



Bluetooth user manual

(RIF-BT10)

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Regulatory Information

FCC compliance Information

This device complies with part 15 of FCC Rules.

Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and

2. This device must accept any interference received.

Including interference that may cause undesired operation.

Information to User

This equipment has been tested and found to comply with the limits for a Class B 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 can radiate radio Frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that 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 to correct the 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.

FCC WARNING: This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

RF Exposure Information: The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.





1. Hardware & Software

1) Hardware



Cable_USB_BT (Shielded Cable which incorporates ferrite core)

Cable_Serial_BT (Shielded Cable)

2) Software & manual

- (1) USB virtual serial port driver (Win98, 2000, XP): VirtualCOM_R9032148
- (2) System configuration program: BluetoothConfig_V2.x
- (3) Window printer driver: Download from website
 - SRP 350: V3.0.5E above
 - SRP 270: V3.0.3E above
- (4) Application programmer's guide: Bluetooth control message V1.x
- 3) Ordering information
 - (1)USB Master (RIF-BT10U) = RIF-BT10 + Cable_USB_BT
 - (2)Serial Master (RIF-BT10S) = RIF-BT10 + Cable_Serial_BT + (5V Power adapter option)





(3)Slave (RIF-BT10F) = RIF-BT10 + RIF-BT10C

2. Specifications

Category	Specification			
Model name	RIF-BTM10			
Connection System	POS System (Printer : SRP-350, SRP-270)			
Interface Port	USB(PC), RS-232C(PC), UART(Printer)			
Flow control	Hardware(RTS/CTS)			
Transmission speed (bps)	19200,9600			
Power	DC 5V/150mA (USB port or RS-232C Pin 9 or Printer power)			
Bluetooth Specification	V1.0B & V1.1			
Service Distance	Max 100 m (Class 1)			
Network Support	Multi-Connection Support = N:7(max N=infinity)			
(Master: Slave)	Simultaneous printing = 1 : n (max. n=7)			
	SPP(Serial Port Profile) &			
Printing Profile Support	HCRP(Hardcopy Cable Replacement Profile)			
Dimensions(W x L x H)	70 x 45 x 11 mm			
Rx/Tx Buffer	Rx Buffer: 1024 byte Tx Buffer: 512 byte			





3. System structure

Connect Bluetooth master module to the USB port (or Serial) of PC and Bluetooth slave module to the printers.





- 1) A network between PC (Master) and Printers (Slave) is n : n. The number of PC can be infinite on network while printers can be max up to 7.
- 2) Master can designate the printer for use after finding all the printers installed around. (Refer to Application programmer's guide for developing Bluetooth application program)
- 3) Master can save Bluetooth address of the printers up to 7 and then no need to search for printers
- 4) Master can send data to max 7 printers at the same time.
- 5) Bluetooth compatible module like PDA also can use the printer.





4. How to configure

- 1) Virtual serial port driver installation (required only when you use the USB port on the PC)
 - Connect Bluetooth main (master) to USB port of PC (Refer to Attachment 3. Dip switch setting)
 - Found New Hardware Wizard detects new hardware by Plug and Play and select Include this location in the search. Then select the folder which contains VirtualCOM_R9032148.
 - When installation completes, Found New Hardware Wizard will detects new hardware once again. Then repeat the above setting one more time.
 - Refer to Attachment 1. Virtual serial port driver installation.
- 2) Virtual serial port driver setting (required only when you use the USB port on the PC)
 - Check Virtual port and apply the setting as below.
 - Start > Control Panel > System > Hardware > Device Manager
 - Select USB Serial Port under Port (COM x: Port number varies from your PC condition) and change the Properties.
 - Port Setting: 19200, 8, none, 1, hardware
 - Advanced Setting: 4096, 4096, 16, 0, 0,

Check in "Serial Enumerator" and "Serial Printer".

(In case of Win 98, You cannot see "miscellaneous option" Just ignore)

- Make sure not to change COM Port Number (When changes, select the open port)
- Refer to Attachment 2. Virtual serial port setting

3) Bluetooth & Printer dip switch setting

- Set Maser/Slave, Baud rate and handshaking by Dip switch.
- **19200** bps, **DTR/DSR (RTS/CTS)** (Be sure that communication condition must be all the same for PC, Bluetooth master, Bluetooth slave, Printer)
- Refer to Attachment 3. Dip switch setting
- 4) Bluetooth slave setting
 - Connect Bluetooth main (master/slave) to USB (or Serial) port of PC.
 - Execute BluetoothConfig_V2.x.exe from the downloaded files.
 - Select the virtual port
 - a) USB port: Select the virtual port (COM x) of step 2).
 - b) Serial (RS-232C): Select the COM x connected.
 - Configure Adapter setting: slave, 19200, hardware
 - Disconnect the Bluetooth main (master/slave) from the PC, assemble it with the Cover_BT, and





connect it to the printer.

- Refer to Attachment 4. Bluetooth slave Setting
- 5) Bluetooth master setting
 - Connect Bluetooth main (master/slave) to USB (or Serial) port of PC.
 - Execute BluetoothConfig_V2.x.exe from the downloaded files.
 - Select the port
 - a) USB port: Select the virtual port (COM x) of step 2).
 - b) Serial (RS-232C): Select the COM x connected.
 - Configure Adapter setting: master, 19200, hardware
 - Register Printer setting: Search the printers around and save the printer address by button "Search". Make sure the printers are all power on mode.
 - Configure Adapter setting: Check in auto connector to printers.
 - Click "ok".
 - Refer to Attachment 5. Bluetooth master Setting
- 6) Printer driver installation & Test page printing
 - Once the setting's complete, disconnect the Bluetooth master from the PC, reconnect it and initialize the system. Turn the printer off and then on to initialize the Bluetooth slave.
 - Wait for approximately 20 seconds for the Bluetooth master and slave are automatically reconnected.
 - Install the printer driver (Available at website)
 - a) SRP 350: V3.0.5E above
 - b) SRP 270: V3.0.3E above
 - You can download the printer driver from the homepage. Make sure that you delete the older version driver from the PC before you install the new one(Clean register)
 - Open the printer driver and select a port
 - a) USB port: Select the virtual port (COM x) of step 2).
 - b) Serial (RS-232C): Select the COM x connected.
 - Set the port settings as below (19200, 8, none, 1, hardware)
 - Test Page Printing.
 - Refer to Attachment 6. Test page printing
- 7) Other
 - If you are a POS Application Programmer, refer to the manual below for more information.
 - "Bluetooth control message V1.x





Attachment 1. "Virtual serial port driver installation"

- 1. Connect Bluetooth Master to USB port of PC.
- 2. Then **Found New Hardware** will show up and pop up **Found New Hardware Wizard**. Then select Installation from a list specific location (Advanced).

Found New Hardware Wiz	ard					
	Welcome to the Found New Hardware Wizard					
	This wizard helps you install software for:					
	USB Serial Port					
	If your hardware came with an installation CD or floppy disk, insert it now.					
	What do you want the wizard to do?					
	O Install the software automatically (Recommended)					
	 Install from a list or specific location (Advanced) 					
	Click Next to continue.					
	< <u>B</u> ack <u>N</u> ext > Cancel					

3. Select the right location of VirtualCOM_R9032148 by "Browse" and go to "Next".

Found New Hardware Wizard
Please choose your search and installation options.
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
Search removable media (floppy, CD-ROM)
✓ Include this location in the search:
E:\VirtualCOM_V8062115
O Don't search. I will choose the driver to install.
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
< <u>B</u> ack <u>N</u> ext > Cancel

4. Found New Hardware (USB Serial Port) will show up again when installation completes. Then install the same file again as same as above steps.





Attachment 2. Virtual serial port setting

- 1. Open Device Manager as the below path:
 - : Start > Control Panel > System > Hardware > Device Manager

System Properties			? 🛛
System Restore	Automati	c Updates	Remote
General Comp	uter Name	Hardware	Advanced
Add Hardware Wizard	ware Wizard bel	ns uqu install hardı	Mare
		ps you instail hards	Male.
		Add <u>H</u> ardwar	re Wizard
Device Manager			
The Device M	anager lists all t	ne hardware devic	es installed
on your compu	uter. Üse the De nu device	vice Manager to cl	hange the
	ny do noo.	6	
Driver	<u>àigning</u>	<u>D</u> evice Ma	anager
- Hardware Profiles			
Hardware prof	iles provide a wa	ay for you to set up	and store
different hardv	vare configuratio	ns.	
			Du Clau
		Hardware	Profiles
	04		

2. Select "USB Serial Port (COM x)" that is installed newly. Go to "Properties" by right button of mouse.





🖳 Device Manager	
Eile <u>A</u> ction <u>V</u> iew <u>H</u> elp	
IDE ATA/ATAPI controllers Keyboards	^
E Direction and other pointing devices	
E Monitors	
⊞™∰ Necwork adapters ⊟™∰ Other devices	
🖓 Universal Serial Bus (USB) Controller	
🖃 🐙 Ports (COM & LPT)	
Communications Port (COM1)	
Printer Port (LPT1)	
USB Serial Port (COM3)	
E Sector	=
H-W Sound, video and game controllers	
E Grand Bus controllers	
Standard Universal PCI to USB Host Controller	
🖙 🖶 Standard Universal PCI to USB Host Controller	
ייייי יקר טכט געווי חעם	<u> </u>

3. Select the conditions as below at "Port Settings" and click "Advanced"

USB Serial Port (COM3) Properties 🛛 🔋 🔀
General Port Settings Driver
Bits per second: 19200
Data bits: 8
Parity: None
Stop bits: 1
Elow control: Hardware
<u>A</u> dvanced <u>R</u> estore Defaults
OK Cancel

4. Set as below and apply "OK"

(Note: Windows 98 dose not have "Serial Enumerator" or "Serial Printer" under "Miscellaneous Option.")





Advanced Settings for COM3	? 🛛
COM Port Number: COM3 USB Transfer Sizes Select lower settings to correct performance problems at low baud rates. Select higher settings for faster performance. Receive (Bytes): 4096 Transmit (Butes): 4096	OK Cancel Defaults
BM Options Select lower settings to correct response problems.	
Latency Timer (msec):	
Miscellaneous Options	
Minimum Read Timeout (msec): 0 Image: Serial Entimetator Image: Serial Entimetator Minimum Write Timeout (msec): 0 Image: Serial Entimetator Image: Serial Entimetator Minimum Write Timeout (msec): 0 Image: Serial Entimetator Image: Serial Entimetator Image: Serial Entimetator Minimum Write Timeout (msec): 0 Image: Serial Entimetator Image: Serial Entimetator Image: Serial Entimetator Serial Entimetator 0 Image: Serial Entimetator Image: Serial Entimetator Image: Serial Entimetator Minimum Write Timeout (msec): 0 Image: Serial Entimetator Image: Serial Entimetator Image: Serial Entimetator Serial Entimetator 0 Image: Serial Entimetator Image: Serial Entimetator Image: Serial Entimetator Minimum Write Timeout (msec): 0 Image: Serial Entimetator Image: Serial E	

Attachment 3. "Dip switch setting"

1. Bluetooth

Function	<mark>SW1-1</mark>	<mark>SW1-2</mark>	<mark>SW1-3</mark>	<mark>SW1-4</mark>
USB Master	OFF	OFF	OFF	OFF
Serial Master	ON	ON	OFF	OFF
Slaver	OFF	OFF	OFF	OFF
Firmware				
download	OFF	OFF	OFF	UN

2. Printer Baud rate (bps) and Handshaking setting (Default 19200 bps)

Model	Baud rate(bps)			Hand shaking
	bps	SW1-7	SW1-8	
	19200	Off	Off	
SRP-350	9600	On	Off	(S)//1.2 off)
	4800	Off	On	(3001-3011)
	2400	On	On	
	bps	SW2-7	SW2-8	
SDD 270	9600	Off	Off	DTR/DSR
SKF-270	4800	On	Off	(SW2-3 off)
	2400	Off	On	





	19200	On	On	
	bps	SW1-1	SW1-2	
	115200	On	On	
SRP-370	38400	Off	On	(SW(1.2 off)
	19200	On	Off	(3001-3011)
	9600	Off	Off	
SRP-500	bps	SW2-7	SW2-8	
	19200	On	Off	
	9600	Off	Off	DIR/DSR
	4800	Off	On	(302-3011)
	2400	On	On	

Attachment 4. Bluetooth slave setting

- 1. Connect the Bluetooth main (Master/Slave) to the USB (or Serial) port on the PC.
- 2. Execute "BluetoothConfig_V2.x.exe"
- 3. Select the port
 - a) USB port: Select the virtual port (COM x) of step 2).
 - b) Serial (RS-232C): Select the COM x connected.
- 4. Select the same port as you chosen at Virtual COM and click "Configure Adapter".

😽 Bluetooth Printer Adapter Configuration 🛛 🔲 🛽					
Select Quit Quit					
Configure Adapter					
Register Printers					
Test_Receipt					

5. Set as below and apply OK. (slave, 19200, hardware)





Configure Adapter		×
Bluetooth Address:	00:02:78:01:06:50	
Firmware Version:	2003.12.08.00	
Role:	Slave (Adapter for Printer) 💌	
Baudrate:	19200 💌	
Flow Control:	Hardware (RTS/CTS) 🔽	
Master Configuration	Slave Configuration	
Auto Connect To Printers:	Printer Name:	
Wait For All Connected:	Auto Detect	
	Printer Location:	
	Print F/W Info: 🗖	
	OK Cancel]

6. Disconnect the Bluetooth main (Master/Slave) from the PC, assemble it with the Cover_BT, and connect it to the printer.

Attachment 5. Bluetooth master setting

- 1. Connect the Bluetooth main (Master/Slave) to the USB (or Serial) port on the PC.
- 2. Execute "BluetoothConfig_V2.x.exe"
- 3. Select the port
 - a) USB port: Select the virtual port (COM x) of step 2).
 - b) Serial (RS-232C): Select the COM x connected.
- 4. Select the same port as you chosen at Virtual COM and click "Configure Adapter".

bluetooth Printer Adapter Configuration				
Select Quit Quit				
Configure Adapter				
Register Printers				
Test_Receipt				

5. Set as below and apply OK. (master, 19200, hardware)





Configure Adapter		×	
	00-00-70-04-04-50		
Bluetooth Haaress:	00:02:78:01:00:56		
Firmware Version:	2003.12.08.00		
Role:	Master (Adapter for Terminal) 🔻		
Baudrate:	19288		
Flow Control:	Hardware (RTS/CTS) 🔻		
Master Configuration-	Slave Configuration	7	
Auto Connect To Printers:	Printer Name:		
Wait For All Connected:	Auto Detect		
	Printer Location:		
	Print F/W Info: 🗆		
	OK Cancel		

6. Select "Register Printers"

7. Select "Search" (The printer should be Power ON)

	Printer 2 ()
Text @	Printer 3 ()
	Printer 4 ()
Hex C	Printer 5 ()
fest Receive Buffer	Printer 6 ()
Clear	Printer 7 ()





8. All Bluetooth Interface found will appear with address automatically. Just apply OK for saving in Bluetooth master.

Printer List To Reg	jister	×
-Printer ID-	Bluetooth Address	Device Name — Device Location —
× 1	89 : 02 : 78 : 01 : 06 : 9C	S1
X 2	00 : 02 : 78 : 01 : 06 : AC	S4
× 3	80 : 62 : 78 : 61 : 66 : 61	S6
x 4	00 : 02 : 78 : 01 : 06 : D1	S2
× 5	00 : 02 : 78 : 01 : 06 : C1	\$7
X 6	00 : 02 : 78 : 01 : 06 : 45	53
× 7	00 : 02 : 78 : 01 : 06 : C0	\$5
🔽 Flash Updat	te	OK Reset Cancel

- 9. Click "Close" .
- 10. Select "Configure Adapter" and check "auto connect to printers"





Configure Adapter		
Bluetooth Address: Firmware Version:	00:02 2003.	2:78:01:06:5C 12.08.00
Role:	Mast	er (Adapter for Terminal) 💌
Baudrate:	1920	0 -
Flow Control:	Hard	ware (RTS/CTS) 💌
Master Configuration-		Slave Configuration
Auto Connect To Printers:	•	Printer Name:
Wait For All Connected:		🗌 Auto Detect
		Printer Location:
		Print F/W Info: □
		OK Cancel

11. Click "OK" and then "Quit" to exit.

12. Disconnect the Bluetooth main (Master/Slave) from the PC.

The below terms explains each item reading at Configure adapter

1) Bluetooth address





- Individual address of each Bluetooth module.
- 2) Firmware version
 - Bluetooth firmware version.
- 3) Role
 - Selection of Master/Slave.
- 4) Baud rate
 - Transmission speed setting.
- 5) Flow control
 - Handshaking condition setting.
- 6) Auto connect to printers
 - Auto connection to the designated Bluetooth slave.
 - Applicable when the designated printer (Bluetooth slave) used.
 - When the multiple printers installed, simultaneous printing becomes available.
 - It ignores the printer in Power off mode.
 - The data transmission stands by when any of the registered printers goes on Busy mode such as no paper, cover open, buffer full etc until it recovers.
 - With no use of this option, Application program should send data only after it connected to Bluetooth slave by Control message. This can be used when wanted to use the designated one out of several printers
- 7) Wait for all connected
 - It is available only when Auto connect to printers selected.
 - Under the condition of several Bluetooth slave saved in Bluetooth master, it transmits the data thoroughly until the all the registered printers complete the reception.
- 8) Printer name
 - You can set the printer name less than 15 letters.
- 9) Auto detect
 - It is to read the individual printer name such as SRP-350 etc.
 - It is available only when the printer has the individual name.
- 10) Printer location
 - It is to set the location identity of the printer such as Kitchen PRT 1 or Receipt PRT 1 less than 12 letters.
- 11) Print F/W info
 - Printer prints the firmware data of Bluetooth slave module at printer power on.

Attachment 6. Printer driver installation & Test page printing





- 1. Once the setting's complete, disconnect the Bluetooth master from the PC, reconnect it and initialize the system. Turn the printer off and then on to initialize the Bluetooth slave.
- 2. Wait for approximately 20 seconds for the Bluetooth master and slave are automatically reconnected.
- 3. Install the printer driver (Available at website)
 - a) SRP 350: V3.0.5E above
 - b) SRP 270: V3.0.3E above
- 4. Open the printer driver and select a port
 - a) USB port: Select the virtual port (COM x) of step 2).
 - b) Serial (RS-232C): Select the COM x connected.
- 5. Select the port and Click "Apply".

爹 SAMSUNG SR	P-350 Properties		? ×
Security Device Settings Additional Commands General Sharing Ports Advanced Image: Samsung S			
Port [Description	Printer	
□ LPT2: F □ LPT3: F □ COM2: 9 □ COM1: 9 □ COM4: 9 ■ COM4: 9	Printer Port Printer Port Serial Port Serial Port Serial Port Serial Port	SAMSUNG SRF	P-270
FILE: F	Print to File		_
Add Port Delete Port Configure Port Image: Enable bidirectional support Enable printer pooling			
	0	Cano	el <u>A</u> pply

6. Set the port settings as below (19200, 8, none, 1, hardware)





COM3 Properties	?	x
Port Settings		
<u>B</u> its per second:	19200	
<u>D</u> ata bits:	8	
<u>P</u> arity:	None	
<u>S</u> top bits:	1	
<u>F</u> low control:	Hardware	
	<u>R</u> estore Defaults	
	OK Cancel Apply	

- 7. Click "OK" and then "Close".
- 8. Open the printer drive again and click "Test Page Print".
- 9. The windows test page prints.