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1 General

The data exchange between the Computing Head and host system takes place using 4-wire half-duplex transmission or the standard RS485, at a baud rate of 2400. Data is received according to appropriate hardware and software protections.

In addition to hardware protections, the security of the data exchange is also ensured by the structure of the messages and redundancies contained therein.
The Computing Head is generally in receive mode: each block of data sent by the host has a synchronization word placed at the beginning of the block, i.e. a word containing the null character.
If the host is in receive mode, the message is valid only if it arrives within a given time-frame and contains all the necessary redundancies.

There are three types of controls:

- use of a parity bit: this provides protection against all odd errors;
- all words containing data transmitted by the Computing Head are followed by their complement to 255;
- all commands received from the host undergo the following procedure:

1.transmission of address with function code (see attached table) and command code;
2.echo response for entire message;
3.transmission of execution by host;
4.execution acknowledgement response.

1.1 Notes

The following sections describe the standard working of Nuovo Pignone Dispenser Protocol. It is possible, for some software version, not to have some features or to behave in a different way from the standard one.
In any case the document highlights the behaviour which can be different.

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2 Functional Specifications

The electrical specifications relative to the Computing Head-host connection are as follows:

- Asynchronous
- Speed: 2400 Baud
- data: 8 bit
- parity: odd
- start: 1 bit
- stop: 1 bit

All host-generated communications start with a null word which serves as a preamble to all host transmissions, to synchronize the start of the message; response messages do not have a preamble.

There are four types of messages:

- INITIALIZATION
- DATA REQUEST
- COMMANDS
- EXECUTION

2.1 Timers

The response time for the computing head is less than 50 mS, i.e. the host can set the response timeout for each message at 50 mS. After this time has elapsed, the computing head will not answer any more.

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3 Initialization

On the host side, the message basically has a system self-configuration function. The actual functions performed are the following:

- detection of active Computing Head (or non-active Computing Head)
- assignment of the address to the Computing Head being called (only with the 4 wire NP Standard - not with the RS485 standard)
- acquisition of the configuration of the connected Computing Head

When the initialization message is received by the Computing Head, it performs the following functions:
- address storage (in ADDRESS and ADDRESS double buffer);
- configuration response;
- set-up for management of subsequent connections.

The initialization function procedure does not require the Computing Head to modify the current procedure (for instance, if the computing head is delivering, it will continue to deliver).

FORMAT

HOST

0	W1T	W2T

COMPUTING HEAD

W1T	W2R	W2R

W1T: X X X X X 1 1 1 with XXXXX Computing Head address

W2T: X X X X X 0 0 0

W2R: 0 0 0 1 X X X X

The most significant nibble field of the W2R byte contains:
- value 0001, if the Computing Head is Single-Product (i.e. Computing Head peripheral code);
- binary coding of the existing number of products, if the Computing Head is Multi-Product.

The first four bits have the following meaning:
bit 3: when set, indicates that the Computing Head is equipped with an electromechanical totalizer;
bit 2: when set, indicates that the Computing Head is able to deliver blended petrol;
bit 1: when set, indicates that the Computing Head may be pre-set;
bit 0: when set at 1, indicates that the Computing Head is not fitted with an anti-spill device.

The initialization message is also used to restore Computing Head function after a block or error situation (regardless of whether the interrupt was caused by the host, the Computing Head or the nozzle).

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4 Data Request

The following data is provided by the Computing Head to the host:

- Status 1
- Status 2
- Status 3 (for dispensers with max. 4 products)
- Status 4 (for dispensers with 5 or 6 products)
- Single Product Unit Price
- Blend (5 percentages) or Multi Product (max. 4 products) Prices
- Multi Product Prices (5/6 products)
- Blend Percentage
- Delivery Data
- Delivery Amount
- Delivery Volume
- Overall Total Volume
- Overall Total Amount
- Non-Compensated Volume
- Temperature

In the following subsections there are the complete requests specifications (lenght, data format, action to be taken).

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4.1 Status 1 Request

The message serves to up-date the host as to the status of the pump and the Computing Head.
When it receives this message, the Computing Head

- transmits the status byte,
- turns on the green light on the distributor if the following conditions are met:
- no error present (bit 0 status word = 0)
- nozzle replaced correctly (bit 3 status word = 0)
- metric tests not under way (bit 5 status word = 0)
- no host-generated block (bit 7 status word = 0).

FORMAT

HOST

0	W1T

COMPUTING HEAD

W1T	W1R	W1R

W1T: X X X X X 0 0 1 with XXXXX Computing Head address

W1R: Y - Y Y Y Y Y Y

If the bits are set to 1, the meaning of W1R is the following:

bit 7: host generated block
bit 6: used only in the first status request after an initialization message to signal that the computing head belongs to NPT (new releases) or OTP series.
bit 5: metric tests under way
bit 4: local price change under way
bit 3: nozzle out
bit 2: low level status
bit 1: contactor (motor) ON
bit 0: error status

If bit 0 equals 1, the most significant nibble contains the error code.

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This is a list of error codes and their meaning:

ERROR_CODE_RAM	'11H'
ERROR_CODE_DISPLAY_1	'21H'
ERROR_CODE_CALC_GI	'31H'
ERROR_CODE_CALCULATIONS	'41H'
ERROR_CODE_GI	'51H'
ERROR_CODE_PRICE	'61H'
ERROR_CODE_DISPLAY 2	'71H'
ERROR_CODE_TOTALIZER	'81H'
ERROR_CODE_WATCHDOG	'91H'
ERROR_CODE_CALIBRATION	'A1H'
ERROR_CODE_ANTI-SPILL	'D1H'
ERROR_CODE_TEMPERATURE	'E1H'

Note
In some SW version the lights are always driven by the computing head without any control by the host.

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4.2 Status 2 Request

The purpose of the message is to enable the host to up-date the status of the pump and Computing Head. When it receives this message, the Computing Head

- transmits the status byte,
- turns on the red light on the distributor if the following conditions are met:
- no error present (bit 0 status word = 0)
- nozzle replaced correctly (bit 3 status word = 0)
- metric tests not under way (bit 5 status word = 0)
- no host-generated interrupt (bit 7 status word = 0).

Unlike status 1, this message is sent by the host under delivery conditions or after having sent a pre-set command so that the distributor is considered as being engaged.

FORMAT

HOST

0	W1T

COMPUTING HEAD

W1T	W1R	W1R

W1T: X X X X X 0 1 1 with XXXXX Computing Head address

W1R: see Section 4.1

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4.3 Status 3 Request

This message is used only in the case of a multi-product Computing Head. It is sent by the host only when the following conditions are met:

- there is a change in the status byte (in response to a status 1 or status 2 request)
- the computing head is delivering under a preset condition. In this situation it is permitted for the user to change the nozzle if the delivery has not reached 40 centiliters.

Status 3 contains information about the four products, specifically:

- contactor
- low level
- nozzle out
- nozzle blocked

FORMAT

HOST

0	W1T

COMPUTING HEAD

W1T	W1R	W1R	W2R	W2R

W1T: X X X X X 1 1 0 with XXXXX Computing Head address

W1R: T1 L1 P1 PB1 T2 L2 P2 PB2

W2R: T3 L3 P3 PB3 T4 L4 P4 PB4

with the following meaning:

Ti	contactor product i
Li	low level product i
Pi	nozzle out product i
PBi	nozzle blocked product 1

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4.4 Status 4 Request

This message is used only in the case of a multi-product Computing Head (5/6 products). It has the same features as Status 3.

FORMAT

HOST

0	W1T	W2T

COMPUTING HEAD

W1T	W2T	W1R	W1R	W2R	W2R	W3R	W3R

W1T: X X X X X 0 1 0 with XXXXX Computing Head address

W2T: 0 1 0 0 1 0 1 1

W1R: T1 L1 P1 PB1 T2 L2 P2 PB2
W2R: T3 L3 P3 PB3 T4 L4 P4 PB4
W3R: T5 L5 P5 PB5 T6 L6 P6 PB6

with the following meaning:

Ti contactor product i
Li low level product i
Pi nozzle out product i
PBi nozzle blocked product 1

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4.5 Single Product Unit Price Request

The purpose of the message is to transmit to the host the price stored on the Computing Head.

FORMAT

HOST

0	W1T	W2T

COMPUTING HEAD

W1T	W2T	W1R	W1R	W2R	W2R

W1T: X X X X X 0 1 0 with XXXXX Computing Head address

W2T: 1 1 0 0 0 0 1 1

W1R - W2R: contain the unit price (4 digits BCD) with W1R as most significant byte

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4.6 Blend or Multi Product Unit Prices Request

The purpose of the message is to transmit to the host the prices stored on the Computing Head for each of the various percentages.
In the case of a multi-product Computing Head, the message is used to send the host the prices of the various products.
Since four is the maximum number of products, the field of the fifth price will be null; if the number of products is less than four, the price fields relative to the missing products will be null.

FORMAT

HOST

0	W1T	W2T

COMPUTING HEAD

W1T	W2T	W1R	W1R	...	W10R	W10R

W1T: X X X X X 0 1 0 with XXXXX Computing Head address

W2T: 1 0 1 0 0 1 0 1

W1R - W10R: contain the unit prices (4 digits BCD for each price) with W1R as most significant byte.

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4.7 Multi Product Unit Prices Request (5/6 products)

The purpose of the message is to transmit to the host the prices of the various products stored on the multi-product Computing Head.
If the number of products is less than six, the prices relative to the missing products will be null.

FORMAT

HOST

0	W1T	W2T

COMPUTING HEAD

W1T	W2T	W1R	W1R	...	W12R	W12R

W1T: X X X X X 0 1 0 with XXXXX Computing Head address

W2T: 0 1 0 1 1 0 1 0

W1R - W12R: contain the unit prices (4 digits BCD for each price) with W1R as most significant byte

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4.8 Blend Percentage Request

The purpose of the message is to transmit to the host the current position of the blend commutator. In the pre-set delivery procedure, the host does not transmit the delivery enable signal if the percentage it reads does not correspond to the percentage assigned during the pre-setting procedure.

FORMAT

HOST

0	W1T	W2T

COMPUTING HEAD

W1T	W2T	W1R	W1R

W1T: X X X X X 0 1 0 with XXXXX Computing Head address

W2T: 1 0 0 1 0 1 1 0

W1R: percentage in BCD, 1 digit.

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4.9 Delivery Data Request

The message serves to provide up-dated information in real time as to the current delivery, specifically:

- amount (following the rounding up procedure configured on the computing head)
- volume
- status

The functions performed on the Computing Head are those related to the response procedure. The data transmitted to the host are identical to those displayed on the Computing Head.

FORMAT

HOST

0	W1T	W2T

COMPUTING HEAD

W1T	W2T	WI1R	WI1R		WI3R	WI3R	WV1R		WV3R	WV3R	WSR	WSR

W1T: X X X X X 0 1 0 with XXXXX Computing Head address

W2T: 1 0 1 1 0 1 0 0

WI1R - WI3R: contain the amount (6 digits BCD) with WI1R as most significant byte

WV1R - WV3R: contain the volume (6 digits BCD) with WV1R as most significant byte

WSR: it is the byte status described in section 4.1.

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4.10 Delivery Amount Request

The message serves to provide up-dated information in real time as to the amount marked up on the Computing Head.
The functions performed on the Computing Head are those related to the response procedure.
The data transmitted to the host are identical to those displayed on the Computing Head (following the rounding up procedure configured on the computing head).

FORMAT

HOST

0	W1T	W2T

COMPUTING HEAD

W1T	W2T	W1R	W1R	...	W3R	W3R

W1T: X X X X X 0 1 0 with XXXXX Computing Head address

W2T: 1 1 1 0 0 0 0 1

W1R - W3R: contain the amount (6 digits BCD) with W1R as most significant byte

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4.11 Delivery Volume Request

The message serves to provide up-dated information in real time as to the volume delivered at the Computing Head.
The functions performed on the Computing Head are those related to the response procedure.
The data transmitted to the host are identical to those displayed on the Computing Head.

FORMAT

HOST

0	W1T	W2T

COMPUTING HEAD

W1T	W2T	W1R	W1R	...	W3R	W3R

W1T: X X X X X 0 1 0 with XXXXX Computing Head address

W2T: 1 1 0 1 0 0 1 0

W1R - W3R: contain the volume (6 digits BCD) with most meaningful W1R

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4.12 Overall Total Volume Request for single product computing head.

The purpose of the message is to transmit the overall volume totals, i.e. the total number of litres delivered by each computing head.

FORMAT

HOST

0	W1T	W2T

COMPUTING HEAD

W1T	W2T	W1R	W1R	...	W6R	W6R

W1T: X X X X X 0 1 0 with XXXXX Computing Head address

W2T: 1 0 0 0 0 1 1 1

W1R - W6R: contain the total volume (12 digits BCD) with W1R as most significant byte containing tens and units of a million litres delivered and W6R deciliters and centiliters.

Note
This message is only available for the newest SW versions (see SW features table).

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4.13 Overall Total Amount Request for single product computing head.

The purpose of the message is to transmit the overall amount totals, i.e. the total number of Monetary Units counted by each computing head.

FORMAT

HOST

0	W1T	W2T

COMPUTING HEAD

W1T	W2T	W1R	W1R	...	W6R	W6R

W1T: X X X X X 0 1 0 with XXXXX Computing Head address

W2T: 0 1 1 1 1 0 0 0

W1R - W6R: contain the total amount (12 digits BCD) with W6R as most significant byte

Note
This message is only available for the newest SW versions (see SW features table).

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4.14 Overall Total Volume Request for multi product computing head.

The purpose of the message is to transmit the overall volume totals, i.e. the total number of litres delivered by each nozzle of a multi product computing head.

FORMAT

HOST

0	W1T	W2T

COMPUTING HEAD

W1T	W2T	W1R	W1R	...	W36R	W36R

W1T: X X X X X 0 1 0 with XXXXX Computing Head address

W2T: 0 0 1 0 1 1 0 1

W1R – W6R: contain the total volume for the nozzle #1 (12 digits BCD) with W1R as most significant byte containing tens and units of a million litres delivered and W6R deciliters and centiliters.

W7R – W12R: contain the total volume for the nozzle #2 (12 digits BCD) with W7R as most significant byte containing tens and units of a million litres delivered and W12R deciliters and centiliters.

.....

W31R – W36R: contain the total volume for the nozzle #6 (12 digits BCD) with W31R as most significant byte containing tens and units of a million litres delivered and W36R deciliters and centiliters.

Note
If the nozzle is not configured the fields are fitted with 0.

Note
This message is only available for the newest SW versions (see SW features table).

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4.15 Overall Total Amount Request for multi product computing head.

The purpose of the message is to transmit the overall amount totals, i.e. the total number of Monetary Units counted by each Computing Head.

FORMAT

HOST

0	W1T	W2T

COMPUTING HEAD

W1T	W2T	W1R	W1R	...	W36R	W36R

W1T: X X X X X 0 1 0 with XXXXX Computing Head address

W2T: 0 0 0 1 1 1 1 0

W1R – W6R: contain the total amount for the nozzle #1 (12 digits BCD) with W1R as most significant byte.

W7R – W12R: contain the total amount for the nozzle #2 (12 digits BCD) with W7R as most significant byte.

.....

W31R – W36R: contain the total amount for the nozzle #6 (12 digits BCD) with W31R as most significant byte.

Note
If the nozzle is not configured the fields are fitted with 0.

Note
This message is only available for the newest SW versions (see SW features table).

4.16

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Non-Compensated Volume Request (*not implemented*)

This transmits the number of centiliters actually calculated, without compensating for temperature, when this option is available.

FORMAT

HOST

0	W1T	W2T

COMPUTING HEAD

W1T	W2T	W1R	W1R	...	W3R	W3R

W1T: X X X X X 0 1 0 with XXXXX Computing Head address

W2T: 0 1 1 0 1 0 0 1

W1R - W3R: contain the volume (6 digits BCD) and most meaningful W1R.

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4.17 Temperaure Request (*not implemented*)

The purpose of the message is to transmit the temperature of the product, as measured by the pump thermometer.

FORMAT

HOST

0	W1T	W2T

COMPUTING HEAD

W1T	W2T	W1R	W1R	W2R	W2R

W1T: X X X X X 0 1 0 with XXXXX Computing Head address

W2T: 0 0 0 0 1 1 1 1

W1R: contain the sign (most meaningful nibble, 0 positive temperature, 1 negative temperature) and temperature in increments of ten degrees.

W2R: contain units and tenths of a degree.

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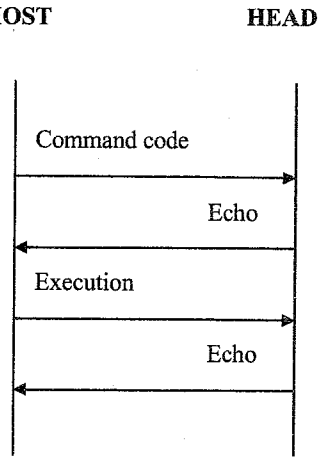
5 Commands

All commands are activated via the following procedure:



The commands that the host transmits to the Computing Head are:

- Enable Delivery Start
- Emergency Delivery Block
- Preset Amount to Deliver
- Preset Volume to Deliver
- Preset Amount for Multi-Product Computing Head
- Unit Price Setting for Single-Product Computing Head
- Unit Prices Setting for Blender or Multi-Product Computing Head (max. 4 products)
- Unit Prices Setting for Multi-Product Computing Head (5/6 products)
- Discounted PriceSetting
- Nozzle Delivery Block
- Nozzle Delivery Unblock
- Delivery Halting
- Delivery Resuming
- Group 1 Writing
- Group 2 Writing
- Group 3 Writing

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5.1 Enable Delivery Start

Transmitted when the host recognises a change in Nozzle position from in to out.
The command enables the activation of the delivery start procedure at the Computing Head.

FORMAT

HOST

0	W1T	W2T

COMPUTING HEAD

W1T	W2T

W1T: X X X X X 1 0 0 with XXXXX Computing Head address

W2T: 1 1 1 0 0 0 0 1

Also transmitted in order to unblock the Computing Head following a block. In this case the first enable command received will be used to cancel the block.

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5.2 Emergency Delivery Block

Causes the delivery of fuel to be blocked at the Computing Head, the two lights to be switched off, the Out of Service LED to be illuminated and the error code 0000 to be displayed.

FORMAT

HOST

0	W1T	W2T

COMPUTING HEAD

W1T	W2T

W1T: X X X X X 1 0 0 with XXXXX Computing Head address

W2T: 1 1 0 1 0 0 1 0

Note

In some SW version the lights can be directly driven from the computing head without any control by the host.

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5.3 Preset Amount to deliver for Single Product Computing Head

Used to transmit the preset amount to deliver.
On reception of this message at the Computing Head the following functions are carried out:

- memorization of the "PRESET BY HOST" function
- memorization of the preset data
- visualisation of the value received on the amount display

FORMAT

HOST

0	W1T	W2T	W3T	W4T	W5T

COMPUTING HEAD

W1T	W2T	W3T	W4T	W5T

W1T: X X X X X 1 0 0 with XXXXX Computing Head address

W2T: 0 1 1 1 1 0 0 0

W3T - W5T: Charge preset in BCD (6 figures) with W3T as most significant byte.

In preset by host mode, in the case of nozzle extraction and delivery of less than 40 cl., the Computing Head will not recognise the replacement of the nozzle for a period of 3', thus remaining in the delivery loop.
Should the nozzle be extracted during this 3' period the Computing Head will proceed with the delivery without modifying the previously acquired information.

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5.4 Preset Volume to deliver for Single Product Computing Head

Used to transmit the preset volume to deliver.
On reception of this message at the Computing Head the following functions are carried out:

- memorization of the "PRESET BY HOST" function
- memorization of the preset data
- visualisation of the value received on the volume display

FORMAT

HOST

0	W1T	W2T	W3T	W4T	W5T

COMPUTING HEAD

W1T	W2T	W3T	W4T	W5T

W1T: X X X X X 1 0 0 with XXXXX Computing Head address

W2T: 0 0 0 0 1 1 1 1

W3T - W5T: Charge preset in BCD (5 figures) with W3T as most significant byte.

In preset by host mode, in the case of nozzle extraction and delivery of less than 40 cl., the Computing Head will not recognise the replacement of the nozzle for a period of 3', thus remaining in the delivery loop.
Should the nozzle be extracted during this 3' period the Computing Head will proceed with the delivery without modifying the previously acquired information.

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5.5 Preset Amount to delivery for Multi Product Computing Head

Used to transmit the preset amount to deliver.
On reception of this message at the Computing Head the following functions are carried out:

- memorization of the "PRESET BY HOST" function
- memorization of the preset data
- indication of the delivery mode
- visualization of the value received on the amount display

FORMAT

HOST

0	W1T	W2T	W3T	W4T	W5T	W6T

COMPUTING HEAD

W1T	W2T	W3T	W4T	W5T	W6T

W1T: X X X X X 1 0 0 with XXXXX Computing Head address

W2T: 1 1 0 0 0 0 1 1

W3T - W5T: Amount determined in BCD (6 figures) with W3T as most significant byte.

W6T: X X X X(A) X X X X(B)
A - indicates whether, in preset by host mode, the Computing Head is enabled to continue delivery if it has registered less than 40 cl. and the 3' period has not yet finished.
1 0 0 1 Enabled to continue delivery
0 1 1 0 Enabled to suspend delivery

B - indicates the product the Computing Head is enabled to deliver, the number is expressed in binary.
1 product 1 enabled
2 product 2 enabled
3 product 3 enabled
4 product 4 enabled
5 product 5 enabled
6 product 6 enabled

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5.6 Unit Price Setting for Single Product Computing Head

Used to transmit the price set on the host.
The transmission of the command can only take place with the NOZZLE in. On reception of this command at the Computing Head the following procedures are carried out:

- memorization of the price received in double buffer
- visualization of the new price
- activation of the procedure for writing the new price in EEPROM

FORMAT

HOST

0	W1T	W2T	W3T	W4T

COMPUTING HEAD

W1T	W2T	W3T	W4T

W1T: X X X X X 1 0 0 with XXXXX Computing Head address

W2T: 0 1 1 0 1 0 0 1

W3T - W4T: Price set in BCD (4 figures) with W3T as the most significant byte.

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5.7 Unit Prices Setting for Blender or Multi Product Computing Head

As Section 5.5

FORMAT

HOST

0	W1T	W2T	...	W12T

COMPUTING HEAD

W1T	W2T	...	W12T

W1T: X X X X X 1 0 0 with XXXXX Computing Head address

W2T: 0 1 0 0 1 0 1 1

W3T - W12T: Prices relative to the % of the blender or the other products expressed in BCD (5 prices of 4 figures each).

In the case of the multiproduct Computing Head the bytes of the prices relating to non-managed products must contain the value "0".

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5.8 Unit Prices Setting for Multi Product Computing Head (5 or 6 products)

As Section 5.6

FORMAT

HOST

0	W1T	W2T	...	W14T

COMPUTING HEAD

W1T	W2T	...	W14T

W1T: X X X X X 1 0 0 with XXXXX Computing Head address

W2T: 1 0 1 0 0 1 0 1

W3T - W14T: Prices relative to the different products expressed in BCD (6 prices of 4 figures each) with W3T as most significant byte.

The bytes of the prices relating to non-managed products must contain the value "0".

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5.9 Discounted Price Setting

Used to transmit the discounted price set on the host. The transmission can only take place with the NOZZLE in.
Reception of the command at the Computing Head leads to the memorization of the price received.
In the case in which the two price bytes have the value "0", the Computing Head will replace the current price with the price memorized in EEPROM.
The format of the transmission-reception is similar to that of the price setting.

FORMAT

HOST

0	W1T	W2T	W3T	W4T

COMPUTING HEAD

W1T	W2T	W3T	W4T

W1T: X X X X X 1 0 with XXXXX Computing Head address

W2T: 0 0 1 1 1 1 0 0

W3T - W4T: Price set expressed in BCD (4 figures) with W3T as most significant byte.

This Command is not available.

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5.11 Host Nozzle Unblock

Used to enable at the host the extraction of the indicated nozzle previously blocked.

FORMAT

HOST

0	W1T	W2T	W3T	W3T

COMPUTING HEAD

W1T	W2T	W3T	W3T

W1T: X X X X X 1 0 0 with XXXXX Computing Head address

W2T: 1 0 0 1 0 1 1 0

WT3: 0 0 0 0 X X X X with XXXX NOZZLE number (1-6).

This Command is not available.

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5.10 Host Nozzle Block

Used to block the Computing Head working.

FORMAT

HOST

0	W1T	W2T	W3T	W3T

COMPUTING HEAD

W1T	W2T	W3T	W3T

W1T: X X X X X 1 0 0 with XXXXX Computing Head address

W2T: 1 0 0 0 0 1 1 1

W3T: 0 0 0 0 X X X X with XXXX NOZZLE number (1 - 6).

This Command is not available.

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5.12 Delivery Halting

Used to suspend the delivery under way.

FORMAT

HOST

0	W1T	W2T

COMPUTING HEAD

W1T	W2T

W1T: X X X X X 1 0 0 with XXXXX Computing Head address

W2T: 0 0 1 0 1 1 0 1

This Command is only available on the Taiwan's Software Version.

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5.13 Delivery Resuming

Used to resume the delivery actually suspended.

FORMAT

HOST

0	W1T	W2T

COMPUTING HEAD

W1T	W2T

W1T: X X X X X 1 0 0 with XXXXX Computing Head address

W2T: 0 0 0 1 1 1 1 0

This Command is only available on the Taiwan's Software Version.

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5.17 Execution

Sent from the host following the successful reception of the ECHO message in response to a command.
On reception at the Computing Head the command previously received is then executed.

FORMAT

HOST

0	W1T	W2T

COMPUTING HEAD

W1T

W1T: X X X X X 1 0 1 with XXXXX Computing Head address

W2T: X X X X X 0 1 0

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7 Appendix A - Code Summary

Description	W1T	W2T	
	only for (*)	W2T	W3T

Initialization

Initialization	XXXXX111	XXXXX 000

Request

Status 1 Request	XXXXX 001	
Status 2 Request	XXXXX 011	
Status 3 Request	XXXXX 110	
Status 4 Request	XXXXX 010	0100 1011
Single Product Unit Price Request	XXXXX 010	1100 0011
Mix or Multi Product Unit Prices Request	XXXXX 010	1010 0101
Multi Product (5/6) Unit Prices Request	XXXXX 010	0101 1010
Mixture % Request	XXXXX 010	1001 0110
Delivery Data Request	XXXXX 010	1011 0100
Delivery Amount Request	XXXXX 010	1110 0001
Delivery Volume Request	XXXXX 010	1101 0010
Overall Total Volume Request for Single Product	XXXXX 010	1000 0111
Overall Total Amount Request for Single Product	XXXXX 010	0111 1000
Overall Total Volume Request for Multi Product	XXXXX 010	0010 1101
Overall Total Amount Request for Multi Product	XXXXX 010	0001 1110
Non-compensated Volume Request	XXXXX 010	0110 1001
Temperature Request	XXXXX 010	0000 1111

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Commands

Enable Delivery Start	XXXXX 100	1110 0001
Emergency Delivery Block	XXXXX 100	1101 0010
Preset Amount to deliver	XXXXX 100	0111 1000
Preset Volume to deliver	XXXXX 100	0000 1111
Preset Amount for Multi Product	XXXXX 100	1100 0011
Unit Price Setting for Single Product	XXXXX 100	0110 1001
Unit Prices Setting for Blender or Multi (4)	XXXXX 100	0100 1011
Unit Prices Setting for Multi Product (5/6)	XXXXX 100	1010 0101
Discounted Unit Price Setting	XXXXX 100	0011 1100
Nozzle Delivery Block	XXXXX 100	1000 0111
Nozzle Delivery Unblock	XXXXX 100	1001 0110
Delivery Halting	XXXXX 100	0010 1101
Delivery Resuming	XXXXX 100	0001 1110

Execution

Execute Command	XXXXX 101	XXXXX 010

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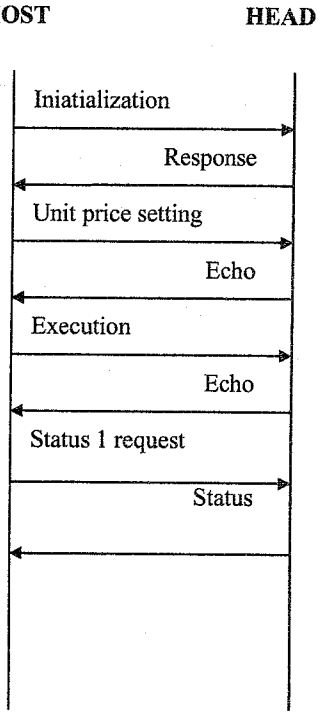
8 Appendix B - Flow Chart

8.1 Initialization Procedure



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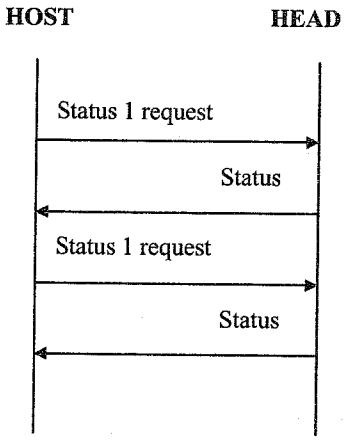
8.2 Polling Procedure



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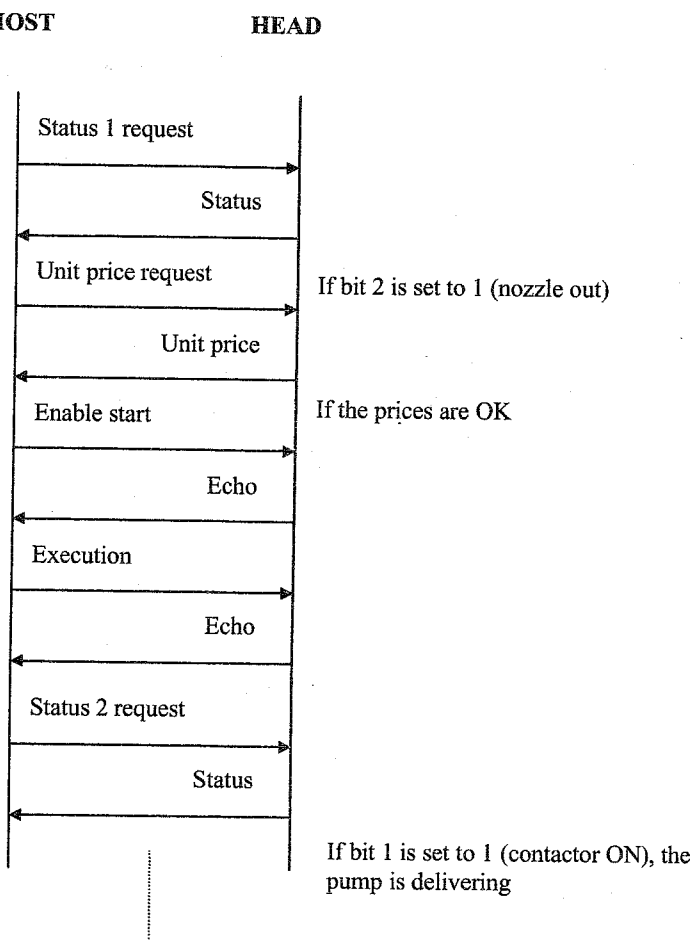
8.3 Delivery Start Procedure



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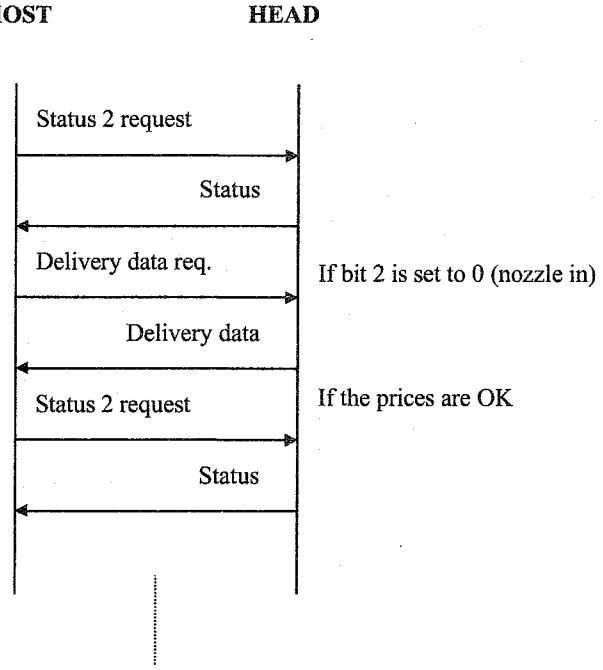
8.4 Delivery End Procedure



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