



JARL TECH

ISO 9002 Certified

Lead with technology

Win customers with service

JP-8650 series Touch LCD Station

***User Operation
Manual***

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Jarltech International Inc.
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This equipment has been tested and found to comply with the limits for Class A 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 if not installed and used in accordance with the instructions may cause harmful 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 correct 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 booklet is available from the U.S. government Printing Office, Washington, DC 20402, Stock NO.004-000-00345-4.

Caution

Any changes of modifications not expressly approved by the grantee of this device could void the user authority to operate the equipment.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received including interference that may cause undesired operation.

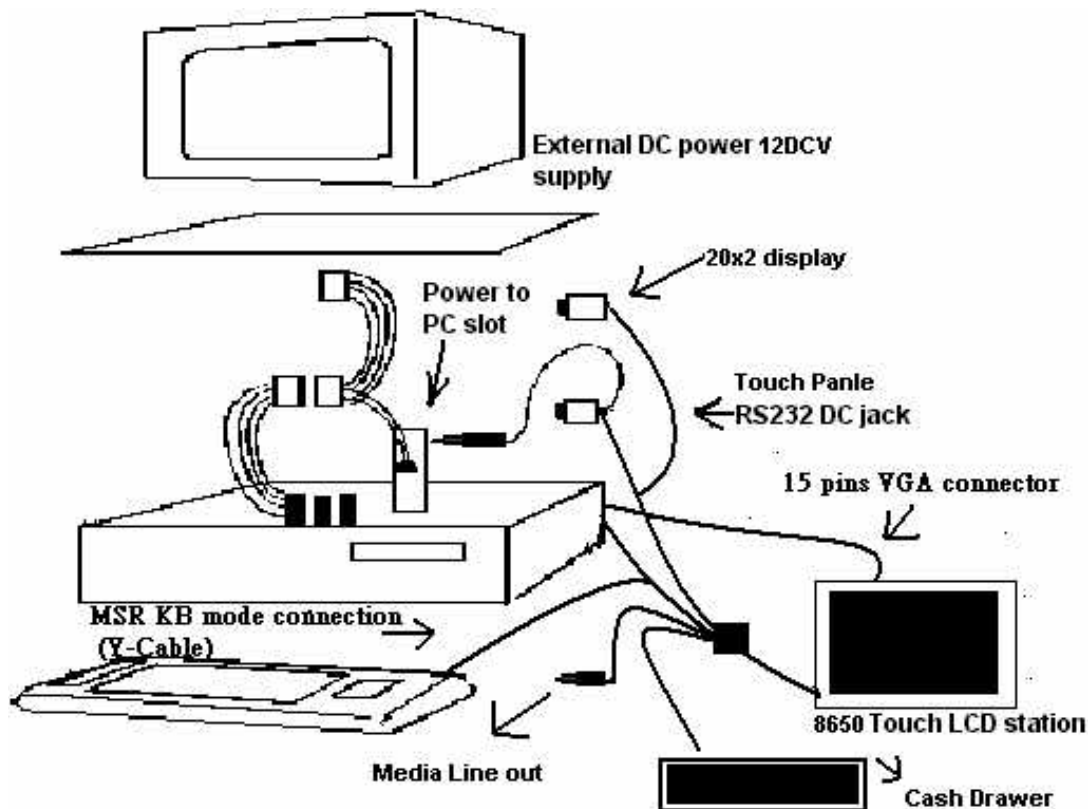
It is better for you to keep the carton and the packing material in case you might need them for packing or moving in the future.

1. Connection for 8650 Touch LCD station

Jarltech 8650 12" LCD Monitor is an excellent tool designed for point-of-sale applications. Besides the touch screen function, the built-in magnetic card reader and customer display can also be used. Attached cables also included medial-line-out and cash drawer socket.

With the outstanding design, the LCD monitor is suitable for any environment at any angle. The rugged base design makes the monitor will not wobble when touched. It is especially ideal for the touch screen applications.

- ✂ 12.1" TFT LCD display with touch screen
- ✂ On Screen Display (OSD) adjustments
- ✂ Surge and reverse protects of power input.
- ✂ +5V outputs for Touch panel application.



2. 20X2 Display (Optional)

The 2x20 alphanumeric customer pole display is designed for retail and industrial environments. Its outstanding features include high quality LCD with backlight, large sized characters (12.7mm), RS232 interface, and easy to use and powerful programming features. The basic function of the display is

comparable to the display programming by your software should be as easy. You just have to open the COM-port on which you have connected the display. Then, you just send the character you want the 20X2 to display directly to the COM interface.

You may also use enclosed JP-8650 programming tool to define what characters you want it behavior. Please see chapter 5 for more information of programming tool.

3. MSR (Optional)

The card reader is a bi-directional magnetic stripe reader, which is easily formatted to ISO requirements. It is intended for use with credit authorization terminals, point-of-sale terminals, portable terminals, personal computers and banking terminals.

Card reader is designed to used with IBM XT, AT and PS/2 computers, entering data as if it were being generated through the keyboard. No software modification, or programming of neither input/output devices, nor additional power supply is needed.

The MSR is a bi-directional magnetic stripe reader, which is easily formatted to ISO requirements. It is intended for use with credit authorization terminals, point-of-sale terminals, portable terminals, personal computers and banking terminals.

4. Cash Drawer (Optional)

The cash drawer socket is a phone jack type's socket. You may plug in the Cash Drawer with 12V or 24V trigged cash drawer on the rear I/O panel. There is a dip SW (SW1) on the rear I/O pad allows you to select cash drawer with 12V or 24V.



JP-8650 Outward

1. Before unpacking


- ✍✍ It's very important to locate the LCD monitor in suitable environment.
- ✍✍ The surface for placing the LCD Monitor should be stable and level.
- ✍✍ Make sure the place has good ventilation, is out of direct sunlight, away from source of excessive dust, dirt, heat, water, moisture and vibration.
- ✍✍ Convenience for connecting the Touch LCD station to the related facilities should be well considered too.

2. Power Off the Machine

By shutting off your computer, you will prevent any accidental damage to the touch LCD station and computer.

3. Installing

There are 6 cables need to be connected when you are required with those functions.

1. Main LCD panel should be connect to 15 pins Normal VGA connector
2. 20X2 Display power connector should be connect to one of RS232 connector
3. MSR connector should be connecting to standard KB wedge PS2 connector with a Y-cable.
4. Touch screen and power supplies should connect to RS232 and with external 12DCV  power adaptor
5. Multi-Media Line Out cable
6. Cash drawer cable

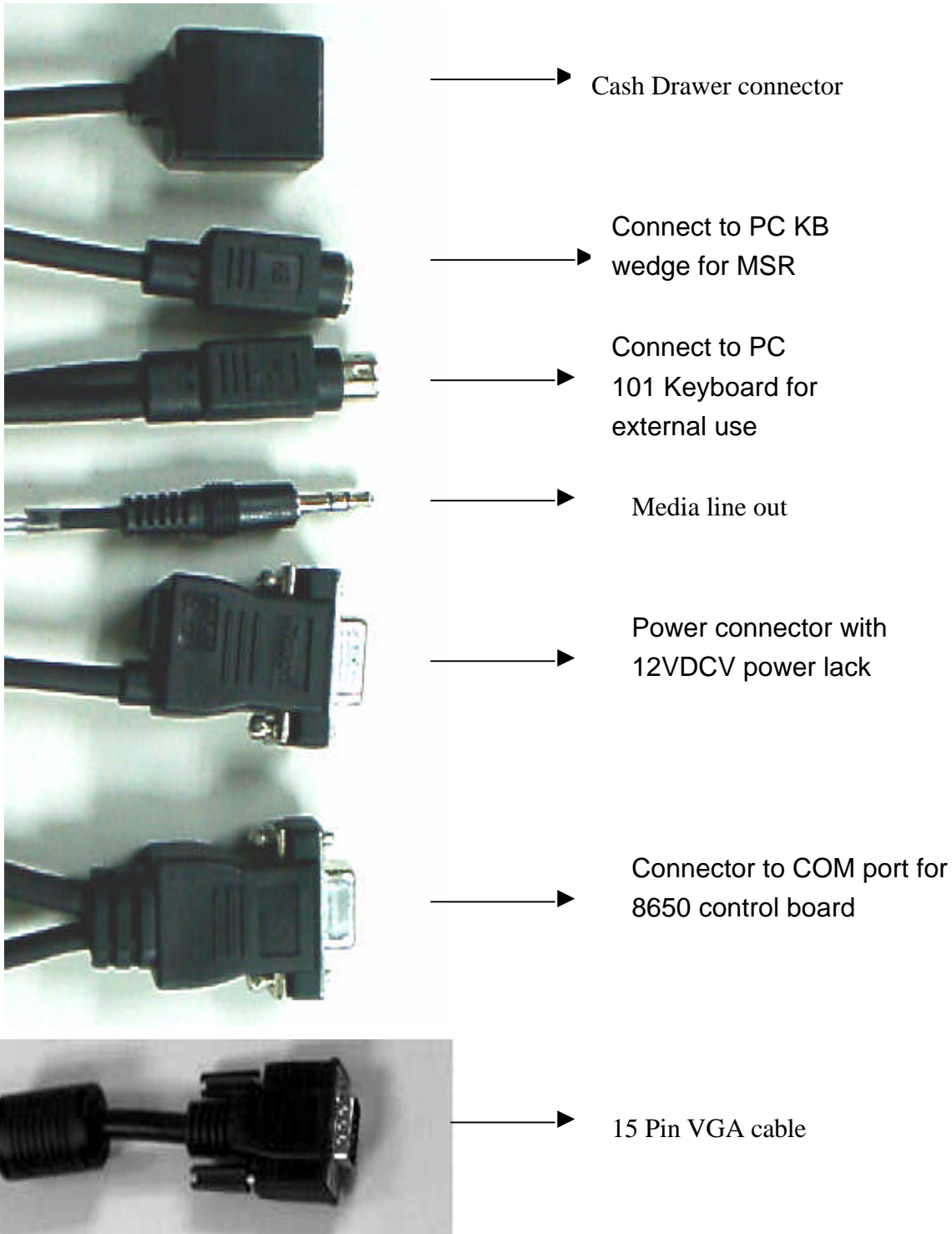
4. Rear pad

There are 2 sockets need to be connected when you are required with those functions as above description.



(Rear Pad)

1. The first left DB9M socket is no function.
2. The second left one is dipswitch for MSR or Display when the functions are available (Optional).
3. The third component is a tuner for 20X2 display contract adjustment (Optional)
4. The fourth one is VGA connector
5. The most right socket is a standard cable collection, please see bellowing picture for details.



Note: The Connector to COM port for 8650 control board allows user through 8650 programming tool to access 8650 basic command sets to controls 8650 peripherals, likes 20X2 display' cash drawer and also MSR settings..etc.

1. Touch LCD Panel

1-1. OSD of LCD panel

OSD Adjustment

There are several items that allow the user to adjust the viewing environment. Due to deviations between various video adapters on the market, you may need to make some adjustment for your specific video adapter.

OSD Menu table



Upon pressing the MENU key on the control panel, the OSD MENU TABLE will appear. Press the indicators with arrowhead to choose the item you would like to adjust. The item will then be described as show in the following table.

The control keys description

Auto: Push the auto switch to set LCD panel as a suitable range.

MENU: Press the **MENU** to activate the On Screen Display function, and press it as a enter key.

  : Press this key to increase/decrease the values of each selected item

  : To select the items that you selected on the OSD function.

1-2. OSD content:

Main Menu	Sub Menu	Range of Control
Picture	Brightness	0~100
	Contrast	0~100
	H-Position	0~100
	V-Position	0~100
	Phase	0~31
	Sharpness	1~5
OSD	VGA mode	
	Firmware Version	
	H-Position	0~100
	V-Position	0~100
	Language	English, Spanish, Japanese
	OSD Time Out	5~60 Second
	OSD Back ground	Opaque, Translucent
	Reset	Reset to default value
	DPMS	On, Off

	Blank Color	Red, Green, Blue, Black
Advanced	Auto Switch	On, Off
	Source Icon	On, Off
	Color Temp.	5000, 7300, 9300, User
	User Red	0~100
	User Green	0~100
	User Blue	0~100

1-3. Touch Screen Setting:

- 1-3-1. Plug "Touch 9 pins RS232 connector" in PC's COM port.
- 1-3-2. Install Touch drivers from enclosed driver CD title
- 1-3-3. Device initial: Check COM port resources and make sure it matches with which COM port you have plugged.
- 1-3-3. Do the "Calibration" of this utility. Follow the indicator to adjust touch points.
- 1-3-4. Restart to make touch function enable.

1-4. Button indicators for LCD panel



2. Command Code Setting:

>> 2-1. JP-8650 command code:

System Commands - Command set of the peripherals

Command Format	ESC + data
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Example: To send command to make JP-8650 has beep sound.

Description: Send "0x1b""0x31" to COMx (By Hex)

Send "ASC (27)""ASC (49)" to COMx (By DEC)

Example in QBASIC:

OPEN "COMx: 9600,N, 8,1,DS0" FOR OUTPUT AS #1

PRINT #1, CHR\$ (27)+CHR\$ (49) ;

CLOSE #1

Note: x = which COM port you have operated (The port you have connected to 8650 control board)

Data		Description
by Hex	By Dec	
0x31	49	Short Buzzer sound
0x32	50	Normal Buzzer sound
0x33	51	Long Buzzer sound
0x34	52	Open Cash Drawer Return value: ESC+"8"+"1"+"A" means Drawer is close. ESC+"8"+"1"+"B" means Drawer is open.
0x3B	59	Detect Cash Drawer sensor Return value: ESC+"8"+"1"+"A" means Drawer still closed. ESC+"8"+"1"+"B" means Drawer still opened.
1.1.1 Enable / Disable devices Commands		
0x82	130	Enable MCR
0x83	131	Disable MCR
0x84	132	Enable TK1 only
0x85	133	Disable TK1 only
0x86	134	Enable TK2 only
0x87	135	Disable TK2 only

0x88	136	Enable TK3 only
0x89	137	Disable TK3 only
0x8A	138	Enable Buzzer
0x8B	139	Disable Buzzer
0xF2	242	Enable PC/AT keyboard (When MSR use KB wedge)
0xF3	243	Disable PC/AT keyboard (When MSR use KB wedge)

>> 2-2. JP-8650 Commands for 20x2 DISPLAY

Here we provide two compatible commands set to select in programming window.

The first one command set is compatible with Jarltech products “JP-8003 and JP-8600”.

The other is compatible with “JP-8100 and JP-8300”,

You may select which command code you need by JP-8650 programming tool (Please see chapter 5 for details).

2-2-1. JP-8003/JP-8600 command code compatible (Default command set)

COMMANDS	FUNCTION	DESCRIPTION
Wrapmode		
CTRLA	Turn on wrap mode Code: 001	This allows the text displayed to the screen to wrap to the next line when the cursor position exceeds the right hand side boundary. If autoscroll is also on and the cursor is on the bottom line, the screen will scroll up one row.
CTRLB	Turn off wrap mode Code: 002	When the cursor position meets the right hand side boundary, the cursor will not continue. If any further characters are received then they will over write the last character at the right hand side.

COMMANDS	FUNCTION	DESCRIPTION
Cursor Move		
CTRLH	Move cursor left one column Code: 008	This is simply the BACK SPACE function, though characters are not deleted as you back space over them. When you reach the beginning of a line, the cursor will wrap to end of the previous line until cursor = 0,0 is met.
CTRLJ	Scroll (line feed) Code: 010	This is the LINE FEED function. It will move the cursor down one line. It will always scroll the screen if at the bottom.
CTRLV	Move cursor down one row Code: 022	This is an alternative LINE FEED function that will not scroll the screen up one row when at the bottom line.
CTRLK	Move cursor up one row Code: 011	This control sequence will move the cursor up one row. if it is at the top of the screen, it will wrap to the bottom line, the cursor's horizontal location stays the same.
CTRL L	Move cursor right one column Code: 012	This is RIGHT ARROW function. It will move the cursor right by one character cell. If it is at the end of a line, the cursor will wrap to the next line until the bottom righthand side is met.

COMMANDS	FUNCTION	DESCRIPTION
CTRLM	Move cursor to column 0 Code: 013	This is CARRIAGE RETURN function which returns the cursor's horizontal location to the first position, on the same line.

NOTE: *In BASIC, after a PRINT#-command, a CR is always sent to the display if you do not add an ";" to the end of the command. The CR command is normally used for the line switching.*

Example:
PRINT #1, "First line!"
PRINT #1, CHR\$(10);
PRINT #1, "Second line!"

CTRL^	Cursor home Code: 030	This function will return the cursor position to 0,0.
-------	--------------------------	---

Clear unprotected cells

CTRLZ or ESC:	Home cursor, clear unprotected cells to nulls Code: 026 Code: 027, 058	This function will clear all the unprotected characters to blank character cells and returns the cursor to 0,0.
---------------------	--	---

Reset

CTRL\	Reset display Code: 028	This function will execute a software reset which will initialize the entire pole display. The power up test will begin as if power was just switched on.
-------	----------------------------	---

2-2-1.1. Command codes explanation (escape sequences)

COMMANDS	FUNCTION	DESCRIPTION
Character attribute: cell protected		
ESC&	Set protected mode Code: 027,038	All characters sent to the display after this command are displayed in protected so that they cannot be overwritten by other unprotected characters. This function is useful especially for scrolling, if you want some characters not to be fixed and not influenced by the scrolling function. This has a kind of "window effect". You can also use this function to use a simple delete command to clear all character except the protected ones very fast.
ESC'	Clear protected mode Code: 027,039	This function simply returns the character attribute to unprotected.
ESCV	Protect cursor column Code: 027,086	This function will set all characters, vertically at the current cursor "X" position, to the protected attribute.

EXAMPLE:

This is useful when you have a series of lists and the beginning selections are the same. e.g:

- (1) :option 1
- (2) :option 2
- (3) :option 3
- (4) :option 4

In this example, you would protect the "(x) :"" fields of columns 0, 1, 2, & 3, by moving the cursor to each column and using ESCV.

COMMANDS	FUNCTION	DESCRIPTION
Automatic Scrolling lines		

With the following commands, you can define up to 8 scrolling strings. Using another command, you can then start and stop them in a certain display line. Your PC does not have to care about this. The display does the scrolling on its own until it receives the stop command.

ESC(Program a message for the scrolling lines Code: 027,040	This function allows the programmer to down load 1 of 8 messages for lines that you are going to scroll. These messages are 255 bytes long or can be terminated by carriage return, ENTER[010,013].
------	--	--

PARAMETERFORMAT:

ESC(<BLOCK><MESSAGE>

RANGES:

BLOCK:"1" - "8" (049-056)

MESSAGE:

Any text string terminated by 010,013

EXAMPLE:

PRINT #1,CHR\$(27)+"<1 This is scrolled"

ATTENTION:

Please do not forget to use ASCII format for the parameters, so that for the text number, only the codes 049-056 are allowed. Do not send 001-008!

ESC)	Start a line scrolling Code: 027,041	This function starts one of the total number of lines, being (1 or 2), scrolling horizontally. You may specify the direction, speed and message.
------	---	--

COMMANDS	FUNCTION	DESCRIPTION
PARAMETERFORMAT: ESC<LINE><DIRECTION><SPEED><BLOCK_NO> RANGES: LINE: "0" (048) = first "1" (049) = second DIRECTION: "0" = right "1" = left SPEED: 0 to 16 (048-064). BLOCK_NO: "1" to "8" (049-056) EXAMPLE: PRINT #1, CHR\$(27)+"0041" or PRINT #1, CHR\$(27)+CHR\$(41)+CHR\$(48)+CHR\$(48)+CHR\$(52)+CHR\$(49) This commands start the scrolling in the first line from the left to the right with the speed 4 using the scrolling text no.1 (as defined in the example above)		

ESC%	Stop a line from scrolling Code: 027,037	This function will stop one of the LCD rows from scrolling its message. For further information on scrolling message, please refer to the explanation on : ESC (: Program a message for the scrolling lines. ESC) : Start a line scrolling.
------	---	---

PARAMETERFORMAT:
ESC%<LINE>
RANGES:
LINE: "0" (048)=firstline
"1" (049)=second line

Clear & Fill

ESC* or ESC+	Turn off protect mode, cursor home (clear all) Code: 027,042 Code: 027,043	These 2 command codes clear the entire screen, regardless of the protected or unprotected attributes, to unprotected cells and return the cursor to 0,0.
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COMMANDS	FUNCTION	DESCRIPTION
EXAMPLE: PRINT #1, "Press any key." INPUT a\$, : REM Wait for key press. PRINT #1, CHR\$(27)+ "*" + "Thanks"		
ESC,	Clearscreen to protected spaces (home cursor) Code:027,044	This special function clears the whole display (no matter if protected or not) and fills the display with protected space. This disables the display until you clear the protection using ESC*/ESC+.
ESC.	Replace all unprotected cells with the specified character Code:027,046	This function replace all character cells that are unprotected with the characters specified. For example, if the entire display has unprotected cells, you could flood fill it with the '*' or '\$'....etc.
PARAMETER FORMAT: ESC.<CHARACTER> RANGES: CHARACTER:00-255 (000-255). EXAMPLE: PRINT #1,CHR\$(27)+".*":REM Fill the display with "*"		
CTRLZ or ESC:	Home cursor, clear unprotected cells to nulls Code:026 Code:027,058	This function will clear all the unprotected character to blank character cells and return the cursor to 0,0.
ESC!	Clear unprotected characters to spaces Code:027,033	This function is the same as CTRLZ & ESC:, except that the cursor position is not changed

COMMANDS	FUNCTION	DESCRIPTION
ESC;	Home cursor, clear unprotected cells to spaces Code: 027, 059	This function is the same as CTRL Z except that with CTRL Z the attribute stays as unprotected. With this function, if protected mode is on then the attribute becomes protected. This function will clear the entire screen to spaces, but will not change the character attributes that are associated to each character.
ESCy	Clear display to spaces Code: 027, 121	
ESC Y	Clear from cursor to end of the display Code: 027, 089	This function is the same as ESC T, except that the screen will be cleared to the bottom right most boundary, end of screen
ESCt	Clear current line to spaces Code: 027, 116	This function follows the same rules as the ESCy, except that instead of clearing the entire screen. This function only clears the current character line.
ESC T	Clear from cursor to the end of the line Code: 027, 084	This function will clear all unprotected characters to spaces, on the current line, from the current cursor "X" to the end. If the protected mode is on then protected characters will also be cleared to spaces.

COMMANDS	FUNCTION	DESCRIPTION
ESCR	Delete an entire line Code: 027, 082	This function will delete the current line at cursor "Y". All data below this line will move up and the last line will be blank.

Line Scroll

ESCE	Insert line of space characters Code: 027, 069	This function will insert a line of space characters at the current vertical position. Data on this line and underneath will scroll downward.
ESCj	Move cursor up one line (scroll if at top) Code: 027, 106	This function will move the cursor up 1 line, if it is at the top of the screen will scroll down all the lines down, the bottom line will be lost and the top line will become black.
ESCO	Turn autoscroll on Code: 027, 079	This function enables autoscrolling, which simply means that when the bottom right most boundary is met, the screen will scroll up when the next printable character is received.
ESCN	Turn autoscroll off Code: 027, 078	This function will turn off the autoscroll mode.

COMMANDS	FUNCTION	DESCRIPTION
Set cursor position		
ESC=XY	Move cursor to X,Y Code:027,061	It will address the cursor to an X,Y location on display.
PARAMETER FORMAT : ESC = <COLUMNX> <ROWY> RANGES : COLUMN X : "0"- "19" (048-067). ROW Y : "0"- "1" (048-049). EXAMPLE : PRINT #1,CHR\$(27)+"=51"; Set the cursor to the second line, the 5th cell. ATTENTION : For all cursor move commands, please make sure that your PRINT-command does not send a CR as terminator, which will also change the cursor position.		
RS232 setting		

COMMANDS	FUNCTION	DESCRIPTION
LCD functions		
ESCG	Set brilliance to level Code: 027, 071	This function will set the brilliance level to a value between 00 (OFF) and 32 (FULL ON).

PARAMETER FORMAT:

ESCG<LEVEL>

RANGES:

LEVEL: 00-32 (048-080)

Note:

Please use "ESC 8" command to save this value into EEprom and it will be the default value next time 8003 boots up.

**Esc1 Increase brilliance
(Rate x 8.88ms)
Code 027, 049**

This function will fade brilliance from current level to another level at a rate (Level*8.88ms.) The dimming time of the brightness is between 0 sec. and 2.26 secs.

PARAMETER FORMAT :

ESC0<RATE><LEVELVALUE>

RANGES:

RATE: 00-255 (000-255): 0sec-2.265 sec

LEVELVALUE: 0-32 (048-080)

- ESC1 Increase brilliance
(rate * 8.88ms)
Code: 027, 059 This function will increase the brilliance from the current level until the level user specify.
User may make the rate of increase, time until each level of brightness, between 0 sec. and 2.26 secs.

PARAMETER FORMAT:

ESC0<RATE><LEVELVALUE>

RANGES:

RATE: 00-255 (000-255): 0sec-2.265 sec

LEVELVALUE: 0-32 (048-080)

2-2-1.2. User definable characters

You can program up to 8 user-defined characters. You can use this for foreign characters or for a little graphics. First, you define character matrix. Then you activate the special character mode. To the display the characters, then you use ASCII 001 to 008(CTRL-A etc.). As the last step, you return from special character mode to the normal mode.

ESC
CTRL I

Program special
character
Code: 027,096,009

This function allows the
programmer to define 1 of
8 user definable charac-
ters. These characters
are for those

COMMANDS	FUNCTION	DESCRIPTION
		whom wish to use variations of characters. There are only 8 characters limited.

PARAMETERFORMAT:

ESC ` CTRL I <CHARACTER> <8* CHARACTERDATA>

RANGES:

CHARACTER: "1" - "8" (049-056)

CHARACTERDATA: 0-255 (000-255).

This is the definition of the character.

Draft	Binary	Hex.(dez.)	ASCII-Code
*****	11111	\$1F (31)	"O" = CHR\$(48+31)
*	*	10001	\$11 (17) "A" = CHR\$(48+17)
*	*	10001	\$11 (17) "A" = CHR\$(48+17)
*	*	10001	\$11 (17) "A" = CHR\$(48+17)
*	*	10001	\$11 (17) "A" = CHR\$(48+17)
*	*	10001	\$11 (17) "A" = CHR\$(48+17)
*	*	10001	\$11 (17) "A" = CHR\$(48+17)
*****	11111	\$1F (31)	"O" = CHR\$(48+31)

EXAMPLE: (for the special character above)

```
PRINT #1, CHR$(27)+CHR$(96)+CHR$(9)+"1"+"OAAAAAO": :REM Define
PRINT #1, CHR$(27)+"H"+CHR$(002) :REM Turn on special character mode
PRINT #1, CHR$(1) :REM Display this character
PRINT #1, CHR$(27)+"H"+CHR$(003) :REM Turn off special character mode
```

ESCH CTRLB	Turn on special character mode Code: 027,072,002	The special character mode allows you to use the 8 user definable characters, you also must add DEC 32 or Hex 20 to the character.
ESCH CTRLC	Turn off special character mode Code: 027,072,003	Return the display to normal display mode.

COMMANDS	FUNCTION	DESCRIPTION
Macro programming		
<p>You can define up to 32 function blocks (macros) with a length of up to 127 byte. You can exceed the length of 127 bytes if you take care that you do not use the following function block which would overwrite the data of the last one.</p>		
ESC"	Program an executable function block Code: 027, 034	<p>This function allows the programmer to program a sequence of function calls, control or escape sequences and even text. The ability to execute series of functions with a single call is useful for repetitive function formats such as those in the retail industry.</p> <p>There are 32 usable blocks all of which, if you desire, may be linked.</p> <p>If you exceed the 127 byte size of the blocks, the display will directly link your block to the next consecutive block.</p> <p>This is only useful upon power up, because if you have data in the next block, its data will be overwritten. Therefore it is suggested these blocks are unutilized as one of the first steps to use the LCD display.</p> <p>To link blocks, simply add a function call, from within a block, to the block that you wish to use.</p>

COMMANDS	FUNCTION	DESCRIPTION
PARAMETERFORMAT: ESC “ <BLOCK-NO><DATAand/orCTRL/ESC SEQUENCES><ESCEOT> RANGES: BLOCK-NO:0-31 (048-079) ESCEOT:027,004. EXAMPLE: PRINT #1,CHR\$(27)+CHR\$(34)+‘0’; PRINT #1,CHR\$(27)+‘*’ PRINT #1,CHR\$(27)+‘Macro#0.’; PRINT #1,CHR\$(27)+CHR\$(4)		
ESC\$	Pause (for a multiple of 8.88ms) Code:027,036	This function allows the programmer to stop the pole display for a period of time. The delay is in multiple of 8.88ms.
PARAMETERFORMAT: ESC\$<DELAY> RANGES: DELAY:0-255 (000-255) (0sec - 2.26 secs).		
ESC#	Execute a programmed function block Code:027,035	This function allows the programmer to call one of the function blocks for execution.
PARAMETERFORMAT: ESC#<BLOCK-NO> RANGES: BLOCK-NO:0-31 (048-079) EXAMPLE: Starts the Block-NO, that has been defined in the example above. PRINT #1,CHR\$(27)+‘#0’		

ESC/	Display until terminated by carriage return.	This function will display data received until it gets an ENTER. This is really only used within programmable function block for variable text message.
------	--	---

EXAMPLE:

```
TOTAL: $ 10.75
TOTAL: $ 13.87
TOTAL: $ 5000.00
```

In this example you would protect the "TOTAL: \$" then use an ESC/ within a function block, to get the total account as this operation will be repetitive.

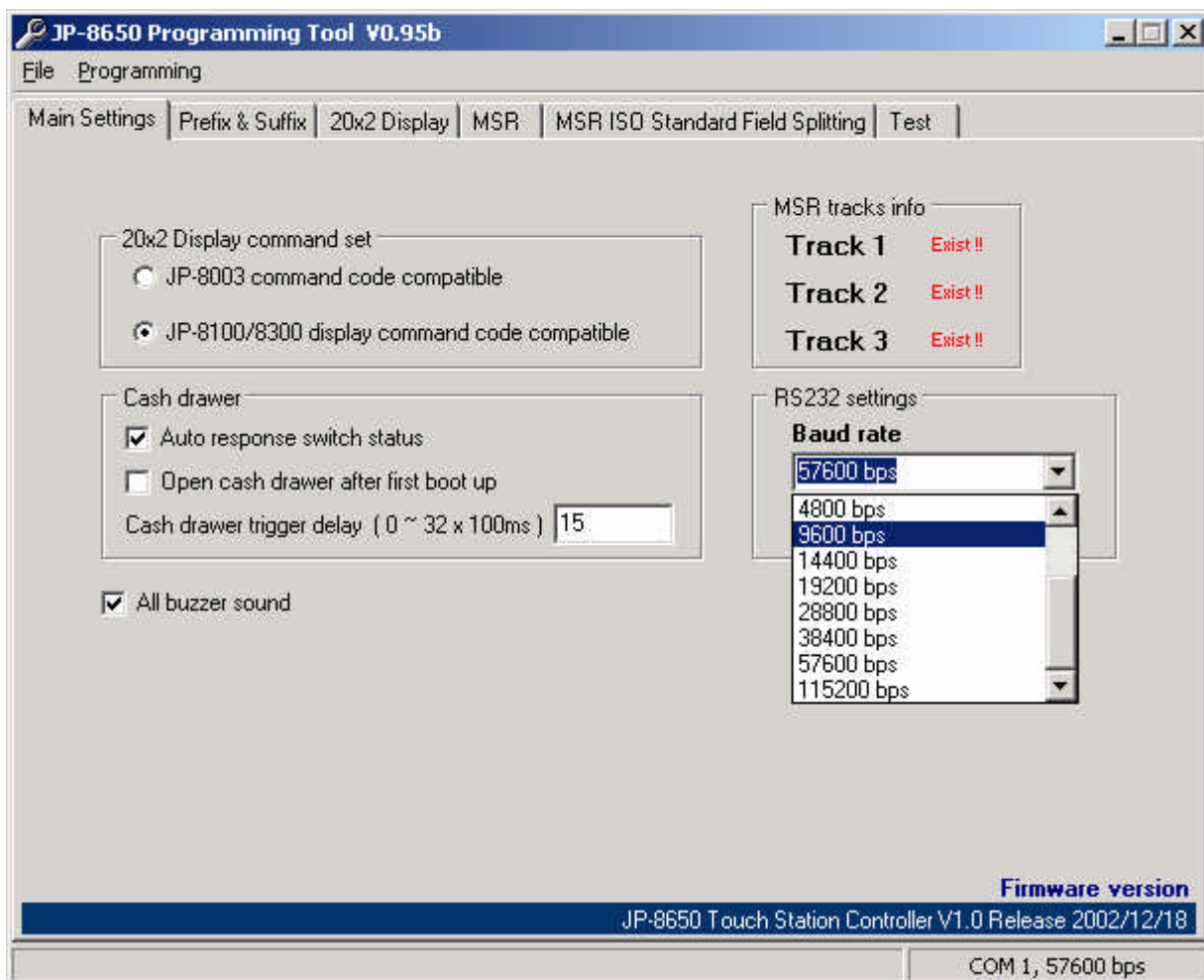
2-2. JP-8100/JP-8300-command code compatible:

Data		Description
by Hex	By Dec	
0x20	32	Clear customer display & move cursor to first digit
0x21	33	Move cursor to first digit
0x22	34	Set customer display cursor on
0x23	35	Set customer display cursor off
0x24	36	Set customer display blinking on
0x25	37	Set customer display blinking off
0x26	38	Set customer display on
0x27	39	Set customer display off
0x28+y+x	40+ y + x	Move customer cursor to y, x y range : Hex 31~32 (Dec 49~50) x range : Hex 31~44 (Dec 49~68)
0x2A+ n	42+ n	Set customer display backlight n range : Hex 1~40 (Dec 1~64)
0x2E	46	Save customer display backlight value to EEPROM

Here we provided a free and simple-understanding programming tool for you and easily to set up your JP-8650. Find to programming tool from enclosed driver CD. Execute setup program. The setup wizard will help you finishing your setup program and create a item in Windows Start menu.

Click to run the execution item of JP-8650 programming tool in start menu. You will see bellowing picture in the first page with Main setting.

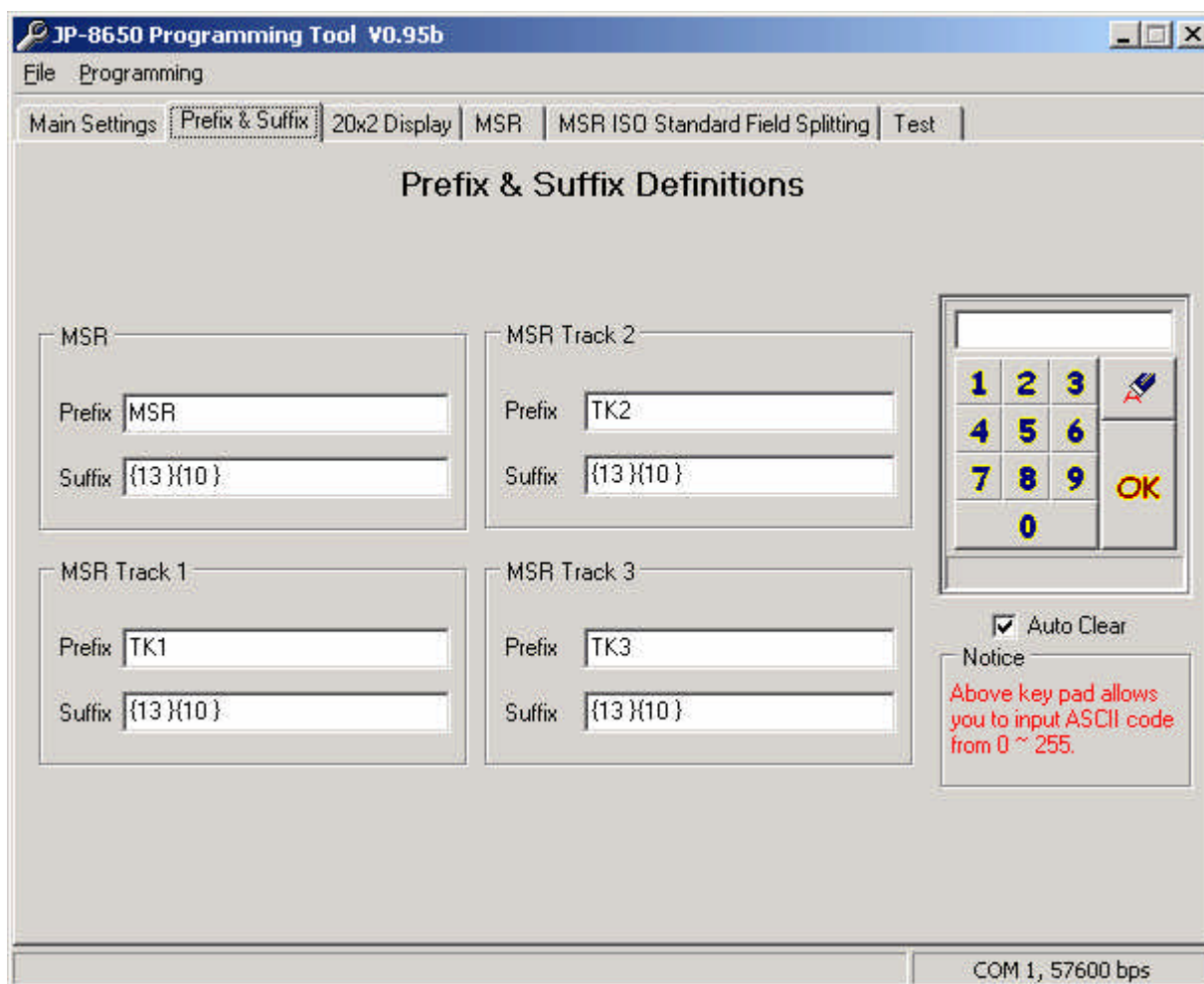
Main Settings:



<Picture 5-1>

1. Select compatible command code in 20X2 display dialog to meet your expecting.
2. Tab or leave blank in the square box to Enable/Disable "Auto response switch status" if customer want to detect cash drawer open/close status.
3. Tab "All buzzer sound" to enable 8650 operation sound.
4. Select "Baud rate" for RS232 data transferring.

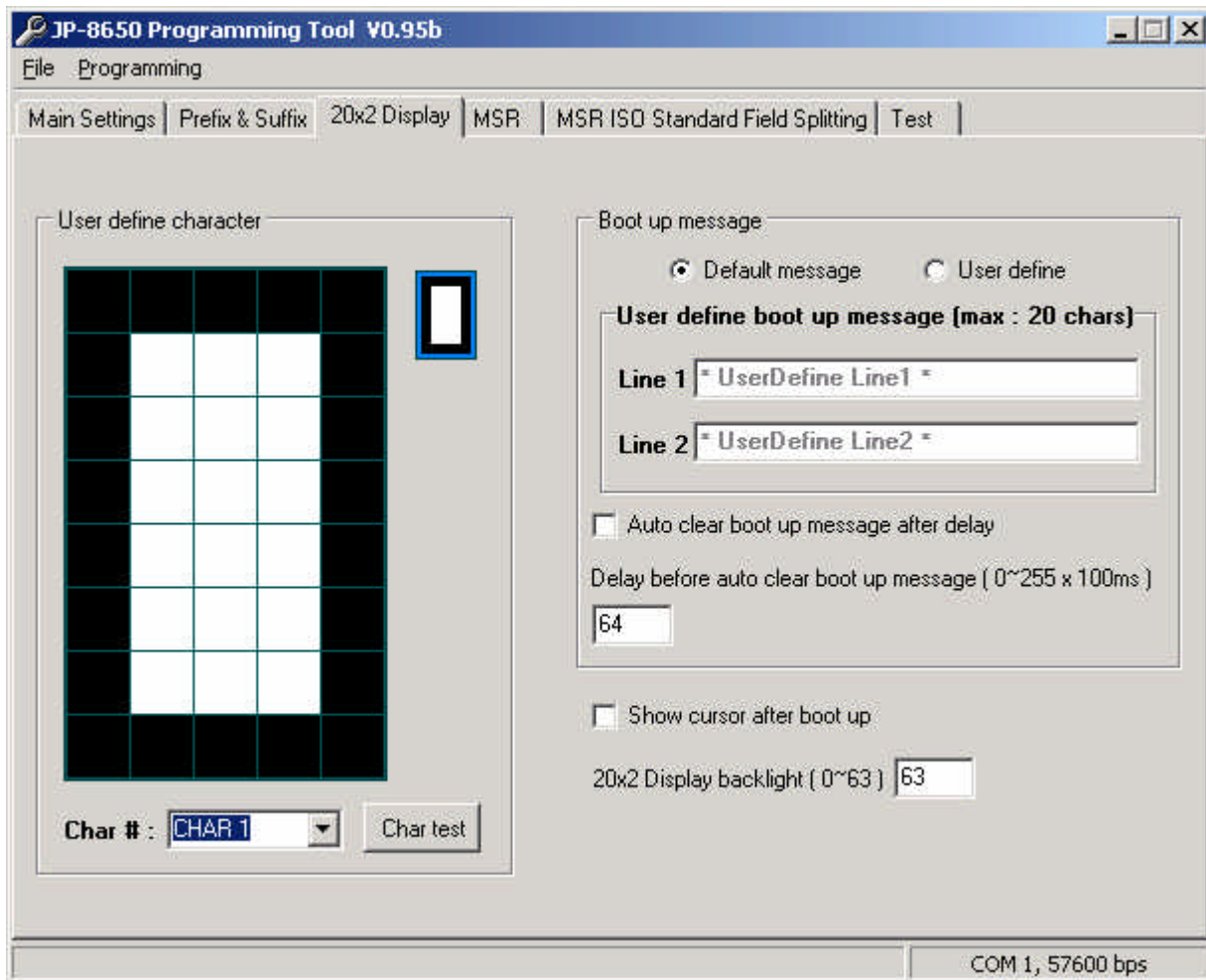
Prefix & Suffix:



<Picture 5-2>

1. Input prefix and suffix for MSR and track of a card. Each blank frame, you may input 7 characters in it.
2. You may input ASCII codes from 0 to 255 on most right side keypad.

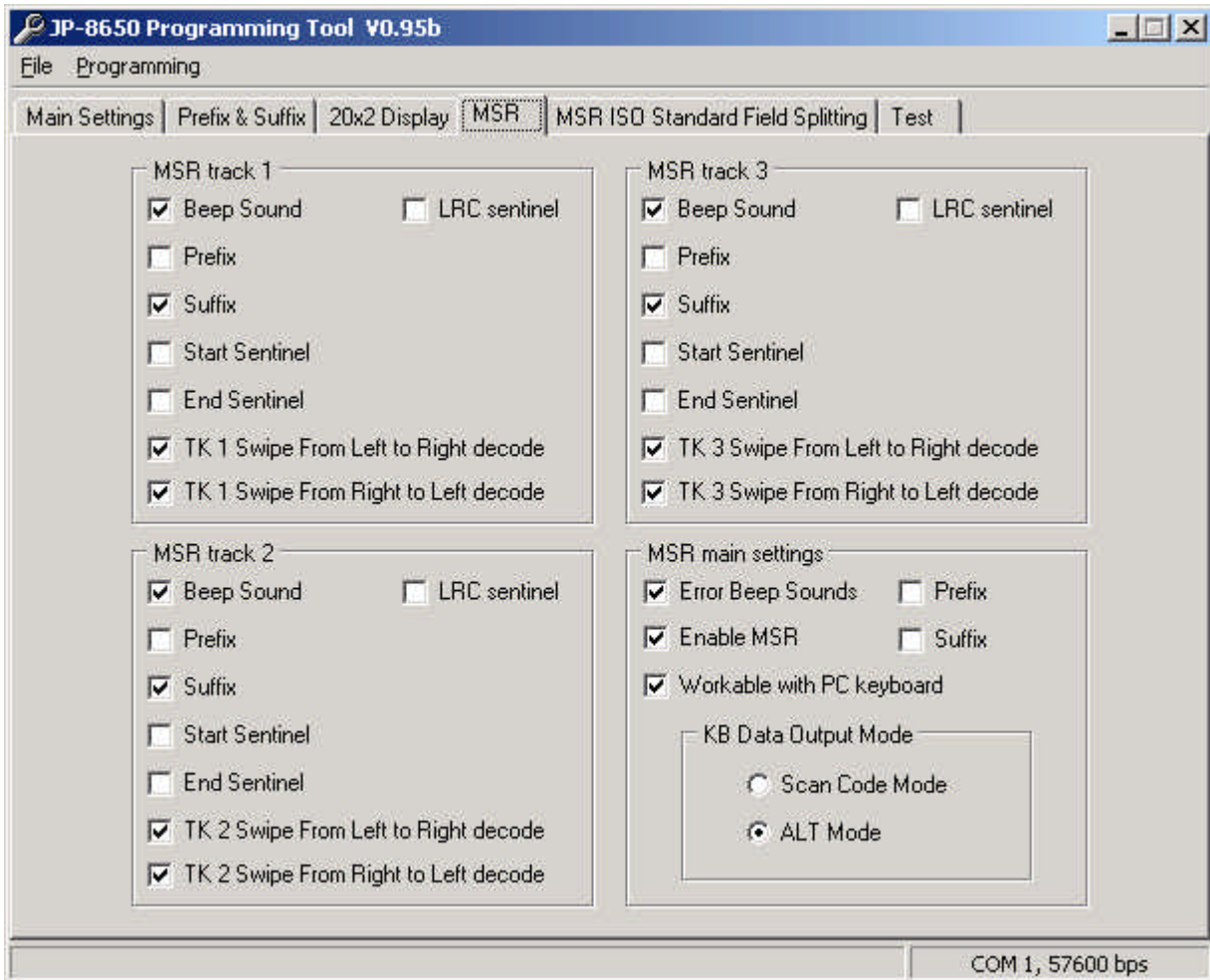
20X2 Display:



<Picture 5-3>

1. Select "User Define" in "boot up Message" dialog if you would like display any characters in 20X2 line to show you mark.
2. Select "Default Message" in "boot up Message" dialog if you would like the customer display showing Jarltech default string.
3. Tab the square box before " Auto clear boot up message after delay" to clear your customer display message (after next item: you have to input a time to clear the message after that)
4. Input a time to clear the message for step 3.
5. On the left window, you may define character as what you want it behavior. There're 7 characters for you defining. And you may see the special characters after program the data to EPROM, or click the "Char test" button to see the result.

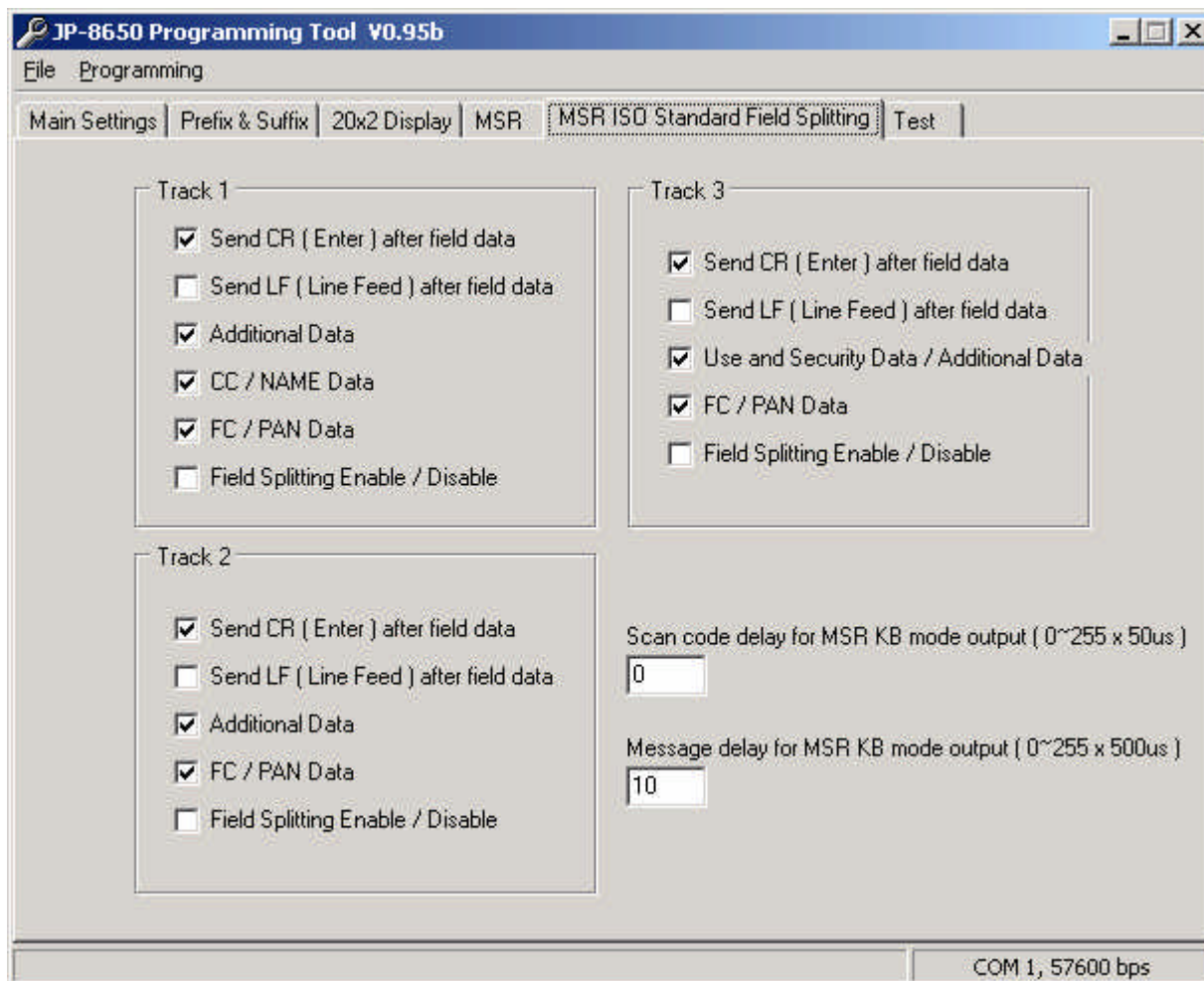
MSR



<Picture 5-4>

1. In MSR track 1 and MSR Track 2 and MSR Track 3 dialogs, tab square box before “beep/prefix/suffix/Start Sentinel/End Sentinel/TKx swipe from left to right decode/TKx swipe from right to left decode” to enable and create card data format.
1. In MSR main settings dialog, tab square box before “Error Beep Sounds/ Enable MSR/Prefix/Suffix” if you would like set up MSR related setting.
3. Tab circle box to select for KB data output mode to be “Scan code mode” or “ALT mode”

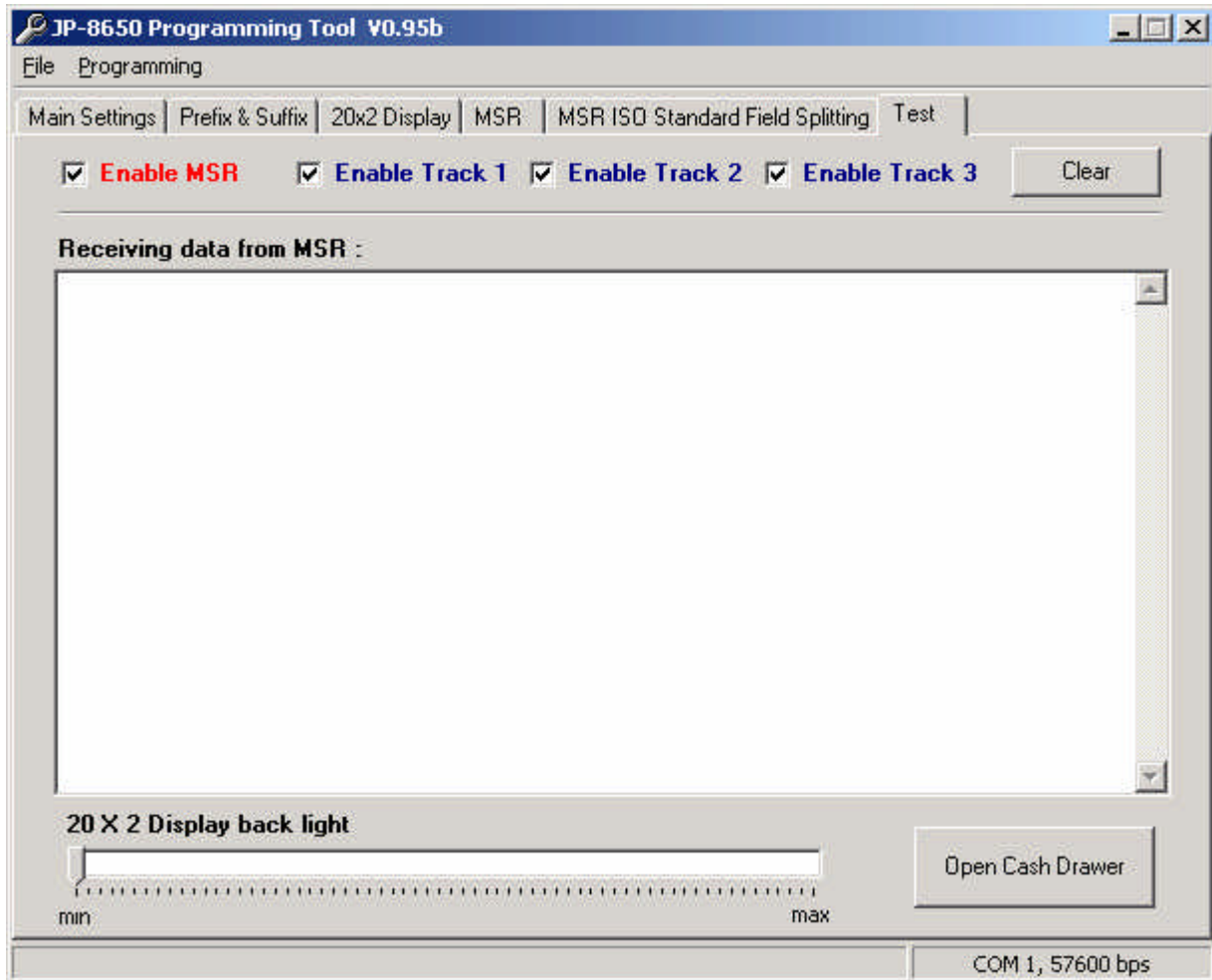
MSR ISO Standard Field Splitting:



<Picture 5-5>

1. In Track 1 dialog, tab square box before “Send CR {Enter} after field data / Send LF [Line Feed] after field data / Additional Data / CC / NAME data / FC / PAN data / Field Splitting Enable / Disable” to enable and create card data format.
2. In Track 2&3 dialogs, tab square box before “Send CR {Enter} after field data / Send LF[Line Feed] after field data / Additional Data / FC / PAN data / Field Splitting Enable / Disable” to enable and create card data format.

Test



<Picture 5-6>

1. Test RS232 mode MSR in the “Receiving data from MSR” window. The result will be showed in the window.
2. Adjust 20X2 display backlight on the bottom scale.
3. Click “Open Cash drawer” to open cash drawer.

Chapter 5 Dip switching

On the rear pad, there's a 5-dip-switcher next to the "20X2 display contrast" tuner for meet hardware selection.



SW1	OFF	Cash Drawer with 24V
SW1	ON	Cash Drawer with 12V
SW2	OFF	Enabled QWERTY keyboard (when y-cable connected)
SW2	ON	Disabled QWERTY keyboard. (When PC connected only with PC/KB)
SW3	OFF	Enabled buzzer sound.
SW3	ON	Disabled buzzer sound.
SW4	OFF	MSR with KB mode
SW4	ON	MSR with RS232 mode
SW5	OFF	Normally Operation
SW5	ON	(Press SW5 until you hear beep sound, then, turn the dip switch to OFF to reset to be default).



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