

Remote Communication for the Mini series

Version 1.2

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1 RS232

To use Rs232 connection, you should connect to a message (MiniTouch version), before you can change it's content.

Command syntax:	<ESC><Command><Function>: <Parameters><EOT>	<ESC>=ASCII char 27, <EOT>=ASCII char 04
Reply on succes:	<ESC><Command><ACK><EOT>	<ACK>=ASCII char 06
Reply on fail:	<ESC><NAK><error code><EOT>	<NAK>=ASCII char 21

Example: <esc>O:MYOBJECT;T=Newtext<eot>

1.1 Basic Commands

Connect		
<i>Command</i>	<i>Function</i>	<i>Parameter</i>
C	C	<user>;<password> (optional) <user> (optional) <password> (optional)
<i>Reply on success</i>	<i>Description</i>	<i>Example</i>
C<ACK> IU (input user) (optional) IP (input password) (optional)	Connects to MiniTouch from remote location. Login user+password is used if login is enabled on MiniTouch.	Ex1: <ESC>CC<EOT> <ESC><user><EOT> <ESC><password><EOT> Ex2: <ESC>CC;<user>; <password><EOT>

Disconnect		
<i>Command</i>	<i>Function</i>	<i>Parameter</i>
C	D	
<i>Reply on success</i>	<i>Description</i>	<i>Example</i>
C<ACK>	Disconnect remote connection to MiniTouch.	<ESC>CD<EOT>

Start print		
<i>Command</i>	<i>Function</i>	<i>Parameter</i>
C	R	
<i>Reply</i>	<i>Description</i>	<i>Example</i>
C<ACK>	Enter print mode on MiniTouch.	<ESC>CR<EOT>

Stop print		
<i>Command</i>	<i>Function</i>	<i>Parameter</i>
C	S	
<i>Reply on success</i>	<i>Description</i>	<i>Example</i>
C<ACK>	Leave print mode on MiniTouch.	<ESC>CS<EOT>

Load Job

Command	Function	Parameter
C	F	<job_name> or <path\ \\job_name>
Reply on success	Description	Example
C<ACK>	Loads <Job_name> in MiniTouch memory.	<ESC>CF;MY_JOB<EOT>

User message

Command	Function	Parameter
C	U	<line1>;<line2>;<line3>
Reply on success	Description	Example
C<ACK>	Displays message on MiniTouch display.	<ESC>CU;User message; Please don't turn off<EOT>

Reboot

Command	Function	Parameter
C	Q	R (shutdown if R is omitted)
Reply on success	Description	Example
C<ACK>	Reboots or shuts down MiniTouch.	<ESC>CQ;R<EOT>

1.2 Object Handling

Text objects

Change content

Command	Function	Parameter
O	<name of text object>	T=<new text>
Reply on success	Description	Example
O<ACK>	Sets text of text object (text object must be linked to a static content).	<ESC>OMy text object:T=this is a test<EOT>

Select Font

Command	Function	Parameter
O	<name of text object>	F=
Reply on success	Description	Example
O<ACK>	Sets text print font to font with .	<ESC>OMy text object:F=Ari_28pt<EOT>

Select position

Command	Function	Parameter
O	<name of text object>	P=<x>,<y>
Reply on success	Description	Example
O<ACK>	Sets text object position in print.	<ESC>OMy Text object:P=50,50<EOT>

Graphic objects

Select logo		
Command	Function	Parameter
O	<name of graphic object>	l=<logo name>
Reply on success	Description	Example
O<ACK>	Sets active logo of a Graphics logo object by logo name.	<ESC>OMy graphic object:l=My logo<EOT>

Select position		
Command	Function	Parameter
O	<name of graphic object>	P=<x>,<y>
Reply on success	Description	Example
O<ACK>	Sets graphic object position in print.	<ESC>OMy graphic object:P=50,50<EOT>

Select Line Width		
Command	Function	Parameter
O	<name of graphic object>	W=<line width in pixels>
Reply on success	Description	Example
O<ACK>	Sets graphic box or line object line width.	<ESC>OMy graphic object:W=50<EOT>

Select Length		
Command	Function	Parameter
O	<name of graphic object>	L=<object length in pixels>
Reply on success	Description	Example
O<ACK>	Sets graphic box width or line length.	<ESC>OMy graphic object:L=500<EOT>

Select Height		
Command	Function	Parameter
O	<name of graphic object>	H=<object height in pixels>
Reply on success	Description	Example
O<ACK>	Sets graphic box height.	<ESC>OMy graphic object:H=1600<EOT>

Select Fill		
Command	Function	Parameter
O	<name of graphic object>	B=<1 0> (1=ON, 0=Off)
Reply on success	Description	Example
O<ACK>	Sets graphic box black fill ON/OFF.	<ESC>OMy graphic object:B=1<EOT>

Barcode objects

Change content

Command	Function	Parameter
O	<name of barcode object>	C=<new text>
Reply on success	Description	Example
O<ACK>	Sets text of barcode object (object must be linked to content).	<ESC>OMY barcode object: C=1234<EOT>

Turn human readable on or off

Command	Function	Parameter
O	<name of barcode object>	H=<1 0> (1=ON, 0=Off)
Reply on success	Description	Example
O<ACK>	Enables/disables human readable text on barcode.	<ESC>OMY barcode object:H=1<EOT>

Select Size

Command	Function	Parameter
O	<name of barcode object>	S=<line width>;<line height> (in pixels)
Reply on success	Description	Example
O<ACK>	Set barcode line size.	<ESC>OMy barcode object:H=<Enter 1 or 0><EOT>

Space

Command	Function	Parameter
O	<name of barcode object>	W=<line extra spacing> (in pixels)
Reply on success	Description	Example
O<ACK>	Set barcode extra white spacing.	<ESC>OMy barcode object:W=100<EOT>

Black

Command	Function	Parameter
O	<name of barcode object>	B=<line extra black> (in pixels)
Reply on success	Description	Example
O<ACK>	Set barcode extra black line width.	<ESC>OMy barcode object:B=2<EOT>

Checksum

Command	Function	Parameter
O	<name of barcode object>	O=<0 1> (1=ON)
Reply on success	Description	Example
O<ACK>	Set barcode checksum on/off.	<ESC>OMy barcode object:O=2<EOT>

Type		
Command	Function	Parameter
O	<name of barcode object>	T=<barcode type>
Reply on success	Description	Example
O<ACK>	Set barcode type.	<ESC>OMy barcode object:T=EAN13<EOT>

Font		
Command	Function	Parameter
O	<name of barcode object>	F=
Reply on success	Description	Example
O<ACK>	Sets human readable font to font with .	<ESC>OMy barcode object:F=Ari_28pt<EOT>

Position		
Command	Function	Parameter
O	<name of barcode object>	P=<x>,<y>
Reply on success	Description	Example
O<ACK>	Sets barcode object position in print.	<ESC>OMy barcode object:F=100,100<EOT>

Static Contents

Text		
Command	Function	Parameter
O	<name of static content>	T=<new text>
Reply on success	Description	Example
O<ACK>	Sets text of a static content object.	<ESC>O:My static content;T=this is a test<EOT>

Counter Contents

Minimum value		
Command	Function	Parameter
O	<Name of counter content>	m=<value>
Reply on success	Description	Example
O<ACK>	Set minimum count value of a counter content.	<ESC>O:My counter content;m=1000<EOT>

Maximum value

Command	Function	Parameter
O	<Name of counter content>	M=<value>
Reply on success	Description	Example
O<ACK>	Set maximum count value of a counter content.	<ESC>O:My counter content; M=2000<EOT>

Current value

Command	Function	Parameter
O	<Name of counter content>	C=<value>
Reply on success	Description	Example
O<ACK>	Set current count value of a counter content.	<ESC>O:My counter content; C=1500<EOT>

Digits

Command	Function	Parameter
O	<Name of counter content>	D=<value>
Reply on success	Description	Example
O<ACK>	Set amount of digits in a counter content.	<ESC>O:My counter content;D=5<EOT>

Repeats

Command	Function	Parameter
O	<Name of counter content>	R=<value>
Reply on success	Description	Example
O<ACK>	Set amount of prints per counter increment.	<ESC>O:My counter content;R=2<EOT>

Step

Command	Function	Parameter
O	<Name of counter content>	S=<value>
Reply on success	Description	Example
O<ACK>	Set counter increment value.	<ESC>O:My counter content;S=3<EOT>

Leadin

Command	Function	Parameter
O	<Name of counter content>	L=< '0' > (' '=spaces leadin, '0'=zeros leadin , blank/others=no leadin)
Reply on success	Description	Example
O<ACK>	Set leadin of printed counter value.	<ESC>O:My counter content;L=0<EOT>

Date & Time Contents

Day offset		
Command	Function	Parameter
O	<Name of date/time content>	E=<day offset>
Reply on success	Description	Example
O<ACK>	Set day offset of a date content.	<ESC>O:My date/time content;E=10<EOT>

Format		
Command	Function	Parameter
O	<Name of date/time content>	F=<format string> (See list of format types in MTHP4 manual)
Reply on success	Description	Example
O<ACK>	Sets date/time content print format.	<ESC>O:My date/time content;F=dddd<EOT>

Date set		
Command	Function	Parameter
O	<Name of date/time content>	D=<year/month/day>
Reply on success	Description	Example
O<ACK>	Sets date of a data/time content object.	<ESC>O:My date/time content;D=2009/10/28<EOT>

Time set		
Command	Function	Parameter
O	<Name of date/time content>	T=<hour:minute:second>
Reply on success	Description	Example
O<ACK>	Sets time of a data/time content object.	<ESC>O:My date/time content;T=14:31:00<EOT>

System contents

Content		
Command	Function	Parameter
O	<system content>	C=<system type>
Reply on success	Description	Example
O<ACK>	Sets print output of a system content.	<ESC>O:My date/time content;C=Filename<EOT>

1.3 Parameter Handling

Layout length

Command	Function	Parameter
P	<L M none>	L=<value> (in pixels)
Reply on success	Description	Example
P<ACK>	Set picture length i pixels.	<ESC>PM:L=500<EOT>

Resolution

Command	Function	Parameter
P	<L M none>	r=<resolution_type>
Reply on success	Description	Example
P<ACK>	Set print resolution.	<ESC>PM:r=600<EOT>

Print direction

Command	Function	Parameter
P	<L M none>	D=<r l>
Reply on success	Description	Example
P<ACK>	Set print direction (r)ight (l)eft.	<ESC>PM:D=r<EOT>

Start distance

Command	Function	Parameter
P	<L M none>	S=<value> (in pixels)
Reply on success	Description	Example
P<ACK>	Set start distance from start signal to print i pixels.	<ESC>PM:S=500<EOT>

Start sensor edge

Command	Function	Parameter
P	<L M none>	G=<+ ->
Reply on success	Description	Example
P<ACK>	Set startsensor active edge (+=positive, -=negative).	<ESC>PM:G=+<EOT>

Modular parameter

Command	Function	Parameter
P	<L M none>	M=<value>
Reply on success	Description	Example
P<ACK>	Set modular parameter.	<ESC>PM:M=1<EOT>

Velocity parameter

Command	Function	Parameter
P	<L M none>	V=<velocity> (in meters/min)
Reply on success	Description	Example
P<ACK>	Set velocity parameter. (decimal notation is allowed)	<ESC>PM:V=15<EOT>

Encoder parameter

Command	Function	Parameter
P	<L M none>	e=<encoder par> (in mm/pulse)
Reply on success	Description	Example
P<ACK>	Set encoder parameter. (decimal notation is allowed)	<ESC>PM:e=0.00706<EOT>

Quadrature

Command	Function	Parameter
P	<L M none>	Q=<+ ->
Reply on success	Description	Example
P<ACK>	Set encoder quadrature on/off.	<ESC>PM:Q=+<EOT>

Repeat

Command	Function	Parameter
P	<L M none>	R=<repeats>,<repeat_distance> (in pixels)
Reply on success	Description	Example
P<ACK>	Set print repeats and distance between repeats.	<ESC>PM:R=2, 600<EOT>

Endless mode

Command	Function	Parameter
P	<L M none>	U=<+ ->
Reply on success	Description	Example
P<ACK>	Set endless print on/off.	<ESC>PM:U=+<EOT>

Print mode

Command	Function	Parameter
P	<L M none>	E=<P M V>
Reply on success	Description	Example
P<ACK>	Set print mode (P)osition, (M)odular or (V)elocity.	<ESC>PM:E=P<EOT>

Buffer mode

Command	Function	Parameter
P	<L M none>	B=<+ ->
Reply on success	Description	Example
P<ACK>	Set print buffer mode (+) normal buffer (-)no buffer.	<ESC>PM:B=+<EOT>

Head offset

Command	Function	Parameter
P	<L M none>	OFF offset=<head nr>;<head offset>;<pen1 offset>;...
Reply on success	Description	Example
P<ACK>	Set offsets for a complete head. Offset are written with/ without decimal point, and value may be appended with unit type (mm, in or px for mm, inches or pixels notation).	<ESC>P:OFF=1;0;0;25;50.1;75.2#<EOT>

Head parameters

Command	Function	Parameter
P	<L M none>	HEA head=<head nr.>;<parameter>=<value> parameters: offset: OFF offset=<value><unit> upside/down: UPS updown=<+ -> otherside: OTH othside=<+ -> voltage: VOL voltage=<voltage>;<fire width>
Reply on success	Description	Example
P<ACK>	Set head parameter: Offset, Upsidedown, otherside or voltage.	<ESC>P:HEA=1;UPS=+#<EOT>

Pen parameters

Command	Function	Parameter
P	<L M none>	PEN pen=<head nr>;<pen nr>; <parm>=<value> parameters: offset: OFF offset=<value><unit> overlap: OVL overlap=<value> ink setup: INK ink=<ink supply (ml)>;<ink low (ml)> ink reset: RST reset pen switch: SWH switch=<+ ->
Reply on success	Description	Example
P<ACK>	Set pen parameters: Offset, overlap, ink setup, ink reset and pen auto switch.	<ESC>P:pen=1;1;INK=42#<EOT>

Network setup		
Command	Function	Parameter
P	N	D=<110> (DHCP on/off) N=<Network name> I=<IP ADDRESS> (dot seperated) G=Gateway address> M=<network mask> P=<ip port>,<file port>
Reply on success	Description	Example
P<ACK>	Set network parameters	<ES>>PN:D=0;I192.168.160.199; N=HSAAMT<EOT>

1.4 Request Handling

Object Info

Grahic Object info (line)		
Command	Function	Parameter
R	o	<name of graphic object>
Reply on success	Description	Example
Ro:<object_name>; <graphic_type>;<X>,<Y>; <line_length>;<line_width>	Display object info	<ESC>Ro:My_graphic_object <EOT>

Graphic Object info (box)		
Command	Function	Parameter
R	o	<name of graphic object>
Reply on success	Description	Example
Ro:<object_name>; <graphic_type>;<X>,<Y>; <box_width>;<box_height>; <line_width>; <box_fill+ ->	Display object info	<ESC>Ro:My_graphic_object <EOT>

Graphic Object info (logo)		
Command	Function	Parameter
R	o	<name of graphic object>
Reply on success	Description	Example
Ro:<object_name>; <graphic_type>;<X>,<Y>; <logo_width>;<logo_height>; <logo_name>	Display object info	<ESC>Ro:My_graphic_object <EOT>

Text Object info

Command	Function	Parameter
R	o	<name of text object>
Reply on success	Description	Example
Ro:<object_name>;<X>,<Y>; <rotation_type>; <font_name>; <linked_content_1>;...; <linked_content_n>; <content_seperator_char>	Display object info	<ESC>Ro:My_text_object <EOT>

Barcode Object info

Command	Function	Parameter
R	o	<name of barcode object>
Reply on success	Description	Example
Ro:<object_name>;<X>,<Y>; <rotation_type>; <font_name>; <linked_content_1>;...; <linked_content_n>; <content_seperator_char>; <barcode_type>; <checksum_0 1>;<line_width>; <black_size>; <white_size>; <human_readable>; <lines_height>	Display object info	<ESC>Ro:My_barcode_object <EOT>

Content info

Static Content info

Command	Function	Parameter
R	c	<name of static content>
Reply on success	Description	Example
Rc:<content_name>; <static_text>	Display content info	<ESC>Rc:My_static_content <EOT>

Counter Content info

Command	Function	Parameter
R	c	<name of counter content>
Reply on success	Description	Example
Rc:<content_name>; <current_value>;<digits>; <min_value>;<max_value>; <repeats>; <step_value>;<leadin type>	Display content info	<ESC>Rc:My_counter_content <EOT>

Date/Time Content info

<i>Command</i>	<i>Function</i>	<i>Parameter</i>
R	c	<name of date/time content>
<i>Reply on success</i>	<i>Description</i>	<i>Example</i>
Rc:<content_name>;<format>; <offset>; <locales_name>	Display content info	<ESC>Rc:My_my_date/ time_content<EOT>

Shift Content info

<i>Command</i>	<i>Function</i>	<i>Parameter</i>
R	c	<name of shift content>
<i>Reply on success</i>	<i>Description</i>	<i>Example</i>
Rc:<content_name>; <shift_datetime_1>; <shift_data_1>; ...;<shift_datetime_n>; <shift_data_n>	Display content info	<ESC>Rc:My_shift_content <EOT>

System content info

<i>Command</i>	<i>Function</i>	<i>Parameter</i>
R	c	<name of system content>
<i>Reply on success</i>	<i>Description</i>	<i>Example</i>
Rc:<content_name>; <system_type>	Display content info	<ESC>Rc:My_system_content <EOT>

Identifier content

<i>Command</i>	<i>Function</i>	<i>Parameter</i>
R	c	<name of identifier content>
<i>Reply on success</i>	<i>Description</i>	<i>Example</i>
Rc:<content_name>; <ID_format>	Display content info	<ESC>Rc: My_indentifier_content<EOT>

Parameters list

Command	Function	Parameter
R	p	<L M none>
Reply on success	Description	Example
RP:<picture_length>; <start_distance>; <resolution_type>; quadrature+ ->;<print_dir_r l>; <repeats>;<modular_parm>; <velocity_parm>; <encoder_parm>; <sensor_edge_+ ->; <endless_+ ->;<printmode_p m v>;<buffer_mode_0 1>; <head_offset_1>; <head_size_1>; <head_1_pen_offset_1>;...; <head_1_pen_offset_n>;...; <head_n....>	List parameters	<ESC>Rp<EOT>

File list

Command	Function	Parameter
R	D	<directory_path> (optional)
Reply on success	Description	Example
RD:<file/dir_name_1>;...;<file/ dir_name_n>	List files	<ESC>RD<EOT>

Active jobname

Command	Function	Parameter
R	F	
Reply on success	Description	Example
RF:<job_name>	Show active jobname	<ESC>RF<EOT>

Active user

Command	Function	Parameter
R	U	
Reply on success	Description	Example
RU:<user_name>	Show current user	<ESC>RU<EOT>

Object list

Command	Function	Parameter
R	O	
Reply on success	Description	Example
RO:<object_name_1>=<tex bar hrp>;...; <object_name_n>=<tex bar hrp>	List objects	<ESC>RO<EOT>

Content list

Command	Function	Parameter
R	C	
Reply on success	Description	Example
RC:<static_name_1>=<sta>;...; <static_name_n>=<sta>; <counter_name_1>=<cnt>;...; <counter_name_n>=<cnt>; <date_time_name_1>=<dat>;...; <date_time_name_n>=<dat>; <shift_name_1>=<shf>;...; <shift_name_n>=<shf>; <system_name_1>=<sys>;...; <system_name_n>=<sys>; <identifier_name_1>=<id>;...; <identifier name n>=<id>	List content	<ESC>RC<EOT>

Version info

Command	Function	Parameter
R	V	
Reply on success	Description	Example
RV:<MiniTouch_type>; <firmware_version>; <build_date>; <FPGA_version>	List version info	<ESC>RV<EOT>

Ethernet info

Command	Function	Parameter
R	I	
Reply on success	Description	Example
RI:<network_name>; <ip_address>;<ip_netmask>; <ip_gateway>;<ip_com_port>; <ip_file_port>; <DHCP_on_off_+_->	List ethernet info	<ESC>RI<EOT>

Uptime

Command	Function	Parameter
R	T	
Reply on success	Description	Example
RT:<uptime_hours>	Display uptime	<ESC>RT<EOT>

Print info

Command	Function	Parameter
R	i	
Reply on success	Description	Example
Ri:<printing_1 0>; <pictures_printed>	Display print info	<ESC>Ri<EOT>

Ink info

Command	Function	Parameter
R	B	
Reply on success	Description	Example
RB:<ink_used_pen_1>;...; <ink_used_pen_n>	Display ink info	<ESC>RB<EOT>

Print done interrupt

Command	Function	Parameter
R	d	<+ ->
Reply on success	Description	Example
Rd:<print_done_interrupt_on off_1 0><ACK> (when print done and print interrupt on: SP: <prints_since_last_interrupt>)	Turn print done interrupt on or off	<ESC>Rd;+<EOT>

2 Ethernet Commands

Ethernet Connection

To use ethernet connection, you should connect to a message (MiniTouch version), before you can change it's content.

Command syntax:	<Command>:<Function>;<Parameters>#
Reply on success:	RES:0;Transmission OK#
Reply on fail:	RES:<error_code>;<error_description>

Example: OBJ:My_object;tex=this_is_a_test#

2.1 Basic Commands

Connect

Command	Function	Parameter
CMD	C	<user>;<password> (optional) <user> (optional) <password> (optional)
Reply	Description	Example
RES:0 DAT:Please login INP:username (optional) INP:password (optional)	Connects to MiniTouch from remote location. Login user+password is used if login is enabled on MiniTouch.	Ex1: CMD:C# -> DAT:Please login# INP:username# <user># -> INP:password# <password># Ex2: CMD:C;<user>;<password>#

Disconnect

Command	Function	Parameter
CMD	D	
Reply	Description	Example
RES:0	Disconnect remote connection to MiniTouch.	CMD:D#

Start print

Command	Function	Parameter
CMD	R	
Reply	Description	Example
RES:0	Start print mode on MiniTouch.	CMD:R#

Stop print

Command	Function	Parameter
CMD	S	
Reply	Description	Example
RES:0	Stop print mode on MiniTouch.	CMD:S#

Load Job

Command	Function	Parameter
CMD	F	<job_name> or <path\ \job_name>
Reply	Description	Example
RES:0	Loads <Job_name> from <path> in MiniTouch memory. The <path\\> is optional if job is saved in root.	CMD:F;job_name#

User message

Command	Function	Parameter
CMD	U	<line1>;<line2>;<line3> (line2 + line3 are optional)
Reply	Description	Example
RES:0	Displays user text lines on MiniTouch display.	CMD:U;User message;Please don't turn off#

Reboot

Command	Function	Parameter
CMD	Q	R (shutdown if R is omitted)
Reply	Description	Example
RES:0	Reboots or shuts down MiniTouch.	CMD:Q#

2.2 Object Handling

Text objects

Text		
<i>Command</i>	<i>Function</i>	<i>Parameter</i>
OBJ	<name of text object>	TEX=<new text>
<i>Reply</i>	<i>Description</i>	<i>Example</i>
RES:0	Sets text of text object (text object must be linked to a static content).	OBJ:My text object;TEX=this is a test#

Font		
<i>Command</i>	<i>Function</i>	<i>Parameter</i>
OBJ	<name of text object>	FON=
<i>Reply</i>	<i>Description</i>	<i>Example</i>
RES:0	Sets text print font to font with .	OBJ:My text object;FON=Ari_28pt#

Position		
<i>Command</i>	<i>Function</i>	<i>Parameter</i>
OBJ	<name of text object>	POS=<x>,<y>
<i>Reply</i>	<i>Description</i>	<i>Example</i>
RES:0	Sets text object position in print.	OBJ:My text object;FOS=100,100#

Graphic objects

Logo		
<i>Command</i>	<i>Function</i>	<i>Parameter</i>
OBJ	<name of graphic object>	PAT=<logo name>
<i>Reply</i>	<i>Description</i>	<i>Example</i>
RES:0	Sets active logo of a Graphics logo object by logo name.	OBJ:My graphic object;PAT=My logo#

Position		
<i>Command</i>	<i>Function</i>	<i>Parameter</i>
OBJ	<name of graphic object>	POS=<x>,<y>
<i>Reply</i>	<i>Description</i>	<i>Example</i>
RES:0	Sets graphic object position in print.	OBJ:My graphic object; POS=100,100

Line Width		
<i>Command</i>	<i>Function</i>	<i>Parameter</i>
OBJ	<name of graphic object>	WID=<line width in pixels>
<i>Reply</i>	<i>Description</i>	<i>Example</i>
RES:0	Sets graphic box or line object line width.	OBJ:My graphic object;WID=500#

Length

Command	Function	Parameter
OBJ	<name of graphic object>	LEN=<object length in pixels>
Reply	Description	Example
RES:0	Sets graphic box width or line length.	OBJ:My graphic object;LEN=500#

Height

Command	Function	Parameter
OBJ	<name of graphic object>	HIG=<object height in pixels>
Reply	Description	Example
RES:0	Sets graphic box height.	OBJ:My graphic object;HIG=500#

Fill

Command	Function	Parameter
OBJ	<name of graphic object>	FLL=<On Off>
Reply	Description	Example
RES:0	Sets graphic box black fill ON/OFF.	OBJ:My graphic object;FLL=On#

Barcode objects

Text

Command	Function	Parameter
OBJ	<name of barcode object>	CON=<new text>
Reply	Description	Example
RES:0	Sets text of barcode object (barcode object must be linked to a static content).	OBJ:My barcode object;CON=New text#

Human readable font

Command	Function	Parameter
OBJ	<name of barcode object>	HUM=<1 0> (1=ON)
Reply	Description	Example
RES:0	Enables/disables human readable text on barcode.	OBJ:My barcode object;HUM=1#

Size

Command	Function	Parameter
OBJ	<name of barcode object>	SIZ=<line width>;<line height> (in pixels)
Reply	Description	Example
RES:0	Set barcode line size.	OBJ:My barcode object;SIZ=200;2#

Space

Command	Function	Parameter
OBJ	<name of barcode object>	SPC=<line extra spacing> (in pixels)
Reply	Description	Example
RES:0	Set barcode extra white spacing.	OBJ:My barcode object;SPC=10#

Black

Command	Function	Parameter
OBJ	<name of barcode object>	BLK=<line extra black> (in pixels)
Reply	Description	Example
RES:0	Set barcode extra black line width.	OBJ:My barcode object;BLK=10#

Checksum

Command	Function	Parameter
OBJ	<name of barcode object>	CHK=<0 1> (1=ON)
Reply	Description	Example
RES:0	Set barcode checksum on/off.	OBJ:My barcode object;CHK=1#

Type

Command	Function	Parameter
OBJ	<name of barcode object>	TYP=<barcode type>
Reply	Description	Example
RES:0	Set barcode type.	OBJ:My barcode object;TYP=EAN13#

Font

Command	Function	Parameter
OBJ	<name of barcode object>	FON=
Reply	Description	Example
RES:0	Sets human readable font to font with .	OBJ:My barcode object; FON=Ari_28pt#

Position

Command	Function	Parameter
OBJ	<name of barcode object>	POS=<x>,<y>
Reply	Description	Example
RES:0	Sets barcode object position in print.	OBJ:My barcode object; POS=100,100#

Static Contents

Text		
<i>Command</i>	<i>Function</i>	<i>Parameter</i>
OBJ	<name of static content>	TEX=<new text>
<i>Reply</i>	<i>Description</i>	<i>Example</i>
RES:0	Sets text of a static content object.	OBJ:My static content;TEX=this is a test#

Counter Contents

Minimum value		
<i>Command</i>	<i>Function</i>	<i>Parameter</i>
OBJ	<name of counter content>	MIN=<value>
<i>Reply</i>	<i>Description</i>	<i>Example</i>
RES:0	Set minimum count value of a counter content.	OBJ:My counter content;MIN=1000#

Maximum value		
<i>Command</i>	<i>Function</i>	<i>Parameter</i>
OBJ	<name of counter content>	MAX=<value>
<i>Reply</i>	<i>Description</i>	<i>Example</i>
RES:0	Set maximum count value of a counter content.	OBJ:My counter content;MAX=2000#

Current value		
<i>Command</i>	<i>Function</i>	<i>Parameter</i>
OBJ	<name of counter content>	CUR=<value>
<i>Reply</i>	<i>Description</i>	<i>Example</i>
RES:0	Set current count value of a counter content.	OBJ:My counter content;CUR=1500#

Digits		
<i>Command</i>	<i>Function</i>	<i>Parameter</i>
OBJ	<name of counter content>	DIG=<value>
<i>Reply</i>	<i>Description</i>	<i>Example</i>
RES:0	Set amount of digits in a counter content.	OBJ:My counter content;DIG=5#

Repeats		
<i>Command</i>	<i>Function</i>	<i>Parameter</i>
OBJ	<Name of counter content>	REP=<value>
<i>Reply</i>	<i>Description</i>	<i>Example</i>
RES:0	Set amount of prints per counter increment.	OBJ:My counter content;REP=3#

Step

Command	Function	Parameter
OBJ	<Name of counter content>	STP=<value>
Reply	Description	Example
RES:0	Set counter increment value.	OBJ:My counter content;STP=2#

Leadin

Command	Function	Parameter
OBJ	<Name of counter content>	LDN=< '0' > (' '=spaces leadin, '0'=zeros leadin , blank/others=no leadin)
Reply	Description	Example
RES:0	Set leadin of printed counter value.	OBJ:My counter content;LDN=0#

Date & Time Contents

Day offset

Command	Function	Parameter
OBJ	<name of date/time content>	EXP=<day offset>
Reply	Description	Example
RES:0	Set day offset of a date content.	OBJ:My date/time content;EXP=10#

Format

Command	Function	Parameter
OBJ	<name of date/time content>	FOR=<format string> (see format types)
Reply	Description	Example
RES:0	Sets date/time content print format.	OBJ:My date/time content;FOR=DDD#

Date set

Command	Function	Parameter
OBJ	<name of date/time content>	DAT=<year/month/day>
Reply	Description	Example
RES:0	Sets date of a data/time content object.	OBJ:My date/time content; DAT=2009/11/29#

Time set

Command	Function	Parameter
OBJ	<name of date/time content>	TIM=<hour:minute:second>
Reply	Description	Example
RES:0	Sets time of a data/time content object.	OBJ:My date/time content; TIM=13:03:31#

System contents

Content		
<i>Command</i>	<i>Function</i>	<i>Parameter</i>
OBJ	<name of system content>	CON=<system_type>
<i>Reply</i>	<i>Description</i>	<i>Example</i>
RES:0	Sets print output of a system content.	OBJ:My system content;CON=filename#

2.3 Parameter Handling

Layout length		
<i>Command</i>	<i>Function</i>	<i>Parameter</i>
PAR	<L M none>	LEN=<value> (in pixels) size=<value> (in pixels)
<i>Reply</i>	<i>Description</i>	<i>Example</i>
RES:0	Set picture length i pixels.	PAR:M;LEN=200#

Resolution		
<i>Command</i>	<i>Function</i>	<i>Parameter</i>
PAR	<L M none>	RES=<resolution_text> resolution=<resolution_text>
<i>Reply</i>	<i>Description</i>	<i>Example</i>
RES:0	Set print resolution.	PAR;RES=600#

Print direction		
<i>Command</i>	<i>Function</i>	<i>Parameter</i>
PAR	<L M none>	DIR=<right left> direction=<right left>
<i>Reply</i>	<i>Description</i>	<i>Example</i>
RES:0	Set print direction (r)ight (l)eft.	PAR:M;DIR=r#

Start distance		
<i>Command</i>	<i>Function</i>	<i>Parameter</i>
PAR	<L M none>	DIS=<value> (in pixels) start=<value> (in pixels)
<i>Reply</i>	<i>Description</i>	<i>Example</i>
RES:0	Set start distance from start signal to print i pixels.	PAR:M;DIS=200#

Start sensor edge

Command	Function	Parameter
PAR	<L M none>	EDG=<pos neg> edge=<positive negative>
Reply	Description	Example
RES:0	Set startsensor active edge (+=positive, -=negative).	PAR:M;EDG=pos#

Modular parameter

Command	Function	Parameter
PAR	<L M none>	MOD=<value> modular=<value>
Reply	Description	Example
RES:0	Set modular parameter.	PAR:M;MOD=1#

Velocity parameter

Command	Function	Parameter
PAR	<L M none>	VEL=<velocity> (in meters/min) velocity=<velocity> (in meters/min)
Reply	Description	Example
RES:0	Set velocity parameter. (decimal notation is allowed)	PAR:M;VEL=15#

Encoder parameter

Command	Function	Parameter
PAR	<L M none>	ENC=<encoder_par> (in mm/pulse) encoder=<encoder_par> (in mm/pulse)
Reply	Description	Example
RES:0	Set encoder parameter. (decimal notation is allowed)	PAR:M;ENC=0.00706#

Quadrature

Command	Function	Parameter
PAR	<L M none>	QDT=<+ -> quadrature=<+ ->
Reply	Description	Example
RES:0	Set encoder quadrature on off.	PAR:M;QDT=+#

Repeat

Command	Function	Parameter
PAR	<L M none>	REP=<repeats>, <repeat_distance> (in pixels) repeat=<repeats>, <repeat_distance> (in pixels)
Reply	Description	Example
RES:0	Set print repeats and distance between repeats.	PAR:M;REP=2,200#

Endless mode

Command	Function	Parameter
PAR	<L M none>	ENL=<+ -> endless=<+ ->
Reply	Description	Example
RES:0	Set endless print on/off.	PAR:M;ENL=+#

Print mode

Command	Function	Parameter
PAR	<L M none>	ENM=<pos mod vel> mode=<position modular velocity>
Reply	Description	Example
RES:0	Set print mode to Position, Modular or Velocity.	PAR:M;ENM=pos#

Buffer mode

Command	Function	Parameter
PAR	<L M none>	BUF=<+ -> buffermode=<+ ->
Reply	Description	Example
RES:0	Set print buffer mode (+)normal buffer (-)no buffer.	PAR:M;BUF=+#

Head offset

Command	Function	Parameter
PAR	<L M none>	OFF/offset=<head nr>;<head offset>;<pen1 offset>;.....
Reply	Description	Example
RES:0	Set offsets for a complete head. Offset are written with/without decimal point, and value may be appended with unit type (mm, in or px for mm, inches or pixels notation).	PAR;OFF=1;0;600;1200;1800#

Head parameters

Command	Function	Parameter
PAR	<L M none>	HEA/head=<head nr.>;<parameters> Parameters OFF/offset=<value><unit> Upside down: UPS/updown=<+/->
Reply	Description	Example
RES:0	Set head parameter: Offset, Upsidedown, otherside or voltage.	PAR;HEA=1;UPS=+#

Pen parameters

Command	Function	Parameter
PAR	<L M none>	PEN/pen=<head nr>;<pen nr>;<parm> OFF/offset=<value><unit> Overlap: OVL/overlap=<value> Ink setup: INK/ink=<ink supply (ml)>; <ink low (ml)> Ink reset: RST/reset
Reply	Description	Example
RES:0	Set pen parameters: Offset, overlap, ink setup, ink reset and pen auto switch.	PAR

Network setup

Command	Function	Parameter
PAR	N	DHCP=<on/off> NAME=<network name> IP=<IP ADDRESS> (dot seperated) GATE=<Gateway address> M=<network mask> MASK=<network mask>
Reply on success	Description	Example
P<ACK>	Set network parameters	PAR:N;DHCP=on#

2.4 Request Handling

Object Info

Graphic Object info (line)

Command	Function	Parameter
REQ	OBJ object	<name of graphic object>
Reply	Description	Example
DAT:<object_name>=graphic; type=<graphic_type>; pos=<X>,<Y>pix; length=<line_length>pix; line=<line_width>pix	Display object info	REQ:OBJ object;My graphic object#

Graphic Object info (box)

<i>Command</i>	<i>Function</i>	<i>Parameter</i>
REQ	OBJ object	<name of graphic object>
<i>Reply</i>	<i>Description</i>	<i>Example</i>
DAT:<object_name>=graphic; type=<graphic_type>; pos=<X>,<Y>pix; width=<box_width>pix; height=<box_height>pix; line=<line_width>pix;fill=<box_fill> ->	Display object info	REQ:OBJ object;My graphic object#

Graphic Object info (logo)

<i>Command</i>	<i>Function</i>	<i>Parameter</i>
REQ	OBJ object	<name of graphic object>
<i>Reply</i>	<i>Description</i>	<i>Example</i>
DAT:<object_name>=graphic; type=<graphic_type>; pos=<X>,<Y>pix; width=<logo_width>pix; height=<logo_height>pix; logo=<logo_name>	Display object info	REQ:OBJ object;My graphic object#

Text Object info

<i>Command</i>	<i>Function</i>	<i>Parameter</i>
REQ	OBJ object	<name of text object>
<i>Reply</i>	<i>Description</i>	<i>Example</i>
DAT:<object_name>=text;pos=<X>,<Y>pix; ori=<rotation_type>; font=<font_name>; <content_1_type>=<linked_content_1>;...; <content_n_type>=<linked_content_n>; sep=<content seperator char>	Display object info	REQ:OBJ object;My text object#

Barcode Object info

<i>Command</i>	<i>Function</i>	<i>Parameter</i>
REQ	OBJ object	<name of barcode object>
<i>Reply</i>	<i>Description</i>	<i>Example</i>
DAT:<object_name>=barcode; pos=<X>,<Y>pix; ori=<rotation_type>; font=<font_name>; <content_1_type>=<linked_content_1>;...; <content_n_type>=<linked_content_n>; sep=<content_seperator_char>; bartype=<barcode_type>; checktype=<checksum_0 1>; modules=<line_width>; blacksize=<black_size>; whitesize=<white_size>; human read=<human_readable>; height=<lines_height>	Display object info	REQ:OBJ object;My barcode object#

Content info

Static Content info

<i>Command</i>	<i>Function</i>	<i>Parameter</i>
REQ	CON/content	<Name of static content>
<i>Reply</i>	<i>Description</i>	<i>Example</i>
DAT:<content_name>=static; tex=<static_text>	Display content info	REQ:CON;My static content#

Counter Content info

<i>Command</i>	<i>Function</i>	<i>Parameter</i>
REQ	CON/content	<Name of counter content>
<i>Reply</i>	<i>Description</i>	<i>Example</i>
DAT:<content_name>=counter; value=<current_value>; digits=<digits>;min=<min_value>; max=<max_value>; rep=<repeats>;step=<step_value>; leadin=<leadin_type>	Display content info	REQ:CON;My counter content#

Date/Time Content info

Command	Function	Parameter
REQ	CON/content	<Name of date/time content>
Reply	Description	Example
DAT:<content_name>datetime; format=<format>; offset=<offset>; locale=<locales_name>	Display content info	REQ:CON;My date/time content#

Shift Content info

Command	Function	Parameter
REQ	CON/content	<Name of shift content>
Reply	Description	Example
DAT:<content_name>=shift; timeshift=<shift_datetime_1>; data=<shift_data_1>;...; timeshift=<shift_datetime_n>; data=<shift_data_n>	Display content info	REQ:CON;My shift content#

System Content info

Command	Function	Parameter
REQ	CON/content	<Name of system content>
Reply	Description	Example
DAT:<content_name>=system; type=<system_type>	Display content info	REQ:CON;My system content#

Identifier content

Command	Function	Parameter
REQ	CON/content	<name of identifier content>
Reply	Description	Example
DAT:<content_name>=identifier; ID=<ID_format>	Display content info	REQ:CON;My identifier content#

Parameters list

Command	Function	Parameter
REQ	PAR/parameters	<L M none>
Reply	Description	Example
DAT:size=<picture_length>pix; start=<start_distance>pix; res=<resolution_type>; quad=<quadrature+ ->; dir=<print_dir_right left>; repeat=<repeats>,<repeat_dist>pix; mod=<modular_parm>; vel=<velocity_parm>; enc=<encoder_parm>; edge=<sensor_edge_pos meg>; endless<endless_+ ->; mode=<printmode_pos mod vel>; buffer=<buffer_mode_0 1>; headoffset=<head_offset_1>; headsize=<head_size_1>; penoffset<head_1_pen_offset_1>;...; penoffset<head_1_pen_offset_n>;... ; head...=<head_n...>	List parameters	REQ:PAR;M#

File list

Command	Function	Parameter
REQ	DIR/dir	<directory path> (optional)
Reply	Description	Example
DAT:dir;<file/dir_name_1>;...;<file/dir_name_n>	List files	REQ:DIR#

Active jobname

Command	Function	Parameter
REQ	FIL/filename	
Reply	Description	Example
DAT:file=<job_name>	Show active jobname	REQ:FIL#

Active user

Command	Function	Parameter
REQ	user	
Reply	Description	Example
DAT:user=<user name>	Show current user	REQ:user#

Object list

Command	Function	Parameter
REQ	OLS/ Objects	
Reply	Description	Example
DAT:objects; <object_name_1>=<tex bar hrp>; ...; <object_name_n>=<tex bar hrp>	List objects	REQ:Objects#

Content list

Command	Function	Parameter
REQ	CLS/Contents	
Reply	Description	Example
DAT:contents; <static_name_1>=<sta>;...; <static_name_n>=<sta>; <counter_name_1>=<cnt>;...; <counter_name_n>=<cnt>; <date_time_name_1>=<dat>;...; <date_time_name_n>=<dat>; <shift_name_1>=<shf>;...; <shift_name_n>=<shf>; <system_name_1>=<sys>;...; <system_name_n>=<sys>; <identifier_name_1>=<id>;...; <identifier_name_n>=<id>	List content	REQ:Contents#

Version info

Command	Function	Parameter
REQ	VER/version	
Reply	Description	Example
RV:<MT_type>; <firmware_version>;<build_date>	List version info	REQ:VER#

Ethernet info

Command	Function	Parameter
REQ	IP/tcpip	
Reply	Description	Example
DAT:tcpip; name=<network_name>; ip=<ip_address>; mask=<ip_netmask>; gateway=<ip_gateway>; ipport=<ip_com_port>; fileport=<ip_file_port>; dhcp=<DHCP on off + ->	List ethernet info	REQ:IP#

Uptime

Command	Function	Parameter
REQ	UP/uptime	
Reply	Description	Example
DAT:uptime=<uptime_hours>hr	Display uptime	REQ:UP#

Print info

Command	Function	Parameter
REQ	PI/ print info	
Reply	Description	Example
DAT:print info;print=<on off>; prints=<pictures_printed>	Display print info	REQ:print info#

Ink info

Command	Function	Parameter
REQ	II/ink info	
Reply	Description	Example
DAT:ink info;<ink_used_pen_1>; ...;<ink_used_pen_n>	Display ink info	

Print done interrupt

Command	Function	Parameter
REQ	PD/print done	<on off>
Reply	Description	Example
DAT:print interrupt=<on off> (when print done and print interrupt on: SYS:PRD; <prints since last interrupt>)	Turn print done interrupt on or off	REQ:PD#

3 Error codes

Return error codes	
Code	Description
0	Transmission OK
2	Unknown command
101	Username not found
102	Password not accepted
104	User remote login not allowed
105	Not connected
106	Parameters changes not allowed
210	File not found
220	Printing, can't start now
221	Stopped, can't stop now
300	Object not found
301	OBJ: not a number
310	POS: x not a number
311	POS: y not a number
318	FONT: not a number
321	FONT: invalid font
340	LOGO: unknown logo
343	LOGO: invalid logo
352	BARCODE: function failed
353	BARCODE: unknown type
354	BARCODE: invalid checksum
404	Object changes not allowed
504	Not found
600	SYSTEM: unknown variable
602	TEXT: function failed
1010	PAR: not a number
1020	PAR: unknown edge
1050	PAR: unknown printmode
2001	FIL: transfer done OK
2004	File access not allowed
2010	FIL: tranfer busy
2011	FIL: failed opening file
2012	FIL: file size error
2013	FIL: file wr error
2014	FIL: file rd error
2015	FIL: file timeout
2015	FIL: max file entries
2110	DIR: unknown directory
2201	PRD: not valid number
2202	PRD: command error
3001	Firmware write done OK
3002	Firmware flash error
3003	Firmware timeout
3004	Firmware size error

4 Support

For product support, please contact the office where the product was purchased.

Coding and marking customers, please contact HS Automatic.

Mail, pharma and graphics customers, please contact HSA Mail.

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