
W	Clear the Top Error
C	Flush the Error Queue

Response to Error Commands

Clear/Flush Error Response:

ACK/NAK only

Read Error Response:

STX Pump# EC ETX CD

Pump #=XX

(01 to 32)

EC=XX

(Error Type — see descriptions)

Extended Read Error Response:

STX Pump# EC EX ETX CD

Pump #=XX

(01 to 32)

EC=XX

(Error Type — see descriptions)

EX=XX

(Extended Error Code)

Extended String Read Error Response:

STX Pump# String ETX CD

Pump #=XX

(01 to 32)

String

(Data string 25 bytes long)

Description of Error Codes**System Codes**

05	Invalid Command Received
06	Authorization Failed

Dispenser Codes

01	Unit price on fueling position incorrect; price indicated on the fueling position is not the price sent to it
02	Dispenser did not stop at preset amount; dispenser "overran" the limit sent to it; should not use this dispenser for preset operations
03	Invalid data received from dispenser; cannot get valid data from dispenser; sales or totals data may not be valid
04	Communication down for this dispenser; dispenser is not responding to commands and had been working
05	Invalid dispenser status; dispenser is returning invalid status
06-07	Reserved
08	New preset error

Omega JR Commands

Status Request

F — *Reads the status of the system and each fueling position*

Status Request Command Character **F**

Purpose of Status Request Command

Reads the status of the system and each fueling position. The status indications are "bit" oriented. The first status in the response is the System Status. The remainder of the statuses are for all 32 fueling positions and are returned in order — 1 to 32. The Standard Extended Status (E flag) consists of two ASCII characters. The lower nibble (4 bits) of the character contains the status bits. The upper nibble is always a '3' (0011 binary). *See Select Status (1 flag) description for return value information.*

Format for Status Request Command

STX FE ETX CD

Status Request Command Character **F**

Status Flag Character Definitions:

E = Standard Extended Status

1 = Select Status

Response to Status Request Command

STX Ss Pp Pp Pp ETX CD

69 characters are transferred (including STX, ETX & CD) for the 'E'xtended status. See System Status Definitions, Description of System Status, Pump Status Definitions, and Description of Pump Status on following pages.

System Status Definitions

Event Mode	Indicates event mode has been selected for this port. <i>See Event Mode Command M.</i>
All Comm Down	Indicates the communications link to all dispensers is down. In half duplex systems, this bit indicates that the transmit character is not even being echoed.
Error Queued	Indicates an error is stored in the error queue and needs to be retrieved.
Controller Reset	Indicates that the controller is reset and all information has been cleared. The controller requires dispenser initialization.
Emergency Stop	Indicates an emergency stop has been issued and has been sent to the dispensers.

Description of System Status

S = Bit 3 =	Event mode active
Bit 2 =	Reserved
Bit 1 =	Card reader status changed
Bit 0 =	Communication down for all dispensers
s = Bit 3 =	Error in the error queue
Bit 2 =	Controller has completed a reset and requires configuration
Bit 1 =	Reserved
Bit 0 =	Emergency stop sent to dispensers

Dispenser Status Definitions

Stop	Indicates that a Pump Stop command was sent by the POS or that the dispenser is in a stopped state. This bit can only be cleared by issuing a Resume command from the POS.
Drive Away	Asserted when the dispenser dollar value has not increased for a period of seven (7) seconds. This bit may go on and off many times during a sale. Its purpose is to alert the store clerk to check for a possible drive-away situation.
Flowing	Indicates the sale dollar amount is not zero. Some dispensers are unable to indicate the sale flowing, in which case this bit will not be asserted.
Sale Complete	Indicates a completed sale and that all information is collected and available, including dollar and volume amounts as well as updated polled pump totals.
Auth Allowed	POS has sent an Authorization command to a fueling position. The authorization will be held until a handle signal is received from the dispenser.
Auth Sent	Pump has been sent an Authorization command and dispenser is armed.
Logged On	Indicates an active communication for this dispenser. This bit may be disabled if a communication error is detected. At this point, this bit will remain off until communication is reestablished.
Handle	Indicates the current handle position for this dispenser.
Customer-Made Selection	Indicates customer has selected one of many different options at the dispenser, such as cash/credit, push-to-start, grade-select, etc. This bit is dispenser/application dependent.

Description of Extended Flag (E) Dispenser Status

- P = Bit 3 = Dispenser has been sent a Stop command
Bit 2 = Drive away — *dispenser flowing and amount has not increased for 7 seconds*
Bit 1 = Dispenser is dispensing fuel
Bit 0 = Sale is complete and ready to be read
- p = Bit 3 = Controller allowed to authorize dispenser
Bit 2 = Authorization sent to the dispenser
Bit 1 = Dispenser logged on — *dispenser configured and communication established; bit will reset if communication for this dispenser is lost and then set when communication is restored*
Bit 0 = A dispenser handle is lifted and a request for service is active

Description of Select Flag (1) Dispenser Status

This status has the hose number embedded in the upper nibble to the second dispenser status byte. There are 10 handle conditions — No Handle, Unknown Handle, and Handle 1-8. No Handle occurs when no handle is lifted. Unknown Handle occurs when a handle is lifted, but the number is unknown. Handle 1-8 reflects the handle selected.

P =	Bit 7 =	1 (always returned)	
	Bit 6 =	Reserved	
	Bit 5 =	Reserved	
	Bit 4 =	Customer made selection	
	Bit 3 =	Pump stopped	
	Bit 2 =	Drive away	
	Bit 1 =	Flowing	
	Bit 0 =	Sale complete	
p =	Bit 7 =	Handle Bit 8	binary handle number bits <i>Refer to Handle Bit Definitions which follow</i>
	Bit 6 =	Handle Bit 4	
	Bit 5 =	Handle Bit 2	
	Bit 4 =	Handle Bit 1	
	Bit 3 =	Authorized allowed	
	Bit 2 =	Authorized sent	
	Bit 1 =	Dispenser logged on — <i>dispenser configured and communication established; this bit will reset if the communication for this dispenser is lost and set when communication is restored</i>	
	Bit 0 =	A dispenser handle is lifted and a request for service is active	

Handle Bit Definitions

8 4 2 1 ← binary coding

1 0 0 1	No Handle — <i>handle bit off</i>
1 0 0 1	Unknown Handle — <i>handle bit on</i>
0 0 0 1	Handle 1
0 0 1 0	Handle 2
0 0 1 1	Handle 3
0 1 0 0	Handle 4
0 1 0 1	Handle 5
0 1 1 0	Handle 6
0 1 1 1	Handle 7
1 0 0 0	Handle 8

Status Request Command Example

Command:
STX FE ETX CD
Response:
<i>See following diagrams</i>

Diagram: Response to Standard Extended Status Request Command

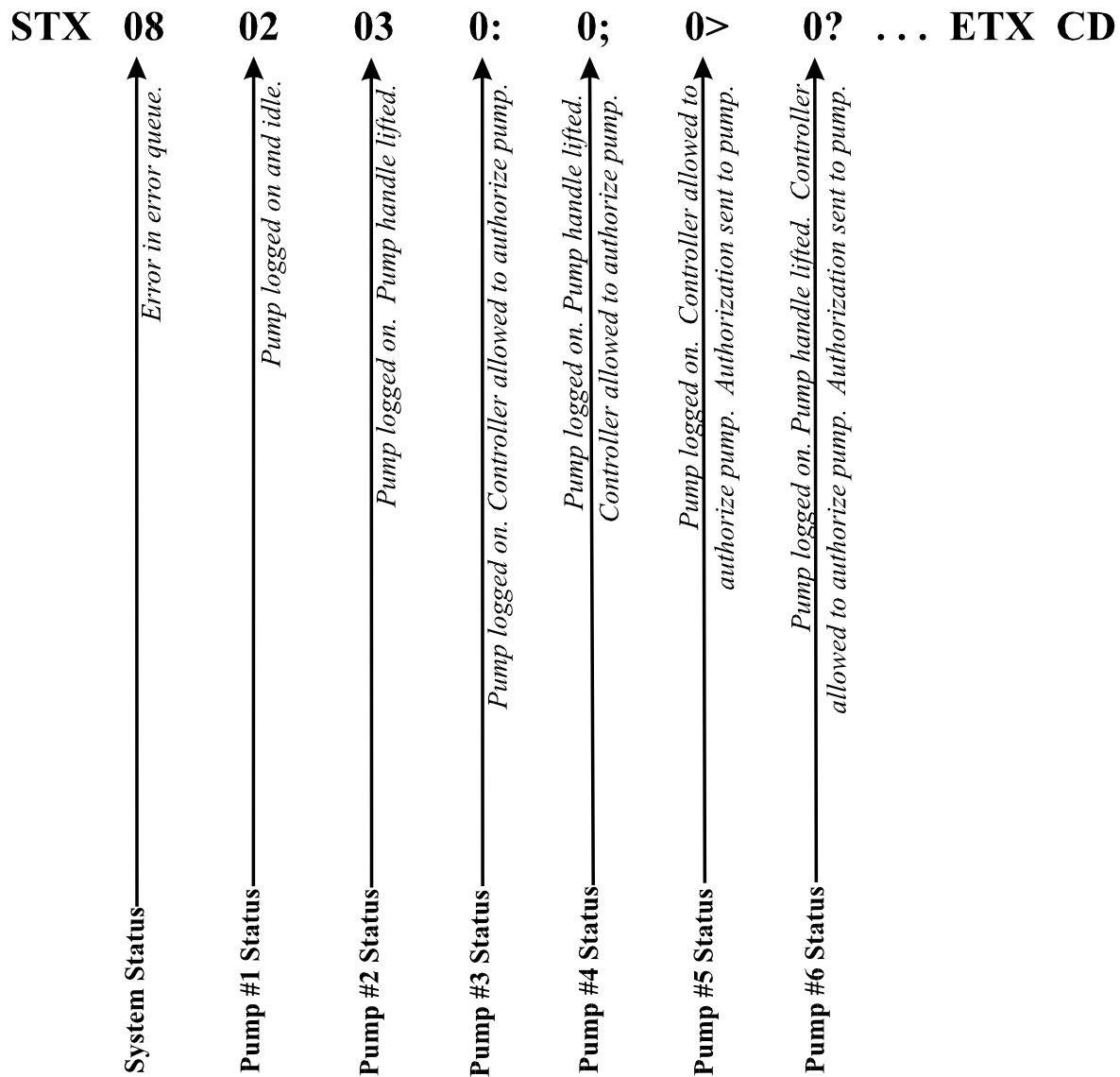
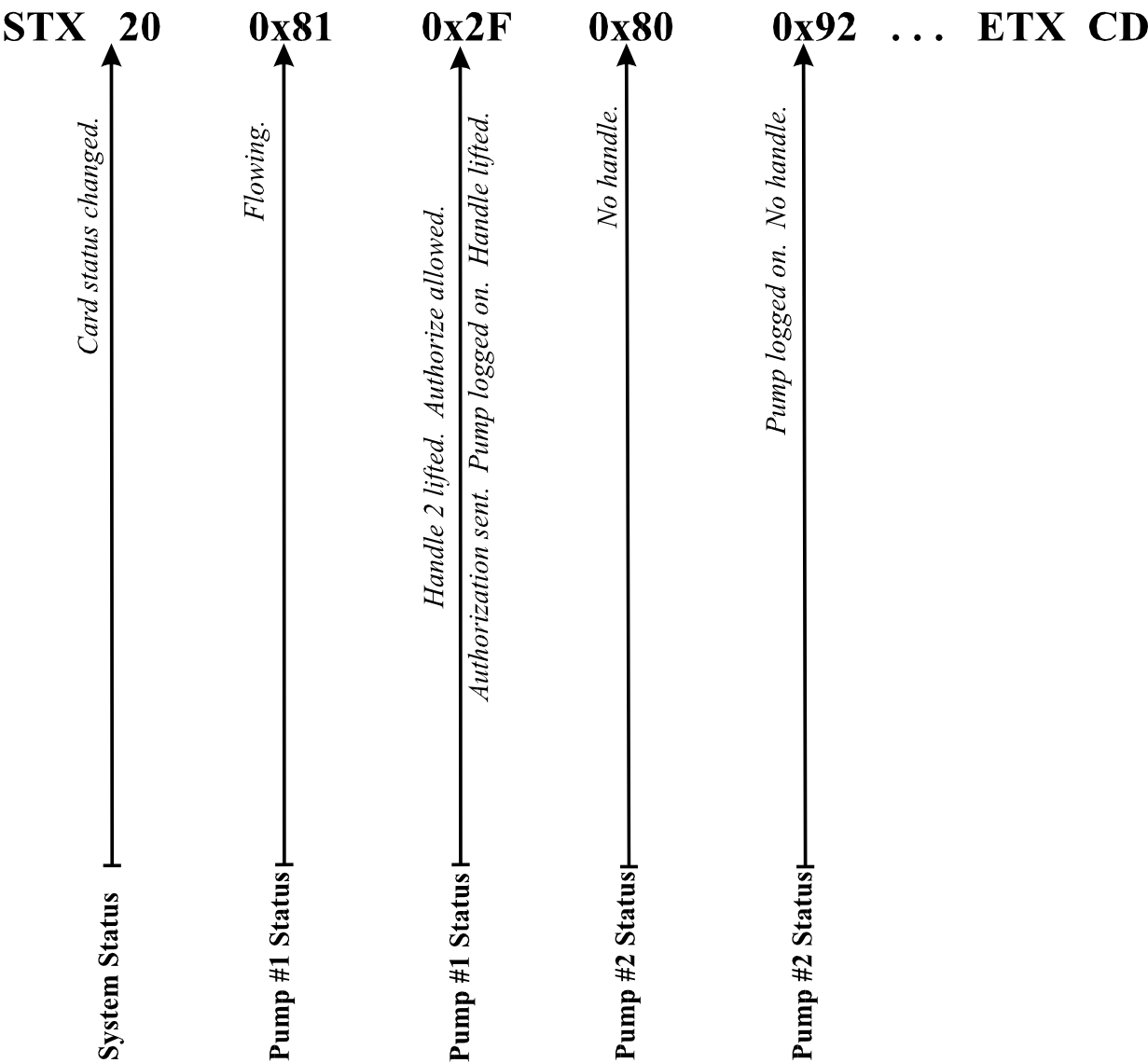


Diagram: Response to Select Status Request Command



Omega JR Commands

Reset

G — *Resets the data and configuration of the controller*

Reset Command Character G

Purpose of Reset Command

Resets the controller. Extreme caution must be exercised when issuing this command. Use of the Reset Command within the POS application is not recommended, since the result is a total reset of all data and configuration information. Also, the Controller Reset status bit (bit 2 of system status two) is set by this command.

After issuing a Reset Command, the controlling program must configure the controller before any operations can be performed (i.e., send PPUs and/or reader keypad configurations).

Format for Reset Command

STX G ETX CD

Response to Reset Command

ACK/NAK only

Reset Command Example

Command:
STX G ETX CD
Response:
ACK

Omega JR Commands**Blend****H** — *Sets blend ratio in the dispensers***Blend Command Character H****Purpose of Blend Command**

Sets the blend ratio in dispensers that allow the controller to adjust the gasoline grade blend ratio. The blend is set by dispenser and hose. The value specified is the percent of Hose 1 used in each hose (i.e., hose 1 = 100% and the last hose = 0%). Blend ratios can be set in 1% increments.

Format for Blend Command**STX H Pump# Hose# XXX ETX CD**

Command Code Character=H

Pump #=XX (01 to 32)

Hose #=X (0 to 8)

XXX (Percent of Hose #1 ratio -- 001 to 100)

Response to Blend Command

ACK/NAK only

Blend Command Example

- Hose 2
- 50%

Command:
STX 012050 ETX CD
Response:
ACK

Omega JR Commands

Polled Totals

I — *Reads totals from requested dispenser and hose number*

Polled Totals Command Character I

Purpose of Polled Totals Command

Used to read the totals from the requested dispenser and hose number.

Some dispensers may not have totals. Also, totals cannot be read if the fueling position is Not Idle. Some dispensers can return volume, along with separate cash and credit totals. Other dispensers combine cash and credit totals into one money total. This combined cash/credit money total will be returned by the controller in the credit position and the cash position will be 0.

Volume totals returned by dispensers are always combined cash and credit volume totals.

Format of Polled Totals Command

STX I Pump# Hose# ETX CD

Polled Totals Command Character=I

Pump #=XX (01 to 32)

Hose #=X (0 to 8)

Response to Polled Totals Command

STX Pump# Hose# Flag vvvvvvv.vvv XXXXXXXX.XX YYYYYYYY.YY ETX CD

Pump #=XX (01 to 32)
 Hose #=X (0 to 8)
 Flag=X (Totals type — see following description)
 Volume Total=vvvvvvv.vvv (0000000.001 to 9999999.999)
 Credit Total=XXXXXXXX.XX (00000000.01 to 99999999.99)
 Cash Total=YYYYYYY.YY (00000000.01 to 99999999.99)

Description of Totals Flag

- | | |
|---|-----------------------------------------------------------|
| 0 | Totals not available for this dispenser |
| 1 | Pump busy; try later |
| 2 | Cash & Credit combined money totals with combined volume |
| 3 | Cash & Credit separated money totals with Combined volume |

If the flag is a 0 or 1, the totals fields will be zero. Decimal points are implied.

Polled Totals Command Example

- Pump 1
- Hose 3
- Totals Type 3
- Volume
1234512.345
- Credit Total
\$9875432.10
- Cash Total
\$5555123.45

Command:
STX I 013 ETX CD
Response:
ACK STX 0133123451234598765432105555512345 ETX CD

Omega JR Commands

PPU

J — *Reads or sets the price per unit on the fueling position*

PPU Command Character J

Purpose of PPU Command

Reads or sets the price per unit on the fueling position. With this command, the controller may be configured. A price must be sent to hose number 1 if the dispenser exists. If multiple hoses are sent prices, the dispenser is considered to be a multi-product dispenser (MPD). Only those fueling positions which exist should be sent prices. Otherwise, the system operation will be slowed drastically. Also, it is good programming practice to send the prices starting with the highest hose on the dispenser and ending with hose number 1. Both price fields must be filled in. If only one price is required, fill both fields with the same price. If a dispenser is to be taken off-line, send a price of "00.00" to hose number one. (Other hoses are optional.)

For a Read operation, the price fields are ignored and decimal places are implied only.

Format for PPU Command

STX J Pump# Hose# Flag XXX.XXX YYY.YYY ETX CD

PPU Command Character=J

Pump #=XX (01 to 32)

Hose #=X (0 to 8)

Flag=X (Type of PPU information — see below)

Credit Pricel=XXX.XXX (000.001 to 999.999)

Cash Total=YYY.YYY (000.001 to 999.999)

Description of Flag Operation

R	Read Operation
W	Write Operation
E	Enable PPU with Handle Off Hook
D	Disable PPU with Handle Off Hook

Response to PPU Command

For Write Operation:

ACK/NAK only

For Read Operation:

STX Pump# Hose# XXX.XXX YYY.YYY ETX CD

Pump #=XX	<i>(Dispenser — 01 to 32)</i>
Hose #=X	<i>(Hose number — 0 to 8)</i>
Credit Price=XXX.XXX	<i>(Credit)</i>
Cash Price=YYY.YYY	<i>(Cash)</i>

PPU Command Example 1

- Pump 5
- Hose 1
- Credit Price \$111.9
- Cash Price \$101.9

Command:
STX J051W001119001019 ETX CD
Response:
ACK

PPU Command Example 2 — Enable PPU with Handle Off Hook

- Pump 3
- Hose 2
- Credit Price \$112.9
- Cash Price \$102.9

Command:
STX J032E001129001029 ETX CD
Response:
ACK

Omega JR Commands

System Version

K — *Returns software versions of sections of controller*

System Version Command Character K

Purpose of System Version Command

Returns the software versions of the sections of the controller.

Each section version is terminated with a NULL character. Actual spaces [20] will be embedded in information returned.

Format for System Version Command

STX K ETX CD

Response to System Version Command

STX Sys Pmp1 Rdr1 Pmp2 Rdr2 ETX CD

System Version Command Character=K

Sys=system version *(format — sys x.xx MM/DD/YY)*

Pmpx=pump version *(format — pmp x.xx MM/DD/YY)*

Rdrx=reader version *(format — rdr x.xx MM/DD/YY)*

Format for Extended System Version Command

STX KE ETX CD

Response to Extended System Version Command

Same as above response — PIEx.xx (indicating Progressive's core code version).

Format for Extended System Version Command:**STX KE ETX CD****Response to Extended System Version Command:****STX Sys Pmp1 Rdr1 Pmp2 Rdr2 Core Code ETX CD**Core Code PROM Version *(Format — PIE 1.00 MM/DD/YY)***System Version Command Example**

Command:				
STX KE ETX CD				
Response:				
ACK STX	PCC	4.40	04/17/98	[00]
DW	P5.90	04/16/98	[00]	
DW	C3.80	01/06/98	[00]	
DW	P5.90	04/16/98	[00]	
DW	C5.80	01/06/98	[00]	
PIE	1.00	04/17/98	[00] ETX CD	

Omega JR Used with Various Dispensers
Dispenser-Specific Information

Tokheim

Authorize Command — new limit

Dispenser must support the AE46 command.

Gilbarco

Authorize Command — new limit

New limit must be sent prior to flow.

Wayne-Dresser

Authorize Command — new limit

- New limit may be sent at any time prior to previous limit being reached.
- If increasing or decreasing original limit set, allow for some delay in communication.
If insufficient time is allowed, error message may result or new limit may not be attained.

Schlumberger

Authorize Command — new limit

New limit must be sent prior to flow.