



DC SERIES User's Guide

|||ibc DC PRODUCTS USER'S GUIDE

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This document contains all of the information you need to connect and use a DC series reader. If you have specific questions concerning the reader which are not found in this manual, please contact the dealer you purchased this product from.

If your dealer cannot supply you with the information you need, then feel free to contact IBC directly by phone, fax, or through e-mail.

Update information on all IBC products, as well as utility software can be found on our internet pages at <http://interbar.com>.

Thank you for purchasing an IBC product. In order to serve you better, we welcome all comments you may have concerning our products and manuals. Please send your comments to IBC using e-mail to comments@interbar.com.

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FUNCTIONALITY

The DC readers are stand-alone/semi-portable readers which may be used for any type of data collection where portability is required.

Major features of the DC products are:

- 128k bytes battery backed-up RAM storage for saving transactional data.
- Time and Date stamping for all transactions.
- RS232 serial port for uploading data.
- RS232 logging to a printer (SSLOT-DC only).
- Easily programmed using serial commands.
- Notification of duplicate reads (SSLOT-DC only).
- 10 year lithium battery backup for memory.
- Red and Green status leds.
- "J" series reader emulation.

The **DC** readers contain 128k of memory in which data transactions are stored. Every time a barcode is read, or a magnetic stripe is read, the data read is stored into the memory, along with an optional date/time stamp.

The reader can be programmed to accept specific length cards, or programmed to accept all card lengths up to a specific maximum, as well as specific barcode symbologies.

Both the SMAG-DC and the SSLOT-DC are available with either a DB9 cable for communications and power, or two jacks on the side of the reader for power and communications cable connections, which allow them to be used as portables.

These readers can be operated portably using a 9-volt battery. The reader case does not support holding a battery internally, however a 9-volt battery can be easily attached to the bottom of the

reader using velcro, which places the battery out of the way. The SMAG-DC will operate approximately 8-9 hours with a 9-volt battery. The SSLOT-DC will operate for about 3 hours on a 9-volt battery.

Both readers can operate in "J" reader emulation mode. In this mode, the reader will operate like a standard IBC "J" series reader, utilizing the same command sets and functionality as a standard "J" reader.

A built-in memory protection feature notifies you when the reader is full, and data must therefore be uploaded to a PC.

There are 2 leds (red and green) on the reader, which are used to notify you of a good read, as well as duplicate reads (SSLOT-DC only), and notification of when the reader is full.

You can upload the transactional information in the DC reader into your computer easily by writing a simple program to upload the data. Also, you can utilize one of the IBC utility software programs for this purpose. Data uploaded from the reader is **not** cleared until you specifically tell the reader to clear itself.

With the SSLOT-DC, you can optionally program it to notify you when a card which is read is already in the memory (duplicate read).

Also, with the SSLOT-DC, rs232 logging is supported, as well as a feature to clear the

COMMUNICATIONS

Communications to/from the DC readers is achieved using RS232, either with an attached cable, or an IBC-supplied cable which connects to the RS232 communications jack on the side of the reader.

LED'S

DC readers contain two leds on the front of the reader - one red and one green.

During normal operation, these leds are off. The Green led will turn on after a good read. The red led will turn on only if the unit is full, or in the case of a SSLOT-DC running in "duplicate checking" mode, it will turn on when a duplicate card has been scanned.

While in the "J" emulation mode, both leds are normally off, and operate according to the "J" programming defaults which you have programmed the reader to.

WEATHERPROOFING

Weatherproofed units are weather-resistant and not completely weatherproof. Avoid direct contact with continuous rain and/or ice/snow by providing some protection. If you have a unit with power and communication jacks on the side, be sure to protect them so that water cannot enter the reader.

CLEARING MEMORY

The memory of the DC readers can be cleared at any time using a serial command. Additionally, in the SSLOLT-DC, the reader can be cleared by scanning in a special barcode. See the section entitled **SSLOT-DC Barcode Memory Clear** for instructions on clearing the memory with a barcode.

DUPLICATE READ FEATURE

The SSLOT-DC has an additional feature which is not in the SMAG-DC. This feature allows you to activate **duplicate read** checking. When this feature is activated, every barcode which is scanned in is checked to see if it has already been scanned in (already in the memory). If it is, the red led will flash informing you that the duplicate read has occurred. This is useful when the SSLOT-DC is used for scanning barcodes in an entrance to a facility, so that the same barcode is not used twice for admission.

RS232 LOGGING

An additional feature in the SSLOT-DC allows you to print to any RS232 device each transaction as it is occurring. When this feature is turned on, and a barcode is scanned in, the reader will send out the rs232 port the date and time as well as the card number scanned. This is useful for providing an audit trail for all scans.

PROGRAMMING

The following commands are commands which are specific to the DC reader series. For commands relating to specific symbologies, as well as magnetic stripe track selection, consult the "J" series manual. Please note that commands must be sent to the reader serially, unless otherwise noted.

All serial commands must be sent followed by a carriage return (hexadecimal 13), unless the reader is set up in protocol mode (for networking, with reader addressing).

All DC readers, by default, are shipped from the factory set up in non-protocol mode. If you wish to change the readers to operate in protocol mode - you must re-program them.

Some of the commands which are sent to the reader will receive responses back from the reader. Other commands will not. If a response is generated, the possible responses are listed here with each command.

● **Reset Record Size and Clear Memory**

This command resets the reader, clears the memory in the reader, and sets the id size for employee id's in the reader. The minimum allowable id size is 4, and the maximum is 150. By default, the reader id size is set to 150 for the SMAG-DC, and to 10 for the SSLOT-DC. The format of this command is:

\sss where: sss = id size (4-150)

In a DC reader, there is 128K of memory available for storage. Some overhead is associated with storing data and therefore the full 128K is not available for use, but a good rule to use when calculating record size is that 120K will always be available. To calculate the number of records which you will be able to store, divide 120000 by your record size. If you also have date and time stamping on, add 6 to your record size when doing this calculation.

Please note that if you want date and time stamping, then the number you enter in above in sss is the record size without the date and time stamp. You do not need to adjust your record size for date/time stamping as the system does this automatically.

This command also clears the memory and all memory counters, so after executing this command, the reader believes that there is no transactional data in the system - so use this command wisely.

Also, do not confuse this reset command with the "J" series reset command - although you can still issue the "J" series reset command (null-U), that command will reset not only the DC parameters defined in this manual, but also the standard "J" parameters in the reader (symbology selections, magstripe selections, etc...).

● Set Time

This command sets the time in the time clock in the reader. The format of the command is:

+yymmddhhmmssw where:

yy	=	year
mm	=	month
dd	=	day
hh	=	hour
mm	=	minute
ss	=	seconds
w	=	day of week (1=monday,7=sunday)

You should always reset the time in the reader after getting the reader from the factory, because the time is not always set at the factory prior to shipment.

This command returns the following:

T-bad time
O-time set

● Set Mode

This command sets the operating mode of the reader - DC, or "J" emulation mode. DC readers can be set to either DC mode or "J" emulation mode. Please note that you should upload any data you have in the reader prior to issuing this command.

The format of this command is:

|m where: m = 1 ("J" emulation mode)
2 (DC mode)

Please note that "|" is a vertical bar, not a lower case L.

● Upload Transactional Log Item

This command uploads one transaction from the Transactional Log in the reader. Each time this command is sent to a reader - the next transaction is returned. After all transactions have been uploaded, this command returns "END".

The format of the command is:

l (lowercase L)

The command returns:

YYMMDDHHMMSSiiiiiiiiiii... where YYMMDDHHMMSS is the date/time
iiiiiiii... is the id
or END

After all items have been uploaded, this command returns END. If date and time stamping is not on, then only the ID is returned.

To upload all information in the log - first issue the **lr** command for a reset to the beginning of the log, and then continue to issue **l** commands, reading the data, until you receive the last record which will be **END**. Once you are sure that you have received all of the data, then clear the log with the **cl** command. Please note that during the time that you have uploaded data, another transaction could have occurred in the reader - so therefore it is a good idea to, just before you clear the log, issue another **l** command to make sure that there is no new data in the reader. If there is not, then you will get the **END** again, otherwise you will get the new data.

