6 Appendix

6.1 Protocols

The numbers correspond to the number that will show up in the Soft Switch settings in Group 3.5:

0. (Reserved)
1. NCI - ECR
2. (Reserved)
3. 8217 Mettler Toledo
4. 8213 Mettler Toledo
5. EPOS 1 (Weight Only)
6. EPOS 2 (Weight Only)
7. (Reserved)
8. Dialog 06
9. Dialog 04 / 02
10. (Reserved)
11. ICL

6.1.1 NCI – ECR

6.1.1.1   OVERVIEW

The serial communications protocol is used to interface Weigh-Tronix/NCI POS (Point-of-Sale) scales to ECR (Electronic Cash Registers), or other computing equipment (eg. personal computers).

Baud rate, parity, data bits, and stop bits are all programmable as described in Section 3.3. Responses to serial commands will be immediate, or within one weight meter cycle of the scale. One second should be more than adequate for use as a time-out value by the remote (controlling) device.

There are two types of serial commands: *mandatory* and *optional*. Mandatory commands must be supported by all products.

If weight is negative, in motion, over capacity or under capacity, or if a zero error exists, only the scale's status is returned in response to a weight ('**W**') command.

Status bytes are prefaced by the letter 'S'

Units of measure abbreviations are always upper case.

The weight is always positive, therefore there is no polarity byte

Key to symbols used:
>   <ETX> End of TeXt character (03 hexadecimal).
>   <LF> Line Feed character (0A hex).
>   <CR> Carriage Return character (0D hex).
>   <SP> Space (20 hex).
>   x Weight characters from display including minus sign and out-of range characters.
>   hh Two status bytes.
>   UU Units of measure (LB, KG, OZ, G, etc., all upper case).

Mandatory Commands

Name:	Request weight
Command:	W<CR>
Response:	Returns decimal weight, units and status. (see note 1 and 2) <LF>xx.xxxUU<CR><LF>Shhhh<CR><ETX>

Returns lb-oz weight with units plus scale status.
<LF>xLB<SP>xx.xOZ<CR><LF>Shhhh<CR><ETX>

Scale status only if wt < 0, initial zero error, in motion or out of capacity.
<LF>Shhhh<CR><ETX>

Name:	Request status
Command:	S<CR>
Response:	Returns scale status. <LF>Shhhh<CR><ETX>

Name:	Zero the scale

Command: Z<CR>
Response: Scale is zeroed, returns scale status. (see note 4)
                                  <LF>Shhhh<CR><ETX>

Optional Commands

Name: Request high-resolution weight
Command: H<CR>
Response: Returns decimal wt in 10x with units plus scale status. (see notes 2 and 3)
                                  <LF>xxx.xxxUU<CR><LF>Shhhh<CR><ETX>

                                  Returns lb-oz wt in10x with units plus scale status.
                                  <LF>xLB<SP>xx.xxOZ<CR><LF>Shhhh<CR><ETX>

                                  Scale status only if wt < 0, initial zero error, in motion or out of capacity.
                                  <LF>Shhhh<CR><ETX>

Name: Change units of measure
Command: U<CR>
Response: Changes units of measure, returns new units and scale status.
                                  <LF>uu<CR><LF>Shhhh<CR><ETX>

Name: Request metrology raw counts
Command: M<CR>
Response: Returns normalized raw counts and scale status.
                                  <LF>xxxxxxMM<CR><LF>Shhhh<CR><ETX>

Name: unrecognized command
Command: all others
Response: Unrecognized command
                                  <LF>?<CR><ETX>

NOTES:
1) Weight field is always six characters (5 for weight, 1 for decimal point), regardless of display size.
2) Leading zeroes are not suppressed.
3) High resolution weight field is seven characters (6 for weight, 1 for decimal point), regardless of display size.
4) If scale is outside zero range or in motion the 'Z' command is ignored and scale status is returned without zero status flag set, i.e., scale not at zero.

Weight Command: W

This command causes the scale to return the displayed weight string in ECR format. The scale will usually return the displayed weight with leading zeroes (ie no leading zero suppression). However, if weight is negative, in motion, over capacity or under capacity, or if a zero error exists, the ECR protocol causes only the scale's status to be returned in response to a weight (**'W'**) command.

The returned weight string will include decimal point plus units of measure. The length of the weight field will be equal to the length of the scale's display plus three (one for the decimal point, and two for the units, e.g., "LB"). For pounds-ounce weight, the length of the weight field will be equal to the length of the scale's display plus five (one for the decimal point, two for the "LB" and two for the "OZ"). Units of measure will appear in their ANSI standard abbreviated form ("LB" for pounds, "KG" for kilograms, etc.) in uppercase characters.

Zero Command: Z

If zeroing criteria are met, the scale is zeroed. In any case, scale status is returned.

High-Resolution Command: H

This is the same as the **W** command except that when weight is returned, it is returned with ten times the scale's displayed resolution.

Change Units Command: U

The effect of this command will be the same as if the *UNITS* key on the scale were pressed, causing the scale to change its units of measure. In response, the scale will return the new units of measure and scale status.

Metro Command: M

This command is optional. It will cause the scale to return normalized raw counts used for metrology verification. The count value is the same number displayed in the scale's division test in its diagnostics mode. For example, this number ranges up to 120,000 for the 67xx, 100,000 for the 78xx and 1,000,000 for QDT scales.

Scale Status Command: S

There will be at least two status bytes. If bit 6 of the second status byte is set then there will be a third byte. Bit 6 of each successive byte will indicate whether or not another status byte follows. The bit will be clear (0) in the last status byte. At this time only the first three bytes are defined. Others may be added in the future. Bit 0 is the least significant bit in the byte while bit 7 is the most significant bit.

The status bits are defined as follows:

Bit	Status Byte 1	Status Byte 2	Status Byte 3	Status Byte 4
0	1 = Scale in motion 0 = Stable	1 = Under capacity 0 = Not under capacity	00 = Low range 01 = (undefined) 10 = (undefined) 11 = High range	1 = Weight Change 0 = No Change
1	1 = Scale at zero 0 = Not at zero	1 = Over capacity 0 = Not over capacity		1 = Zero Detected 0 = No Zero Seen
2	1 = RAM error 0 = RAM okay	1 = ROM error 0 = Calibration okay	1 = Net weight 0 = Gross weight	1 = Metric 0 = English
3	1 = EEPROM error 0 = EEPROM okay	1 = Faulty calibration 0 = Calibration okay	Initial zero error	Unused
4	**Always 1**	**Always 1**	**Always 1**	**Always 1**
5	**Always 1**	**Always 1**	**Always 1**	**Always 1**
6	**Always 0**	1 = Byte follows 0 = Last byte	1 = Byte follows 0 = Last byte	1 = Byte follows 0 = Last byte
7	Parity	Parity	Parity	Parity

6.1.2 (Reserved)

6.1.3 8217 Mettler Toledo

6.1.3.1 Host Communications

The 8217 scale acts as a peripheral device when connected to a host computer. When the host requests weight data by sending an uppercase **W**, the scale will respond with the weight data or a status byte if the scale is in motion or an invalid state. The host can also request a scale zero operation, in which case the scale will respond with the scale status, so the host can determine if the scale is in zeroing range and/or if the scale is at zero. A scale confidence test can also be initiated by the host to cause the scale to perform RAM, ROM, and NOVRAM tests and put the results in a status byte for later interrogation by the host.

Data is transmitted and received by the scale using an RS232 voltage level interface in the following ASCII format: 7 bit even parity and one stop bit. Data transmission rates are 1200, 2400, 9600, or 19200 baud asynchronous.   The host computer must send requests to the scale as specified single uppercase ASCII characters to have it perform various functions. The scale will send a response back to the host computer as a string of ASCII numeric digits or as an ASCII *?* followed by a status byte. There must be at least a 200-ms delay between commands to allow for processing data response time at the scale. The following table shows the standard commands and responses between the scale and host.   If a confidence test results in an error, the scale will not respond to the **W** or **Z** commands until the error condition is corrected. An error will also cause the scale to halt any weighing operation until cleared.

6.1.3.2 Command Descriptions

ASCII Commands
(* MUST BE UPPERCASE CHARACTERS ONLY.)

*ASCII Command From Host	Scale Response	Description
W	STX WW.WW $^C{}_R$ STX WW.WWW $^C{}_R$ STX WW.WWN $^C{}_R$ STX WW.WWWN $^C{}_R$ STX?*status byte* $^C{}_R$	Instructs scale to send weight data. (W=Weight Digit 0-9). The scale will respond as follows according to setup and status: Gross Weight Pounds. Gross Weight KG. Net Weight Pounds. ASCII N added after weight. Net Weight KG. ASCII N added after weight. Status byte is sent if scale is in motion, or is net/gross weight is negative or over capacity. Table "Scale Status Byte Bit Definitions" to determine status byte results.
Z	STX?*status byte* $^C{}_R$	Zero scale command. On the next A/D reading, zero will be captured if the weight is stable, within capture range, and no tare is taken (gross weight mode.)
T$^C{}_R$	STX?*status byte* $^C{}_R$	Tare item on platter command. The scale must be at gross zero before placing the item on the platter. Tare will be taken if weight is stable and non-zero. After 150 millisecond delay, the scale will respond with a status byte. (NOTE: Tare must be enabled in calibration mode or scale will not respond.).
TWWWWW $^C{}_R$	STX?*status byte* $^C{}_R$	Digital Tare Command. Known tare value can be sent to scale and must be transmitted as five digits. The scale assumes a decimal point of WWW.WW LB, or WW.WWW KG. (Note: Tare must be enabled in calibration mode or scale will not respond.)
C	STX?*status byte* $^C{}_R$	Clear Tare Command (ignored if weight is not stable.) Scale status byte is sent after 150 ms delay.
A	STX $^C{}_R$	Initiate Confidence Test Command. sTxcr is sent indicating command was received.
B	STX?*status byte* $^C{}_R$	Send Confidence Test Results Command. **A** must be sent prior to the Send Result command **B**. Results of the test are contained in a status byte. Use Table 12-c to determine test results. If all tests passed, the ASCII @ character will be returned.
E	STXE$^C{}_R$	Start Echo Mode Serial Port Test Command. Scale will respond with an E indicating command received. Characters except F will be echoed back to the host.
F	STXF	End Echo Mode Command. The scale will respond with an ASCII **F** indicating the command was received.

6.1.3.3 Status Byte Format

When the scale responds with STX?*status byte* ^C_R , this indicates a status byte. The status byte contains scale status information, which can include net/gross mode, zero status, etc. The actual status byte sent will be an ASCII character which must be converted to binary to decode the bits. The scale status bit definitions are shown in the following table.

Scale Status Byte Bit Definitions

Bit Number	Bit Description
7	7 Parity Bit (even).
6	1 = Normal. 0 = Bad Command from host.
5	1 = Net Weight, 0 = Gross Weight
4	1 = Center of zero. 0 = Not at center of zero.
3	1 = Outside zero capture range. 0 = Within range.
2	1 = Under zero. 0 = Within weighing range.
1	1 = Over capacity. 0 = Within weighing range.
0	1 = Scale in motion. 0 = Stable weight data.

6.1.3.4 Confidence Test Status Byte Format

When the scale responds with STX? *status byte* ^C_R, after requesting a confidence test (B), a confidence test status byte will be sent. The status byte contains scale status information, which can include net/gross mode, zero status, etc. The actual status byte sent will be an ASCII character which must be converted to binary to decode the bits. The confidence test status bits are shown in the following table. Bit 6 is set to 1 after a confidence test is performed and reset to 0 after the host reads the confidence test status byte. The Confidence Test Byte bit definitions are shown below.

Note: The ASCII @ (decimal 64) indicates all tests were passed. Repeated reads of the confidence byte for all test passed without initiating a new confidence test will result in an ASCII NULL (hex 00).

Scale Confidence Test Byte Bit Definitions

Bit Number	Bit Description
7	Parity Bit (even).
6	1 = New status data available. 0 = Host has read data.
5	Bit is always a 0.
4	1 = ROM test failed. 0 = ROM test passed.
3	1 = Processor RAM test failed. 0 = Processor RAM test passed.
2	1 = Ram Test Passed. 0 = Ram Test Failed.
1	1 = NOVROM test failed. 0 = NOVROM test passed.
0	Always 0.

6.1.3.5 Tare

Tare can be taken on an item two ways: Automatic or digital.

REMOTE TARE

The unknown weight of an object can be tared-off automatically by placing the object on the scale platter, then with the display in a stable non-motion and positive weight condition, sending an uppercase ASCII *T* character followed by ^C_R from the host will automatically subtract the weight. The tare function must be enabled. Chain tare is not permitted. A display triangle, located under the least significant weight digit on the scale display will illuminate to indicate net weight is displayed. Negative weight will cause dashes to be displayed and status byte will be sent to the host instead of weight data.

DIGITAL TARE

Keyboard tare is set in the scale when an uppercase ASCII T character, followed by five ASCII digits and a CR is sent by the host. The scale weight display must be positive and stable. The tare value input is limited to the scale capacity. In metric mode, the tare value must always end in 0 or 5.

CLEARING TARE

If auto tare clear is enabled, tare is automatically cleared whenever the scale returns to gross zero after having indicated a stable net weight at least one increment above net zero. If auto tare clear is disabled, tare can be cleared by sending an uppercase ASCII C from the host.

6.1.4 8213 Mettler Toledo

6.1.4.1 Host Communications

The 8217 scale acts as a peripheral device when connected to a host computer. When the host requests weight data by sending an uppercase **W**, the scale will respond with the weight data or a status byte if the scale is in motion or an invalid state. The host can also request a scale zero operation, in which case the scale will respond with the scale status, so the host can determine if the scale is in zeroing range and/or if the scale is at zero. A scale confidence test can also be initiated by the host to cause the scale to perform RAM, ROM, and NOVRAM tests and put the results in a status byte for later interrogation by the host.

Data is transmitted and received by the scale using an RS232 voltage level interface in the following ASCII format: 7 bit even parity and one stop bit. Data transmission rates are 1200, 2400, 9600, or 19200 baud asynchronous.   The host computer must send requests to the scale as specified single uppercase ASCII characters to have it perform various functions. The scale will send a response back to the host computer as a string of ASCII numeric digits or as an ASCII **?** followed by a status byte. There must be at least a 200-ms delay between commands to allow for processing data response time at the scale. The following table shows the standard commands and responses between the scale and host.   If a confidence test results in an error, the scale will not respond to the **W** or **Z** commands until the error condition is corrected. An error will also cause the scale to halt any weighing operation until cleared.

6.1.4.2 Command Descriptions

ASCII Commands
(* MUST BE UPPERCASE CHARACTERS ONLY.)

*ASCII Command From Host	Scale Response	Description
W	STX 0WW.WW ^C_R STX WW.WWW ^C_R STX 0WW.WWN ^C_R STX WW.WWWN ^C_R STX?*status byte* ^C_R	Instructs scale to send weight data. (W=Weight Digit 0-9). The scale will respond as follows according to setup and status: Gross Weight Pounds. Gross Weight KG. Net Weight Pounds. ASCII N added after weight. Net Weight KG. ASCII N added after weight. Status byte is sent if scale is in motion, or is net/gross weight is negative or over capacity. Table "Scale Status Byte Bit Definitions" to determine status byte results.
Z	STX?*status byte* ^C_R	Zero scale command. On the next A/D reading, zero will be captured if the weight is stable, within capture range, and no tare is taken (gross weight mode.)
T^C_R	STX?*status byte* ^C_R	Tare item on platter command. The scale must be at gross zero before placing the item on the platter. Tare will be taken if weight is stable and non-zero. After 150 millisecond delay, the scale will respond with a status byte. (NOTE: Tare must be enabled in calibration mode or scale will not respond.).
TWWWWW ^C_R	STX?*status byte* ^C_R	Digital Tare Command. Known tare value can be sent to scale and must be transmitted as five digits. The scale assumes a decimal point of WWW.WW LB, or WW.WWW KG. (Note: Tare must be enabled in calibration mode or scale will not respond.)
C	STX?*status byte* ^C_R	Clear Tare Command (ignored if weight is not stable.) Scale status byte is sent after 150 ms delay.
A	STX ^C_R	Initiate Confidence Test Command. sTxcr is sent indicating command was received.
B	STX?*status byte* ^C_R	Send Confidence Test Results Command. **A** must be sent prior to the Send Result command **B**. Results of the test are contained in a status byte. Use Table "Scale Confidence Test Byte Bit Definitions" to determine test results. If all tests passed, the ASCII @ character will be returned. If a confidence test results in an error, the scale will not respond to the "W", "H", or "Z" command until the error condition is cleared. A confidence test error will also cause the scale weighing operation to halt until the error condition is cleared.
E	STXE^C_R	Start Echo Mode Serial Port Test Command. Scale will respond with an E indicating command received. Characters except F will be echoed back to the host.
F	STXF	End Echo Mode Command. The scale will respond with an ASCII **F** indicating the command was received.

6.1.4.3 Status Byte Format

When the scale responds with STX?*status byte* ^{C}R , this indicates a status byte. The status byte contains scale status information, which can include net/gross mode, zero status, etc. The actual status byte sent will be an ASCII character which must be converted to binary to decode the bits. The scale status bit definitions are shown in the following table.

Scale Status Byte Bit Definitions

Bit Number	Bit Description
7	7 Parity Bit (even).
6	Always 1
5	1 = Net Weight, 0 = Gross Weight
4	1 = Center of zero. 0 = Not at center of zero.
3	1 = Outside zero capture range. 0 = Within range.
2	1 = Under zero. 0 = Within weighing range.
1	1 = Over capacity. 0 = Within weighing range.
0	1 = Scale in motion. 0 = Stable weight data.

6.1.4.4 Confidence Test Status Byte Format

When the scale responds with STX? *status byte* ^C_R, after requesting a confidence test (B), a confidence test status byte will be sent. The status byte contains scale status information, which can include net/gross mode, zero status, etc. The actual status byte sent will be an ASCII character which must be converted to binary to decode the bits. The confidence test status bits are shown in the following table. Bit 6 is set to 1 after a confidence test is performed and reset to 0 after the host reads the confidence test status byte. The Confidence Test Byte bit definitions are shown below.

Note: The ASCII @ (decimal 64) indicates all tests were passed. Repeated reads of the confidence byte for all test passed without initiating a new confidence test will result in an ASCII NULL (hex 00).

Scale Confidence Test Byte Bit Definitions

Bit Number	Bit Description
7	Parity Bit (even).
6	1 = New status data available. 0 = Host has read data.
5	Bit is always a 0.
4	1 = ROM test failed. 0 = ROM test passed.
3	1 = Processor RAM test failed. 0 = Processor RAM test passed.
2	1 = Ram Test Passed. 0 = Ram Test Failed.
1	1 = NOVROM test failed. 0 = NOVROM test passed.
0	Always 0.

6.1.5 EPOS 1

6.1.5.1 Data Format

2400 Baud (select 2400, 4800 or 9600)
7 data bits (select 7 or 8)
Even parity (select Even, None or Odd parity)
1 stop bit (select 1 or 2 stop bit)

6.1.5.2 Command Descriptions

Command	COMMENTS
ENQ (05h)	Starts the communication sequence
ACK (06h)	Data Available
CAN (18h)	Repeat weighing
NAK (15h)	No acknowledgement
NUL (00h)	No data available
DC1 (11h)	Data Request
STX (02h)	Start of text
ID	Information byte, broken down into the following bits: | Bit			Capacity
---	---	---	---
2	1	0	
0	0	1	15kg x 0.005kg
0	1	0	30lb x 0.01lb
0	1	1	6kg x 0.002kg	 **Bit 3** - Logic 1 **Bit 4** - Logic 1 means under/over range **Bit 5** - Logic 1 **Bit 6** - Logic 1 indicates non-AVR capacities
Weight	5 bytes with MSD first
BCC	Block Check Character calculated as the even column parity (Longitudinal Redundancy Check) of all characters except the STX and ETX.
ETX (03h)	End of text
STX Z NUL NUL NUL NUL NUL ETX BCC	Command String to Zero the scale from the EPOS, note that the BCC in this case will be "Z"
STX N NUL NUL NUL NUL NUL ETX BCC	Command String to Tare the scale from the EPOS, note that the BCC in this case will be "N"
CR (0dh)	Data received and compared correctly

6.1.5.3 Command Flow

ECR	Scale	COMMENTS
ENQ (05h)		

	ACK (06h)	Data Available.
		  Errors could be:
		  CAN - repeat weighing
		  NAK - no acknowledgement
		  NUL - no data available

DC1 (11h)		Data Request
		  Errors could be:
		  NAK – no acknowledgement

	STX ID W5W4W3W2W1 BCC ETX	Transmitted Data

STX ID W5W4W3W2W1 BCC ETX		Confirm Data
		  Errors could be:
		  ACK – Data not confirmed

	CR (0dh)	Data confirmed

Note: Spaces depicted in the description above are only used for ease of reading.   No space characters are used unless the BCC result yields the space character.

6.1.6 EPOS 2

6.1.6.1 Data Format

2400 Baud (select 2400, 4800 or 9600)
7 data bits (select 7 or 8)
Even parity (select Even, None or Odd parity)
1 stop bit (select 1 or 2 stop bit)

6.1.6.2 Handshaking

For PC DB25 serial port connector: Jumper 4 to 5, and 6, 8, & 20 together.
For PC DB9 serial port connector: Jumper 4 to 6 and 7 to 8.

6.1.6.3 Command Descriptions

Command	COMMENTS
ENQ (05h)	Starts the communication sequence
ACK (06h)	Data Available
NAK (15h)	No acknowledgement
NUL (00h)	No data available
DC1 (11h)	Data Request
STX (02h)	Start of text
ID	Information byte, broken down into the following bits: | Bit			Capacity
---	---	---	---
2	1	0	
0	0	1	15kg x 0.005kg
0	1	0	30lb x 0.01lb
0	1	1	6kg x 0.002kg	 **Bit 3** - Logic 1 **Bit 4** - Logic 1 means under/over range **Bit 5** - Logic 1 **Bit 6** - Logic 1 indicates non-AVR capacities
Weight	5 bytes with MSD first
BCC	Block Check Character calculated as the even column parity (Longitudinal Redundancy Check) of all characters except the STX and ETX.
ETX (03h)	End of text
STX Z NUL NUL NUL NUL NUL ETX BCC	Command String to Zero the scale from the EPOS, note that the BCC in this case will be "Z"
STX N NUL NUL NUL NUL NUL ETX BCC	Command String to Tare the scale from the EPOS, note that the BCC in this case will be "N"

6.1.6.4 Command Flow

ECR	Scale	COMMENTS
ENQ (05h)		

	ACK (06h)	Data Available.
		    Errors could be:
		    CAN - repeat weighing
		    NAK - no acknowledgement
		    NUL - no data available

DC1 (11h)		Data Request
		    Errors could be:
		    NAK – no acknowledgement

	STX ID W5W4W3W2W1 BCC ETX	Transmitted Data

Note: Spaces depicted in the description above are only used for ease of reading.   No space characters are used unless the BCC result yields the space character.

6.1.7 (Reserved)

6.1.8 Dialog 06

With free programmable POS-Systems it is for a third party on principle possible, to manipulate parts of the software, which are obligate to verification.

For this reason certifying agencies expects appropriate protection against such inadmissible manipulations of third parties.

A protection against manipulations presents the Checkout-Dialogue 06 in conjunction with precautions taken at the POS-Software.

6.1.8.1 POS-Software

The parts of the POS-Software, which are obligated to verify, have to be protected with checksums (here called value CS), created by an appropriate method (for instance CRC16). These checksums CS have also to be protected with checksums (here called value KW), created by the CRC16-method in use with a polynomial P, which is known only by the manufacturers of the scale and the POS-system.   CS and KW both have a length of 16 bit. Remark: KW represents the rest of the polynomial-division   CS / P.

6.1.8.2 Checkout-Dialogue 06

The checkout-dialogue 06 presents for the scale the possibility, to request 1-5 pairs of values CS/KW in cyclic intervals from the POS-system and check their validity. In case of invalidity, no weight-results will be given from the scale to the POS-system, i.e. dealing with the scale is not possible.   With the request for the checksums, the scale sends a random number, which has to be used from the POS-system for encoding the checksums. This shall prevent a third party from monitoring valid checksums with simple measures.   The random number is an 8-bit-number, the higher nibble (here called Z1) is used for encoding the CS-values, and the lower nibble (here called Z2) is used for encoding the KW-values. The encoding of the CS-values has to be made by rotating them to the left for Z1 bits, the encoding of the KW-values by rotating them to the right for Z2 bits.

For checking the conformity of the used protocol version in POS-system and scale, the Checkout-Dialogue 06 presents for the POS-system the possibility to order the scale to display the version number of the protocol. If the POS-system also displays the version number, the conformity can be checked.

6.1.8.3 Command Descriptions

Records for Communications from a POS system to the Scale

Record 01:   Transmitting of unit price

```
EOT   STX   01   ESC   D5   D4   D3   D2   D1   D0   ESC   ETX
            \_/              _____/
         Record No.              Unit price 5/6 digits
```

```
ERROR: rangecheck
OFFENDING COMMAND: image

STACK:

-dictionary-
-mark-
-savelevel-
0
0.750179
0.750179
0.750179
0.750179
0.750179
0.750179
0.750179
0.750179
0.750179
0.750179
0.750179
0.750179
0.750179
0.750179
0.750179
0.750179
0.750179
0.750179
0.750179
0.750179
0.750179
```