

5. Command Set

Command Code	Functional Description	Remark
Miscellaneous Commands:		
Hex 7F	Warm Reset	
Hex 1B	Abort	
Hex 4D	Red LED On	
Hex 6D	Red LED Off	
Hex 4C	Green LED On	
Hex 6C	Green LED Off	
Hex 28	Yellow LED On	
Hex 29	Yellow LED Off	
Hex 59	Buzzer On	
Hex 79	Buzzer Off	
Read Commands:		
Hex 50	Arm to Read	
Hex 51	Read T1, Standard T1 Format	
Hex 52	Read T2, Standard T2 Format	
Hex 53	Read T3, Standard T3 Format	
Hex 71	Read T1, Non-Standard Track Format	1 Parameter
Hex 72	Read T2, Non-Standard Track Format	1 Parameter
Hex 73	Read T3, Non-Standard Track Format	1 Parameter
Hex 55	Read T1, Custom Data Format (5, 6, or 7 Bits)	1 Parameter
Hex 56	Read T2, Custom Data Format (5, 6, or 7 Bits)	1 Parameter
Hex 57	Read T3, Custom Data Format (5, 6, or 7 Bits)	1 Parameter
Write Commands:		
Hex 40	Arm to Write with RAW	
Hex 41	Write T1, Standard T1 Format	
Hex 42	Write T2, Standard T2 Format	
Hex 43	Write T3, Standard T3 Format	
Hex 61	Write T1, Non-Standard Track Format	1 Parameter
Hex 62	Write T2, Non-Standard Track Format	1 Parameter
Hex 63	Write T3, Non-Standard Track Format	1 Parameter
Hex 45	Write T1, Custom Data Format (5, 6, or 7 Bits)	1 Parameter
Hex 46	Write T2, Custom Data Format (5, 6, or 7 Bits)	1 Parameter
Hex 47	Write T3, Custom Data Format (5, 6, or 7 Bits)	1 Parameter
Hex 3B	Set Write Density for Specified Track	2 Parameters
Hex 4F	Set 210 BPI for T1&T3	
Hex 6F	Set 75 BPI for T1&T3	
Hex 4E	Set 210 BPI for T2	
Hex 6E	Set 75 BPI for T2	
Hex 77	Set BPC for T1&T2&T3	3 Parameters
Hex 7B	Set Hi-Co	
Hex 7C	Set Lo-Co	
Erase Commands:		
Hex 5D	Arm to Erase	
Hex 5A	Erase T1	
Hex 5B	Erase T2	
Hex 5C	Erase T3	

6. Sample Program

The following code fragment demonstrates how to encode 7BPC data on track 3.

Initialization (Communications Setup)

```
If MSCComm1.PortOpen = True Then MSCComm1.PortOpen = False
MSCComm1.CommPort = 1
MSCComm1.Settings = "9600,o,7,1"
MSCComm1.PortOpen = True
```

Build Track Record

```
Dim T3 as String
T3 = "ENCODE 7-BIT DATA ON TRACK3"
```

Issue Write Command

```
MSCComm1.Output = "c" & "1"

mStart = Timer
Do While MSCComm1.InBufferCount = 0
    DoEvents
    If Timer - mStart > 1 Then
        MsgBox "Device time out"
        Exit Sub
    End If
Loop

buf = MSCComm1.Input
If buf = "^" Then
    MSCComm1.Output = T3 & Chr(&H4)
    mStart = Timer
    Do While Timer - mStart < 0.5
        DoEvents
    Loop
    buf = MSCComm1.Input
    If buf = "^" Then
        buf = MSCComm1.Input
        buf = MSCComm1.Input
        MSCComm1.Output = "@"
        mStart = Timer
        Do While MSCComm1.Input <> "^"
            DoEvents
            If Timer - mStart > 0.3 Then
                Command1_Click
                Exit Sub
            End If
        Loop
    Do While MSCComm1.Input <> "^"
        DoEvents
    Loop
    MsgBox "O.K."
Else
    MsgBox "Transmit Data Error", vbCritical
End If
Else
    MsgBox "Can't Excute", vbCritical
End If
```

User's Manual

MSE-630A

High/Low Coercivity Tracks 1&2&3
Magstripe Card Encoder



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1. Introduction

MSE-630A reads and writes magstripe cards with coercivity ranging from 300 through 4000 Oersted. *Hi-co/lo-co setting is configurable at startup.* It is intended for use with a personal computer via the RS-232 or USB connectivity.

MSE-630A reads and writes data format as specified by ISO 7811/2 through 5 and ANSI 4.16 1983. Any ISO/ANSI standard track format can be read/written from/to any track location (1, 2, or 3). MSE-630A also reads and writes custom data format and offers a selectable writing density (75/210 BPI) through the host commands (see "Command Set" section of this document).

Standard MSE-630A package comes equipped with the following:

- MSE-630A reader/writer hardwired with RS-232 serial cable
- Switching power supply (100~240VAC input/+24VDC 2.5A output)
- USB adapter cable
- Utility/driver CD
- Two blank magstripe cards (one hi-co and one lo-co)
- User's Manual

2. Installation



Follow the steps below to interconnect MSE-630A to your PC:

1. Power off your PC.
2. Connect DB9F end of RS-232 cable to a free serial port on your system.
3. Connect power plug of AC adapter to power jack on RS-232 cable.
4. Connect AC adapter to electrical outlet.
5. Power on your PC.

Upon successful installation of MSE-630A,

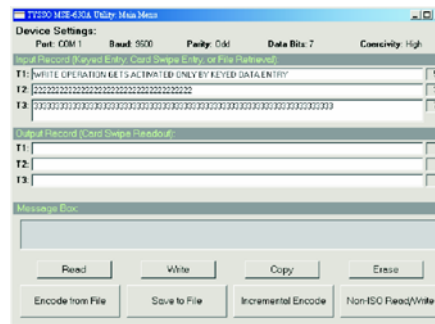
- All three LEDs (red, yellow, and green) will come on simultaneously for a couple of seconds and only the green LED will stay on.
- MSE-630A beeps momentarily.

3. MSE Utility

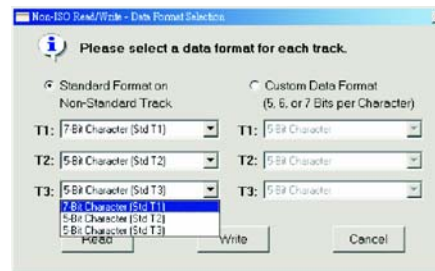
About MSE Utility

MSE Utility is a productivity tool intended primarily for use with ISO/ANSI-compliant magstripe cards. ISO or ANSI specifies 7 bits per character as the standard data format for track 1, and 5 bits per character for both track 2 and track 3. ISO or ANSI also specifies 210 BPI as the encoding density for tracks 1 and 3, and 75 BPI for track 2. We use ISO, ANSI, or ISO/ANSI interchangeably throughout this document.

In addition to Keyed-in Encode, MSE Utility also supports Copy Encode, File Encode, and Incremental Encode as shown by the main menu below:



MSE Utility also provides support for non-ISO/ANSI card reading and writing. What follows is a dialog box for the user to specify the data format for each track to work with.



Install MSE Utility and USB Driver

There are two subfolders on the utility/driver CD: MSE Utility and USB Driver. Run Setup.exe from the MSE Utility folder and follow the instructions to complete the utility installation.

Windows will prompt you to install a device driver for the newly detected hardware when you plug in the USB cable to your host PC the first time. Specify the path to the USB Driver folder and Windows will complete the driver installation in a few seconds. You only need to run the driver installation once. Windows will load the USB driver automatically the next time around.

Note that USB driver assigns a virtual serial port for communications. Control Panel > System > Hardware > Device Manager > Ports (COM & LPT) will lead you to identify the port number.

4. Specifications

<i>Electrical</i>	
Power Supply	100~240VAC/+24VDC 2.5A
Interface	RS-232 (Default: 9600 baud, odd parity, 7 data bits) or USB (via USB serial conversion)
Current Consumption	350mA (read), 600mA (write)
<i>Interconnections</i>	
Cabling	DB9F with molded 2.1mm power jack
Pin Assignment (DB9F)	TXD (2), RXD (3), ground (5), CTS (7), RTS (8)
<i>Mechanical</i>	
Casing	ABS (optional metal available)
Swipe	Manual, single direction
Dimensions	8.2" L x 2.5" W x 2.5" H (208m x 64mm x 64mm)
Weight	1.8lbs (0.8kg)
<i>Environmental</i>	
Operating Temperature	0° C~40° C, 20%~90%RH, non-condensing
Storage Temperature	-20° C~70° C, 20%~90%RH, non-condensing
<i>Performance</i>	
Media Life	1,000,000 passes for both read and write heads
Media Speed	5~50IPS (read), 5~30IPS (write)
Media Coercivity	300~4000 Oersted (read), 300~4000 Oersted (write)
Media Thickness	0.010~0.080" (0.25mm~2.03mm)
Low Amplitude Reading	30% (210BPI) or 40% (75BPI) at 10~40IPS
Error Rate	<0.5% (read), <0.75 (write)
MTBF	95,000 hours (Power Off/Auto Shutoff)