Mindeo_COM_Text Function Description Document

Based on COM_Text_V2.5.3

Version：Mindeo_COM_Text Function Description Document _V1.2

Contents

Ⅰ. COM_Text Introduction

COM_Text software can convert hexadecimal data obtained by serial port (COM) or USB virtual serial port (USB Virtual COM) into character format (ASCII, Unicode, Simplified Chinese, Japanese, etc.), and then display it on txt document or Word document.

Note: The content in the document is based on the software language is English. If the software language is Chinese, please refer to Appendix A to contrast texts; if the software language is Japanese, please refer to Appendix B to contrast texts. There is no actual difference in functions between different languages, only the text displayed is different.

Ⅱ. Interface & Function Description

1. Main Interface

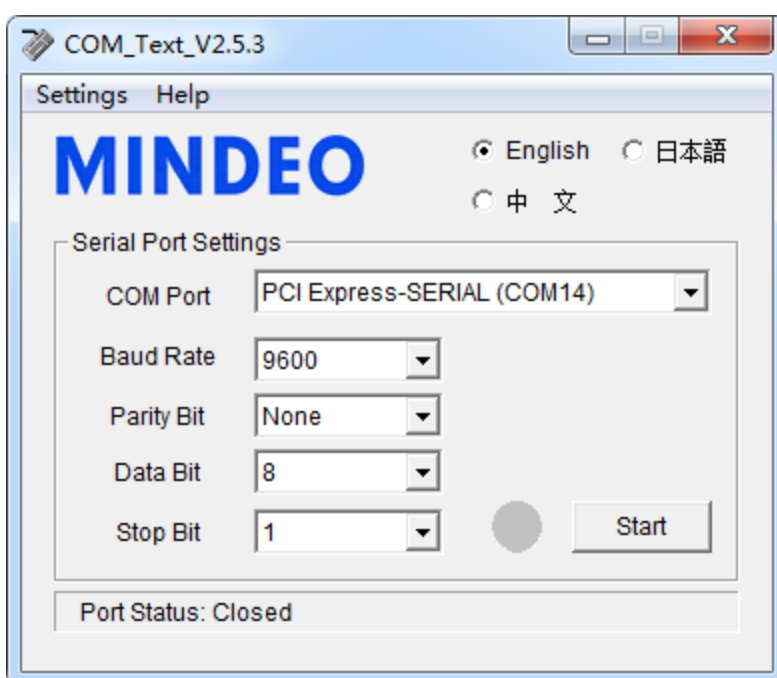The main interface is shown in Figure 1.1 .

Figure 1.1   COM_Text_V2.5.3 Main interface

The elements of the main interface are described as follows:

1.1 Serial Number Selection Bar

You can select the serial port number (including the available USB virtual serial port) through the drop-down box, as shown in Figure 1.2 .

Note: The drop-down box cannot be used when the serial port is connected.
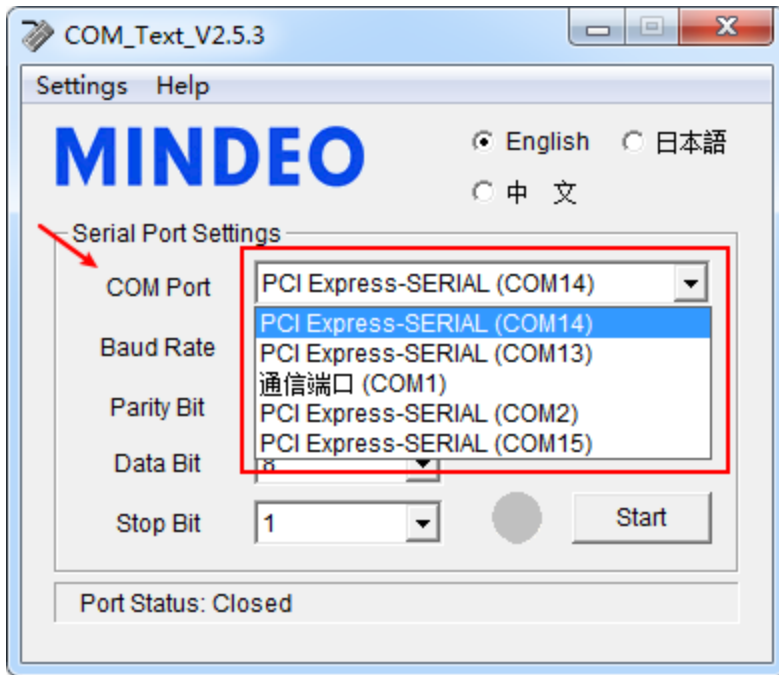
Figure 1.2　Schematic diagram of the serial number selection bar

1.2 Baud Rate Selection Bar

The baud rate used for serial communication can be selected through the drop-down box, as shown in Figure 1.3 . The baud rate supported by the software includes 300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200.

Note: The drop-down box cannot be used when the serial port is connected.
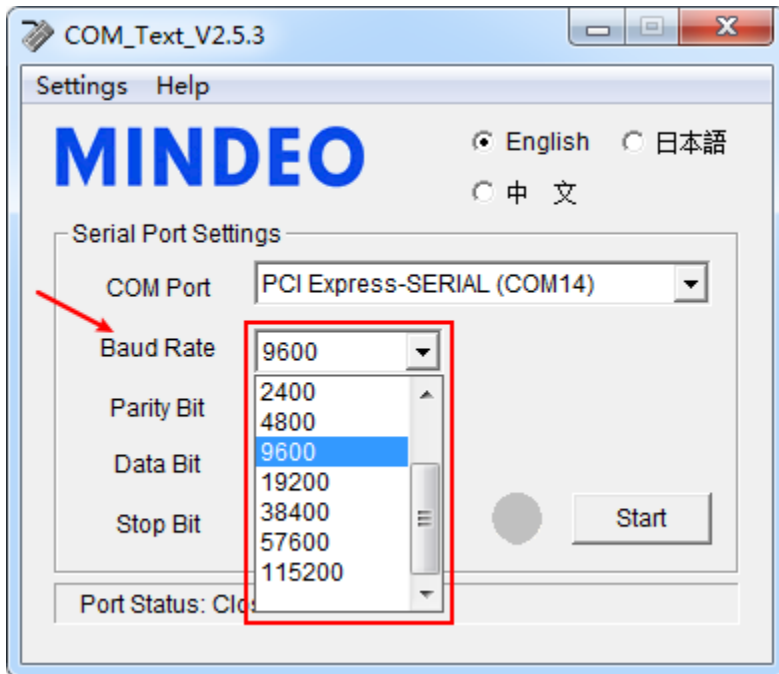

Figure 1.3　Schematic diagram of the baud rate selection bar

1.3 Check Digit Selection Bar

The parity bit used for serial communication can be configured through the drop-down box, as shown in Figure 1.4 . The parity bit supported by the software includes None, Odd, Even.

Note: The drop-down box cannot be used when the serial port is connected.

Figure 1.4　Schematic diagram of parity bit selection bar

1.4 Data Bit Selection Bar

　　The data bit that can be sent and received during serial communication can be configured through the drop-down box, as shown in Figure 1.5 . The data bit supported by the software includes 8 bits and 7 bits.
　　Note: The drop-down box cannot be used when the serial port is connected.
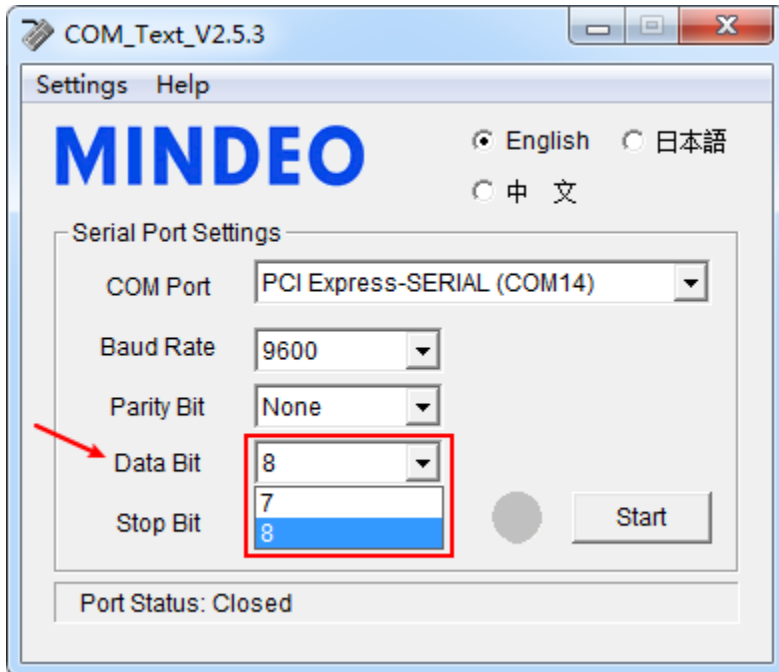
Figure 1.5　Schematic diagram of data bit selection bar

1.5 Stop Bit Selection Bar

　　The stop bit for sending and receiving data during serial communication can be configured through the drop-down box, as shown in Figure 1.6 . The stop bit supported by the software includes 2 bits and 1 bit.
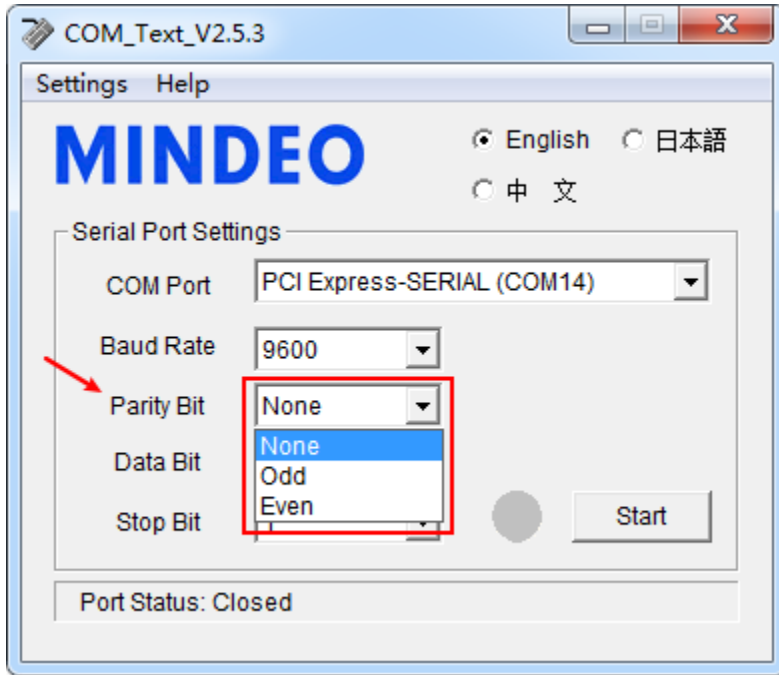　　*Note: The drop-down box cannot be used when the serial port is connected.*
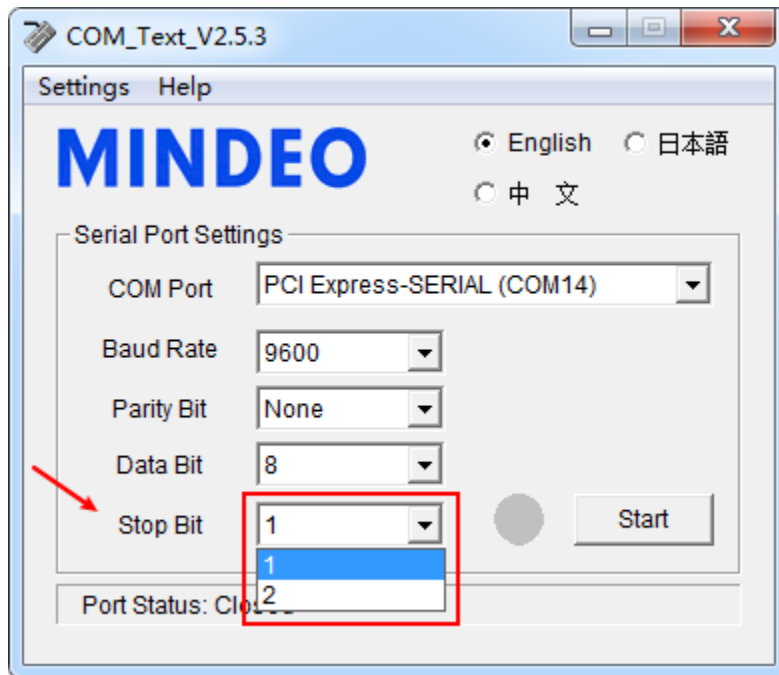
Figure 1.6   Schematic diagram of the stop bit selection bar

1.6 Connection Status Indication

There are four parts in total, which are the selection bar related to the serial port settings, the serial port status text box, the connection status indicator and the connection button.

When not connected:
①Each selection bar related to serial port settings is **available** and **not grayed out**;
②The serial port status text box displays " **Port Status: Closed** ";
③The connection status indicator is **gray**;
④The text of the connection button is displayed as **"Start"**.

At this time, the controls display as shown in Figure 1.7 .
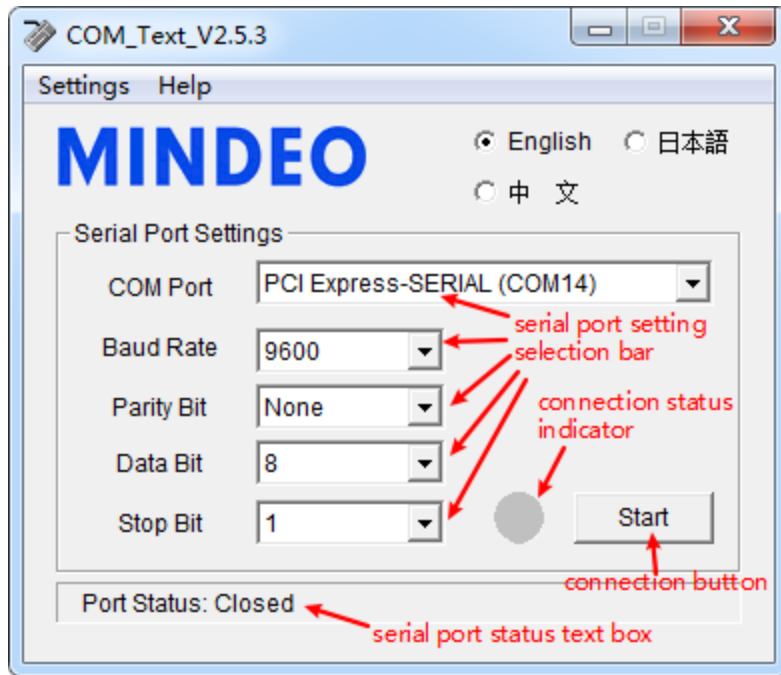
Figure 1.7   Schematic diagram of connection status indication when not connected

When connected:

①Each selection bar related to serial port settings is **not available** and **grayed out**;

②The serial port status text box displays " **Port Status: Opened** ";

③The connection status indicator is **green**;

④The text of the connection button is displayed as "**Stop**".

At this time, the controls display as shown in Figure 1.8 .
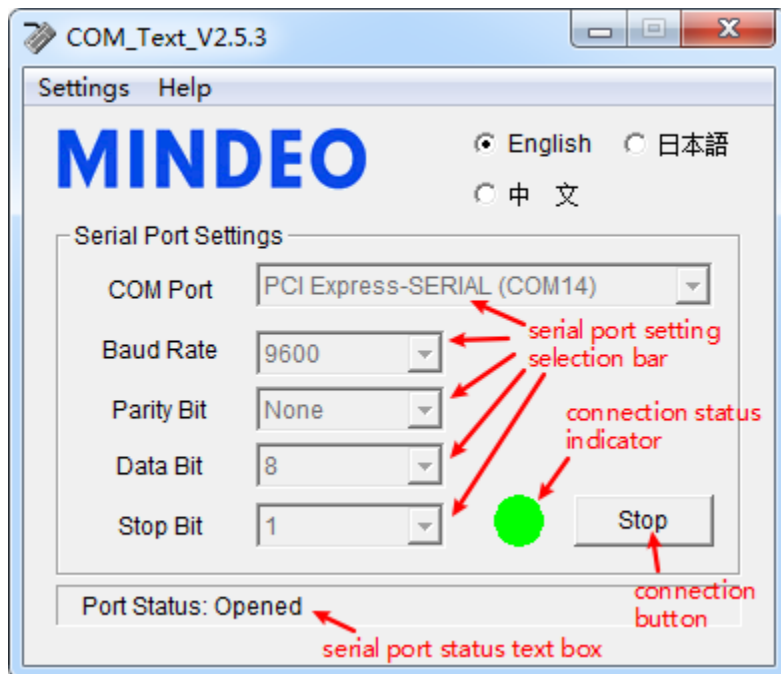
Figure 1.8   Schematic diagram of connection status indication when connected

1.7 Language selection button

You can select the language used by the software by clicking the button, and it will refresh in real time after clicking, as shown in Figure 1.9 . The language supported by the software include Chinese, English, and Japanese.

Even when the serial port is connected, the interface language can be changed by the button.
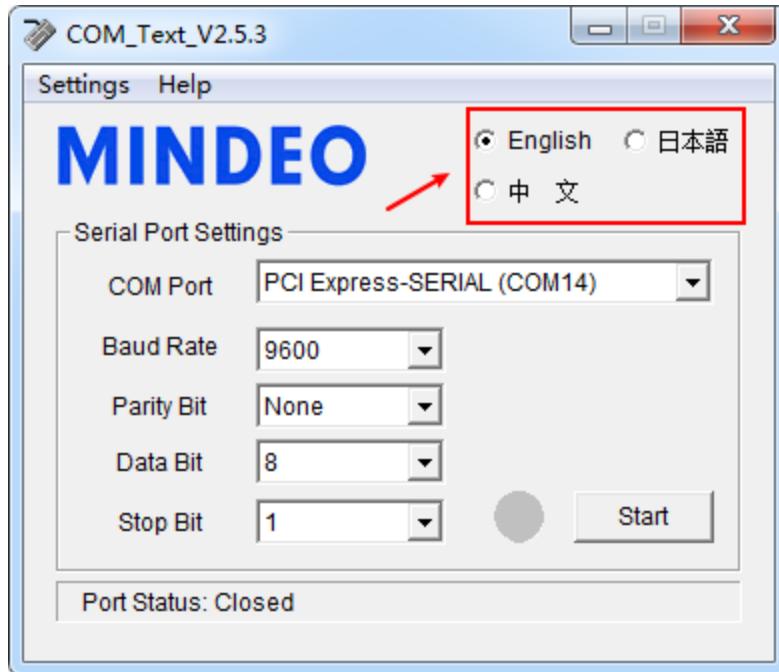
Figure 1.9　Schematic diagram of language selection buttons

1.8 Connection Button

Click the button to switch the connection status (open or closed) for the currently selected serial port, as shown in Figure 1.10 .
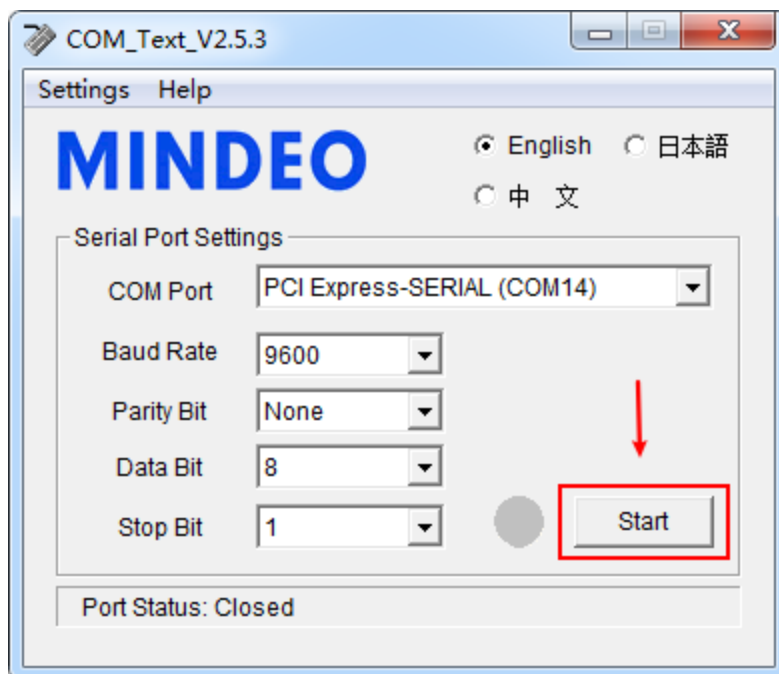
Figure 1.10　Schematic diagram of connection button

1.9 Title Bar

The title bar includes title text, minimize button, and close button, as shown in Figure 1.11 .

Title Text：Display the name of the current software "COM_Text_V2.5.3";

Minimization Button：Click to immediately minimize as a small icon in the lower right corner of the desktop, as shown in Figure 1.12;

Close Button：Click to exit the software.
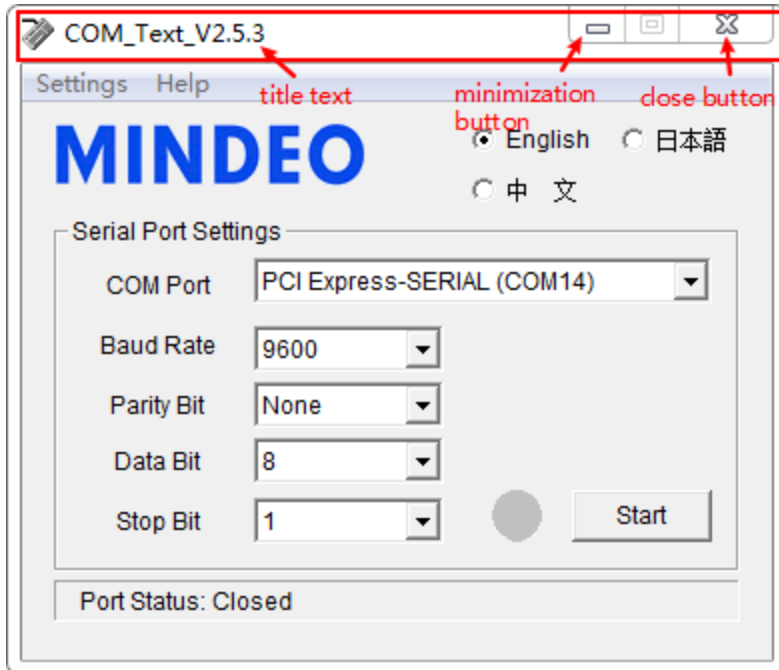
Figure 1.11　Schematic diagram of the title bar

Figure 1.12　Schematic diagram of tray icon when COM_Text is minimized

2. [Menu Bar] → [Settings]

The menu bar includes two buttons for settings and help. Click the settings button to modify some properties of the software, as shown in Figure 2.1 .
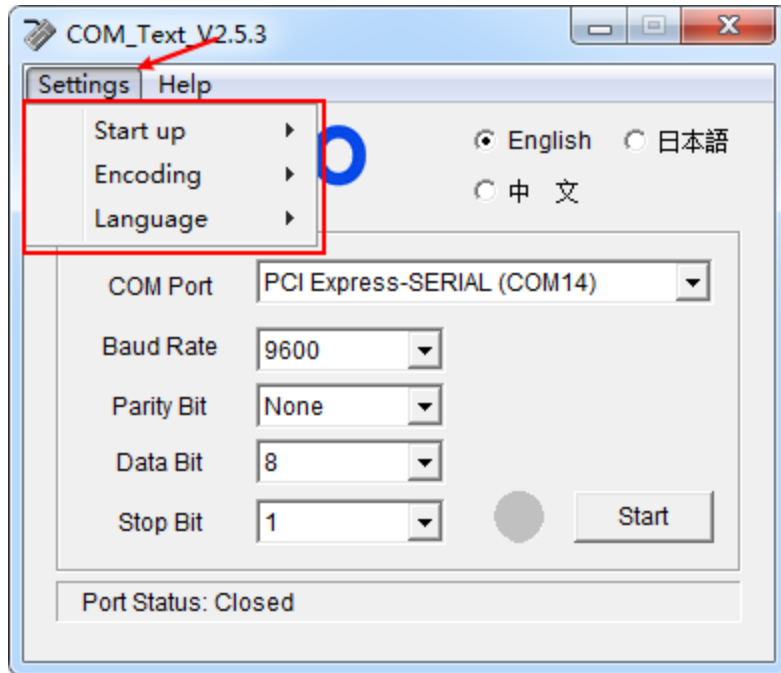
Figure 2.1 Schematic diagram of [Menu Bar] → [Settings] button

2.1 [Settings] → [Start up]

After clicking the [Menu Bar] → [Settings] button and moving the mouse to the [Settings] → [Start up] item, the right selection box will automatically expand, as shown in Figure 2.2 .
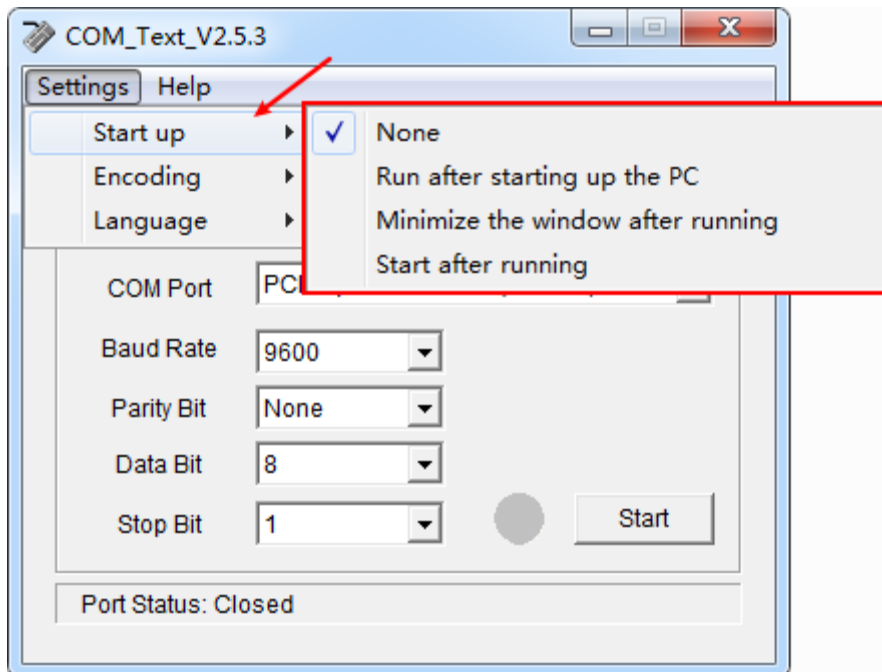
Figure 2.2 Schematic diagram of [Settings] → [Startup] item

The elements in the right selection box are described as follows:

①**None**: The default setting means that no startup items are set; when the remaining items (including "

Run after starting up the PC ", " **Minimize the window after running** " and " **Start after running** ") are in the selected state, selecting the "None" button will cause other 3 options revert to unselected state.

Note: The following options (that is, " **Run after starting up the PC** ", " **Minimize the window after running** ", and " **Start after running** ") are multiple options, that is, multiple options can be selected at the same time.

②**Run after starting up the PC**: If selected, it will automatically run after starting up the PC. On Windows 7, Windows 8 and Windows 10 systems, if directly opening the software fails to successfully set this function, please open the software with administrator rights to set this function.

③**Minimize the window after running**: If selected, it will be immediately minimized as a small icon in the lower right corner of the desktop after running.

Caption: 1. Clicking on the icon, it can be reverted to its original size;
2. A pop-up menu which contains "close" option is available if the small icon is clicked on by the right button, then it can be closed by this way. When the language of the software is Chinese or English, the text here is displayed as "Exit", as shown in Figure 2.3; when the language of the software is Japanese, the text is displayed as "閉じる" as shown in Figure 2.4 .

Figure 2.3   Schematic diagram when the right mouse button clicks on the COM_Text icon (when the software language is Chinese or English)
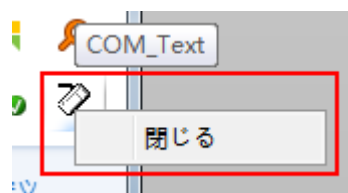
Figure 2.4   Schematic diagram when the right mouse button clicks on the COM_Text icon (when the software language is Japanese)

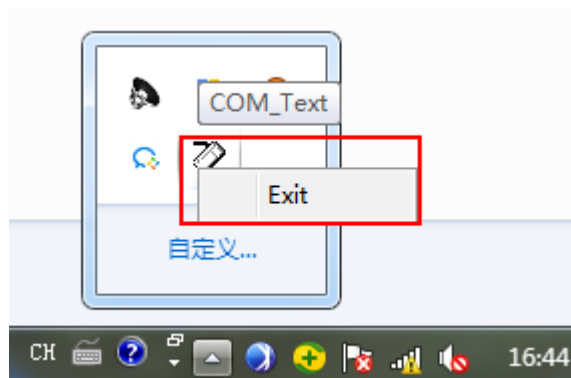④**Start after running**: If selected, the serial port will be opened automatically according to the previous settings after running.

2.2 [Settings] → [Encoding]

After clicking the [Menu Bar] → [Settings] button and moving the mouse to the [Settings] → [Encoding] item, the right selection box will automatically expand, as shown in Figure 2.5 .

Figure 2.5　Schematic diagram of [Settings] → [Encoding] item

2.2.1 Brief description of character encoding system

In computer science, the terms "character encoding", "character map", "character set" or "code page" were historically synonymous, as the same standard would specify a repertoire of characters and how they were to be encoded into a stream of code units - usually with a single character per code unit. Common examples include the ASCII and Unicode. If the data received does not display with the proper characte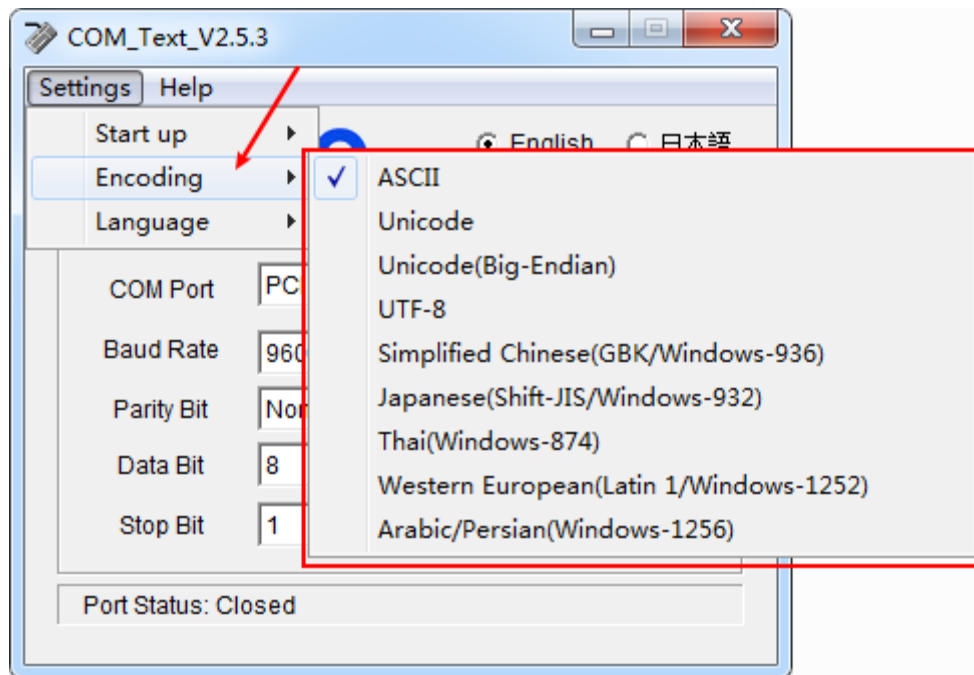rs, it may be because the barcode being scanned was created using a character encoding system that is different from the one the host program is expecting. Try alternate options in "Character Encoding System Setting" menu of COM_Text to find the proper one.

2.2.2 Brief description of the character encoding system supported by COM_Text

① ASCII（Default option）:

ASCII(American Standard Code for Information Interchange) is a character-encoding scheme originally based on the English alphabet. ASCII codes represent text in computers, communications equipment, and other devices that use text. Most modern character-encoding schemes are based on ASCII, though they support many additional characters. ASCII includes definitions for 128 characters: 33 are non-printing control characters (many now obsolete) that affect how text and space is processed and 95 printable characters, including the space (which is considered an invisible graphic).

② Unicode:

Unicode is a computing industry standard for the consistent encoding, representation and handling of text expressed in most of the world's writing systems. Unicode is developed in conjunction with the International Organization for Standardization and shares the character repertoire with ISO/IEC 10646: the Universal Character Set.

Unicode defines two mapping methods: the Unicode Transformation Format (UTF) encodings, and the Universal Character Set (UCS) encodings. An encoding maps (possibly a subset of) the range of Unicode code points to sequences of values in some fixed-size range, termed code values. The numbers in the names of the encodings indicate the number of bits in one code value (for UTF encodings) or the number of bytes per code value (for UCS) encodings. UTF-8 and UTF-16 are probably the most commonly used encodings. UCS-2 is

an obsolete subset of UTF-16; UCS-4 and UTF-32 are functionally equivalent. In computing, the term endian or endianness refers to the ordering of individually addressable sub-components within the representation of a larger data item as stored in external memory. This "Unicode" equates the UTF-16(Little-Endian), the least significant byte is ordered first.

③ **Unicode（Big-Endian）:**

Unicode(Big-Endian) equates UTF-16(Big-Endian), the most significant is ordered first.

④ **UTF-8:**

UTF-8 (UCS Transformation Format—8-bit[1]) is a variable-width encoding that can represent every character in the Unicode character set. It was designed for backward compatibility with ASCII and to avoid the complications of endianness and byte order marks in UTF-16 and UTF-32.UTF-8 has become the dominant character encoding for the World-Wide Web, accounting for more than half of all Web pages.

Note: If this kind of coding method is selected and the barcode of the GBK coding rule is scanned, the coding method needs to be reselected, or the serial port can be closed by clicking the connection button and then the serial port can be opened again for the data output function to take effect correctly.

⑤ **Simplified Chinese(GBK/Windows-936):**

GB 2312 is the registered internet name for a key official character set of the People's Republic of China, used for simplified Chinese characters. GB abbreviates Guojia Biaozhun, which means national standard in Chinese. GB2312 includes 6,763 Chinese characters.

GBK is an extension of the GB2312 character set for simplified Chinese characters, used in the People's Republic of China. GB abbreviates Guojia Biaozhun, which means national standard in Chinese, while K stands for Extension ("Kuozhan").GBK includes 21,003 Chinese simplified and traditional characters.Microsoft's Code Page Windows-936 is generally thought of as being GBK. Code page Windows-936 is Microsoft's character encoding for simplified Chinese.

⑥ **Japanese(Shift-JIS/Windows-932):**

Shift-JIS, also known as MS Kanji or SJIS, is an encoding system for Japanese characters, developed by Microsoft Corporation.It encodes the characters from the JIS X 0201 (ASCII/JIS-Roman) and JIS X 0208 (Japanese) character sets as sequences of either one or two bytes.It can accommodate full-width and half-width Latin alphabet, Hiragana, Katakana, symbols and Kanji.Microsoft's Code Page Windows-932 is generally thought of as being Shift-JIS. Code page Windows-932 is Microsoft's character encoding for Japanese.

⑦ **Thai(Windows-874):**

ISO/IEC 8859-11:2001, Information technology - 8-bit single-byte coded graphic character sets - Part 11: Latin/Thai alphabet, is part of the ISO/IEC 8859 series of ASCII-based standard character encodings, first edition published in 2001. It is informally referred to as Latin/Thai. It is nearly identical to the national Thai standard TIS-620 (1990). The sole difference is that ISO/IEC 8859-11 allocates non-breaking space to code 0xA0, while TIS-620 leaves it undefined. (In practice, this small distinction is usually ignored.)

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As with all varieties of ISO/IEC 8859, the lower 128 codes are equivalent to ASCII. The additional characters, apart from no-break space, are found in Unicode in the same order, only shifted from 0xA1 to U+0E01 and so forth.

Windows - 874 as well as the code page used in the Thai version of the Microsoft Windows.Windows - 874 is differs from ISO/IEC 8859-11 only nine symbols(0x80,0x85, 0x91~0x97).

⑧ **Western European（Latin 1/Windows-1252）:**

ISO/IEC 8859-1:1998, Information technology - 8-bit single-byte coded graphic character sets - Part 1: Latin alphabet No. 1, is part of the ISO/IEC 8859 series of ASCII-based standard character encodings, first edition published in 1987.It is generally intended for "Western European" languages .It is the basis for most popular 8-bit character sets, including Windows-1252 and the first block of characters in Unicode.

The Windows-1252 codepage coincides with ISO-8859-1 for all codes except the range 128 to 159 (hex 80 to 9F), where the little-used C1 controls are replaced with additional characters including all the missing characters provided by ISO-8859-15. Windows-28591 is the actual ISO-8859-1 codepage.

Windows-1252 is designed for Latin 1 languages: Afrikaans, Basque, Catalan, Danish, Dutch, English, Faroese, Finnish, French, Galician, German, Icelandic, Indonesian, Italian, Malay, Norwegian, Portuguese, Spanish, Swahili, and Swedish.

⑨ **Arabic /Persian (Windows-1256):**

Windows-1256 is a code page used to write Arabic (and possibly some other languages that use Arabic script, like Persian and Urdu) under Microsoft Windows. This code page is not compatible with ISO 8859-6 and MacArabic encodings.

It encodes every abstract single letter of the basic Arabic alphabet. The Arabic letters in the C0-FF range are in Arabic alphabetic order, but some Latin characters are interspersed among them.

2.3 [Settings]→[Language]

After clicking the [Menu Bar] → [Settings] button and moving the mouse to the [Settings] → [Language] item, the right selection box will automatically expand, as shown in Figure 2.6 . Click the corresponding button to replace the text of COM_Text with the text of the corresponding language. Chinese, English and Japanese are supported. This function is the same as the "language selection button" function in the main interface.
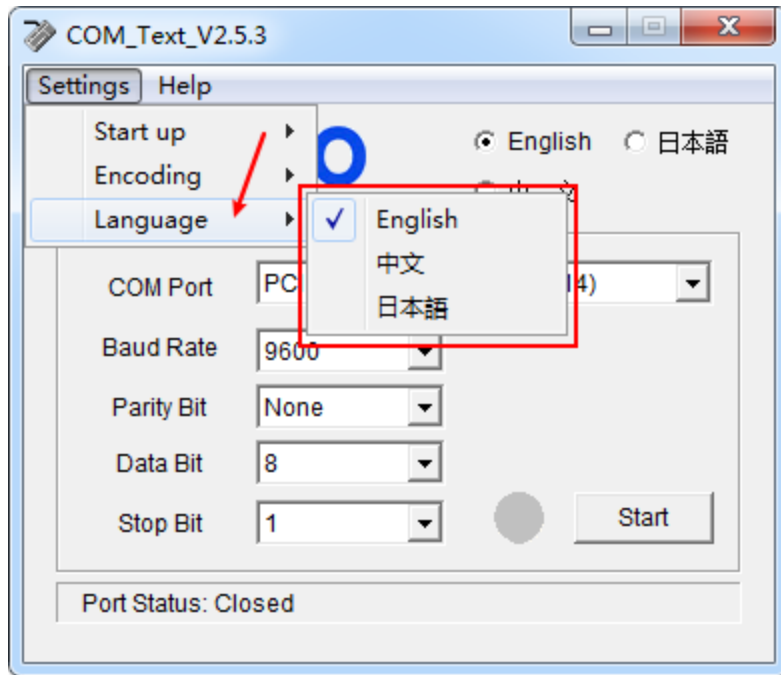
Figure 2.6　Schematic diagram of [Settings] → [Language] item

3. [Menu Bar] → [Help]

The help button in the menu bar provides two options: User manual, About. As shown in Figure 3.1 .
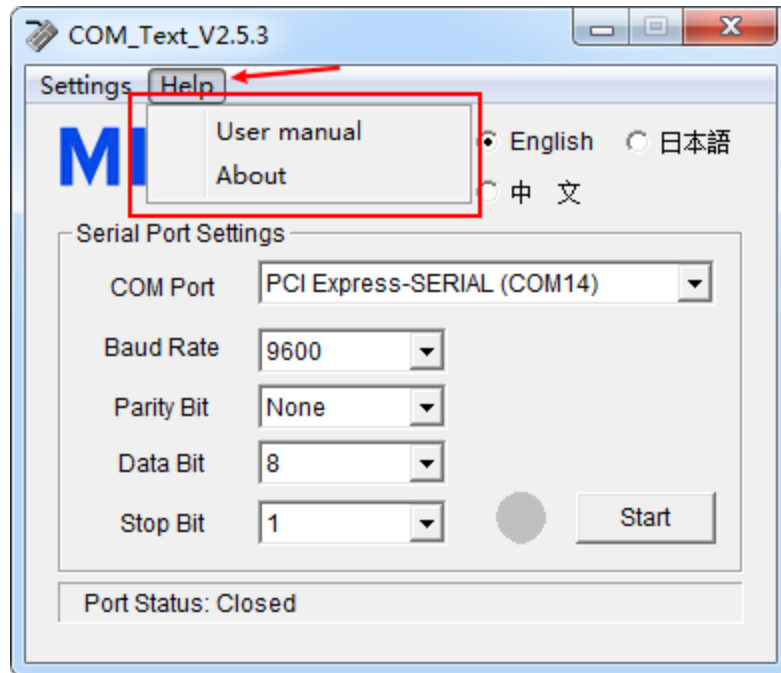

Figure 3.1   Schematic diagram of [Menu Bar] → [Help] button

3.1 [Help] → [User Manual]

When the software is correctly installed, click [Help] → [User Manual] to open the user manual that matches the current language setting in the chm format (Compiled HTML Help file) (the English user manual will be opened when the current language is Japanese).

3.2 [Help] → [About]

Click [Help] → [About] to display the relevant information of the COM_Text, including version information and copyright information, as shown in Figure 3.2 .

Figure 3.2   Schematic diagram of [Help] → [About] item

In addition, for COM_Text_V2.5.3.exe, according to [right mouse button] → [properties] → [details] operation, you can also find the content of copyright information, as shown in Figure 3.3 .
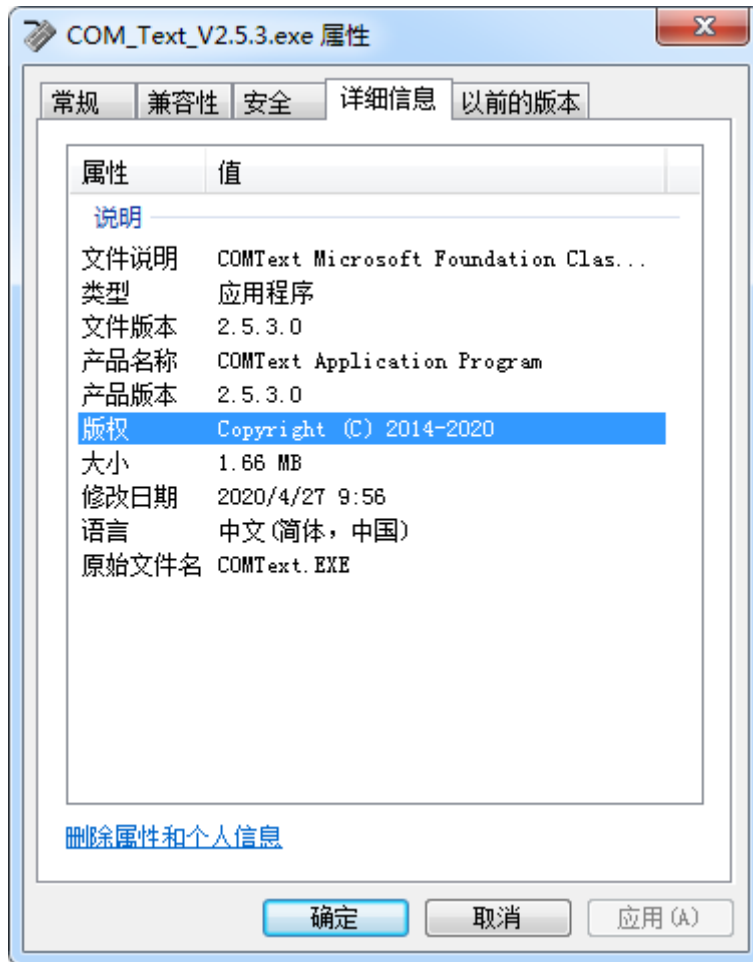
Figure 3.3　Schematic diagram of copyright information in the property page of COM_Text_V2.5.3

4. Other Functions

4.1 Operating Restrictions

Only one COM_Text software can be run at a time. If you double-click the program after running COM_Text, there will be no response, and there is only one COM_Text process in the task manager.

4.2 Automatic Connection To Virtual Serial Port

After the COM_Text software is running, if the user uses the Mindeo virtual serial device and connects to the PC with a USB cable, the COM_Text software will automatically open the virtual serial port corresponding to the virtual serial device, that is, skip the serial number selection and click the connect button.The operation is shown in Figure 4.1 .

When the device is unplugged, the software will automatically close the serial port, the serial port number will be switched to the first serial port number in the serial number selection column, and the remaining settings will remain unchanged, as shown in Figure 4.2 and Figure 4.3 .
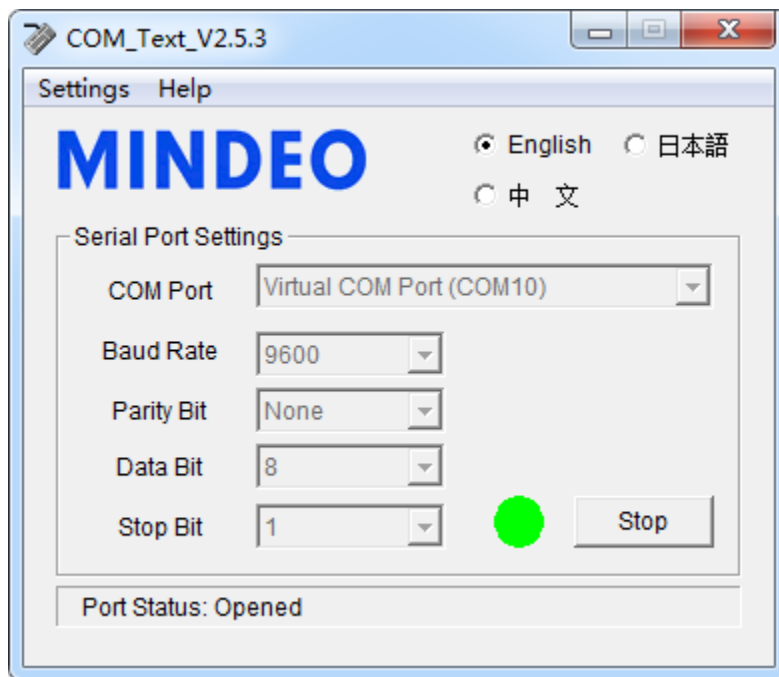

Figure 4.1   Schematic diagram of automatically connecting a virtual serial port device
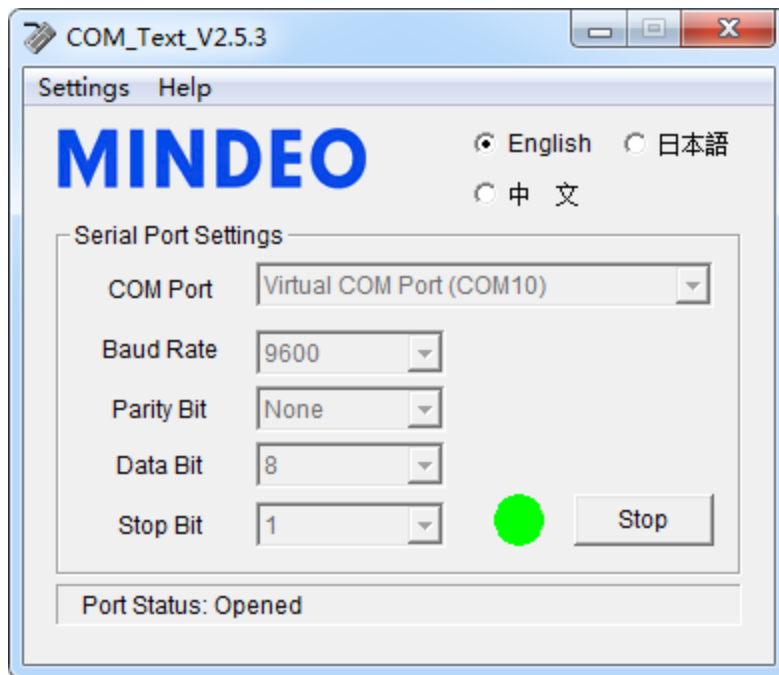
Figure 4.2   Schematic diagram of the interface before pulling out the virtual serial port device
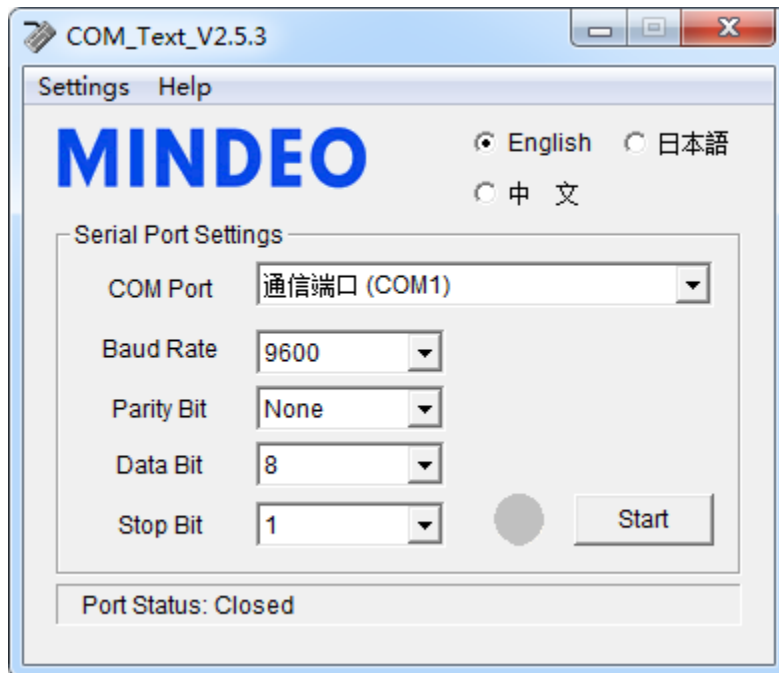
Figure 4.3   Schematic diagram of the interface after pulling out the virtual serial port device

Note: Only when the COM_Text software is run first, and then the virtual serial port device is connected, there is an automatic serial port opening function; if the virtual serial port device is connected to the PC first, and then the COM_Text software is run, the serial port will not be automatically opened.

4.3 Memory Function

All the settings on the software will be saved, and these settings will be retained when starting later.

Appendix A   Interface Text Comparison Table in English and Chinese

English	Chinese
Settings	设置
Help	帮助
Serial Port Settings	串口设置
COM Port	串口号
Baud Rate	波特率
Parity Bit	校验位
Data Bit	数据位
Stop Bit	停止位
Start	开始
Stop	停止
Port Status: Opened	串口状态：已打开
Port Status: Closed	串口状态：已关闭
Start up	启动
None	无
Run after starting up the PC	开机后自动启动
Minimize the window after running	启动后最小化
Start after running	启动后自动开始
Encoding	编码
ASCII	ASCII
Unicode	Unicode
Unicode(Big-Endian)	Unicode(Big-Endian)
UTF-8	UTF-8
Simplified Chinese(GBK/Windows-936)	简体中文(GBK/Windows-936)
Japanese(Shift-JIS/Windows-932)	日文(Shift-JIS/Windows-932)
Thai(Windows-874)	泰语(Windows-874)
Western European(Latin 1/Windows-1252)	西欧语言(Latin 1/Windows-1252)
Arabic/Persian(Windows-1256)	阿拉伯语/波斯语(Windows-1256)
Language	语言
中文	中文
English	English
日本語	日本語
Help	帮助
User manual	用户手册
About	关于
About COM_Text	关于COM_Text
COM_Text V2.5.3	COM_Text V2.5.3
Copyright 2014-2020 MINDEO	版权所有 2014-2020 MINDEO
Shenzhen MinDe Electronics Technology Ltd.	深圳市民德电子科技股份有限公司
OK	OK
Exit	Exit

Appendix B Interface Text Comparison Table in English and Japanese

English	Japanese
Settings	設定
Help	ヘルプ
Serial Port Settings	通信設定
COM Port	COM ポート
Baud Rate	ボーレート
Parity Bit	パリテイビット
Data Bit	データビット
Stop Bit	ストップビット
Start	接続
Stop	切断
Port Status: Opened	接続状態: 接続
Port Status: Closed	接続状態: 切断
Start up	起動オプション
None	指定なし
Run after starting up the PC	PC 起動時に自動起動
Minimize the window after running	起動後最小化
Start after running	起動後自動接続
Encoding	エンコーディング
ASCII	ASCII
Unicode	Unicode
Unicode(Big-Endian)	Unicode(Big-Endian)
UTF-8	UTF-8
Simplified Chinese(GBK/Windows-936)	Simplified Chinese(GBK/Windows-936)
Japanese(Shift-JIS/Windows-932)	Japanese(Shift-JIS/Windows-932)
Thai(Windows-874)	Thai(Windows-874)
Western European(Latin 1/Windows-1252)	Western European(Latin 1/Windows-1252)
Arabic/Persian(Windows-1256)	Arabic/Persian(Windows-1256)
Language	言語
中文	中文
English	English
日本語	日本語
Help	ヘルプ
User manual	ヘルプ
About	バージョン情報
About COM_Text	About COM_Text
COM_Text V2.5.3	COM_Text V2.5.3
Copyright 2014-2020 MINDEO	Copyright 2014-2020 MINDEO
Shenzhen MinDe Electronics Technology Ltd.	Shenzhen MinDe Electronics Technology Ltd.
OK	OK
Exit	閉じる

Ⅲ. Revise History

Version	Author	Date	History
V1.0	Huang Y.K.	2020/05/06	Create document.
V1.1	Huang Y.K.	2020/05/10	Change some description.
V1.2	Huang Y.K.	2020/05/11	Change some format.