



## **Dual Frequency RFID Device Configuring Prefixes and Postfixes**

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## 1 Introduction

### 1.1 Important Note

**The function to add prefixes and postfixes to the HID output of the dual frequency RFID devices may not be possible with every firmware version.**

### 1.2 Reference Documents

HID Usage Tables 1.40 (2023-01-27).pdf, see chapter “10 Keyboard/Keypad Page (0x07)”

You can get the latest version here: <https://www.usb.org/documents>

## 2 Configuration Software HID Setting

The screenshot displays the 'Configuration Software HID Setting' interface. On the left, under the 'Protocol Screen' label, there is a list of keyboard keys. A dropdown menu is open for 'Prefix1', showing the following options: 'No Prefix', 'Keyboard [ENTER-LEFT]', 'Keyboard [ESCAPE]', 'Keyboard [TAB]', 'Keyboard [SPACE]', 'Keyboard [ENTER-RIGHT]', and 'Keyboard #'. To the right of this, there are dropdowns for 'Prefix2', 'Prefix3', 'Postfix1', 'Postfix2', and 'Postfix3', all of which are currently set to 'No Prefix' or 'No Postfix'. At the bottom right of the interface, there are two buttons: 'SET' and 'CLEAR'.

<b>Prefix</b>	Prefix1	Keyboard [ENTER-LEFT] ▾	Prefix2	Keyboard [TAB] ▾	Prefix3	Keyboard [SPACE] ▾
<b>Postfix</b>	Postfix1	Keyboard [ENTER-RIGHT] ▾	Postfix2	Keyboard # ▾	Postfix3	No Postfix ▾

**Protocol Screen**

```

>> AA 00 01 83 82 BB
<< AA 00 0A 00 00 20 20 05 20 03 18 44 01 71 BB
>> AA 00 01 86 87 BB
<< AA 00 26 00 52 38 35 35 2D 53 45 54 2D 48 46 5F 4C 46 5F 4C 45 47 49 43 20 32 30 32 32 2D 30 39 2D 31
33 2D 31 36 3A 31 30 7B BB
>> AA 00 07 FE 28 28 2C 58 32 00 BC BB
<< AA 00 02 00 80 82 BB

```

Version: R855-SET-HF\_LF\_LEGIC 2022-09-13 16:10 / SN: 2020052003184401

### 3 Configuration Command Description

If you need more flexibility, you can compose your control command manually. The BCC checksum is calculated after the Start of Telegram as XOR over all bytes from the Device Address to Postfix3

#### 3.1 Command from PC to RFID device

AA 00 07 FE 00 00 00 00 00 00 ED BB

##### The Bytes in Detail

AA = Start of Telegram  
 00 = Device Address  
 07 = Bytes of Payload (Command + Parameters)  
 FE = Command Code  
 00 = Prefix1  
 00 = Prefix2  
 00 = Prefix3  
 00 = Postfix1  
 00 = Postfix2  
 00 = Postfix3  
 F3 = BCC  
 BB = End of Telegram

#### 3.2 The Reply from the RFID device to the PC (Success)

AA 00 02 00 80 82 BB

##### The Bytes in Detail

AA = Start of Telegram  
 00 = Device Address  
 02 = Bytes of Payload (Status + Error Code)  
 00 = Status, 0x00 = OK  
 80 = Configuration successfully changed  
 82 = BCC  
 BB = End of Telegram

#### 3.3 The Reply from the RFID device to the PC (Error)

AA 00 02 01 89 8A BB

## The Bytes in Detail

AA = Start of Telegram  
 00 = Device Address  
 02 = Bytes of Payload (Status + Error Code)  
 01 = Status, 0x01 = Error  
 89 = Error code, setting not possible  
 8A = BCC  
 BB = End of Telegram

### 3.4 Configuration Bytes for Prefixes/Postfixes

The value of this Byte is simply passed to the HID output. So, you can freely select any keypress as describe in chapter 10 of the document on HID Usage Tables.

The firmware will only check if the value of this Byte is not allowed. In this case this Prefix/Postfix is not active. If the value of this Byte is allowed, it is passed to the USB interface as Usage ID of a keyboard.

**This table shows a selection of typical values of the Prefix/Postfix configuration Bytes:**

Value	Description	Designation
0x00	No Prefix/Postfix	No Prefix/Postfix
0x28	Keyboard [ENTER]	Keyboard [ENTER-LEFT]
0x29	Keyboard [ESCAPE]	Keyboard [ESCAPE]
0x2B	Keyboard [TAB]	Keyboard [TAB]
0x2C	Keyboard [SPACE]	Keyboard [SPACE]
0x58	Keypad [ENTER]	Keyboard [ENTER-RIGHT]
0xA5-0xAF	No Prefix/Postfix	Values not allowed.
0x32	Keyboard #	Will only work on non US keyboards
0xDE	No Prefix/Postfix	Value not allowed.
0xDF	No Prefix/Postfix	Value not allowed.
0xE8 and above	No Prefix/Postfix	Values not allowed.

## 4 Revision History

Date	Version	Description
2023-02-03	0.6	Rework as User Manual