HS-1RS User Guide

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Revision History

DATE	Version	Description
01/13/2021	01132021	Updated few sections.
05/18/2020	Original (05182020)	Original HS-1RS manual.

Contents

1 - Introduction

The JADAK HS-1RS is a handheld barcode and Radio Frequency Identification (RFID) reader that utilizes area imaging technology to read popular linear (1D), stacked linear, and matrix (2D) barcodes, combined with reading and writing High Frequency (13.56 MHz) as well as Low Frequency (125 KHz or 134.2 KHz) RFID tags in close distance (10 to 40mm).

With a small ergonomic shape, the HS-1RS can be used in a wide variety of applications but is specifically designed for healthcare applications and environments. The HS-1RS has a sealed housing that protects it from day to day debris and spills and is built with medical grade plastics that are compatible with popular medical cleansers and disinfectants.

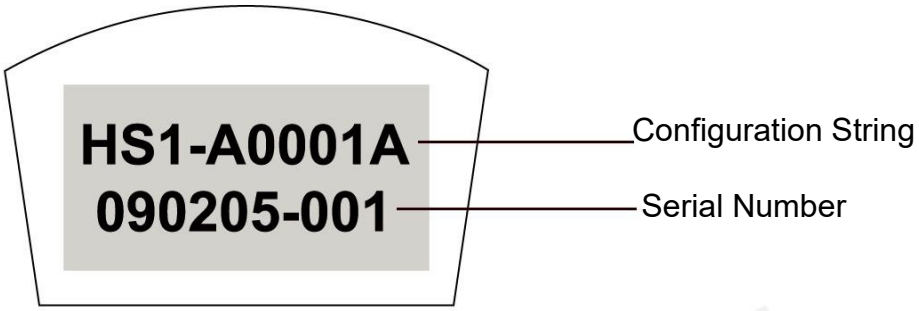
This User Guide provides installation and programming instructions for the HS-1RS. Product specifications, dimensions, warranty, and customer support information are also included. JADAK's barcode imagers are factory programmed for the most common terminal and communications settings. If you need to change these settings, programming is accomplished by scanning the bar codes in this guide or sending the relevant commands serially.

Note: An asterisk (*) next to an option indicates the default setting.

Hardware Overview

JADAK® HS-1RS Imager Identification

On the bottom of your scanner you will see a label as shown below:



Configuration String:
The configuration string is a 10-digit string with the first 9 digits being a factory configuration number and the last digit being the revision of the product.

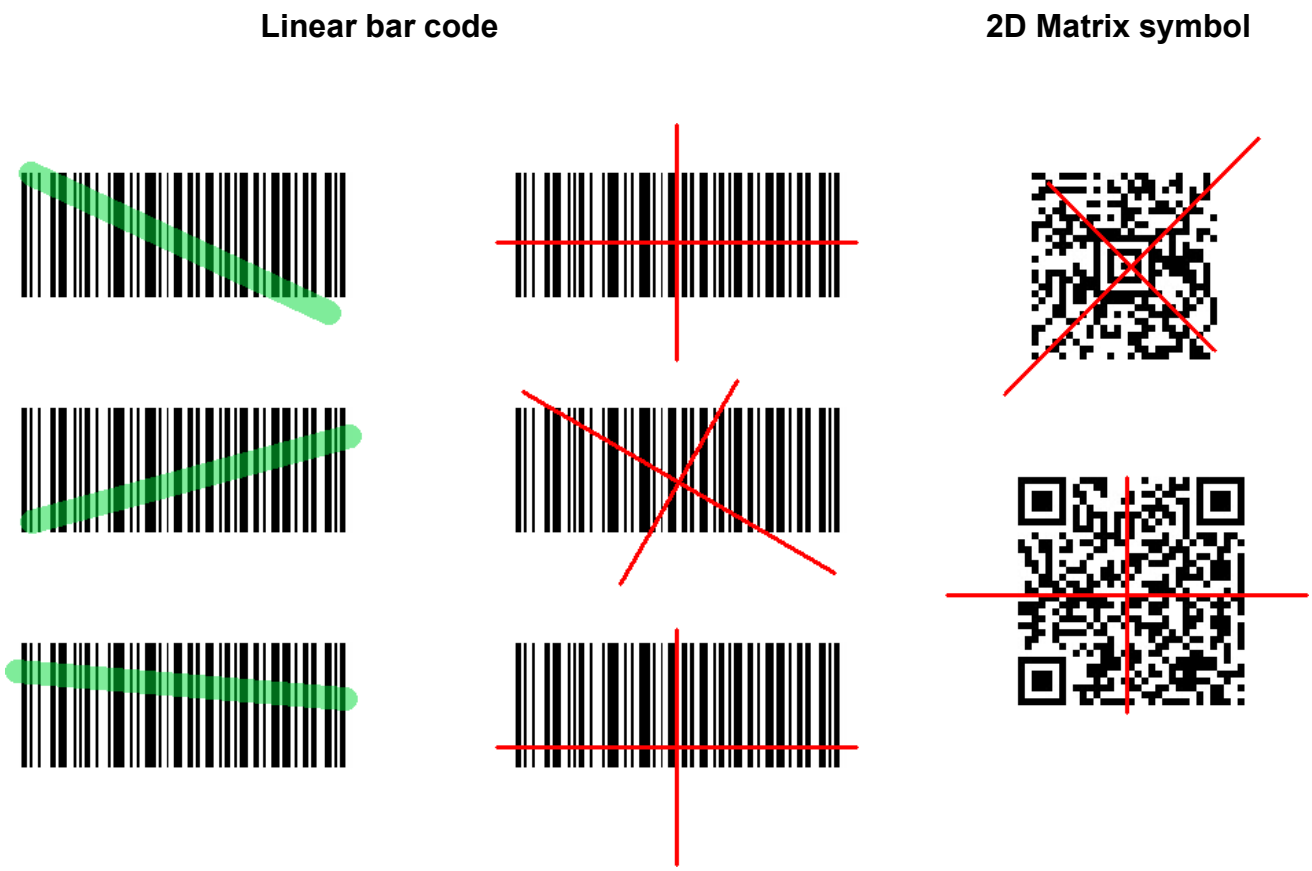
Please consult the factory for configuration information.

Serial Number:
The serial number format is as follows: YYMMDD-NNN

Where:
YY = Year
MM = Month
DD = Day
NNN = Unit Number

Reading Techniques

The imager has a view finder or aimer that projects a bright red cross or a green beam, which corresponds to the imager's horizontal/vertical field of view. The aimer should be centered over the bar code, but it can be positioned in any direction for a good read. See the following page for examples:



The aiming beam is smaller when the imager is closer to the code and larger when it is farther from the code.

Symbologies with smaller bars or elements (lower mil size) should be read closer to the unit. Symbologies with larger bars or elements (higher mil size) should be read farther from the unit.

To read single or multiple symbols (on a page or on an object), hold the imager at an appropriate distance from the target, pull the trigger, and center the aiming beam on the symbol. If the code being scanned is highly reflective (e.g., laminated), it may be necessary to tilt the code up 15° to 18° to prevent unwanted reflection.

2 - Interface Settings

Connecting the HS-1RS with USB Port

Note: *These instructions are for use with the USB (JADAK CBL-0080 Rev C) cable.*

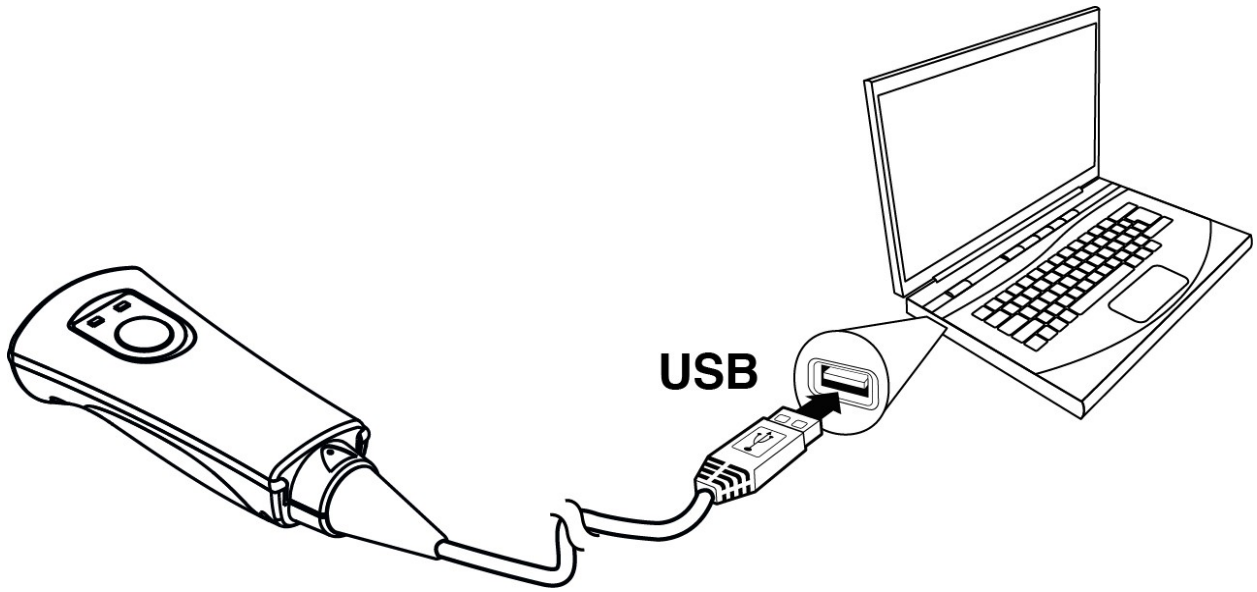
1. If you are using USB Serial Communication Port Emulation interface, you must first load the driver for that interface onto your computer.
   The driver is available from your JADAK technical support contact.

   No driver is required when using the USB HID Keyboard interface.

2. Turn off power to the terminal/computer.

3. Connect the appropriate interface cable to the HS-1RS hand scanner.

Note: *For the imager to work properly, you must have the correct cable for your type of terminal/computer.*



3. Plug the USB-A connector into a free USB port on your computer.

4. Once the imager has been fully connected, power up the computer.

Interface Options

USB COM Port Emulation

HOSTCFG command is used to select data output interface while the scanner is in composite mode. Scan the following code to program the HS-1RS to emulate a regular RS-232-based COM port.

Note: The HS-1RS **must** be power cycled after programming this interface!

USB COM Emulation

USB HID Keyboard Emulation

HOSTCFG command is used to select data output interface while the scanner is in composite mode. Scan the following code to program the HS-1RS for USB HID Keyboard mode.

Note: The HS-1RS **must** be power cycled after programming this interface!

USB HID Keyboard

Keyboard Country Layout

When the HS-1RS is set to USB HID Keyboard Emulation, use the following commands (without prefix “JDK”) or programming barcodes to set the specific Keyboard layout for your language. Default = United States.

*** United States:**

#KBD_CTY 0

United Kingdom:

#KBD_CTY 1

Belgium:

#KBD_CTY 21

Denmark:

#KBD_CTY 30

France:

#KBD_CTY 20

Germany:

#KBD_CTY 15

Italy:

#KBD_CTY 35

Netherlands:

#KBD_CTY 31

Norway:

#KBD_CTY 28

Portugal:

#KBD_CTY 33

Spain:

Sweden / Finland:

#KBD_CTY 36

#KBD_CTY 26

HID Keyboard Rate

If you use the HS-1RS in USB HID Keyboard mode, it's possible to change the speed of the data output when an RFID tag or barcode is read, akin to someone typing the data faster or slower on a keyboard. Faster settings may lead to data loss when large amounts of data are transmitted.

Note: This setting has no impact when using the HS-1RS in USB COM Emulation mode.

Scan one of the codes below to change the Keyboard Rate setting. Default = Keyrate 3.

Note: The HS-1RS **must** be power cycled after changing the Keyboard rate!

#KEYRATE 0

Keyrate Slow

#KEYRATE 1

Keyrate Medium

#KEYRATE 2

Keyrate Fast

#KEYRATE 3

** Keyrate Fastest*

Default Options

Custom Default Settings

Scan the following code revert the unit to its custom default settings.

Note: The HS-1RS **must** be power cycled after programming this command!

#DEFAULT

To set custom defaults, please contact Jadak.

Factory Default Settings

Scan the following code revert the unit to its factory default settings.

Note: The HS-1RS **must** be power cycled after programming this command!

#DEFFACT

3 - Input/Output Settings

Good Read Indicators

Beeper Volume - Good Read

The beeper volume codes modify the volume of the beep the imager emits on a good read. Default = High.

#BEPLEVL 0

Off

#BEPLEVL 1

Low

#BEPLEVL 2

Medium

#BEPLEVL 3

** High*

No Reads

Not every trigger event will result in a successful barcode read. When there is no code read the HS-1RS may return a no read signer in the form of the characters NR. Default = Disable No Read.

#NORDENA 0

** Disable No Read*

#NORDENA 1

Enable No Read

Vibration

The HS-1RS has an optional internal Vibration function that can be turned on for good reads (both RFID and barcodes). This can be very helpful in an environment where an audible beep would be unwanted; for instance, in a patient ward at night in a hospital, where patients are sleeping.
Default = Enabled

#VIBENAB 0

Don't Vibrate

#VIBENAB 1

** Vibrate on Good Read*

Trigger Commands

In order to scan barcodes, you need to 'trigger' the HS-1RS. This can be done in various ways. You can activate the HS-1RS by sending the trigger command TRGON serially or by pressing the trigger button on the scanner itself.

Several supporting commands are provided to set the allowed trigger time-out (e.g. the maximum time that the scanner will take to keep looking for a barcode.)

TRGON This command turns the trigger ON.

TRGOFF This command turns the trigger OFF.

Trigger Modes

Manual Trigger (level)

You can activate the imager by pressing the trigger or sending the serial trigger command **TRGON**. When in manual trigger mode, the HS-1RS scans until a bar code is read, until the trigger is released, a **TRGOFF** command is sent, or a time-out occurs.
Use the command below to enable Manual Trigger Mode.

** Manual (level) Trigger*

Presentation Mode

Presentation mode is a hands-free mode of operation in which the imager will automatically trigger on when an object is moved into the field of view.
The HS-1RS will not enter low power mode while in Presentation Mode.
Use the command below to enable Presentation Mode.

Presentation Mode

Trigger Time Out

This sets the maximum time how trigger procession continues during a scan attempt.
This command is not valid in Presentation Trigger Mode.
Use the command **TRGTIME x** *(where 'x' is a value between 0 and 300.000 in 1ms steps)*, to set the time between 1ms and 300 seconds. Default = 9900 (9.9 Seconds).
Note: *TRGTIME 0 = infinite trigger time out.*

Setting examples:


#TRGTIME 1000

Trigger Time Out 1.0 seconds


#TRGTIME 5000

Trigger Time Out 5.0 seconds


#TRGTIME 9900

** Trigger Time Out 9.9 seconds*


#TRGTIME 30000

Trigger Time Out 30.0 seconds

Good Read Delay

This sets the time period before the scanner can read another bar code.
Use the command **DLYGDRD x** *(where 'x' is a value between 0 and 30.000 milliseconds)*, to set the time between 0 (no delay) and 30.000 (=30 sec). Default time = 0 Seconds.

Note: *Good Read Delay is most effective when in Presentation Mode or when Multiple Symbol Mode is turned on in combination with the other Trigger Modes.*

Setting examples:


#DLYGDRD 0

** No Good Read delay*


#DLYGDRD 200

Good Read delay 0.2 seconds


#DLYGDRD 500

Good Read delay 0.5 seconds


#DLYGDRD 1000

Good Read delay 1.0 seconds

Re-read Delay

This sets the time period before the imager can read the same bar code a second time. Setting a proper re-read delay time protects against accidental re-reads of the same bar code. Use shorter delays in applications where repetitive bar code scanning is required.

Several commonly used re-read delay menu command barcodes are included below. Use the command **DLYGDRD x** *(where 'x' is a value between 50 and 30.000 in milliseconds)*, or by building a menu command barcode that includes such a value.
Please contact JADAK if assistance is needed. Default time = 0.75 seconds.

Note: *Re-read Delay only works when in* ***Presentation Mode****.*

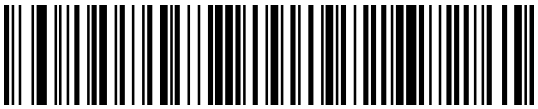
Setting examples:

#DLYRERD 50

Re-read delay 0.05 seconds

#DLYRERD 100

Re-read delay 0.1 seconds



#DLYRERD 1000

Re-read delay 1.0 seconds

#DLYRERD 2000

Re-read delay 2.0 seconds

#DLYRERD 5000

Re-read delay 5.0 seconds

#DLYRERD 750

** Re-read delay 0.75 seconds*

4 – Utilities

Utilities Overview

This chapter describes some utilities that can tell more about certain aspects of the HS-1RS hand scanner.

Report the list of available Programming Commands

All of the supported serial command of the imager, along with a short description and the current setting value will be serially output when this barcode is scanned.


#HELP

Revision

Show Software Revision


#REVSOFT

Show Revision Time


#REVTIME

Show Device Serial Number [1]

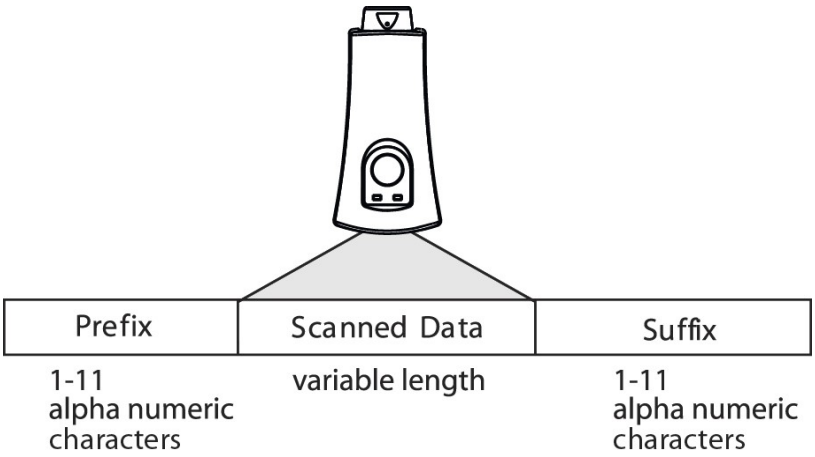

#DEVSERN ?

[1] Menu Barcodes that have an expected response of returning a string of text when scanned, do not return any data. This includes: #DEVSERN ?.

5 - Data Editing

Data Editing Overview

When a bar code is scanned, additional information is sent to the host computer along with the bar code data. This group of bar code data and additional, user-defined data is called a "message string." The selections in this section are used to build the user-defined data into the message string.
The following illustration shows the breakdown of a message string:



Transmit AIM ID Character

Use the following codes to transmit an AIM ID character or a Symbol ID Character.
See Appendix B for a chart of all supported barcodes and their corresponding AIM ID characters.
Default = Don't Transmit AIM ID.

#XMITCID 1

Transmit AIM ID

#XMITCID 0

** Don't Transmit AIM ID*

#XMITCID 2

Transmit Symbol ID

Barcode Prefix

Prefix characters are user-definable data characters that can be sent before scanned data.
It's possible for the HS-1RS to enable and set a specific prefix for all scanned Barcode data only.
This can help to discern barcode data from RFID data when both are output alternately.

Note: This Barcode Prefix will be separate from any set RFID prefixes.

Barcode Prefixes On/Off

To enable or disable Barcode prefixes, scan the appropriate code below.
Default = Disabled.

#PREBENA 1

Enable

#PREBENA 0

** Disable*

Barcode Prefix Block String

Use the command **PREBBLK** in combination with ASCII or hex characters to set the specific Barcode Prefix string. See ***Appendix D*** for ASCII/hex conversion help.
Note: Hex characters must be preceded by **\x** and it's not possible to interject a Carriage Return in the middle of the block string.

For instance, if you want the prefix to be **[BC-data]**, send: **PREBBLK [BC-data].**

Please contact JADAK if you need further help.
The default Barcode Prefix Block string is: **(B)**

#PREBBLK (B)

** Barcode Prefix Block (B)*

Example codes:

#PREBBLK B/
Barcode Prefix Block B/

#PREBBLK [BC]
Barcode Prefix Block [BC]

Barcode Suffix

Suffix characters are user-definable data characters that can be sent after scanned data.
It's possible for the HS-1RS to enable and set a specific suffix for all scanned Barcode data only.

Note: This Barcode Suffix will be separate from any set RFID suffixes or general suffixes.

Barcode Suffix On/Off

To enable or disable the Barcode suffix, scan the appropriate code below.
Default = Disabled.

#SUFBENA 1

Enable

#SUFBENA 0

** Disable*

Barcode Suffix Block String

Use the command **SUFBBLK** in combination with ASCII or hex characters to set the specific Barcode Suffix string. See ***Appendix D*** for ASCII/hex conversion help.

***Note*:** Hex characters must be preceded by **\x** to be recognized as hex instead of ASCII and it's not possible to interject a Carriage Return in the middle of the block string.

For instance, it's possible to program a Suffix that starts with 123 (regular ASCII text), then a Tab symbol (as hex 09) and then ABC (ASCII characters again), send the following: **SUFBBLK 123\x09ABC**

Please contact JADAK if you need further help.
The default Barcode Suffix Block string is a Carriage Return (**hex '0D'**).

#SUFBBLK \x0D

** Barcode Suffix Block \x0D*

6 - RFID

RFID Overview

Besides being able to scan 1D and 2D barcodes, the HS-1RS can also read RFID tags, using LF RFID technology at 125 KHz/134.2 KHz and HF RFID technology at 13.56 MHz.

RFID Mode On/Off

It's possible to enable or disable the RFID part of the HS-1RS. Scan one of the codes below to enable or disable RFID Scanning. Default = Enabled.

#RFIDMOD 1

** RFID Enabled*

#RFIDMOD 0

RFID Disabled

This programming section contains menu selections for the following RFID tags:

Low Frequency (LF) tags:

Cotag	HITAG 1 (no encryption)
G-Prox (Hash value only)	HITAG 2 (no encryption)
HD Prox	HITAG S (no encryption)
Honeywell NexWatch	Keri
Indala	EM4102
ioPox	Pyramid
EM4150	TIRIS/HDX
AWID	ISO FDX-B

Deister	Cardeck
PAC	Ultraprox
ICT	ISONAS

High Frequency (HF) tags:

ISO14443A/MIFARE	ISO14443B
ISO15693	HID iClass
FeliCa	SRX
NFCP2P	Topaz

All RFID tags

If you want to be able to read all type of RFID tags, scan the **#RFIDALL 1 On** code (Enable All). If on the other hand, you want to read only a particular type RFID tag, scan **#RFIDALL 0** (Disable All) followed by the RFID Enable (1) for that particular type of RFID. If you want display UID in reverse byte order, scan enable (2) command.

#RFIDALL 1

#RFIDALL 0

LF RFID EM4100 tag

Command #EM410EN 1 enable; 0 disable; 2 reverse byte order

#EM410EN 1

#EM410EN 0

#EM410EN 2

LF RFID HITAG 1/HITAG S tag

Command #HIT1SEN 1 enable; 0 disable; 2 reverse byte order

#HIT1SEN 1

#HIT1SEN 0

#HIT1SEN 2

LF RFID HITAG 2 tag

Command #HITA2EN 1 enable; 0 disable; 2 reverse byte order

#HITA2EN 1

#HITA2EN 0

#HITA2EN 2

LF RFID EM4x50 tag

Command #EM415EN 1 enable; 0 disable; 2 reverse byte order

#EM415EN 1

#EM415EN 0

#EM415EN 2

LF RFID ISO FDX-B tag

Command #ISOFDEN 1 enable; 0 disable; 2 reverse byte order

#ISOFDEN 1

#ISOFDEN 0

#ISOFDEN 2

LF RFID HID Prox tag

Command #IHIDPREN 1 enable; 0 disable; 2 reverse byte order

#HIDPREN 1

#HIDPREN 0

#HIDPREN 2

LF RFID ISO HDX/TIRIS tag

Command #HTIRISEN 1 enable; 0 disable; 2 reverse byte order

#TIRISEN 1

#TIRISEN 0

#TIRISEN 2

LF RFID COTAG tag

Command #COTAGEN 1 enable; 0 disable; 2 reverse byte order

#COTAGEN 1

#COTAGEN 0

#COTAGEN 2

LF RFID IOProx tag

Command #IOPROXEN 1 enable; 0 disable; 2 reverse byte order

#IOPROEN 1

#IOPROEN 0

#IOPROEN 2

LF RFID Indala tag

Command #INDITEN 1 enable; 0 disable; 2 reverse byte order

#INDITEN 1

#INDITEN 0

#INDITEN 2

LF RFID NexWatch tag

Command #HOMEYEN 1 enable; 0 disable; 2 reverse byte order

#HONEYEN 1

#HONEYEN 0

#HONEYEN 2

LF RFID AWID tag

Command #AWID_EN 1 enable; 0 disable; 2 reverse byte order

#AWID_EN 1

#AWID_EN 0

#AWID_EN 2

LF RFID G-Prox tag

Command #GPROXEN 1 enable; 0 disable; 2 reverse byte order

#GPROXEN 1

#GPROXEN 0

#GPROXEN 2

LF RFID Pyramid tag

Command #PYRAMEN 1 enable; 0 disable; 2 reverse byte order

#PYRAMEN 1

#PYRAMEN 0

#PYRAMEN 2

LF RFID Keri tag

Command #KERI_EN 1 enable; 0 disable; 2 reverse byte order

#KERI_EN 1

#KERI_EN 0

#KERI_EN 2

LF RFID Deister tag

Command #DEISTEN 1 enable; 0 disable; 2 reverse byte order

#DEISTEN 1

#DEISTEN 0

#DEISTEN 2

LF RFID Cardax tag

Command #CARDAEN 1 enable; 0 disable; 2 reverse byte order

#CARDEN 1

#CARDEN 0

#CARDEN 2

LF RFID Nedap tag

Command #NEDAPEN 1 enable; 0 disable; 2 reverse byte order

#NEDAPEN 1

#NEDAPEN 0

#NEDAPEN 2

LF RFID IDTECK tag

Command #IDTECEN 1 enable; 0 disable; 2 reverse byte order

#IDTECEN 1

#IDTECEN 0

#IDTECEN 2

LF RFID PAC tag

Command #PAC_ENA 1 enable; 0 disable; 2 reverse byte order

#PAC_ENA 1

#PAC_ENA 0

#PAC_ENA 2

LF RFID UltraProx tag

Command #ULTRAEN 1 enable; 0 disable; 2 reverse byte order

#ULTRAEN 1

#ULTRAEN 0

#ULTRAEN 2

LF RFID ICT tag

Command #ICT_ENA 1 enable; 0 disable; 2 reverse byte order

#ICT_ENA 1

#ICT_ENA 0

#ICT_ENA 2

LF RFID Isonas tag

Command #ISONAEN 1 enable; 0 disable; 2 reverse byte order

#ISONAEN 1

#ISONAEN 0

#ISONAEN 2

HF RFID ISO14443A/MIFARE tag

Command #MIFAREN 1 enable; 0 disable; 2 reverse byte order

#MIFAREN 1

#MIFAREN 0

#MIFAREN 2

HF RFID ISO14443B tag

Command #ISO14EN 1 enable; 0 disable; 2 reverse byte order

#ISO14EN 1

#ISO14EN 0

#ISO14EN 2

HF RFID ISO15693 tag

Command #ISO15EN 1 enable; 0 disable; 2 reverse byte order

#ISO15EN 1

#ISO15EN 0

#ISO15EN 2

HF RFID HID iClass tag

Command #HIDICEN 1 enable; 0 disable; 2 reverse byte order

#HIDICEN 1

#HIDICEN 0

#HIDICEN 2

HF RFID HID FeliCa tag

Command #FRLICEN 1 enable; 0 disable; 2 reverse byte order

#FELICEN 1

#FELICEN 0

#FELICEN 2

HF RFID HID SRX tag

Command #FRLICEN 1 enable; 0 disable; 2 reverse byte order

#SRX _ENA 1

#SRX _ENA 0

#SRX _ENA 2

HF RFID HID NFC Peer-to-Peer tag

Command #NFCP2EN 1 enable; 0 disable; 2 reverse byte order

#NFCP2EN 1

#NFCP2EN 0

#NFCP2EN 2

HF RFID HID Topaz tag

Command #TOPAZEN 1 enable; 0 disable; 2 reverse byte order

#TOPAZEN 1

#TOPAZEN 0

#TOPAZEN 2

RFID Re-read Delay

This sets the time period before the HS-1RS can read the same RFID tag a second time. Setting a proper re-read delay time protects against accidental re-reads of the same tag. Several commonly used re-read delay menu command barcodes are included below. Use the command **RFIDDLY x** *(where 'x' is a value between 0 and 5000)*, to set the time between 0 (no delay) and 5000 (=5 sec.) in steps of 1ms, or by building a menu command barcode. Please contact JADAK if assistance is needed. Default time = 1.0 seconds.

Setting examples:

No Re-read delay

Re-read delay 0.5 seconds

** Re-read delay 1.0 seconds*

Re-read delay 2.0 seconds

RFID Reverse UID

The HS-1RS can reverse the UID data of an RFID tag when scanned. Scan the codes below to enable or disable the reversing of the UID's data. Default = disabled.

Reverse UID Enabled

** Reverse UID Disabled*

RFID Prefix

Prefix characters are user-definable data characters that can be sent before scanned data. It's possible to enable and set a specific prefix for all scanned RFID data only.

Note: This RFID Prefix will be separate from any set Barcode prefixes or general prefixes.

RFID Prefixes On/Off

To enable or disable RFID prefixes, scan the appropriate code below. Default = Disabled.


#PRERENA 1

Enable


#PRERENA 0

** Disable*

RFID Prefix Block String

Use the command **PRERBLK** in combination with ASCII or hex characters to set the specific RFID Prefix string. See ***Appendix D*** for ASCII/hex conversion help.

Note: Hex characters must be preceded by **\x** to be recognized as hex instead of ASCII and it's not possible to interject a Carriage Return in the middle of the block string.

For instance, if you want the prefix to be **[RFID]**, send: **PRERBLK [RFID].**

Please contact JADAK if you need further help. Default RFID Prefix Block string is: **(R)**

Example codes:


#PRERBLK (R)

** RFID Prefix Block (R)*


#PRERBLK [RFID]

RFID Prefix Block [RFID]

RFID Suffix

Suffix characters are user-definable data characters that can be sent after scanned data. It's possible to enable and set a specific suffix for all scanned RFID data only.

Note: This RFID Suffix will be separate from any set Barcode suffixes or general suffixes.

RFID Suffix On/Off

To enable or disable the RFID suffix, scan the appropriate code below. Default = Disabled.

Enable

** Disable*

RFID Suffix Block String

Use the following command in combination with ASCII or hex characters to set the specific RFID Suffix string. See ***Appendix D*** for ASCII/hex conversion help.

Note: Hex characters must be preceded by **\x** to be recognized as hex instead of ASCII and it's not possible to interject a Carriage Return in the middle of the block string.

For instance, it's possible to program a Suffix that starts with 123 (regular ASCII text), then a Tab symbol (as hex 09) and then ABC (ASCII characters again), send the following: **SUFRBLK 123\x09ABC**

Please contact JADAK if you need further help. The default RFID Suffix Block string is a Carriage Return (**hex '0D'**).

** RFID Suffix Block \x0D*

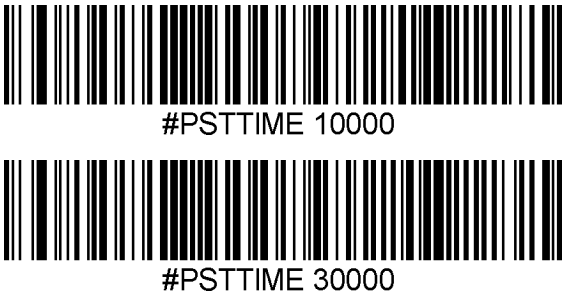
RFID Presentation Time Out

When you place the HS-1RS in a presentation cradle, it will automatically switch to Barcode Presentation mode. By pressing the trigger button, you can toggle between Barcode and RFID Presentation mode. By default, this is an infinite duration, but you can also have the HS-1RS switch back to barcode presentation mode from RFID mode after a specific time.
Use the command **PSTTIME x** *(where 'x' is a value between 0 and 3600000)*, to set the time between 0 (no time out) and 3600000 (=1 hour) in steps of 1ms, or by building a menu command barcode. Please contact JADAK if assistance is needed. Default time = 0 / Infinite Time Out.

Setting examples:

** Infinite Time Out*

Presentation Time Out 5.0 seconds



Presentation Time Out 10 seconds

Presentation Time Out 30 seconds

Beeper Sounds

The HS-1RS has the option to have its beeper controlled externally by a host.
This can be useful for certain notifications. Eight different beeper tones are available in the HS-1RS. Use the command **BEPSOND x** *(where 'x' is a value between 0 and 7),* to have the HS-1RS sound one of the 8 different beeper tones. *Beeper must be enabled.

Example codes:

#BEPSOND 0

#BEPSOND 1

#BEPSOND 2

#BEPSOND 5

Beeper Tone

#BEPTONE

#BEPTONE 0

#BEPTONE 1

#BEPTONE 2

Beeper Duration

#BEPTIME

#BEPTIME 0

#BEPTIME 1

#BEPTIME 2

Enable Power Up Beep

#BEEPPWR

#BEEPPWR 0 #BEEPPWR 1

Enable Good Read Beep

#BEPGDRD

#BEPGDRD 0 #BEPGDRD 1

Enable No Read Beep

#BEPNORD

#BEPNORD 0 #BEPNORD 1

Enable Ascii BEL Beep

#BEEPBEL

#BEEPBEL 0 #BEEPBEL 1

LED Indicators

The HS-1RS also has the option to have its green and red LED controlled externally by a host. This can be useful for certain notifications. Five different beeper tones are available in the HS-1RS. Use the command **LEDINDC x** *(where 'x' is a value between 0 and 5)*, to have the HS-1RS light up one of its LED Indicators in various ways.

Example codes:

#LEDINDC 0

#LEDINDC 4

Enable LED blink indications

#BLKENAB

#BLKENAB 0

#BLKENAB 1

Enable Good Read LED indications

#BLKGDRD

#BLKGDRD 0

#BLKGDRD 1

Enable No Read LED indications

#BLKNORD

#BLKNORD 0

#BLKNORD 1

Vibration Indicator

The HS-1RS furthermore has the option to have its vibration engine controlled externally by a host. This can be useful for certain notifications. Three different vibrations are available in the HS-1RS. Use the command **VIBRATE x** *(where 'x' is a value between 0 and 2)*, to have the HS-1RS vibrate in various ways.
Note: For this command to work, Vibration must be enabled (**VIBENAB 1**).

Example codes:


#VIBRATE 0


#VIBRATE 1

Enable Good Read vibration indications

#VIBGDRD


#VIBGDRD 0


#VIBGDRD 1

Enable No Read vibration indications

#VIBNORD


#VIBNORD 0


#VIBNORD 1

7 - Imaging

Imaging Overview

The HS-1RS cannot be used to take images with. While this could be very helpful in applications such as patient identity verification, signature capturing, or any other situation where you need to take an image, the internal structure of the HS-1RS does not allow for such transmissions. However, there are several options to configure the HS-1RS for improved barcode finding and decoding that are related to image processing. This chapter describes these options.

Illumination Brightness

Use the command **LEDSPWR** to set the Illumination (LEDs Power) between 'Off' and 100% with a value between 0 (=Off) and 3 (=100%).
Note that this setting also is in place when scanning bar codes, when **EXPMODE** is set to 0.

All illumination brightness menu command barcodes are included below.

Illumination Off

Illumination Brightness Low

Illumination Brightness Medium

** Illumination Brightness High*

Auto Exposure

Allow the imager to control gain and exposure settings automatically. Default = Enabled.


#EXPMODE 0

Disable


#EXPMODE 4

** Enable*

Maximum Exposure

Set the maximum allowable exposure for the unit between 1 and 7874.
Several commonly used Max Exposure menu command barcodes are included below. If a different value other than those provided is needed, it can be set either by sending the serial command **EXP_MAX x** *(where 'x' is a value between 1 and 7874),* or by building a menu command barcode. Please contact JADAK if assistance is needed. Default value = 100.

Setting examples:


#EXP_MAX 50


#EXP_MAX 100


#EXP_MAX 2500


#EXP_MAX 7500

Target White Value

Set the Target White Value within a range of 48 to 212.
Some menu command barcodes are included below. If a different value other than those provided is needed, it can be set either by sending the serial command **EXPTARG x** *(where 'x' is a value between 48 and 212),* or by building a menu command barcode.
Please contact JADAK if assistance is needed. Default value = 120.

Setting examples:


#EXPTARG 90


#EXPTARG 180

Image Width and Height [1]

Use these commands to show the image's maximum width and height in pixels.


#IMGMAXX

Maximum Width of Image


#IMGMAXY

Maximum Height of Image

Decode Window

Decode Windowing is about defining a limited area within the scanner's Field of View, where to look for a barcode, to improve performance. As long as the barcode or barcodes are within the boundaries of the Decode Window, they can be decoded, when Decode Windowing is enabled. If the barcode is outside the Decode Window, it will not be decoded.
Default = Disabled.


#WINDECE 1

Enable Decode Windowing


#WINDECE 0

** Disable Decode Windowing*

To define the Decode Window, one needs to set the boundaries for Top, Bottom, Left and Right. These boundaries are defined by pixel values within the full frame (e.g. 844 x 640 pixels).
Note: There are automated restrictions to prohibit a 'negative' Decode Window size. This means that the Bottom value cannot be 'above' Top and likewise for the values for Left and Right.

Decode Window Top/Bottom

The Top and Bottom boundaries for the decode window can be set either by sending the serial command shown under the barcodes below with a value between 0 and 639, or by building a menu command barcode.
Default Top boundary = 256. Default Bottom boundary = 384.
Please contact JADAK if assistance is needed


#WINDECT


#WINDECB

Decode Window Left/Right

The Left and Right boundaries for the decode window can be set either by sending the serial command shown under the barcodes below with a value between 0 and 843, or by building a menu command barcode.
Default Left boundary = 338. Default Right boundary = 506.
Please contact JADAK if assistance is needed

#WINDECL

#WINDECR

This is a screenshot of an example where a Decode Window with T=260, B=390, L=40, R=170 was used to speed up decoding a Data Matrix code that was offset to the left in the Field of View.

Note: This image was taken and transmitted using a regular HS-1 Scanner (non-RFID model).

[1] #IMGMAXY & #IMGMAXX menu barcodes don't return a response. Sending them serially works as expected.

8 - Symbologies

This programming section contains menu selections for the following symbologies.

- Aztec Code
- Codabar
- Code 11
- Code 128
- Code 39
- Code 93
- Composite Code
- Data Matrix
- EAN/JAN-13
- EAN/JAN-8
- GS1-128
- GS-1 Databar (RSS-14)
- GS-1 Databar Limited (RSS Limited)
- GS-1 Databar Expanded (RSS Expanded)
- Interleaved 2 of 5
- Matrix 2 of 5
- Maxi Code
- MicroPDF417
- MSI
- PDF417
- QR Code
- UPC-A
- UPC-E
- UPC-E1

All Symbologies

If you want to be able to decode all the symbologies allowable for your imager, scan the **All Symbologies On** code (Enable All).
If on the other hand, you want to decode only a particular symbology, scan **All Symbologies Off** (Disable All) followed by the On/Enable symbol for that particular symbology.

#ALLENAB 0

Disable All

#ALLENAB 1

Enable All

Linear Symbologies

Codabar

Codabar Defaults

Set all Codabar settings to their default configuration with this code.

#CBRDEFA

Codabar On/Off

Scan one of the codes below to enable or disable Codabar. Default = Enabled.

#CBRENAB 1

** Enable*

#CBRENAB 0

Disable

Codabar Minimum and Maximum Length

Use the following commands in combination with numerical values to set the minimum and maximum length. Default minimum length = 4. Default maximum length = 55.

The minimum and maximum length for this barcode can be set either by sending the serial command shown under the barcodes below with a value between 2 and 55, or by building a menu command barcode.
Please contact JADAK if assistance is needed.

#CBRMINL

Codabar Minimum Length

#CBRMAXL

Codabar Maximum Length

Code 11

Code 11 Defaults

Set all Code 11 settings to their default configuration with this code/command.

#C11DEFA

Code 11 On/Off

Scan one of the codes below to enable or disable Code 11. Default = Disabled.

#C11ENAB 1

Enable

#C11ENAB 0

** Disable*

Code 11 Minimum and Maximum Length

Use the following commands in combination with numerical values to set the minimum and maximum length. Default minimum length = 4. Default maximum length = 55.

The minimum and maximum length for this barcode can be set either by sending the serial command shown under the barcodes below with a value between 1 and 55, or by building a menu command barcode.
Please contact JADAK if assistance is needed.

#C11MINL

Code 11 Minimum Length

#C11MAXL

Code 11 Maximum Length

Code 11 Check Digit

The HS-1RS may look for a check digit to decide if the code is valid.

Code 11 usually has 1 check digit and some codes have 2 check digits. Either option can be chosen to be validated.
Default = 1 Check Digit Validate.


#C11CHEC 0

** 1 Check Digit Validate*


#C11CHEC 1

2 Check Digits Validate

Code 128

Code 128 Defaults


#128DEFA

Code 128 On/Off

Scan one of the codes below to enable or disable Code 128. Default = Enabled.


#128ENAB 1

** Enable*


#128ENAB 0

Disable

Code 128 Minimum and Maximum Length

Use the following commands in combination with numerical values to set the minimum and maximum length. Default minimum length = 0. Default maximum length = 55.

The minimum and maximum length for this barcode can be set either by sending the serial command shown under the barcodes below with a value between 0 and 55, or by building a menu command barcode. Please contact JADAK if assistance is needed.


#128MINL

Code 128 Minimum Length


#128MAXL

Code 128 Maximum Length

ISBT 128 On/Off

ISBT 128 is a variant of Code 128 used in the blood bank industry. Scan the appropriate bar code below to enable or disable ISBT 128. Default = Disabled


#ISBT128 1

Enable


#ISBT128 0

** Disable*

Code 39

Code 39 Defaults

#C39DEFA

Code 39 On/Off

Scan one of the codes below to enable or disable Code 39. Default = Enabled.

#C39ENAB 1

** Enable*

#C39ENAB 0

Disable

Code 39 Minimum and Maximum Length

Use the following commands in combination with numerical values to set the minimum and maximum length. Default minimum length = 0. Default maximum length = 48.

The minimum and maximum length for this barcode can be set either by sending the serial command shown under the barcodes below with a value between 0 and 48, or by building a menu command bar code. Please contact JADAK if assistance is needed.

#C39MINL

Code 39 Minimum Length

#C39MAXL

Code 39 Maximum Length

Code 39 Full ASCII Conversion

Code 39 Full ASCII is a variant of Code 39 that pairs certain characters so it can include the entire ASCII set. Default = Disabled.

#C39ASCI 1

Enable

#C39ASCI 0

** Disable*

Code 39 Check Digit

Use the following commands to allow scanning of all Code 39's (No Check Digits) or only allow codes with a Check Digit. Default = No Check Digits.


#C39CHEC 0

** Disable C39 Check Digit*


#C39CHEC 1

Validate, but don't Transmit


#C39CHEC 2

Validate and Transmit

Code 39 Convert to Code 32 / Pharmacode

Code 32 is a variant of Code 39 used by the Italian pharmaceutical industry. Scan the appropriate bar code below to enable or disable converting Code 39 to Code 32. Default = Disabled.

Note: *In order for this parameter to work, Code 39 must be enabled.*


#C39CONV 1

Enable


#C39CONV 0

** Disable*

Trioptic Code 39

Trioptic Code 39 is a variant of Code 39 used in the marking of computer tape cartridges. Trioptic Code 39 symbols always contain six characters. To enable or disable Trioptic Code 39, scan the appropriate bar code below. Default = Disabled.

Note: *You cannot enable Trioptic Code 39 and Code 39 Full ASCII simultaneously.*


#C39TRIO 1

Enable


#C39TRIO 0

** Disable*

Code 93

Code 93 Defaults

Set all Code 93 settings to their default configuration with this code.


#C93DEFA

Code 93 On/Off

Scan one of the codes below to enable or disable Code 93. Default = Enabled.


#C93ENAB 1

** Enable*


#C93ENAB 0

Disable

Code 93 Minimum and Maximum Length

Use the following commands in combination with numerical values to set the minimum and maximum length. Default minimum length = 0. Default maximum length = 55.

The minimum and maximum length for this barcode can be set either by sending the serial command shown under the barcodes below with a value between 0 and 55, or by building a menu command barcode.
Please contact JADAK if assistance is needed.


#C93MINL

Code 93 Minimum Length


#C93MAXL

Code 93 Maximum Length

Composite Code

GS 1 Composite Code

Linear codes are combined with a unique 2D composite component to form a new class called GS1 Composite symbology. GS1 Composite symbologies allow for the co-existence of symbologies already in use.
Default = Disabled.


#COMENAB 1

Enable


#COMENAB 0

** Disable*

Composite Code Minimum and Maximum Length

Use the following commands in combination with numerical values to set the minimum and maximum length.
The minimum and maximum length for this barcode can be set either by sending the serial command shown under the barcodes below with a value between 1 and 2435, or by building a menu command barcode.

Default minimum length = 1. Default maximum length = 2435.
Please contact JADAK if assistance is needed.


#COMMINL

Composite Code Minimum Length


#COMMAXL

Composite Code Maximum Length

EAN-8/JAN 8

EAN-8/JAN 8 Defaults

Set the EAN-8 settings to their default configuration with this code.

#EA8DEFA

EAN-8/JAN 8 On/Off

Scan one of the codes below to enable or disable EAN-8. Default = Enabled.

#EA8ENAB 1

** Enable*

#EA8ENAB 0

Disable

EAN-13/JAN 13

EAN-13/JAN 13 Defaults

Set the EAN-13 settings to their default configuration with this code.

#E13DEFA

EAN-13/JAN 13 On/Off

Scan one of the codes below to enable or disable EAN-13. Default = Enabled.

#E13ENAB 1

* *Enable*

#E13ENAB 0

Disable

GS1-128 (Formerly UCC-EAN128)

Scan one of the codes below to enable or disable GS1-128. Default = Enabled.


#GS1ENAB 1


#GS1ENAB 0

* *Enable* *Disable*

GS1 DataBar (Formerly RSS-14)

Scan one of the codes below to enable or disable GS1 DataBar. Default = Enabled.


#RSSENAB 1


#RSSENAB 0

* *Enable* *Disable*

GS1 DataBar Limited (Formerly RSS-Limited)

Scan one of the codes below to enable or disable GS1 DataBar Limited. Default = Enabled.


#RSLENAB 1


#RSLENAB 0

* *Enable* *Disable*

GS1 DataBar Expanded (Formerly RSS-Expanded)

Scan one of the codes below to enable or disable GS1 DataBar Expanded. Default = Enabled.


#RSEENAB 1


#RSEENAB 0

* *Enable* *Disable*

Interleaved 2 of 5

Interleaved 2 of 5 Defaults

Set all Interleaved 2 of 5 settings to their default configuration with this code.

#I25DEFA

Interleaved 2 of 5 On/Off

Scan one of the codes below to enable or disable Interleaved 2 of 5. Default = Enabled.

#I25ENAB 1

** Enable*

#I25ENAB 0

Disable

Interleaved 2 of 5 Minimum and Maximum Length

Use the following commands in combination with numerical values to set the minimum and maximum length. Default minimum length = 6. Default maximum length = 30.

The minimum and maximum length for this barcode can be set either by sending the serial command shown under the barcodes below with a value between 2 and 55, or by building a menu command barcode.
Please contact JADAK if assistance is needed.

#I25MINL

Interleaved 2 of 5 Minimum Length

#I25MAXL

Interleaved 2 of 5 Maximum Length

Interleaved 2 of 5 Check Digit

The scanner may look for a check digit to decide if the code is valid.
Interleaved 2 of 5's USS (Uniform Symbology Specification) Check digit can be validated and if desired, transmitted too.

Default = Disabled.


#I25CHEC 0

** Disable I 2 of 5 Check Digits*


#I25CHEC 1

USS Check Validate


#I25CHEC 2

USS Check Validate & Transmit

Matrix 2 of 5

Matrix 2 of 5 Defaults

Set all Matrix 2 of 5 settings to their default configuration with this code.


#M25DEFA

Matrix 2 of 5 On/Off

Scan one of the codes below to enable or disable Matrix 2 of 5. Default = Disabled.


#M25ENAB 1

Enable


#M25ENAB 0

** Disable*

Matrix 2 of 5 Minimum and Maximum Length

Use the following commands in combination with numerical values to set the minimum and maximum length.
The minimum and maximum length for this barcode can be set either by sending the serial command shown under the barcodes below with a value between 1 and 55, or by building a menu command barcode.
Default minimum length = 4. Default maximum length = 55.

Please contact JADAK if assistance is needed.

#M25MINL

Matrix 2 of 5 Minimum Length

#M25MAXL

Matrix 2 of 5 Maximum Length

MSI

MSI Defaults

Set all MSI settings to their default configuration with this code.

#MSIDEFA

MSI On/Off

Scan one of the codes below to enable or disable MSI. Default = Disabled.

#MSIENAB 0

** Disable*

#MSIENAB 1

Enable

MSI Minimum and Maximum Length

Use the following commands in combination with numerical values to set the minimum and maximum length. The minimum and maximum length for this barcode can be set either by sending the serial command shown under the barcodes below with a value between 4 and 48, or by building a menu command barcode.
Default minimum length = 4. Default maximum length = 48.
Please contact JADAK if assistance is needed.


#MSIMINL

MSI Minimum Length


#MSIMAXL

MSI Maximum Length

MSI Check Digits

With MSI symbols, one check digit is mandatory and always verified by the reader. The second check digit is optional.
If the MSI codes include two check digits, scan the Two MSI Check Digits bar code to enable verification of the second check digit.

Default = Enable One Check Digit, but don't transmit.


#MSICHEC 0

Disable MSI Check Digits


#MSICHEC 1

** Enable One Check Digit, but don't Transmit*


#MSICHEC 2

Enable One Check Digit and Transmit


#MSICHEC 3

Enable Two Check Digits, but don't Transmit


#MSICHEC 4

Enable Two Check Digits and Transmit

UPC-A

UPC-A Defaults

Set the UPC-A settings to their default configuration with this code.

#UPADEFA

UPC-A On/Off

Scan one of the codes below to enable or disable UPC-A. Default = Enabled.

#UPAENAB 1

** Enable*

#UPAENAB 0

Disable

UPC-A Check Digit

The check digit is the last character and is used to verify data integrity. This digit is always checked but it may be chosen whether or not to transmit it. Default=Transmit

#UPAXMIT 1

** Transmit UPC-A Check*

#UPAXMIT 0

Do Not Transmit UPC-A Check

UPC-E(0)

UPC-E(0) Defaults

Set the UPC-E(0) settings to their default configuration with this code.

#UPEDEFA

UPC-E On/Off

Scan one of the codes below to enable or disable UPC-E(0). Default = Enabled.


#UPEENAB 1

** Enable*


#UPEENAB 0

Disable

UPC-E(0) Check Digit

The check digit is the last character and is used to verify data integrity. This digit is always checked but it may be chosen whether or not to transmit it. Default=Transmit


#UPEXMIT 1

** Transmit UPC-E Check*


#UPEXMIT 0

Do Not Transmit UPC-E Check

UPC-E(0) Expanded ModeOn/Off

UPC-E(0) Expanded Mode expands the UPC-E(0) code to the 12 digit, UPC-A format. Scan one of the codes below to enable or disable UPC-E(0) Expanded Mode. Default = Disabled.


#UPEENAB 1

Enable


#UPEENAB 0

** Disable*

UPC-E1

Scan one of the codes below to enable or disable UPC-E(1). Default = Disabled.


#UE1ENAB 1

Enable


#UE1ENAB 0

** Disable*

1D Stacked Symbologies

PDF417

PDF417 Defaults

To set the default values for PDF417, scan this code:

#PDFDEFA

PDF417 On/Off

Scan one of the codes below to enable or disable PDF417. Default = Enabled.

#PDFENAB 1

** Enable*

#PDFENAB 0

Disable

MicroPDF417

MicroPDF417 Defaults

To set the default values for Micro PDF417, scan this code:

#MPDDEFA

MicroPDF417 On/Off

Scan one of the codes below to enable or disable Micro PDF417. Default = Disabled.

#MPDENAB 1

Enable

#MPDENAB 0

** Disable*

2D Matrix Symbologies

Aztec Code

Aztec Code Defaults

To set the default values for Aztec Code, scan this code:

#AZTDEFA

Aztec Code On/Off

Scan one of the codes below to enable or disable Aztec Code. Default = Enabled.

#AZTENAB 1

** Enable*

#AZTENAB 0

Disable

Data Matrix

Data Matrix Defaults

To set the default values for Data Matrix, scan this code:

#DMXDEFA

Data Matrix On/Off

Scan one of the codes below to enable or disable Data Matrix. Default = Enabled.

#DMXENAB 1

** Enable*

#DMXENAB 0

Disable

2D Matrix Symbologies

Maxi Code

Maxi Code Defaults

To set the default values for Maxi Code, scan this code:

#MAXDEFA

Maxi Code On/Off

Scan one of the codes below to enable or disable Maxi Code. Default = Disabled.

#MAXENAB 1

Enable

#MAXENAB 0

** Disable*

QR Code

QR Code Defaults

To set the default values for QR Code, scan this code:

#QRCDEFA

QR Code On/Off

Scan one of the codes below to enable or disable QR Code. Default = Enabled.

#QRCENAB 1

** Enable*

#QRCENAB 0

Disable

9 - Product Specifications

Technology	Notes
RFID	
RF Frequency:	125 KHz (LF), 134.2 KHz (LF), 13.56 MHz (HF)
Supported LF Transponders:	Cotag, HITAG 1, HIT S, HITAG 2, G-Prox*, HD Prox, Honeywell NexWatch, Keri, Indala, EM4100, EM4102, CASI-RUSCO, ioPox, Pyramid*, EM4150, TIRIS/HDX, AWID, ISO FDX-B*, Deister*, Cardeck, PAC, Ultraprox*, ICT*, ISONAS*
Supported HF Transponders:	ISO14443A/MIFARE, ISO14443B*, ISO15693, HID iClass, FeliCa, SRX*, NFCP2P*, Topaz
Antenna:	Internal
Read Range:	Contact to 1.0” (2.5cm) + (Tag dependent)
Barcode Scanning	
Light Source:	White LED illumination, Green LED line aimer
Rotational Sensitivity:	360°
Min X Dimension:	Linear Codes: 5 mil, 2D Codes:10 mil
Reading Distance:	2.0” to 15” (barcode dependent)
Ambient:	0-100,000 lux (complete darkness to full sunlight)
Symbologies:	2D: PDF417, MicroPDF417, Maxi Code, Data Matrix, QR Code, Aztec, GS-1, Composite Code Linear: Code 39, Code 128, Code 11, Code93, Codabar, MSI, UPC, EAN, Interleaved 2 of 5, GS-1 Databar
Electrical	
Communications:	USB (Keyboard or COM Port), RS-232 (available upon request)
Power Supply:	5VDC +/-5%
Scanning Current:	500mA max.

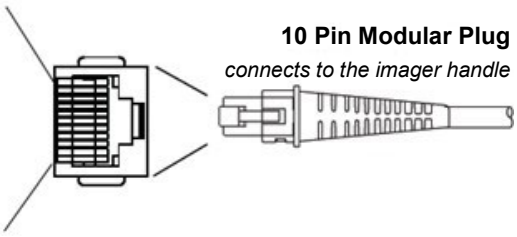
Idle Current:	100mA
Agency:	FCC Class B, Industry Canada (IC), ETSI EN 300 330 V2.1.1, RED 2014/53/EU, EN60601 compatible, CE, EN60950, ROHS, REACH, WEEE
Environmental	
Operating Temp.:	32°F to 122°F (0°C to 50°C)
Relative Humidity:	95% RH non-condensing, at +50°C
Environmental Sealing:	IP54 Sealed Housing
Recommended Cleaning Solutions:	Sani-Cloth® HB, Sani-Cloth® Plus, Supper Sani-Cloth®, Isopropyl Alcohol Wipes (70%), CaviWipes™, Betadine, Windex™ Blue, Hydrogen Peroxide (3%), Clorox™ Bleach, Gentle Dish Soap and Water

All specifications subject to change without notice. An asterisk (*) next to a RFID tag is not tested.

USB

Standard Cable Pin out

1
2 Data +
3 Tied to 5 volt power
4 Supply ground
5
6
7 5 volt power connection
8
9
10 Data -



10 Pin Modular Plug
connects to the imager handle

10 - Maintenance

Repairs

Repairs and/or upgrades are not to be performed on this product. These services are to be performed by JADAK only. Please contact JADAK for your service needs.

Maintenance

The HS-1RS provides reliable and efficient operation with a minimum of care. Although specific maintenance is not required, the following periodic checks ensure dependable product operation:

Cleaning the Scanning Window
Reading performance may degrade if the scanner's window is not clean. If the window is visibly dirty, or if the scanner isn't operating well, clean the window with a soft cloth or lens tissue dampened with water (or a mild detergent- water solution). If a detergent solution is used, rinse with a clean lens tissue dampened with water only.

Cleaning the Scanner Housing
The HS-1RS is IP54 rated when the cable is attached. This means that liquids and dusts will not penetrate into the housing, however, the scanner should not be submerged in water or other liquids. It is also good practice to dampen the cleansing cloth vs. spraying the scanner directly.

The HS-1RS housing is compatible with the following medical grade cleaners:

Sani-Cloth® HB
Sani-Cloth® Plus
Hydrogen Peroxide
CaviWipes™
409® Glass and Surface Cleaner
Windex® Blue
Clorox® Bleach (100%)
Isopropyl Alcohol
Gentle dish soap and water

Caution!

Do not submerge the imager in water.
Do not use abrasive wipes or tissues on the imager's window – abrasive wipes may scratch the window.
Never use solvents (e.g., acetone, benzene, ether, or phenol-based agents) on the housing or window – solvents may damage the finish or the window.

Interface Cable

Inspect the imager's interface cable and connector for wear or other signs of damage. A badly worn cable or damaged connector may interfere with scanner operation.

Should the cable be damaged, the cable can be replaced in the field.

NOTE: The use of non-JADAK cables voids the warranty, only a JADAK cable can be used to keep the IP54 rating.

Replacing the Interface Cable

To Replace the JADAK HS-1RS Interface Cable:

1. Turn the power to the host system OFF.

2. Disconnect the imager's cable from the terminal or computer.

3. Locate the small hole underneath a triangular label on the bottom side of the hand scanner near the cable connection point. This is the cable release.

4. Straighten one end of a paper clip.

5. Insert the straight end of the paper clip into the small hole and press in. This depresses the retention tab, releasing the connector. Pull the connector out while maintaining pressure on the paper clip. When the connector is free, remove the paper clip.

6. Replace with the new cable. Insert the connector into the opening and press firmly. The connector is keyed to go in only one way,and will click into place.

11 - Customer Support

Obtaining Technical Assistance or Factory Service

JADAK provides support and service for all its products. To obtain warranty or non-warranty service, please complete the RMA form at the following link:
https://www.jadaktech.com/support/rma-form/

If you need assistance installing or troubleshooting your scanner, please contact the JADAK office in your area.

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Email: info@jadaktech.com

For documentation, spec sheets, quick start guides and other support, please visit **www.jadaktech.com**

Limited Warranty

JADAK LLC (“JADAK”) warrants the HS-1RS to be free from defects in materials and workmanship and to conform to JADAK’s published specifications applicable to the products purchased at the time of shipment. This warranty does not cover the interface cable and does not include any JADAK product which is (i) improperly installed or used; (ii) damaged by accident or negligence, including failure to follow the proper maintenance, service, and cleaning schedule; or (iii) damaged as a result of: (A) Modification or alteration by the purchaser or other party, (B) Excessive voltage or current supplied to or drawn from the interface connections, (C) Static electricity or electro-static discharge, (D) Operation under conditions beyond the specified operating parameters, or (E) Repair or service of the product by anyone other than JADAK or its authorized representatives.

This warranty shall extend from the time of shipment for the duration published by JADAK for the product at the time of purchase (“Warranty Period”). Any defective product must be returned (at purchaser’s expense) during the Warranty Period to JADAK factory for inspection. No product will be accepted by JADAK without a Return Materials Authorization, which may be obtained by contacting JADAK. In the event that the product is returned to JADAK within the Warranty Period and JADAK determines to its satisfaction that the product is defective due to defects in materials or workmanship, JADAK, at its sole option, will either repair or replace the product without charge, except for return shipping to JADAK.

EXCEPT AS MAY BE OTHERWISE PROVIDED BY APPLICABLE LAW, THE FOREGOING WARRANTY IS IN LIEU OF ALL OTHER COVENANTS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, ORAL OR WRITTEN, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.
JADAK’S RESPONSIBILITY AND PURCHASER’S EXCLUSIVE REMEDY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE DEFECTIVE PRODUCT WITH NEW OR REFURBISHED PARTS. IN NO EVENT SHALL JADAK BE LIABLE FOR INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, AND, IN NO EVENT, SHALL ANY LIABILITY OF JADAK ARISING IN CONNECTION WITH ANY PRODUCT SOLD HEREUNDER (WHETHER SUCH LIABILITY ARISES FROM A CLAIM BASED ON CONTRACT, WARRANTY, TORT, OR OTHERWISE) EXCEED THE ACTUAL AMOUNT PAID TO JADAK FOR THE PRODUCT. THESE LIMITATIONS ON LIABILITY SHALL REMAIN IN FULL FORCE AND EFFECT EVEN WHEN JADAK MAY HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH INJURIES, LOSSES, OR DAMAGES. SOME STATES, PROVINCES, OR COUNTRIES DO NOT ALLOW THE EXCLUSION OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

All provisions of this Limited Warranty are separate and severable, which means that if any provision is held invalid and unenforceable, such determination shall not affect the validity of enforceability of the other provisions hereof. Use of any peripherals not provided by the manufacturer may result in damage not covered by this warranty. This includes but is not limited to: cables, power supplies, cradles, and docking stations. JADAK extends these warranties only to the first end users of the products. These warranties are non-transferable. The duration of the limited warranty for the HS-1RS is for one (1) year.

Compliance and IP Notices
Statement of Agency Compliance

Model Number: HS-1RS
FCC ID: QV5HS1RS
IC: 5407A-HS1RS
EU: CE

The product is designed to support the following regulatory and safety standards as a standalone unit. The end user will need to verify general EMC compliance as implemented in their host system.

Federal Communication Commission (FCC) and Industry Canada (IC) Compliance Information Statement

This device complies with FCC Rules Part 15 and with Industry Canada license-exempt RSS standard(s). Operation is subject to two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference that may be received or that may cause undesired operation.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced radio/TV technician for help.

This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numerique de la classe B est conforme a la norme NMB-003 du Canada.

Changes or modifications to this equipment not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

To comply with FCC and IC RF exposure compliance requirements, the entire device outer surface may be contacted by operators during normal operation; the device housing provides sufficient spacing for safety. The device must not be co-located or operated in conjunction with any other antenna or transmitter.

Pour se conformer aux exigences de conformité de la FCC et de l'IC en matière d'exposition aux radiofréquences, les utilisateurs peuvent entrer en contact avec toute la surface extérieure du dispositif au cours de son fonctionnement normal. le boîtier de l'appareil offre un espacement suffisant pour la sécurité. L'appareil ne doit pas être co-localisé ou utilisé en conjonction avec une autre antenne ou un autre émetteur.

Responsible Party: Novanta
Address: 125 Middlesex Turnpike, Bedford, MA 01730, USA
Internet Contact Information: www.novanta.com

Appendices

Appendix A - Command Format

The HS-1RS accepts a wide range of configuration commands. Commands can be sent to the imager wither by scanning menu bar symbol or via Serial commands sent from the host machine.

The HS-1RS command format is.

Send Command: #<parameter><space><argument><specifier>

Where:
Parameter: Command
Argument: Value to be set, if applicable
Specifier: Character to designate action to be taken.

Specifier	Action
!	*Save value to RAM*
.	*Save value to ROM*
@	*Save all current settings to custom defaults*
?	*Query current value*
*	*Query range*

All available commands are listed on the following pages as well as a brief description of what the parameter choices mean. Some commands require further elaboration that can be found in the relevant sections in the guide.

For example, the command to enable reading of Code 128 barcode symbols is "128ENAB 1". The full command to apply this setting to ROM is:

#128ENAB 1.

Throughout this manual, the serial command for each setting is shown directly below the corresponding barcode menu symbol. Additionally, all commands are shown in table A1-2.

Upon reception of the special command "**#HELP**", the imager will output all of its commands serially to the host computer, in the format shown in table A1-1. This is a very helpful way to see what commands are supported by the firmware version that you are using, and to archive the imager configuration.

Query Commands

This section will describe in more detail how to use the query commands.

Several special characters can be used to query the device about its settings:

^ What is the default value for the setting?

? What is the device's current ROM value for the setting?

% What is the device's current RAM value for the setting?

***** What is the range of possible values for the setting?

Examples:

In the following examples, a bracketed notation [ ] depicts a non-displayable response.

Query Goal: What is the range of possible values for the Code 128 Max Length?

Send: #128MAXL *[CR]

Response: #0-55[CR]

Query Goal: What is the default value for the Code 128 Max Length?

Send: #128MAXL ^[CR]

Response: #55[CR]

Table A1-1: Example Output part from the "HELP" command

Cmds	Description	RAM	ROM	Default	Range
#HELP	Display cmd list				
#ECHO	Echo data back to sender				
#DEFAULT	Default All Settings				
#JDKPRIV	[H]Set JProtocol into private mode				
#232FLOW	RS232 Flow Control	0	0	0	0 - 1
#HOSTCFG	Enable data interface CDC or HID	1	1	1	0 - 1
#KEYRATE	HID Keyboard Rate. 0=Slowest 3=Fastest	3	3	3	0 - 3
#KBD_CTY	Set Keyboard Country Code	0	0	0	0 - 36
#BEPLEVL	Beeper Volume	3	3	3	0 - 3
#BEPTONE	Beeper Tone	1	1	1	0 - 2
#BEPTIME	Beeper Duration	0	0	0	0 - 2
#BEEPPWR	Enable PowerUp Beep.	1	1	1	0 - 1
#BEPGDRD	Enable Good Read Beep	1	1	1	0 - 1
#BEPNORD	Enable No Read Beep	1	1	1	0 - 1
#BEEPBEL	Enable Ascii BEL Beep	0	0	0	0 - 1
#BLKENAB	Enable LED indications	1	1	1	0 - 1
#BLKGDRD	Enable Good Read LED indications	1	1	1	0 - 1
#BLKNORD	Enable No Read LED indications	1	1	1	0 - 1
#VIBENAB	Enable Vibration	1	1	1	0 - 1
#VIBGDRD	Enable Good Read vibration indications	1	1	1	0 - 1
#VIBNORD	Enable No Read vibration indications	1	1	1	0 - 1
#RFIDMOD	RFID Mode (0 = off, 1 = on)	1	1	1	0 - 1
#PRERENA	Enable RFID Prefix	1	1	0	0 - 1
#SUFRENA	Enable RFID Suffix	1	1	0	0 - 1
#BI_RFID	Enable RFID Bilingual mode.	0	0	0	0 - 1
#RFIDVEB	[H]RFID Verbose Mode.	0	0	0	0 - 2
#EM410EN	Enable RFID Tag: EM4102 (EM4x02/CASI-RUSCO (aka IDRO_A))	1	1	0	0 - 1
#HIT1SEN	Enable RFID Tag: HITAG1S (HITAG 1/HITAG S (aka IDRW_B))	0	0	1	0 - 1
#HITA2EN	Enable RFID Tag: HITAG2 (HITAG 2 (aka IDRW_C))	0	0	0	0 - 1
#EM415EN	Enable RFID Tag: EM4150 (EM4x50 (aka IDRW_D))	0	0	0	0 - 1
#AT555EN	[H]Enable RFID Tag: AT5555 (T55x7 (aka IDRW_E))	0	0	0	0 - 1
#ISOFDEN	Enable RFID Tag: ISOFDX (ISO FDX-B (aka IDRO_G))	0	0	0	0 - 1
#EM402EN	[H]Enable RFID Tag: EM4026 (N/A (aka IDRO_H))	0	0	0	0 - 1
#HITAGEN	[H]Enable RFID Tag: HITAGU (N/A (aka IDRW_I))	0	0	0	0 - 1
#EM430EN	[H]Enable RFID Tag: EM4305 (N/A (aka IDRW_K))	0	0	0	0 - 1
#HIDPREN	Enable RFID Tag: HIDPROX (HID Prox)	0	0	1	0 - 1
#TIRISEN	Enable RFID Tag: TIRIS (ISO HDX/TIRIS)	0	0	0	0 - 1
#COTAGEN	Enable RFID Tag: COTAG (Cotag)	0	0	0	0 - 1
#IOPROEN	Enable RFID Tag: IOPROX (ioProx)	0	0	0	0 - 1
#INDITEN	Enable RFID Tag: INDITAG (Indala)	0	0	1	0 - 1
#HONEYEN	Enable RFID Tag: HONEYTAG (NexWatch)	0	0	0	0 - 1

#AWID_EN	Enable RFID Tag: AWID (AWID)	0	0	1	0 - 1
#GPROXEN	Enable RFID Tag: GPROX (G-Prox)	0	0	0	0 - 1
#PYRAMEN	Enable RFID Tag: PYRAMID (Pyramid)	0	0	0	0 - 1
#KERI_EN	Enable RFID Tag: KERI (Keri)	0	0	0	0 - 1
#DEISTEN	Enable RFID Tag: DEISTER (Deister)	0	0	0	0 - 1
#CARDAEN	Enable RFID Tag: CARDAX (Cardax)	1	1	0	0 - 1
#NEDAPEN	Enable RFID Tag: NEDAP (Nedap)	0	0	0	0 - 1
#PAC_ENA	Enable RFID Tag: PAC (PAC)	0	0	0	0 - 1
#IDTECEN	Enable RFID Tag: IDTECK (IDTECK)	0	0	0	0 - 1
#ULTRAEN	Enable RFID Tag: ULTRAPROX (UltraProx)	0	0	0	0 - 1
#ICT_ENA	Enable RFID Tag: ICT (ICT)	0	0	0	0 - 1
#ISONAEN	Enable RFID Tag: ISONAS (Isonas)	0	0	0	0 - 1
#MIFAREN	[H]Enable RFID Tag: MIFARE (ISO14443A/MIFARE)	0	0	0	0 - 1
#ISO14EN	[H]Enable RFID Tag: ISO14443B (ISO14443B)	0	0	0	0 - 1
#ISO15EN	[H]Enable RFID Tag: ISO15693 (ISO15693)	0	0	0	0 - 1
#LEGICEN	[H]Enable RFID Tag: LEGIC (LEGIC)	0	0	0	0 - 1
#HIDICEN	[H]Enable RFID Tag: HIDICLASS (HID iCLASS)	0	0	0	0 - 1
#FELICEN	[H]Enable RFID Tag: FELICA (FeliCa)	0	0	0	0 - 1
#SRX_ENA	[H]Enable RFID Tag: SRX (SRX)	0	0	0	0 - 1
#NFCP2EN	[H]Enable RFID Tag: NFCP2P (NFC Peer-to-Peer)	0	0	0	0 - 1
#BLE_ENA	[H]Enable RFID Tag: BLE (Bluetooth Low Energy)	0	0	0	0 - 1
#TOPAZEN	[H]Enable RFID Tag: TOPAZ (Topaz)	0	0	0	0 - 1
#CTS_ENA	[H]Enable RFID Tag: CTS (CTS256 / CTS512)	0	0	0	0 - 1
#ICPACEN	[H]Enable iClass PAC: HID iClass PAC bits	0	0	0	0 - 1
#SUFBENA	Enable Barcode Suffix	1	1	0	0 - 1
#PREBENA	Enable Barcode Prefix	0	0	0	0 - 1
#NORDENA	Enable No Read Msg	0	0	0	0 - 1
#NO_READ	[H]Enable No Read Msg	0	0	0	0 - 1
#BI_LING	Enable MCL Bilingual mode.	0	0	0	0 - 1
#DEVGRUP	[H]Device Group ID for Reader	11	11	11	11 - 11
#DEVPROD	[H]Device Product ID for Reader	1	1	1	1 - 2
#DIAGLVL	[H]DIAG Level	0	0	0	0 - 65535
#RFIDDLY	RFID Re-Read Delay in Milliseconds	1000	1000	1000	0 - 30000
#RFIDDTY	[H]RFID Duty Cycle Delay in Milliseconds	100	100	250	5 - 30000
#PSTTIME	RFID Timeout in Presentation in Milliseconds	0	0	0	750 - 3600000
#232BAUD	RS232 Baud Rate	115200	115200	115200	9600 - 921600
#DEVSERN	[H]Device Serial Number	XXX-XXX-XXX	XXX-XXX-XXX	XXX-XXX-XXX	
#DEVTYPE	[P]Device Type	CATXXXX	CATXXXX	CATXXXX	
#HW_REV	[P]Hardware Revision	CAT-XXXX-Rev-X	CAT-XXXX-Rev-X	CAT-XXXX-Rev-X	
#232WORD	Sets communication settings (parity, data, stop bits; e.g. "N81")	N81	N81	N81	
#PRERBLK	RFID specific Prefix	[Steve]	[Steve]	(R)	
#SUFRBLK	RFID specific Suffix	[CR]	[CR]	[CR]	
#PREBBLK	Barcode specific Prefix	B/	B/	(B)	
#SUFBBLK	Barcode specific Suffix	[CR]	[CR]	[CR]	
#NORDMSG	No Read Message	NR	NR	NR	
#DEFFACT	[H]Restore All Settings To Factory Defaults				
#REVSOFT	Report Software Revision	FW-HS1RX-00-A0X-761			

#REVTIME [H]Report Build Time/Date Oct 22 2019 05:39:51
#REVBOOT Report Boot Revision Flextap Boot Local Build
#RESET [H]Reboots the device
#REBOOT [H]Reboots the device
#FORCEBT [H]Force into Boot
#DNLDAPP [H]Force into Boot
#232DEFA Default RS232 Parameters
#INDCATE Play an indication sequence.
#BEPSOND Play a beep sequence.
#VIBRATE Play a vibration sequence.
#LEDINDC Play a LED sequence.
#RFIDALL Change all RFID tag types. 1 = enable all, 0 = disable all
#RFIDDEFA Apply default RFID settings
#PASSRFID [P]Enter Pass Through Mode for RFID
#PASSENA [P]Enter Pass Through Mode for Barcode
#TRGON Trigger ON
#TRGOFF Trigger OFF
#TRGMODE Select Manual or Presentation Mode
#PRECLAL Clear All Prefixes
#PREDEFA Default All Prefixes
#MEMFREE [P]Report Heap Data
#READMEM [P]Read Memory (addr) (length)
#REVRFID Report RFID Revision
#RFIDDBG [P]Print RFID Info
#TESTWDT [P]Test Watchdog Timeout
#IMGGETX Get an Image from Barcode Scanner
#IMGUPLD Send an Image to Barcode Scanner
#GPIOREA [H]Read GPIO Pin State
#GPIOWRT [H]Write GPIO Pin State
#SYNCUPD [H]Update PS/SYNC

#HELP	Display command list	N/A	N/A	N/A	N/A
#BI_LING	[H]Enter bilingual command processing mode	1	1	1	0-1
#FRMRATE	[H]Print out measured frame rate following a trigger	0	0	0	0-1
#DIAGLVL	[H]Set the Jfw DIAG level	0	0	0	0-4294967295
#NORDMSG	Message output by the scanner for NO REA	NR	NR	NR	100 CHARS MAX
#DEFAULT	Restore All Settings To Custom Defaults	N/A	N/A	N/A	N/A
#DEFFACT	[H]Restore All Settings To Factory Defaults	N/A	N/A	N/A	N/A
#DNLDAPP	Download a firmware (*.moc) file via XModem	N/A	N/A	N/A	N/A
#NTV_CMD	[H]Send a single native command	N/A	N/A	N/A	N/A
#REVSOFT	Request Firmware revision information	N/A	N/A	N/A	N/A
#REVTIME	Request Time and Date of build information	N/A	N/A	N/A	N/A
#REV_ALL	Report detailed scan engine info	N/A	N/A	N/A	N/A
#ALLENAB	Enable all Symbologies	N/A	N/A	N/A	N/A
#COMENAB	Enable Composite Code	0	0	0	0-1
#COMMAXL	Composite Code Max Symbol Length	2435	2435	2435	1-2435

#COMMINL	Composite Code Min Symbol Length	1	1	1	1-2435
#128DEFA	Default Code 128 Parameters	N/A	N/A	N/A	N/A
#128ENAB	Enable Decoding Code 128	1	1	1	0-1
#128MAXL	Max Code 128 Symbol Length	55	55	55	0-55
#128MINL	Min Code 128 Symbol Length	0	0	0	0-55
#ISBT128	Enable ISBT-128	0	0	0	0-1
#128APND	[H]Code 128 Append	1	1	1	0-1
#128CDPG	[H]Code 128 Codepage	12	12	12	

1|2|3|5|6|7|10|11|12|13|14|15|16|17|18|22|29|30|31|32|33|34|35|36|37|38|39|40|41|42|43|44|45|51|52|53|54|55|56|57|58|59|60|61|63|64|65|66|70|71|75|76|77|78|79|81|82|83|84|85|86|87|88|89|90|91|92|93|94

#PSTENAB	[H]Enable Postnet	0	0	0	0-1
#PLTENAB	[H]Enable Planet Code	0	0	0	0-1
#JPTENAB	[H]Enable Japan Post	0	0	0	0-1
#APTENAB	[H]Enable Australian Post	0	0	0	0-1
#KIXENAB	[H]Enable Netherlands KIX Code	0	0	0	0-1
#USPS4CB	[H]Enable USPS 4CB	0	0	0	0-1
#UPUENAB	[H]Enable UPU FICS Postal	0	0	0	0-1
#C39DEFA	Default Code 39 Parameters	N/A	N/A	N/A	N/A
#C39ASCI	Code 39 Full ASCII Mode	0	0	0	0-1
#C39CHEC	Code 39 Check Digit 0=none 1=req 2=req+xmit	0	0	0	0|1|2
#C39ENAB	Enable Code 39 Decoding	1	1	1	0-1
#T39ENAB	[H]Enable TLC39 Decoding	0	0	0	0-1
#C39MAXL	Max Code 39 Symbol Length	48	48	48	0-48
#C39MINL	Min Code 39 Symbol Length	0	0	0	0-48
#C39XMIT	[H]Transmit Start/Stop characters for Code 39	0	0	0	0-1
#C39CONV	Convert C39 to C32 Pharmacode	0	0	0	0-1
#C39TRIO	Code 39 Trioptic	0	0	0	0-1
#C39APND	[H]Code 39 Append	0	0	0	0-1
#C39CDPG	[H]Code 39 Code Page	2	2	2	

1|2|3|5|6|7|10|11|12|13|14|15|16|17|18|22|29|30|31|32|33|34|35|36|37|38|39|40|41|42|43|44|45|51|52|53|54|55|56|57|58|59|60|61|63|64|65|66|70|71|75|76|77|78|79|81|82|83|84|85|86|87|88|89|90|91|92|93|94

#TELDEFA	[H]Default Telepen Parameters	N/A	N/A	N/A	N/A
#TELENAB	[H]Enable Telepen Decoding	0	0	0	0-1
#TELMAXL	[H]Telepen Max Symbol Length	60	60	60	1-60
#TELMINL	[H]Telepen Min Symbol Length	1	1	1	1-60
#TEL_OUT	[H]Telepen Output	0	0	0	0|1
#CBRDEFA	Default Codabar Parameters	N/A	N/A	N/A	N/A
#CBRCHEC	[H]Codabar Check Digit 0=none 1=req 2=req+xmit	0	0	0	0|1|2
#CBRENAB	Enable Decoding Codabar	1	1	1	0-1
#CBRMAXL	Max Codabar Symbol Length	55	55	55	2-55
#CBRMINL	Min Codabar Symbol Length	4	4	4	2-55
#CBRXMIT	[H]Transmit Start/Stop characters for Codabar	0	0	0	0-1
#CBR_CAT	[H]Codabar Concatenation	0	0	0	0|1|2
#CDADEFA	[H]Default Codablock A Parameters	N/A	N/A	N/A	N/A
#CDAENAB	[H]Enable Codablock A Decoding	0	0	0	0-1

#CDAMAXL [H]Codablock A Max Symbol Length 600 600 600 1-600
#CDAMINL [H]Codablock A Min Symbol Length 1 1 1 1-600
#CDFDEFA [H]Default Codablock F Parameters N/A N/A N/A N/A
#CDFENAB [H]Enable Codablock F Decoding 0 0 0 0-1
#CDFMAXL [H]Codablock F Max Symbol Length 2048 2048 2048 1-20 8
#CDFMINL [H]Codablock F Min Symbol Length 1 1 1 1-2048
#I25DEFA Default I25 Parameters N/A N/A N/A N/A
#I25CHEC I25 Check Digit 0=none 1=req 2=req+xmit 0 0 0 0|1|2
#I25ENAB Enable Decoding I25 1 1 1 0-1
#I25MAXL Max I25 Symbol Length 30 30 30 2-55
#I25MINL Min I25 Symbol Length 6 6 6 2-55
#C11DEFA Default Code 11 Parameters N/A N/A N/A N/A
#C11CHEC Code 11 2-Char Check Digit 0 0 0 0-1
#C11ENAB Enable Decoding Code 11 0 0 0 0-1
#C11MAXL Code 11 Max Symbol Length 55 55 55 1-55
#C11MINL Code 11 Min Symbol Length 4 4 4 1-55
#C25ENAB [H]Code 2 of 5 (China Post) 0 0 0 0-1
#C25DEFA [H]Default Code 2 of 5 (China Post) Parameters N/A N/A N/A N/A
#C25MAXL [H]Code 2 of 5 (China Post) Max Symbol Length 80 80 80 2-80
#C25MINL [H]Code 2 of 5 (China Post) Min Symbol Length 4 4 4 2-80
#K35ENAB [H]Korean 3 of 5 (Korea Post) 0 0 0 0-1
#K35CHEC [H]Korean 3 of 5 (Korea Post) Check Digit 0 0 0 0-1
#K35DEFA [H]Default Korean 3 of 5 (Korea Post) N/A N/A N/A N/A
#K35MAXL [H]Korean 3 of 5 (Korea Post) Max Symbol Length 48 48 48 2-80
#K35MINL [H]Korean 3 of 5 (Korea Post) Min Symbol Length 4 4 4 2-80
#C93DEFA Default Code 93 Parameters N/A N/A N/A N/A
#C93ENAB Enable Decoding Code 93 1 1 1 0-1
#C93MAXL Max Code 93 Symbol Length 55 55 55 0-55
#C93MINL Min Code 93 Symbol Length 0 0 0 0-55
#C93CDPG [H]Code 93 Code Page 2 2 2
1|2|3|5|6|7|10|11|12|13|14|15|16|17|18|22|29|30|31|32|33|34|35|36|37|38|39|40|41|42|43|44|45|51|52|53|54|55|56|57|58|59|60|61|63|64|65|66|70|71|75|76|77|78|79|81|82|83|84|85|86|87|88|89|90|91|92|93|94
#M25DEFA Default M25 Parameters N/A N/A N/A N/A
#M25ENAB Enable Decoding M25 0 0 0 0-1
#M25MAXL Max M25 Symbol Length 55 55 55 1-55
#M25MINL Min M25 Symbol Length 4 4 4 1-55
#MSIENAB Enable Decoding MSI 0 0 0 0-1
#MSIDEFA Default MSI Parameters N/A N/A N/A N/A
#MSIMAXL Max MSI Symbol Length 48 48 48 4-48
#MSIMINL Min MSI Symbol Length 4 4 4 4-48
#MSICHEC MSI Check Digit (0-4) 1 1 1 0-4
#N25DEFA [H]Default N25 Parameters N/A N/A N/A N/A
#N25ENAB [H]Enable Decoding N25 1 1 1 0-1
#N25MINL [H]Min N25 Symbol Length 4 4 4 2-80
#N25MAXL [H]Max N25 Symbol Length 80 80 80 2-80
#N25XMIT [H]Transmit N25 check digit 0 0 0 0|1|2

#A25DEFA	[H]Default Straight 2 of 5 Parameters	N/A	N/A	N/A	N/A
#A25ENAB	[H]Enable Straight 2 of 5	0	0	0	0-1
#A25MINL	[H]Min Straight 2 of 5 Symbol Length	4	4	4	1-48
#A25MAXL	[H]Max Straight 2 of 5 Symbol Length	48	48	48	1-48
#R25DEFA	[H]Default R25 Parameters	N/A	N/A	N/A	N/A
#R25ENAB	[H]Enable Decoding R25	0	0	0	0-1
#R25MAXL	[H]Max R25 Symbol Length	48	48	48	1-48
#R25MINL	[H]Min R25 Symbol Length	4	4	4	1-48
#E13DEFA	Default EAN13 Parameters	N/A	N/A	N/A	N/A
#E13ADD2	[H]EAN13 2 Digit Addendum	0	0	0	0-1
#E13ADD5	[H]EAN13 5 Digit Addendum	0	0	0	0-1
#E13ADDS	[H]EAN13 Addendum Separator	1	1	1	0-1
#E13ADDR	[H]EAN13 Addendum Required	0	0	0	0-1
#E13CHEC	[H]EAN13 Check Digit Xmit	1	1	1	0-1
#E13ENAB	Enable Decoding EAN13	1	1	1	0-1
#E13ISBN	[H]Enable EAN13 ISBN	0	0	0	0-1
#EA8DEFA	Default EAN8 Parameters	N/A	N/A	N/A	N/A
#EA8ADD2	[H]EAN8 2 Digit Addendum	0	0	0	0-1
#EA8ADD5	[H]EAN8 5 Digit Addendum	0	0	0	0-1
#EA8ADDS	[H]EAN8 Addendum Separator	1	1	1	0-1
#EA8ADDR	[H]EAN8 Addendum Req'd	0	0	0	0-1
#EA8CHEC	[H]EAN8 Check Digit Xmit	1	1	1	0-1
#EA8ENAB	Enable EAN8 Decoding	1	1	1	0-1
#PDFDEFA	Default PDF417 Parameters	N/A	N/A	N/A	N/A
#PDFENAB	Enable Decoding PDF417	1	1	1	0-1
#PDFMAXL	Max PDF417 Symbol Length	2750	2750	2750	1-2750
#PDFMINL	Min PDF417 Symbol Length	1	1	1	1-2750
#CMUENAB	[H]Enable UPC/EAN Composite	0	0	0	0-1
#CPNENAB	[H]Enable UPC-A/EAN-13 Extended Coupon Code	0	0	0	0-2
#UPADEFA	Default UPC-A Parameters	N/A	N/A	N/A	N/A
#UPACONV	Convert UPC-A to EAN-13	1	1	1	0-1
#UPAENAB	Enable UPC-A Decoding	1	1	1	0-1
#UPAXMIT	Transmit UPC-A Check Digit	1	1	1	0-1
#UPAADD2	[H]UPC-A 2 digit addenda	0	0	0	0-1
#UPAADD5	[H]UPC-A 5 digit addenda	0	0	0	0-1
#UPAADDS	[H]UPC-A addenda separator	1	1	1	0-1
#UPAADDR	[H]UPC-A addenda required	0	0	0	0-1
#UPANSYS	[H]UPC-A number system	1	1	1	0-1
#UPEDEFA	Default UPC-E Parameters	N/A	N/A	N/A	N/A
#UPEEXPN	Enable UPC-E Expanded Decoding	0	0	0	0-1
#UPEXMIT	Transmit UPC-E Check Digit	1	1	1	0-1
#UPEENAB	Enable UPC-E(0) Decoding	1	1	1	0-1
#UE1ENAB	Enable UPC-E1 Decoding	0	0	0	0-1
#UE0ADD2	[H]UPC-E0 2 digit addenda	0	0	0	0-1
#UE0ADD5	[H]UPC-E0 5 digit addenda	0	0	0	0-1
#UE0ADDS	[H]UPC-E0 2 addenda separator	1	1	1	0-1
#UE0ADDR	[H]UPC-E0 5 addenda required	0	0	0	0-1

#UE0NSYS [H]UPC-E0 number system 1 1 1 0-1
#TRGON Trigger ON N/A N/A N/A N/A
#TRGOFF Trigger OFF N/A N/A N/A N/A
#TRGTIME Trigger Timeout(in milliseconds) 9900 9900 9900 0-300000
#TRGMODE Trigger Mode 0=Manual, 1=Presentation 0 0 0 0-1
#SUFENAB [H]Enable Suffixes 0 0 0 0-1
#SUFDEFA [H]Default All Suffixes N/A N/A N/A N/A
#SUFBLOK [H]Suffix Block N/A N/A N/A N/A
#SUFCLAL [H]Clear all Suffixes N/A N/A N/A N/A
#PREENAB [H]Enable Prefixes 0 0 0 0-1
#PREDEFA [H]Default All Prefixes N/A N/A N/A N/A
#PREBLOK [H]Prefix Block N/A N/A N/A N/A
#PRECLAL [H]Clear all Prefixes N/A N/A N/A N/A
#DFMENAB [H]Enable Data Format 1 1 1 0|1|2|3|4
#DFMDEFA [H]Default Data Format N/A N/A N/A N/A
#DFMBLOK [H]Data Format Block N/A N/A N/A 00-FF
#DFMCLAL [H]Clear Data Format N/A N/A N/A N/A
#DLYRERD Re-read Delay (in milliseconds) 750 750 750 50-30000
#DLYMESG [H]Inter-message/packet Delay (in milliseconds) 0 0 0 0-1000
#NO_READ Enable No Read message 1 1 1 0-1
#IMGGETX [H]Ships an image from the device. Args: 'A=' infinity filter (0=off, 1=on), 'C=' compensation (0=off, 1=on), 'D=' pixel depth (1|8|24), 'E=' edge sharpen (1-24), 'F=' format (refer to UG for values), DO NOT USE IF 'JPG' OPTION USED, 'H=' histogram stretch (0=off, 1=on), 'I=' invert image (X=x-axis, Y=y-axis), 'N=' noise reduction (0=off, 1=on), 'K=' gamma correction (0-1000), 'S=' pixel ship (1-3), 'U=' document image filter (0-255), 'V=' blur image (0=off, 1=on), 'W=' ship histogram (0=off, 1=on), 'Q=' quality (0-100), 'ROT=' rotation (90|180|270), 'RGB' send color image, 'JPG' send as jpeg, DO NOT USE IF 'F=' OPTION USED, 'XM' use xmodem, DO NOT USE IF 'HM' OPTION USED, 'HM' use hmodem, DO NOT USE IF 'XM' OPTION USEDN/A N/A N/A N/A
#IMGSNAP [H]Gets an image. Args: 'L=' use lights (0=off, 1=on), not available w. P=0, 'P=' type (0=decoding, 1=photo, 2=manual), 'B=' beep (0=off, 1=on), 'T=' wait for trigger (0=off, 1=on), only works w. P=1, 'E=' exposure (1-7874), only works w. P=2, 'G=' gain (1|2|4|8), only works w. P=2, 'W=' target white (0-255), only works w. P=1, 'D=' delta for acceptance (0-255), only works w. P=1, 'U=' update tries (0-10), only works w. P=1, '%=' target set pointpercentage (1-99), N/A N/A N/A N/A
#IMGMAXX Get Image Width N/A N/A N/A N/A
#IMGMAXY Get Image Height N/A N/A N/A N/A
#AZTDEFA Default Aztec Parameters N/A N/A N/A N/A
#AZTENAB Enable Aztec Decoding 1 1 1 0-1
#AZTMINL Min Aztec Symbol Length 1 1 1 1-3832
#AZTMAXL Max Aztec Symbol Length 3832 3832 3832 1-3832
#AZTCDPG [H]Aztec Code Page 51 51 51 1|2|3|5|6|7|10|11|12|13|14|15|16|17|18|22|29|30|31|32|33|34|35|36|37|38|39|40|41|42|43|44|45|51|52|53|54|55|56|57|58|59|60|61|63|64|65|66|70|71|75|76|77|78|79|81|82|83|84|85|86|87|88|89|90|91|92|93|94
#DMXDEFA Default Data Matrix Parameters N/A N/A N/A N/A

#DMXENAB Enable Data Matrix Decoding 1 1 1 0-1
#DMXMINL Data Matrix Min Symbol Length 1 1 1 1-3116
#DMXMAXL Data Matrix Max Symbol Length 3116 3116 3116 1-3116
#DMXCDPG [H]Data Matrix Code Page 51 51 51 1|2|3|5|6|7|10|11|12|13|14|15|16|17|18|22|29|30|31|32|33|34|35|36|37|38|39|40|41|42|43|44|45|51|52|53|54|55|56|57|58|59|60|61|63|64|65|66|70|71|75|76|77|78|79|81|82|83|84|85|86|87|88|89|90|91|92|93|94
#MAXDEFA Default Maxicode Parameters N/A N/A N/A N/A
#MAXENAB Enable Maxicode Decoding 0 0 0 0-1
#MAXMINL Maxicode Min Symbol Length 1 1 1 1-150
#MAXMAXL Maxicode Max Symbol Length 150 150 150 1-150
#QRCDEFA Default QR Code Parameters N/A N/A N/A N/A
#QRCENAB Enable QR Code Decoding 1 1 1 0-1
#QRCMINL QR Code Min Symbol Length 1 1 1 1-7089
#QRCMAXL QR Code Max Symbol Length 7089 7089 7089 1-7089
#QRCNSMD [H]Improve non-square symbol decoding 0 0 0 0-1
#QRCSIZE [H]Symbol size (0= normal, 1=small, 2=very small) 1 1 1 0-2
#MPDDEFA Default Micro PDF Parameters N/A N/A N/A N/A
#MPDENAB Enable Micro PDF Decoding 0 0 0 0-1
#MPDMINL Micro PDF Min Symbol Length 1 1 1 1-366
#MPDMAXL Micro PDF Max Symbol Length 366 366 366 1-366
#RSSENAB Enable RSS-14 Decoding 1 1 1 0-1
#RSLENAB Enable RSS-Limited Decoding 1 1 1 0-1
#RSSDEFA Default RSS-14 Parameters N/A N/A N/A N/A
#RSLDEFA Default RSS-Limited Parameters N/A N/A N/A N/A
#RSEDEFA Default RSS-Expanded Parameters N/A N/A N/A N/A
#RSEENAB Enable RSS-Expanded Decoding 1 1 1 0-1
#RSEMINL RSS-Expanded Min Symbol Length 4 4 4 4-74
#RSEMAXL RSS-Expanded Max Symbol Length 74 74 74 4-74
#DECTMIN [H]Decoder Min Timeout (in milliseconds) 400 400 400 0-2500
#DECVIGR [H]Decoder Vigor 2 2 2 0-2
#DECCNTL [H]Decoder Control Options 0 0 0 0-32
#IMGTRUE [H]Enable True Windowing on Image 0 0 0 0-1
#IMG_TOP [H]Set Top Boundary of Image 0 0 0 0-639
#IMG_BOT [H]Set Bottom Boundary of Image 639 639 639 0-639
#IMG_LFT [H]Set Left Boundary of Image 0 0 0 0-843
#IMG_RGT [H]Set Right Boundary of Image 843 843 843 0-843
#DECTIME [H]Decoder Max Timeout (in milliseconds) 800 800 800 0-2500
#DLYGDRD Good Read Delay (in milliseconds) 0 0 0 0-30000
#EXP_RPT [H]Exposure Report Enable 0 0 0 0-1
#EXPTARG Target White Value 120 120 120 48-212
#EXPMODE Exposure Mode (0 = Manual, 4 = Auto) 4 4 4 0|1|2|3|4|5|6|7|8|9|10
#PRESEXP [H]Presentation Exposure 25 25 25 1-7874
#PDCGMAX [H]Presentation Gain 2 2 2 1|2|3|4|8|16|32|64
#EXP_MAX Max Exposure 100 100 100 1-7874
#EXP_MIN [H]Min Exposure 1 1 1 1-7874

#EXPSTRT [H]Exposure Start 4 4 4 1-7874
#EXP_FIX [H]Fixed Exposure Value 3 3 3 1-7874
#GAINMAX [H]Max Gain 4 4 4 1|2|3|4|6|8|16|32|64
#GAINSRT [H]Starting Gain 4 4 4 1|2|3|4|6|8|16|32|64
#LEDSPWR Illumination Intensity Percentage 0-off, 1-low,2-med,3-high 3 3 3 0-3
#AIMMODE Aimer Mode. 0 = off, 1 = alternating, 2 = continuous 2 0-2
#TSTFLGS [P]Bit field of flags for testing 0 0 0 0-7
#IMGLMTX [P]Number of black images to detect before imager reset 5 5 5 0-20
#PDCTMIN [H]Presentation Mode Min Timeout (in milliseconds) 150 150 150 0-2500
#PDCTMAX [H]Presentation Mode Max Timeout (in milliseconds) 200 200 200 0-2500
#PDCCTRL [H]Presentation Mode Control 0 0 0 0-32
#PDCVIGR [H]Presentation Mode Vigor 0 0 0 0-2
#DEVSERN Device Serial Number N/A N/A N/A N/A
#NSERNUM [H]Native Serial Number N/A N/A N/A N/A
#DATM121 [H]Data Matching mode: 1 to 1 0 0 0 0-1
#DATM12N [H]Data Matching mode: 1 to N 0 0 0 0-1
#DATMN2N [H]Data Matching mode: N to N 0 0 0 0-1
#MATMODE [H]Matching Criteria: 1=length,order and characters 2=length and characters 3=characters only1 1 1 1-3
#COLENAB [H]Enable/Disable Data Collation mode matching 0 0 0 0-1
#COLMAST [H]Scan master barcode start position enable 0 0 0 0-1
#COLSLAV [H]Scan slave barcode start position enable 0 0 0 0-1
#COLSCNT [H]Scan number of characters to compare enable 0 0 0 0-1
#COLSUBS [H]Enable/Disable sending sub barcode 0 0 0 0-1
#EXITPRG [H]Exit Programming start positions in Collation mode N/A N/A N/A N/A
#EXITLRN [H]Exit learning masters for match modes 1 to N and N to N N/A N/A N/A N/A
#EXITDAT [H]Exit Data matching N/A N/A N/A N/A
#EXITCOL [H]Exit Collation Mode N/A N/A N/A N/A
#GS1ENAB Enable/Disable GS1 formatting 1 1 1 0-1
#GS1MINL [H]GS1 Min Symbol Length 0 0 0 0-55
#GS1MAXL [H]GS1 Max Symbol Length 55 55 55 0-55
#GS1PREF [H]Set GS1 prefix per App Id N/A N/A N/A 00-FF
#GS1PCAL [H]Clear all GS1 prefix per App Id N/A N/A N/A N/A
#GS1SUFF [H]Set GS1 suffix per App Id N/A N/A N/A 00-FF
#GS1SCAL [H]Clear all GS1 suffix per App Id N/A N/A N/A N/A
#GS1OREN [H]Enable/Disable GS1 output ordering per App Id 0 0 0 0-1
#GS1ORDR [H]Set GS1 output ordering per App Id N/A N/A N/A 00-FF
#GS1OCAL [H]Clear all GS1 output ordering N/A N/A N/A N/A
#GS1APID [H]Options for outputting GS1 App Id: 0=don't output, 1=output App Id with (), 2=output App Id without () 0 0 0 0-2
#GS1DATE [H]Options for outputting Dates in GS1: 0=send date as is YYMMDD, 1=do not send 00 for DD0 0 0 0-1
#GS1LFNC [H]Enable/Disable transmitting GS1 leading FNC1 character 0 0 0 0-1
#GS1AFNC [H]Enable/Disable transmitting all GS1 FNC1 characters as]C1 0 0 0 0-1

#GS1VFNC [H]Program the GS1 variable length FNC1 as a different character N/A N/A N/A 00-FF
#GS1PRGP [H]Program the Prefix character to be applied to all GS1 App Ids N/A N/A N/A 00-FF
#PREFTAB [H]Enable/Disable inserting [HT] (TAB w/ KEYENAB = 1) character in between each app id0 0 0 0-1
#GS1ERRC [H]Enable/Disable error condition response for bad GS1 barcode format 0 0 0 0-1
#MNUSAVE [H]Save Menu Settings N/A N/A N/A N/A
#GS1EMUL [H]Enable Emulation from GS1 (0=Off 1=128) 0 0 0 0-1
#ALTENAB [H]Enable/Disable Japan 2 byte output mode 0 0 0 0-1
#ALT_FNM [H]Primary/Alternate Data Formats 0 0 0 0|1|2|3
#SCANLED [H]Use illumination LEDs during scanning 1 1 1 0-3
#AIM_DLY Aimer delay (in milliseconds) 0 0 0 0-4000
#SCAN_TO [H]Scanner timeout (in milliseconds) 1 1 1 0-999999
#PRESCEL [H]Presentation read mode; cell phone optimized N/A N/A N/A N/A
#PRESNRM [H]Presentation read mode; normal N/A N/A N/A N/A
#PRESENH [H]Presentation read mode; enhanced N/A N/A N/A N/A
#TRIGCEL [H]Normal trigger read mode; cell phone optimized N/A N/A N/A N/A
#TRIGNRM [H]Normal trigger read mode; normal N/A N/A N/A N/A
#TRIGENH [H]Normal trigger read mode; enhanced N/A N/A N/A N/A
#VID_REV [H]Video reverse mode 0 0 0 0-2
#RMV_FNC [H]Remove function codes from transmitted barcode data 0 0 0 0-1
#DEC_ECI [H]Decoder ECI Handling 2 2 2 0-2
#DECCELL [H]Cell phone mode 0 0 0 0-1
#DEC_BND [H]Improve bounds 0 0 0 0-1
#DEC_LAR [H]Low aspect ratio linear finding 1 1 1 0-1
#DEC_FND [H]Use cycling finder 1 1 1 0-1
#PDC_FND [H]Presentation decode cycling finder 1 1 1 0-1
#DEC_LSC [H]Low symbol contrast 1 1 1 0|1|2|3
#PDC_LSC [H]Presentation mode low symbol contrast 0 0 0 0|1|2|3
#DEC_PDC [H]Force presentation style decode 0 0 0 0|1|2
#DEC_SQZ [H]Linear short quiet zones 1 1 1 0-2
#DEC_USE [H]Choose decoder to use 1 1 1 0|1|3
#IMGUPLD [H]Upload image for processing N/A N/A N/A N/A
#IMGUPEN [H]Enable process uploaded image 0 N/A 0 0-1
#DECTEST [P]Decode test on upload image N/A N/A N/A N/A
#DEBGGEN [H]Enable Honeywell general debug output 0 0 0 0-1
#EMITEST [H]Enable EMI Testing mode 0 0 0 0-1
#DBG_TTR [H]Enable Time To Read 0 0 0 0-1
#JDKPRIV [H]Privilege Mode 1 N/A 0 0-1
#MNUENAB Enable Menu Commands 1 1 1 0-1
#GETXMLDATA [H]Request For XML Data N/A N/A N/A N/A
#RESET [H]Reboots the device N/A N/A N/A N/A

Appendix A1-2 Command List and Standard Default Parameters

Command	Range (if applicable)	Default Value	Description
128DEFA			*Default Code 128 parameters*
128ENAB	*0 to 1*	*1*	*Enable Decoding Code 128*
128MAXL	*0 to 55*	*55*	*Max Code 128 symbol length*
128MINL	*0 to 55*	*0*	*Min Code 128 symbol length*
ALLENAB	*0 to 1*	*1*	*Enable All Symbologies*
AZTDEFA			*Default Aztec parameters*
AZTENAB	*0 to 1*	*1*	*Enable Aztec Decoding*
BEPLEVL	*0 to 3*	*3*	*Set Beeper Level*
C11CHEC	*0 to 1*	*0*	*Enable Code 11 2-digit Check digit*
C11DEFA			*Default Code 11 parameters*
C11ENAB	*0 to 1*	*0*	*Enable Decoding Code 11*
C11MAXL	*1 to 55*	*55*	*Max Code 11 symbol length*
C11MINL	*1 to 55*	*4*	*Min Code 11 symbol length*
C39ASCI	*0 to 1*	*0*	*Enable Code 39 full ASCII mode*
C39CHEC	*0 to 1*	*0*	*Enable Code 39 Check digit*
C39CONV	*0 to 1*	*0*	*Enable conversion C39 to C32 Pharma*
C39DEFA			*Default Code 39 parameters*
C39ENAB	*0 to 1*	*1*	*Enable Code 39 Decoding*
C39MAXL	*0 to 48*	*48*	*Max Code 39 symbol length*
C39MINL	*0 to 48*	*0*	*Min Code 39 symbol length*
C39TRIO	*0 to 1*	*0*	*Enable Trioptic C39*
C93DEFA			*Default Code 93 parameters*
C93ENAB	*0 to 1*	*0*	*Enable Decoding Code 93*
C93MAXL	*0 to 55*	*55*	*Max Code 93 symbol length*
C93MINL	*0 to 55*	*0*	*Min Code 93 symbol length*
CBRDEFA			*Default Codabar Parameters*
CBRENAB	*0 to 1*	*0*	*Enable Codabar Decoding*
CBRMAXL	*2 to 55*	*55*	*Max Codabar symbol length*
CBRMINL	*2 to 55*	*5*	*Min Codabar symbol length*
COMENAB	*0 to 1*	*0*	*Enable Composite Code*
COMMAXL	*1 to 2435*	*2435*	*Composite Code Max Symbol Length*
COMMINL	*1 to 2435*	*1*	*Composite Code Min Symbol Length*
DEFFACT			*Restore All Settings To Factory Defaults*
DEFAULT			*Restore All Settings To Custom Defaults*
DEVSERN			*Show Device Serial Number*
DLYGDRD	*0 to 30000*	*0*	*Good Read Delay (in milliseconds)*
DLYRERD	*0 to 30000*	*600*	*Re-read Delay (in milliseconds)*
DMXDEFA			*Default Data Matrix Parameters*

Command	Range (if applicable)	Default Value	Description
DMXENAB	*0 to 1*	*1*	*Enable Data Matrix Decoding*
DNLDAPP			*Download a firmware file via XModem*
E13DEFA			*Default EAN13 parameters*
E13ENAB	*0 to 1*	*1*	*Enable Decoding EAN13*
EA8DEFA			*Default EAN8 Parameters*
EA8ENAB	*0 to 1*	*1*	*Enable EAN8 Decoding*
ELEDDUR	*0 to 1000*	*1*	*Error LED duration in milliseconds*
EXP_MAX	*1 to 7874*	*100*	*Max Exposure*
EXPMODE	*0, 2*	*0*	*Exposure Mode*
EXPTARG	*48 to 212*	*120*	*Target White Value*
GS1ENAB	*0 to 1*	*1*	*Enable/Disable GS1 Formatting*
GS1EMUL	*0 to 1*	*0*	*Enable Emulation from GS1 (0=Off, 1=128)*
HELP			*Show command list and settings*
HOSTCFG	*0 to 1*	*0*	*0 = CDC (COM Emulation),1 = HID Keyboard*
I25CHEC	*0 to 2*	*0*	*Enable I2of5 Check digit*
I25DEFA			*Default I2of5 parameters*
I25ENAB	*0 to 1*	*1*	*Enable I2of5 Decoding*
I25MAXL	*0 to 55*	*30*	*Max I2of5 Symbol Length*
I25MINL	*0 to 55*	*6*	*Min I2of5 Symbol Length*
IMGMAXX		*844*	*Get Image Width*
IMGMAXY		*640*	*Get Image Height*
ISBT128	*0 to 1*	*0*	*Enable ISBT-128 Concatenation*
KBD_CTY	*12 options*	*0*	*Keyboard Country Setting*
LEDSPWR	*0 to 3*	*3*	*Set illumination brightness*
M25DEFA			*Default Matrix 2 of 5 Parameters*
M25ENAB	*0 to 1*	*0*	*Enable Decoding Matrix 2 of 5*
M25MAXL	*1 to 55*	*55*	*Max Matrix 2 of 5 symbol length*
M25MINL	*1 to 55*	*4*	*Min Matrix 2 of 5 symbol length*
MAXDEFA			*Default MaxiCode parameters*
MAXENAB	*0 to 1*	*0*	*Enable MaxiCode*
MPDDEFA			*Default Micro PDF parameters*
MPDENAB	*0 to 1*	*0*	*Enable Micro PDF417 Decoding*
MSICHEC	*0 to 4*	*0*	*MSI Check Digit (0-4)*
MSIDEFA			*Default MSI Parameters*
MSIENAB	*0 to 1*	*0*	*Enable Decoding MSI*
MSIMAXL	*4 to 48*	*48*	*Max MSI Symbol Length*
MSIMINL	*4 to 48*	*4*	*Min MSI Symbol Length*
MULTSYM	*0 to 1*	*0*	*Multiple Symbol mode*
NO_READ	*0 to 1*	*0*	*Enable No Read message*
PDFDEFA			*Default PDF417 parameters*
PDFENAB	*0 to 1*	*1*	*Enable Decoding PDF417*

Command	Range (if applicable)	Default Value	Description
PREBBLK		*(B)*	*Barcode Prefix Block*
PREBENA	*0 to 1*	*1*	*Enable Barcode Prefix*
QRCDEFA			*Default QR Code parameters*
QRCENAB	*0 to 1*	*1*	*Enable QR Code Decoding*
REVSOFT			*Report Software revision*
REVTIME			*Report Build Time*
RSEENAB	*0 to 1*	*1*	*Enable RSS-Expanded (GS1 Databar Expanded)*
RSLENAB	*0 to 1*	*1*	*Enable RSS-Limited (GS1 Databar Limited)*
RSSENAB	*0 to 1*	*1*	*Enable RSS-14 (GS1 Databar)*
SUFBBLK		*[CR]*	*Barcode Suffix*
SUFBENA	*0 to 1*	*1*	*Enable Barcode Suffix*
TRGMODE	*0, 1*	*0*	*Trigger Mode 0=Single, 1=Presentation*
TRGOFF			*Software Trigger Off*
TRGON			*Software Trigger On*
TRGTIME	*0 to 300000*	*9900*	*Trigger Timeout (in milliseconds)*
UE1ENAB	*0 to 1*	*0*	*Enable UPC-E1 Decoding*
UPADEFA			*Default UPC-A parameters*
UPAENAB	*0 to 1*	*1*	*Enable UPC-A Decoding*
UPAXMIT	*0 to 1*	*1*	*Transmit UPC-A Enable Check digit*
UPEDEFA			*Default UPC-E parameters*
UPEENAB	*0 to 1*	*1*	*Enable UPC-E (0) Decoding*
UPEEXPN	*0 to 1*	*0*	*Enable UPC-E Expanded Decoding*
UPEXMIT	*0 to 1*	*1*	*Transmit UPC-E(0) Check digit*
WINDECE	*0 to 1*	*0*	*Enable Decode Windowing*
WINDECB	*0 to 639*	*384*	*Set Bottom boundary of decode window*
WINDECL	*0 to 843*	*338*	*Set Left boundary of decode window*
WINDECR	*0 to 843*	*506*	*Set Right boundary of decode window*
WINDECT	*0 to 639*	*256*	*Set Top boundary of decode window*
XMITCID	*0 to 2*	*0*	*Transmit Code ID (0-Off, 1-AIM ID, 2-Symbol ID)*

Appendix A1-2 RFID Command List and Standard Default Parameters

Command	Range (if applicable)	Default Value	Description
EM410EN	0 to 2	0	Enable read RFID LF Tag: EM4102 (EM4x02/CASI-RUSCO (aka IDRO_A))
HIT1SEN	0 to 2	1	Enable read RFID LF Tag: HITAG1S (HITAG 1/HITAG S (aka IDRW_B))
HITA2EN	0 to 2	0	Enable read RFID Tag: HITAG2 (HITAG 2 (aka IDRW_C))
EM415EN	0 to 2	0	Enable read RFID LF Tag: EM4150 (EM4x50 (aka IDRW_D))
ISOFDEN	0 to 2	0	Enable read RFID LF Tag: ISOFDX (ISO FDX-B (aka IDRO_G))
HIDPREN	0 to 2	1	Enable read RFID LF Tag: HIDPROX (HID Prox)
TIRISEN	0 to 2	0	Enable read RFID LFTag: TIRIS (ISO HDX/TIRIS)
COTAGEN	0 to 2	0	Enable read RFID LF Tag: COTAG (Cotag)
IOPROEN	0 to 2	0	Enable read RFID LF Tag: IOPROX (ioProx)
INDITEN	0 to 2	1	Enable read RFID LF Tag: INDITAG (Indala)
HONEYEN	0 to 2	0	Enable read RFID LF Tag: HONEYTAG (NexWatch)
AWID_EN	0 to 2	1	Enable read RFIDLF Tag: AWID (AWID)
GPROXEN	0 to 2	*0*	*Enable read RFID LF Tag: ULTRAPROX (UltraProx)*
PYRAMEN	0 to 2	*0*	*Enableread RFID LF Tag: PYRAMID (Pyramid)*
KERI_EN	0 to 2	*0*	*Enable read RFID LF Tag: KERI (Keri)*
DEISTEN	0 to 2	*0*	*Enable read RFID LF Tag: KERI (Keri)*
CARDAEN	0 to 2	*0*	*Enable read RFID LF Tag: CARDAX (Cardax)*
NEDAPEN	0 to 2	*0*	*Enable read RFID LF Tag: NEDAP (Nedap)*
PAC_ENA	0 to 2	*0*	*Enable read RFID LF Tag: PAC (PAC)*
IDTECEN	0 to 2	*0*	*Enable read RFID LF Tag: IDTECK (IDTECK)*
ULTRAEN	0 to 2	*0*	*Enable read RFID LF Tag: ULTRAPROX (UltraProx)*
ICT_ENA	0 to 2	*0*	*Enable read RFID LF Tag: ICT (ICT)*
ISONAEN	0 to 2	*0*	*Enable read RFID LFTag: ISONAS (Isonas)*

Appendix (Cont.) A1-2 RFID Command List and Standard Default Parameters

Command	Range (if applicable)	Default Value	Description
MIFAREN	*0 to 2*	*1*	*Enable read RFID HF Tag: MIFARE (ISO14443A/MIFARE)*
ISO14EN	*0 to 2*	*1*	*Enable read RFID HF Tag: ISO14443B (ISO14443B)*
ISO15EN	*0 to 2*	*1*	*Enable read RFID HF Tag: ISO15693 (ISO15693)*
HIDICEN	*0 to 2*	*1*	*Enable read RFID HF Tag: HIDICLASS (HID iCLASS)*
FELICEN	*0 to 2*	*0*	*Enable read RFID HF Tag: FELICA (FeliCa)*
SRX_ENA	*0 to 2*	*0*	*Enable read RFID HF Tag: SRX (SRX)*
FCP2EN	*0 to 2*	*0*	*Enable read RFID HF Tag: NFCP2P (NFC Peer-to-Peer)*
TOPAZEN	*0 to 2*	*0*	*Enable read RFID HF Tag: NFCP2P (NFC Peer-to-Peer)*
BEPLEVL	*0 to 3*	*3*	*Beeper Volume*
BEPSOND	*0 to 7*	3	*Sound Beeper*
KEYRATE	*0 to 3*	*1*	*HID Keyboard Rate. 0=Slowest 3=Fastest*
LEDINDC	*0 to 5*	*2*	*LED Indicator 0-5*
PRERBLK		*(R)*	*RFID Prefix Block*
PRERENA	*0 to 1*	*1*	*Enable RFID Prefix*
PSTTIME	*0 to 3.600.000*	*0*	*RFID Timeout in Presentation in Milliseconds*
RFIDDLY	*0 to 5000*	*1000*	*RFID Re-Read Delay in Milliseconds*
RFIDUID	*0 to 1*	*0*	*Little/Big Endian output of UID*
SUFRBLK		*[CR]*	*RFID Suffix*
SUFRENA	*0 to 1*	*1*	*Enable RFID Suffix*
BEPTONE	*0 to 2*	*1*	Beeper Tone
BEPTIME	*0 to 2*	*0*	Beeper Duration
BEEPPWR	*0 to 1*	*1*	*Enable Power Up Beep*

Appendix (Cont.) A1-2 RFID Command List and Standard Default Parameters

Command	Range (if applicable)	Default Value	Description
BEPGDRD	*0 to 1*	*1*	*Enable Good Read Beep*
BEPNORD	*0 to 1*	*1*	*Enable No Read Beep*
BLKENAB	*0 to 1*	*1*	*Enable LED blink indications*
BLKGDRD	*0 to 1*	*1*	*Enable Good Read LED indications*
BLKNORD	*0 to 1*	*1*	*Enable No Read LED indications*
VIBENAB	*0 to 1*	*1*	*Enable Vibration*
VIBRATE	*0 to 2*	*1*	*Vibration Indicator 0-2*
VIBGDRD	*0 to 1*	*1*	*Enable Good Read vibration indications*
VIBNORD	*0 to 1*	*1*	*Enable No Read vibration indications*

Appendix B - AIM IDs

Barcode	AIM ID	AIM ID Modifiers
Code 39, Code 39 Full ASCII, Code 32	A	0 No check character or Full ASCII processing.
		1 Reader has checked one check character.
		3 Reader has checked and stripped check character.
		4 Reader has performed Full ASCII character conversion.
		5 Reader has performed Full ASCII character conversion and checked one check character.
		7 Reader has performed Full ASCII character conversion and checked and stripped check character.
		Example: A Full ASCII bar code with check character W, **A+I+MI+DW**, is transmitted as **]A7**AIMID where 7 = (3+4).
Code 128, ISBT 128, ISBT 128 Concatenated, GS1-128, Coupon (Code 128 portion)	C	0 Standard data packet, no Function code 1 in first symbol position.
		1 Function code 1 in first symbol character position.
		2 Function code 1 in second symbol character position.
		Example: A Code (EAN) 128 bar code with Function 1 character FNC1 in the first position, AIMID is transmitted as **]C1**AIMID
Data Matrix	d	0 ECC 000-140, not supported.
		1 ECC 200.
		2 ECC 200, FNC1 in first or fifth position.
		3 ECC 200, FNC1 in second or sixth position.
		4 ECC 200, ECI protocol implemented.
		5 ECC 200, FNC1 in first or fifth position, ECI protocol implemented.
		6 ECC 200, FNC1 in second or sixth position, ECI protocol implemented.
UPC/EAN, Coupon (UPC portion)	E	0 Standard data packet in full EAN format, i.e. 13 digits for UPC-A, UPC-E, and EAN-13 (not including supplemental data).
		1 Two digit supplemental data only.
		2 Five digit supplemental data only.
		3 Combined data packet comprising 13 digits from EAN-13, UPC-A or UPC-E symbol and 2 or 5 digits from supplemental symbol.
		4 EAN-8 data packet.
		Example: A UPC-A bar code 012345678905 is transmitted as **]E0**0012345678905

Barcode	AIM ID	AIM ID Modifiers
GS1 DataBar Family	e	No option specified at this time. Always transmit 0. GS1 DataBar and GS1 DataBar Limited transmit with an Application Identifier “01”. ***Note:*** In GS1-128 emulation mode, GS1 DataBar is transmitted using Code 128 rules (i.e.,]C1).
		Example: A GS1 DataBar bar code 0110012345678902 is transmitted as **]e**00110012345678902.
Codabar	F	0 No check digit processing.
		1 Reader has checked check digit.
		3 Reader has stripped check digit before transmission.
		Example: A Codabar bar code without check digit, 4123, is transmitted as **]F0**4123
Code 93	G	0 No options specified at this time. Always transmit 0.
		Example: A Code 93 bar code 012345678905 is transmitted as **]G0**012345678905
Code 11	H	0 Single check digit
		1 Two check digits
		3 Check characters validated but not transmitted.
Interleaved 2 of 5	I	0 No check digit processing.
		1 Reader has validated check digit.
		3 Reader has validated and stripped check digit.
		Example: An I 2 of 5 bar code without check digit, 4123, is transmitted as **]I0**4123
PDF417, Macro PDF417, Micro PDF417	L	0 Reader set to conform to protocol defined in 1994 PDF417 Symbology specifications. **Note:** When this option is transmitted, the receiver cannot reliably determine whether ECIs have been invoked or whether data byte 92DEC has been doubled in transmission.
		1 Reader set to follow the ECI protocol (Extended Channel Interpretation). All data characters 92_{DEC} are doubled.
		2 Reader set for Basic Channel operation (no escape character transmission protocol). Data characters 92_{DEC} are not doubled. ***Note:*** When decoders are set to this mode, unbuffered Macro symbols and symbols requiring the decoder to convey ECI escape sequences cannot be transmitted.
		3 The bar code contains a GS1-128 symbol, and the first codeword is 903-907, 912, 914, 915.
		4 The bar code contains a GS1-128 symbol, and the first codeword is in the range 908-909.
		5 The bar code contains a GS1-128 symbol, and the first codeword is in the range 910-911.
		Example: A PDF417 bar code ABCD, with no transmission protocol enabled, is transmitted as **]L2**ABCD.

Barcode	AIM ID	AIM ID Modifiers
TLC 39	L2	
MSI	M	0 Check digits are sent.
		1 No check digit is sent.
		Example: An MSI bar code 4123, with a single check digit checked, is transmitted as **]M1**4123
QR Code, MicroQR	Q	0 Model 1 symbol.
		1 Model 2 / MicroQR symbol, ECI protocol not implemented.
		2 Model 2 symbol, ECI protocol implemented.
		3 Model 2 symbol, ECI protocol not implemented, FNC1 implied in first position.
		4 Model 2 symbol, ECI protocol implemented, FNC1 implied in first position.
		5 Model 2 symbol, ECI protocol not implemented, FNC1 implied in second position.
		6 Model 2 symbol, ECI protocol implemented, FNC1 implied in second position.
Discrete 2 of 5, IATA 2 of 5	S	0 No options specified at this time. Always transmit 0.
		Example: A D 2 of 5 bar code 4123, is transmitted as **]S0**4123
Maxicode	U	0 Symbol in Mode 4 or 5.
		1 Symbol in Mode 2 or 3.
		2 Symbol in Mode 4 or 5, ECI protocol implemented.
		3 Symbol in Mode 2 or 3,
Aztec, Aztec Rune	z	0 Aztec symbol.
		C Aztec Rune symbol.
Trioptic Code 39	X	0 No option specified at this time. Always transmit 0.
		Example: A Trioptic bar code 412356 is transmitted as **]X0**412356
Bookland EAN	X	0 No options specified at this time. Always transmit 0.
		Example: A Bookland EAN bar code 123456789X is transmitted as **]X0**123456789X
ISSN EAN	X	0 No options specified at this time. Always transmit 0.
		Example: An ISSN EAN bar code 123456789X is transmitted as **]X0**123456789X
Chinese 2 of 5, Matrix 2 of 5, Korean 3 of 5, US Postnet, US Planet, UK Postal, Japan Postal, Australia Post, Netherlands KIX Code, USPS 4CB/One Code/ Intelligent Mail, UPU FICS Postal	X	

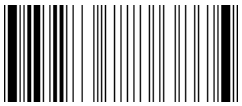
Appendix C - Sample Bar Codes

UPC-A

Codabar

Code 128

Code 39



Code 93

Interleaved 2 of 5

PDF-417

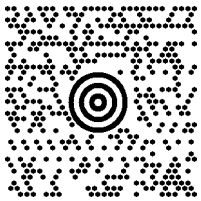
Composite Code

MicroPDF

Aztec

Data Matrix

QR Code



MaxiCode

Appendix D - ASCII Conversion Chart

For these Imager engines, use the 2-digit Hex values to create an ASCII character.
E.g., to create an F, use '46' and to create an f, use '66'. The first 32 characters are unprintable.

Dec	Hex	Char	Dec	Hex	Char	Dec	Hex	Char	Dec	Hex	Char
0	00	NUL	32	20	*Space*	64	40	@	96	60	`
1	01	SOH	33	21	!	65	41	A	97	61	a
2	02	STX	34	22	"	66	42	B	98	62	b
3	03	ETX	35	23	#	67	43	C	99	63	c
4	04	EOT	36	24	$	68	44	D	100	64	d
5	05	ENQ	37	25	%	69	45	E	101	65	e
6	06	ACK	38	26	&	70	46	F	102	66	f
7	07	BEL	39	27	'	71	47	G	103	67	g
8	08	BS	40	28	(	72	48	H	104	68	h
9	09	HT	41	29	)	73	49	I	105	69	i
10	0A	LF	42	2A	*	74	4A	J	106	6A	j
11	0B	VT	43	2B	+	75	4B	K	107	6B	k
12	0C	FF	44	2C	,	76	4C	L	108	6C	l
13	0D	CR	45	2D	-	77	4D	M	109	6D	m
14	0E	SO	46	2E	.	78	4E	N	110	6E	n
15	0F	SI	47	2F	/	79	4F	O	111	6F	o
16	10	DLE	48	30	0	80	50	P	112	70	p
17	11	DC1	49	31	1	81	51	Q	113	71	q
18	12	DC2	50	32	2	82	52	R	114	72	r
19	13	DC3	51	33	3	83	53	S	115	73	s
20	14	DC4	52	34	4	84	54	T	116	74	t
21	15	NAK	53	35	5	85	55	U	117	75	u
22	16	SYN	54	36	6	86	56	V	118	76	v
23	17	ETB	55	37	7	87	57	W	119	77	w
24	19	CAN	56	38	8	88	58	X	120	78	x
25	19	EM	57	39	9	89	59	Y	121	79	y
26	1A	SUB	58	3A	:	90	5A	Z	122	7A	z
27	1B	ESC	59	3B	;	91	5B	[	123	7B	{
28	1C	FS	60	3C	<	92	5C	\	124	7C	|
29	1D	GS	61	3D	=	93	5D	]	125	7D	}
30	1E	RS	62	3E	>	94	5E	^	126	7E	~
31	1F	US	63	3F	?	95	5F	_	127	7F	DEL

Appendix D – Extended ASCII Conversion Chart

Dec	Hex	Char	Dec	Hex	Char	Dec	Hex	Char	Dec	Hex	Char
128	80	€	160	A0		192	C0	À	224	E0	à
129	81	□	161	A1	¡	193	C1	Á	225	E1	á
130	82	‚	162	A2	¢	194	C2	Â	226	E2	â
131	83	ƒ	163	A3	£	195	C3	Ã	227	E3	ã
132	84	„	164	A4	¤	196	C4	Ä	228	E4	ä
133	85	…	165	A5	¥	197	C5	Å	229	E5	å
134	86	†	166	A6	¦	198	C6	Æ	230	E6	æ
135	87	‡	167	A7	§	199	C7	Ç	231	E7	ç
136	88	ˆ	168	A8	¨	200	C8	È	232	E8	è
137	89	‰	169	A9	©	201	C9	É	233	E9	é
138	8A	Š	170	AA	ª	202	CA	Ê	234	EA	ê
139	8B	‹	171	AB	«	203	CB	Ë	235	EB	ë
140	8C	Œ	172	AC	¬	204	CC	Ì	236	EC	ì
141	8D	□	173	AD		205	CD	Í	237	ED	í
142	8E	Ž	174	AE	®	206	CE	Î	238	EE	î
143	8F	□	175	AF	¯	207	CF	Ï	239	EF	ï
144	90	□	176	B0	°	208	D0	Đ	240	F0	ð
145	91	‘	177	B1	±	209	D1	Ñ	241	F1	ñ
146	92	’	178	B2	²	210	D2	Ò	242	F2	ò
147	93	“	179	B3	³	211	D3	Ó	243	F3	ó
148	94	”	180	B4	´	212	D4	Ô	244	F4	ô
149	95	•	181	B5	µ	213	D5	Õ	245	F5	õ
150	96	–	182	B6	¶	214	D6	Ö	246	F6	ö
151	97	—	183	B7	·	215	D7	×	247	F7	÷
152	98	˜	184	B8	¸	216	D8	Ø	248	F8	ø
153	99	™	185	B9	¹	217	D9	Ù	249	F9	ù
154	9A	Š	186	BA	º	218	DA	Ú	250	FA	ú
155	9B	›	187	BB	»	219	DB	Û	251	FB	û
156	9C	œ	188	BC	¼	220	DC	Ü	252	FC	ü
157	9D	□	189	BD	½	221	DD	Ý	253	FD	ý
158	9E	Ž	190	BE	¾	222	DE	Þ	254	FE	þ
159	9F	Ÿ	191	BF	¿	223	DF	ß	255	FF	ÿ