OBJ INKDRAW Remote Communication

Version 1.0

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1 Introduction

Ethernet connection

To use ethernet connection, you should connect to a message (CB version), before you can change it's content. You can address all open messages, even the non-active messages. ALL communication must end with "#" (pound sign). Example: To update content of text object T1 you send:OBJECT:T1;TEX;This is the new text#

Serial connection

In serial communication, you are addressing the message that is designed for the board you connect to. (Board is selected in "canvas size" or "new" menu). If two open messages are designed for the same board, you address the active message (i.e. the message on top). Files are loaded in the active window. ALL communication must start with <ESC> (ASCII 27) and end with #<EOT> (ASCII 04)

Example: To update content of text object T1 you send:
<ESC>OBJ:T1;TEX;This is the new text#<EOT>

OBJ INKdraw will respond with ACK or NAK before the data

Complete command list

The following pages contain a complete command list for OBJ INKdraw remote communication. Please refer
to examples section for instruction on how to use.

On some commands, there are requirements, these are specified in the upper-right part.
- (minus): Does not work here
+ (plus): Works only / required
(+) Works, but is not applied immediately
! Works, but please see remark

COMMANDS COMMAND
CMD
Commands are used to do things.

2   Basic commands

Close		Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Closes active window				-			
Command(s) to use COMMAND:C# COMMAND:close#	Return data(if any)						

Database search		Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Search the database for <string>. If 'J' or 'search' is used, it will search the whole database. If 'K' or fast search is used, it will search only the first column.							+
Command(s) to use COMMAND:J;<string># COMMAND:search;<string># COMMAND:K;<string># COMMAND:fast search;<string>#	Return data(if any)						

Direct access of database		Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
The command loads the record numbers used for the direct access feature.							+
Command(s) to use COMMAND:A;<record 1>[;<record 2>; <record 3>…]#	Return data(if any)						

Disconnect		Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Disconnects the client program from Obj INKDraw.				-			
Command(s) to use COMMAND:D# COMMAND:disconnect	Return data(if any)						

Goto record		Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
The command points the database to the specified record.							+
Command(s) to use COMMAND:G;<record number># COMMAND:goto;<record number>#	Return data(if any)						

Load file	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
If connected to a layout, opened in same window. Otherwise, tries to open a new window. Loads the file specified by <file name>. If no path is given Inkdraw will load the file from the folders defined by the paths in preferences. The .ink extension is not necessary.				!		
Command(s) to use COMMAND:F;<file name># COMMAND:load file;<file name>#	Return data(if any)					

Print go	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
The print go command loads one print to the print head.						
Command(s) to use COMMAND:P# COMMAND:print# COMMAND:go#	Return data(if any)					

Shutdown	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Shuts down Obj INKDraw AND the PC						
Command(s) to use COMMAND:Q# COMMAND:shut down#	Return data(if any)					

Start print	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
The command starts the printer		+				
Command(s) to use COMMAND:R# COMMAND:start#	Return data(if any)					

Start print on hold	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
The command readies the printer for printing (R-), but the printer is not activated before an R+ command is send. Use this set of commands when using more than one controller board to synchronize the printers. If the commands are send when not connected to any message, they will be send to all open messages (print all).				!		
Command(s) to use COMMAND:R+/-# COMMAND:start+/-#	Return data(if any)					

Stop print	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
The stop print command stops the printer. If a layout is currently printing, the current print will finish.	+					
Command(s) to use COMMAND:S# COMMAND:stop#	Return data(if any)					

3   Object commands

Alignment	Printmode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Field objects only Changes the alignment of the field object. Allowed values are "left", "center", or "right".						
Command(s) to use OBJECT:<object name>;ALN; <alignment>#	Return data(if any)					

Barcode contents	Printmode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Barcode only. Changes the contents of a barcode. This will only work if no objects have been inserted into the barcode.						
Command(s) to use OBJECT:<object name>;CON; <contents>#	Return data(if any)					

Barcode Ink Spacing	Printmode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Sets the ink spacing to <value>.						
Command(s) to use Return Data (if any) OBJECT:<object name>;SPC;<value>#	Return data(if any)					

Barcode module	Printmode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Barcodes only. Selects between the original Obj INKDraw barcodes and the expanded (Tec-It) barcodes. Allowed values for <module> are "Tec-It","expanded" or "1" for the expanded module (everything else will set the original module). It is important to resend the barcode type after changing modules.						
Command(s) to use Return Data (if any) OBJECT:<object name>;MOD;<module>#	Return data(if any)					

Barcode type	Printmode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Sets the type of the barcode (EAN13, Codabar, etc). The type must be equal to the type given in Obj INKDraw (EAN13 will work, EAN-13 will not).						
Command(s) to use Return Data (if any) OBJECT:<object name>;TYP;<barcode type>#	Return data(if any)					

Color	Printmode	Edit	RS232	Eth. net	User mg buffer	DB loaded
The object must be either a rectangle, line or ellipse changes color on the specified object. If the object is a line there can be no <color 2>. Formats for colors are "w", "W", or "-" for white and "b", "B", "+" for black						
Command(s) to use OBJECT:<object name>;COL;<color 1> [<color 2>]#	Return data(if any)					

Counter values	Printmode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Counters only. Changes the minimum, maximum, or current (displayed) values of the counter. DIG sets the number of digits in the counter. DIR sets the direction of the counter, "+" for counting up, "-" for counting down. <lead in> is either space (" ", "space"), zero ("0", "zero"), or none ("none"). REP sets the repeat number of the counter.						
Command(s) to use OBJECT:<object name>;MIN;<minimum value># OBJECT:<object name>;CUR; <current value># OBJECT:<object name>; MAX;<maximum value># OBJECT:<object name>;DIG;<number of digits># OBJECT: <object name>;DIR;<+/-># OBJECT: <object name>;LDN;<lead in># OBJECT: <object n	Return data(if any)					

Create object	Printmode	Edit	RS232	Eth. net	User mg buffer	DB loaded
The object name must not be equal to an existing object Creates a new object with the specified name and type. Valid object types are: OTText (text object) OTCounter (counter object) OTBarcode (barcode) OTDateTime (date/time object) OTLogo (logo) OTField (field) OTMail (mail field) OTLine (line) OTRectangle (rectangle) OTEllipse (ellipse)						
Command(s) to use OBJECT:<object name>;create;<object type>#	Return data(if any)					

Data matrix size	Printmode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Data matrix barcodes only Sets the dot resolution. Valid sizes are: default, 10x10, 12x12, 14x14, 16x16, 18x18, 20x20, 22x22, 24x24, 26x26, 32x32, 36x36, 40x40, 44x44, 48x48, 52x52, 64x64, 72x72, 80x80, 88x88, 96x96, 104x104, 120x120, 132x132, 144x144, 8x18, 8x32, 12x26, 12x36, 16x36, and 16x48. If a non-valid size is given, default is used. Refer to datamatrix specifications for content size.						
Command(s) to use OBJECT:<object name>;DMS;<size>#	Return data(if any)					

Date format	Printmode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Date/time objects only. Sets the format for the date objects. Available formats are all Windows formats as well as all special Inkdraw date format features.						
Command(s) to use OBJECT:<object name>;FOR;<format>#	Return data(if any)					

Delete object	Printmode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Deletes the specified object and all sub-objects it might contain.						
Command(s) to use OBJECT:<object name>;delete#	Return data(if any)					

Expiry date/set date	Printmode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Date/time objects only. Sets the date of a date/time object. If sending a date it has to be of the format year/month/day (2003/3/19). Note that the DAT command is different from the DAT command used with fields.						
Command(s) to use OBJECT:<object name>;EXP;<expiry date># OBJECT:<object name>;DAT;<date>#	Return data(if any)					

Field data	Printmode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Field objects only. The command enters data to multiple (text only) lines in a field object. Note that the DAT command is different from the DAT command used with date/times.						
Command(s) to use OBJECT:<object name>;DAT;<line 1>; [<line 2>;<line3>;…;]#	Return data(if any)					

Font	Printmode	Edit	RS232	Eth. net	User mg buffer	DB loaded
All objects containing a font (fields, schedules, barcodes, texts, counters, and dates) Changes the font for the specified object. Font size and font style does not need to be present. Font style values are: 1=bold, 2=italic, 4=underline, 8=strikeout (cummulative).						
Command(s) to use OBJECT:<object name>;FON;<font name>[;<font size>;<font style>]#	Return data(if any)					

Human Readable	Printmode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Turns on ("+") or off ("-") human readable text in the barcode.						
Command(s) to use OBJECT:<object name>;HUM;+/-#	Return data(if any)					

Invert	Printmode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Inverts the object ("+") or returns the object to normal ("-").						
Command(s) to use OBJECT:<object name>;invert;<+/->>#	Return data(if any)					

Line position	Printmode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Only line objects.Changes the position/ size of the line. The start point of the line is (<start x>, <start y>) and the end point is (<end x>, <end y>).						
Command(s) to use OBJECT:<object name>;X-1;<start x># OBJECT:<object name>;X-2;<end x># OBJECT:<object name>;Y-1;<start y># OBJECT:<object name>;Y-2;<end y>#	Return data(if any)					

Line width	Printmode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Only graphic objects (lines, rectangles and ellipses). Changes the line width.						
Command(s) to use OBJECT:<object name>;WID;<width>#	Return data(if any)					

Load logo	Printmode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Logos only. Loads a new logo into the logo object, as specified by the name and path given. Uses LOGO search path.						
Command(s) to use OBJECT:<object name>;PAT;<path to new logo>#	Return data(if any)					

Monitoring	Printmode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Adds ("+") or removes ("-") an object from the monitor list.						
Command(s) to use OBJECT:<object name>;monitor;<+/->#	Return data(if any)					

Number of field lines	Printmode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Empty fields only. Sets the number of lines in the field object. The command will not work unless the field is empty.						
Command(s) to use OBJECT:<object name>;LIN;<amount of lines>#	Return data(if any)					

Position	Printmode	Edit	RS232	Eth. net	User mg buffer	DB loaded
All objects except lines.Changes the position of the object. Positions are measured as the upper left corner.						
Command(s) to use OBJECT:<object name>;POS;<x>;<y>#	Return data(if any)					

Rename object	Printmode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Renames the object.						
Command(s) to use OBJECT:<object name>;rename;<new object name>#	Return data(if any)					

Rotation	Printmode	Edit	RS232	Eth. net	User mg buffer	DB loaded
All objects except lines. Rotates the object. Valid values for <rotation> are 0, 90, 180, or 270 (degrees).						
Command(s) to use OBJECT:<object name>;ROT;<rotation>#	Return data(if any)					

Size	Printmode	Edit	RS232	Eth. net	User mg buffer	DB loaded
All objects except lines. Changes the size of the object. Any font will be automatically resized to fit in the new siz						
Command(s) to use OBJECT:<object name>;SIZ;<width>; <height>#	Return data(if any)					

Snap Point	Printmode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Sets the object snap point. 1=up/left, 2=up, 3=up/right, 4=left, 5=center, 6=right, 7=down/left, 8=down, 9=down/right.						
Command(s) to use Return Data (if any) OBJECT:<object name>;snap;<1-9>#	Return data(if any)					

Text	Printmode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Text objects only. Writes a new text in the object. The object will be automatically resized to fit the size of the new text.						
Command(s) to use OBJECT:<object name>;TEX;<new text>#	Return data(if any)					

Transparency	Printmode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Turns object transparency on ("+") or off ("-").						
Command(s) to use OBJECT:<object name>;trans;<+/->#	Return data(if any)					

4   Parameters

Endless	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
The command will turn on/off endless mode. It will be accepted in print mode, but will not change before exiting print mode.						
Command(s) to use PARAMETER:endless;+# PARAMETER;endless;-#	Return data(if any)					

Global Ink Reduction	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Sets the global ink reduction. Valid values are 25, 50, 75. 25 can be replaced by 1, 50 by 2 and 75 by 3. Any other value will disable ink reduction.						
Command(s) to use PARAMETER:ink reduction;<value>#	Return data(if any)					

Head adjustments	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Makes adjustments to the print heads. With offset you give an offset in mm, engine1-4 is engine offset (also in mm), upside, other side, invert is activated with "+" or deactivated with anything else.	-					
Command(s) to use PARAMETER:adjust;<head no>;offset;<value># PARAMETER:adjust;<head no>;engine1;<value># PARAMETER:adjust;<head no>;eng1;<value># PARAMETER:adjust;<head no>;1;<value># PARAMETER:adjust;<head no>;engine2;<value># PARAMETER:adjust;<head no>;eng2;<value># PARA	Return data(if any)					

HP print mode	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
The command will set the HP printing resolution. Types are: 600x600 DPI ("1"), 300x300 DPI highspeed ("2"), 300x300 DPI with one row ("3"), 150x300 DPI ("4"), 600x300 DPI highspeed ("5") and 300x600 DPI with one row ("6"). The optional parameter contains the relative nozzle offset, or, which row ("1" or "2") to use with one row modes.	-					
Command(s) to use PARAMETER:hp;<type>[;parameter]#	Return data(if any)					

Message length	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Sets message length	-					
Command(s) to use PARAMETER:size;<value># PARAMETER:length;<value>#	Return data(if any)					

Modules	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Sets the modular encoder value.	-					
Command(s) to use PARAMETER;modules;<value># PARAMETER;modular;<value>#	Return data(if any)					

Print Buffer Mode	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
The command will set the print buffer mode user-managed buffer ("user"), 1, 2, or 10 print ("1", "2", or "10"). Other values of <type> will set the buffer mode to default (unlimited).	-					
Command(s) to use PARAMETER:buffermode;<type>#	Return data(if any)					

Print direction	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Sets the print direction. + is left to right, - is right to left	-					
Command(s) to use PARAMETER:direction;+/-# PARAMETER:dir;+/-#	Return data(if any)					

Print mode	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Changes between position encoder ("pos", "position", or "P"), modular encoder ("mod", "modular", or "M"), and velocity ("vel", "velocity", "V") modes. Changes will be accepted in print mode, but will not take effect before exiting print mode.	-					
Command(s) to use PARAMETER;mode;<print mode>#	Return data(if any)					

Print signal	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
The command will set the signal type to either print signal ("print", or "+") or message signal ("message", or "-").						
Command(s) to use Return Data (if any) PARAMETER:signal;<type>#	Return data(if any)					

Print speed	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Changes the encoder/velocity parameter. Exiting print mode is needed.	(+)					
Command(s) to use PARAMETER:encoder;<value># PARAMETER:velocity;<value>#	Return data(if any)					

Purge	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Starts a purge on the heads defined in head flags (1=head 1, 2=head 2, 4=head 3, 8=head 4, etc, multiple heads can be activated by adding their values). The purge will last the given time in msec. If you start purge by using the start command the heads will purge until you send the stop command.	-					
Command(s) to use PARAMETER;purge;<head flags>; <time># PARAMETER:start purge;<heads># PARAMETER:stop purge#	Return data(if any)					

Quadrature	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Turns quadrature on or off	-					
Command(s) to use PARAMETER:quadrature;+/-# PARAMETER:quad;+/-#	Return data(if any)					

Repeat	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Sets repeat number and distance.	-					
Command(s) to use PARAMETER;repeat;<count>; <distance>#	Return data(if any)					

Set edge	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
The command will change the sensor trigger to either positive ("pos", "positive", or "+") edge, or negative ("neg", "negative", "-") edge. The command will be accepted in print mode, but the change will not work before exiting and re-entering print mode.	-					
Command(s) to use PARAMETER:edge;<edge>#	Return data(if any)					

Spit	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Sets the spit rate and burst size, and turns tickle on ("+") or off (anything else).						
Command(s) to use PARAMETER;spit;\<rate>;\<size>;+/-#	Return data(if any)					

Start distance	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
The command changes the "start mm" parameter. The given value must be in mm.	(+)					
Command(s) to use PARAMETER:start;\<start distance>#	Return data(if any)					

Stitching	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Adjusts vertical stitching of the print heads	-					
Command(s) to use PARAMETER:stitch;\<head no>;\<value>#	Return data(if any)					

5   Request Commands

Available fonts	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Inkdraw returns a list of all available fonts.						
Command(s) to use REQUEST:font list#	Return data(if any) DATA:\<font name>#					

Connect to message	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Connects to the specified message. File type (.ink) is mandatory. If just file name is given, file is loaded from "files directory".			-			
Command(s) to use REQUEST:connect;\<message name>#	Return data(if any)					

Conveyor velocity	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Returns the current conveyor velocity	+					
Command(s) to use REQUEST:velocity#	Return data(if any) DATA:\<value>#					

File directory	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
A list of the files available in {install}\files directory.						
Command(s) to use REQUEST:dir# REQUEST:directory#	Return data(if any) DATA:inkfile1.ink# DATA:inkfile2.ink#					

Ink usage	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Returns the ink used per head since last request. Use this to build your own ink counter.						
REQUEST:ink use#	Return data(if any) DATA:<head1>;<head2>;<head3>;<head4>#					

List of open layouts / files	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Returns a list of open layouts.			-			
Command(s) to use REQUEST:messages# REQUEST:file list#	Return data(if any) DATA:c:\path\subpath\file1.ink# DATA:c:\path2\subpath\file2.ink#					

Ping	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Use to check if the connection is alive and working						
Command(s) to use REQUEST:ECHO#	Return data(if any) DATA:ECHO#					

Print ready	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Checks if the CB got space for another print in the buffer. Used with user-managed buffer.					+	
Command(s) to use REQUEST:print ready#	Return data(if any) DATA:ready# DATA:not ready#					

Printer status	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Inkdraw returns status of the printer (online/offline/printing) as well as hardware status (fuses, inklow).						
Command(s) to use REQUEST:status#	Return data(if any) DATA:\<field\>;\<value\>#					

Request data of an object	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Inkdraw returns all data available for the object.						
Command(s) to use REQUEST:object data;\<object name\>#	Return data(if any) DATA:\<field\>;\<value\>#					

Request list of objects	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Inkdraw returns a list of objects from the current layout Ethernet mode: must be connected to a layout				!		
Command(s) to use Return Data (if any) REQUEST:object list#	Return data(if any) DATA:\<object type\>;\<object name\># Object type: OTText OTCounter					

Request parameter data	Print mode	Edit	RS232	Eth. net	User mg buffer	DB loaded
Inkdraw returns all available parameters.						
Command(s) to use REQUEST:parameters#	Return data(if any) DATA:\<field\>;\<value\>#					

6 Replies

All objects

```
DATA:sub;<true/false>#
DATA:rotation;<rotation>#
DATA:transparent;<+/->#
DATA:invert;<+/->#
DATA:monitor;<+/->#
```

Result hen requesting data on any object. This is always the first line sent from Inkdraw when requesting object data. If sub sends "true" the object is stored inside another object (barcode/field) and will have less properties, <rotation> is the rotation of the object (in degrees). Other data describe if the object is transparent, inverted and monitored during print.

Lines

```
DATA:x1;<start x>#
DATA:x2;<end x>#
DATA:y1;<start y>#
DATA:y2;<end y>#
DATA;size;<line width>#
DATA:color;<color>#
```

Result from: when requesting data from a line. The format for <color> is "+" (black) or "-" (white).

Rectangles/ellipses

```
DATA:x;<x position>#
DATA:y;<y position>#
DATA:width;<width>#
DATA:height;<height>#
DATA:size;<line width>#
DATA:color;<color 1>;<color 2>#
```

Result from: when requesting data from a rectangle or an ellipse. The format for <color 1> and <color 2> is "+" (black) or "-" (white). Color 1 is the line out and color 2 is the body of the object.

Text objects

```
DATA:text;<text>#
[DATA:x;<x position>#]
[DATA:y;<y position>#]
[DATA:width;<width>#]
[DATA:height;<height>#]
DATA:font;<font name>#
```

Result from: when requesting data from a text object. <text> is the contents of the object. Font, position and size are not send with texts inside barcodes or fields.

Logos

```
DATA:path;<path to logo>#
DATA:x;<x position>#
DATA:y;<y position>#
DATA:width;<width>#
DATA:height;<height>#
```

Result from: when requesting data from a logo. <path to logo> will be the full path, except if the logo is stored in the (inkdraw)\logos folder, then it will be .<filename>
(notice the dot).

Counters

```
DATA:minimum;<minimum value>#
DATA:current;<current value>#
DATA:maximum;<maximum value>#
[DATA:x;<x position>#]
[DATA:y;<y position>#]
[DATA:width;<width>#]
[DATA:height;<height>#]
DATA:direction;<+/->#
DATA:leadin;<lead in>#
```

Result from: when requesting data of a counter. Note that the current value might change quite fast during print. Position and size are not send with counters inside
barcodes or fields. <lead in> is either ” ” (space), ”0” (zero), or ”-” (none).

Barcodes

```
DATA:contents;<contents>#
DATA:x;<x position>#
DATA:y;<y position>#
DATA:width;<width>#
DATA:height;<height>#
DATA:module;<module>#
DATA:type;<barcode type>#
```

Result from: when requesting data from a barcode. <module> will be either ”HSA” (original module) or ”Tec-It” (expanded module).

Fields

```
DATA:x;<x position>#
DATA:y;<y position>#
DATA:width;<width>#
DATA:height;<height>#
DATA:data;<line 1>#
[DATA:data;<line 2>#]
```

Result from: when requesting data of a field object. The number of data lines will equal the number of text objects in the field.

Schedules

```
DATA:x;<x position>#
DATA:y;<y position>#
DATA:width;<width>#
DATA:height;<height>#
```

Result from: when requesting data of a schedule.

Dates

```
DATA:date;<expiry date>#
DATA:format;<date format>#
[DATA:x;<x position>#]
[DATA:y;<y position>#]
[DATA:width;<width>#]
[DATA:height;<height>#]
```

Result from: when requesting data from a date/time. Note that it sends the expiry date – not the current date. Position and size are not send with dates inside barcodes or fields.

Parameters

```
DATA:start;<start distance>#
DATA:edge;<+/->#
DATA:signal;<+/->#
DATA:endless;<+/->#
DATA:mode;<print mode>
```

Result from: when requesting parameters. <print mode> is "M" (modular), "P" (position), or "V" (velocity).

Status

```
DATA:printmode;<+/->#
DATA:printing;<+/->#
DATA:status;<status>#
```

Result from: when requesting printer status. <status> will be a text describing errors on the system, for example "[5V fuse burned, low ink]".

All replies

```
RESULT:<error code>
```

Returns from: after all commands send. This will always be the last command send from Inkdraw and indicates the end of transmission.

7   Error codes

0: "Transmission OK"
Transmission gone through and all return information send without problems.

1: "Wrong password"
Wrong password. This will disconnect you.

2: "Unknown command"
An invalid command was send to Inkdraw. You probably forgot "COMMAND:", "OBJECT:", or "REQUEST:" in front of your data.

10: "Password OK"
Your password was accepted. This is NOT an error.

100: "COMMAND: Unknown command".
The command you sent was not a vallid COMMAND: command.

101: "COMMAND: S: Printer is not running"
You tried to stop the printer but it wasn't running.

102: "COMMAND: R: Printer is already running"
You tried to start the printer, but it was already started.

103: "COMMAND: F: File not found"
The file you tried to load does not exist. Check spelling and/or path.

104: "COMMAND: G/A: Database not active"
You tried to send a database command, but not database was loaded.

105: "COMMAND: Illegal data, a number was expected"
The command you sent had text where a number was expected. You tried to go to database record "field 1", instead of "1".

110: "COMMAND: DATABASE: Record not found"
The requested record was not found in the database.

200: "REQUEST: Unknown command"
Unknown request.

210: "REQUEST: CONNECT: Message not found"
You tried to connect to a message that was not open. Check that your name matches the Inkdraw message name excactly (use "REQUEST:messages").

211: "REQUEST: CONNECT: Message in use"
You tried to connect to a message thats in use by someone else. This might be due to a broken link.

220: "REQUEST: OBJECT DATA: Object not found"
You requested data on an object that is not present in the layout.

300: "OBJECT: Object not found"
You tried to send a command (different from create) to an object that was not found.

301: "OBJECT: Unknown command"
You send an unknown command. This might be a mismatch between object type and command.

302: "OBJECT: Invalid object type (this is a server error)"
There is a problem with the object you tried to access. You should never see this error.

310: "OBJECT: POSITION: Invalid X value"
You sent a position where the x value was a text not a number.

311: "OBJECT: POSITION: Invalid Y value"
You sent a position where the y value was a text not a number.

312: "OBJECT: POSITION: No X value"
There was no values for x and y in the position you sent. Check for missing ;s.

313: "OBJECT: POSITION: No Y value"
There was only one value for the position you sent. Check for a missing ;.

314: "OBJECT: SIZE: Invalid X value"
You sent a size where the width was a text not a number.

315: "OBJECT: SIZE: Invalid Y value"
You sent a size where the height was a text not a number.

316: "OBJECT: SIZE: No X value"
There was no values for width and height in the size you sent. Check for missing ;s.

317: "OBJECT: SIZE: No Y value"
There was only one value for the size you sent. Check for a missing ;.

318: "OBJECT: FONT: Illegal data, a number was expected"
A number was expected for the font size/style and you sent a text.

319: "OBJECT: COLOR: Illegal data"
Either you send too few data, or illegal data. Legal data are "w", "W", and "-" for white, and "b", "B", and "+" for
black. For rectangles and ellipses this must have the format "wb", not "w;b".

320: "OBJECT: COUNTER: Illegal data, a number was expected"
You sent a text where a number was expected.

330: "OBJECT: DATE: Illegal data, a number was expected"
You sent a text where a number was expected.

331: "OBJECT: DATE: Illegal data, the format dd/mm/yy was expected"
You have used the wrong format for a date.

332: "OBJECT: DATE: Function failed"
Inkdraw failed to change the date to the requested date. You might have entered 31st of february (2003/02/31) or the
interchanged the month and day (2002/24/12 instead of 2002/12/24).

340: "OBJECT: LOGO: File not found"
The requested logo file was not found. Check path and filename.

352: "OBJECT: BARCODE: Function failed"
Inkdraw failed to change the barcode text.

353: "OBJECT: BARCODE: Invalid barcode type"
The barcode type was not found. This might be due to wrong spelling, or wrong barcode module.

360: "OBJECT: LINE: Illegal data, a number was expected"
A text was found where a number was expected.

370: "OBJECT: RECTANGLE: Illegal data, a number was expected"
A text was found where a number was expected.

380: "OBJECT: ELLIPSE: Illegal data, a number was expected"
A text was found where a number was expected.

390: "OBJECT: FIELD: Illegal data, a number was expected"
A text was found where a number was expected.

391: "OBJECT: FIELD: Invalid command"
You tried to set the number of lines in an already populated field.

392: "OBJECT: FIELD: Too many lines"
You have entered more data than there are text lines in the field.

393: "OBJECT: FIELD: Unknown alignment"
Alignment must be "left", "center", or "right".

400: "OBJECT: ROTATION: Only rotations of 0, 90, 180, and 270 degrees allowed"
The function argument must be 0, 90, 180, or 270.

1000: "PARAMETER: Unknown command"
Uknown parameter.

1010: "PARAMETER: START: Illegal data, a number was expected"
A text was found where a number was expected.

1020: "PARAMETER: EDGE: Unknown edge"
Edges must be "+" (positive) or "-" (negative).

1030: "PARAMETER: SIGNAL: Unknown signal"
The signal must be "+" (print signal) or "-" (message signal).

1040: "PARAMETER: ENDLESS: Illegal data, + or - was expected"
Endless must be either on ("+") or off ("-").

1050: "PARAMETER: MODE: illegal data, P, M or V was expected"
Mode must be either "P", "position", "V", "velocity", "M", or "modular".

1060: "PARAMETER: VELOCITY/ENCODER: illegal data, a number was expected"
A text was found where a number was expected.

8   Service and 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.

HS Automatic
Mileparken 16
DK-2740 Skovlunde
Denmark

techsupport@hsasystems.com

Phone: +45 44 94 02 22
Fax: +45 44 94 03 33

HSA MAIL
Aulkaervaenget 1
DK-5260 Odense S
Denmark

Phone: +45 6610 3401
Fax: +45 6610 4301

HSA MAIL FRANCE
19 rue de l'Université
93160 Noisy le Grand
France

Phone. 00 33 1 48 15 50 50
Fax. 00 33 1 43 04 51 71