



BancTec Limited
RFeasyServ
BHT300 Client Users Manual
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OVERVIEW

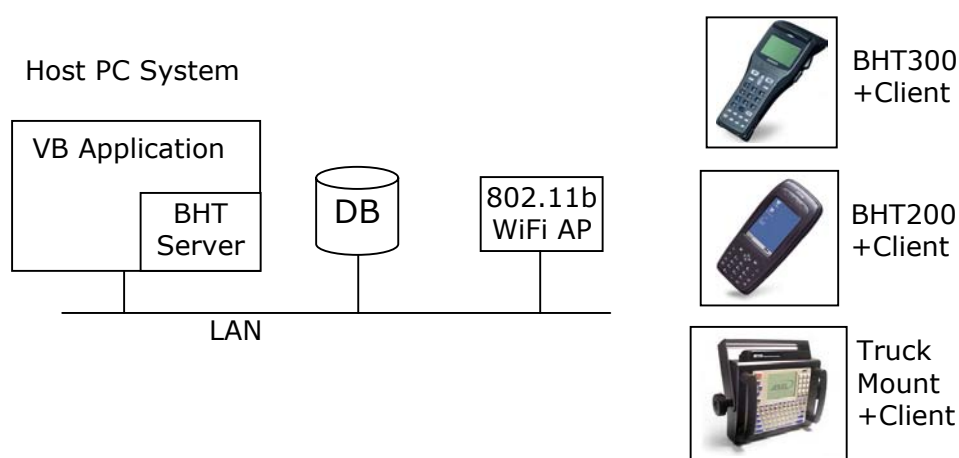
The RFeasyServ control (**RFeasyServ.ocx**) from BancTec is a 32-bit Windows ActiveX component that manages the user screens and data flow between a mobile terminal and a host application via a standard 802.11b WiFi network.

The control has been designed to assist developers in creating powerful RF client-server applications quickly and easily without having to get bogged down in the RF communications. The control provides a simple set of methods and events for the developer to control everything on the HHT and get notification of an input. These include screen outputs, barcode & keyed input fields, RS232 I/O to peripherals, LED and buzzer control, form/frame management and flow control etc.

The control on the Server coupled with the Client on the mobile terminal takes care of all the low-level communications, packet compilation, flow control etc allowing the developer to concentrate on the application functionality.

The Client will be available on a range of products from different manufacturers all connecting to the same RFeasyServ control and thus same Host Application. These will include the **DENSO** BHT300, BHT7500, BHT200 and BHT400 units plus a number of other CE.Net & XP devices including truck mount units, PDAs etc.

As all Client to Server links are the same it is possible to mix the mobile clients to suit your needs. e.g. handheld terminals for picking and goods in, Truck Mount units for bulk transfers and despatch etc..



The RFeasyServ control can be used in any application that supports ActiveX controls, Visual Studio, Visual Basic, Visual C++, Excel, Access, FoxPro, Delphi.

This Manual describes the set-up of the Client on the BHT 300 handheld terminal. For other references please refer to the RFeasyServ programmers manual and the sample source code.

Introduction

The correct configuration of the RF and the Client are critical, any errors will make the system not work at all. However once these are set you should never have to change/check them unless there are changes to your network.

Your system administrator should be able to provide you with any details required below. Please note the BancTec RFeasyServ client is licensed and will require an authorisation code from BancTec. When the application is run for the first time it will prompt you to enter an authorisation code

```
SERIAL NUMBER
403123
PROTECTION CODE
j123-876-123
ENTER CODE or C-DEMO
```

Please contact BancTec call centre +44 (0) 1753 778899 and give the serial number and protect code when asked. The assistant will then provide you the authorisation code to unlock the application.

Demo/Trial

A limited trial period (about 1 hour) is available by pressing the C at the authorisation screen, during this time the application has full functionality. Once the period has expired the authorisation screen will be shown again without the demo mode option.

Client Settings

RF Settings

Before connection the handheld terminal (BHT) to the host you must first ensure that it can access the RF Network. These settings cannot be accessed from within the client application and must be set within the BHT300 System Menu.

Worked Example

The RF Network uses an ESID of "MYRFNET1" with a mandatory WEP Key, using Key 1 set as "MYSECRETWEPKY" (in ASCII).

Note some systems use 26-digit Hex notation for the WEP key, e.g. MYSECRETWEPKY (in ASCII) is 4D595345435245545745504B59 (in Hex)

To enter the system menu, switch the unit off then press and hold the "SF" and the "1" buttons down then press "PW". Now within the RF menu (option 8:RF) set the following parameters. Note you may need to get these details from the Network Administrators.

```
SYSTEM MENU
1:EXECUTE PROGRAM
2:DOWNLOAD
3:UPLOAD
4:SET SYSTEM
5:TEST 6:VERSION
7:FTP 8:RF
```

```
RF MENU
1:PARAMETER
2:SITE SURVEY
3:VERSION
```

```
SET RF PARAMETER
1:ID
2:RF OPTION
3:WEP KEY
4:INITIALIZE
```

Parameter 1:ID

Set the SSID to the Radio network ID, also known as ESID.

```
SET ID
1:SSID
[MYRFNET1 ]
[ ]
Set up? 1:Yes 2:No
```

Set the SSID to "MYRFNET1" using the SF key to turn ALPHA entry on/off, once complete press ENT then press "C" and confirm to accept the setting 1:Yes then ENT.

Parameter 2:RF Option

Power Save ON is recommended.

WEP, is recommended ON and if used the WEP key must be set (below)

Open authentication is standard

```
SET RF OPTION
1:POWER SAVE
ON OFF
2:WEP
ON OFF
3:AUTHENTICATE
OPEN SHAREDKEY
Set up? 1:Yes 2:No
```

Using the cursor keys set Power save **ON**, WEP **ON** and **Open** Authentication then press "C" and confirm to accept the setting 1:Yes then ENT.

Parameter 3:WEP Key

Set the WEP KEY (1,2,3 or 4) as required by your Radio Network. Enter the Key size 40 or 128 and the Key itself.

```
SET WEP KEY
1:WEP KEY1
2:WEP KEY2
3:WEP KEY3
4:WEP KEY4
5:TRANSMIT KEY
```

```
SET WEP KEY1
1:KEY SIZE
  40 128
2:KEY
  [4D59534543524554]
  [5745504B59 ]
Set up? 1:Yes 2:No
```

Enter the WEP KEY 1 menu and set the Size to **128** then enter the Key as Hex 4D595345435245545745504B59 using the SF key to turn ALPHA entry on/off. Once complete press ENT then press "C" and confirm to accept the setting 1:Yes then ENT. If any of the settings are incorrect the system will report an error when you confirm the setting.

Transmit Key, set the KEY number to transmit as required by your Radio Network.

```
SET TRANSMIT KEY
1:TRANSMIT KEY
  KEY1 KEY2
  KEY3 KEY4
Set up? 1:Yes 2:No
```

Enter the TRANSMIT KEY menu then using the cursor keys set **KEY1** then press "C" and confirm to accept the setting 1:Yes then ENT.

Site Survey

Once the above have been set correctly you should be able to see the RF Network using the Site Survey option. You can also check the RF using the RF Link Status option in the Client set-up screen (see below).

```
LINK STATUS
ASSOCIATED AP
  02545D68E64C4AE2
SIGNAL STRENGTH
  [REDACTED] 100
LINK QUALITY
  EXCELLENT
CHANNEL
  11 CH
```

MAC RESTRICT If you are using MAC Restriction on your RF Network (recommended) then you will need to add the MAC address of the BHT to your List/RADIUS Server etc. You can find the MAC Address of the unit using Option 3 Version of the RF Menu.

```
SYSTEM MENU
1:EXECUTE PROGRAM
2:DOWNLOAD
3:UPLOAD
4:SET SYSTEM
5:TEST 6:VERSION
7:FTP 8:RF
```

```
RF MENU
1:PARAMETER
2:SITE SURVEY
3:VERSION
```

```
SUB SYSTEM VERSION
V 111.182
MACID
[000B6B187D73]
```

For further information please refer to the BHT300 Users Manual.

Unit Settings

Once the BHT has the correct RF Settings all the other settings can be made within the client program. To access these power the unit on and at the BHT-300 Client screen press SF and dot. This will display the Program Set-up Menu

```
PROGRAM SETUP
1. UNIT SETTINGS
2. HOST SETTINGS
3. SCREEN SETTINGS
4. OTHER SETTINGS
5. RF LINK STATUS
6. LOG FILE

BHT-CLIENT Ver S1.03
```

Note, the system uses TCP/IP to transfer data between the Host computer and the handheld terminal (HHT) and as such needs fixed IP Addresses, which you may need to get the details from the Network Administrator.

The Client has the ability to store the details of up to three host systems, so that if a particular Host has a problem then the BHT will automatically switch to the next one.

Unit Settings:

Enter the IP Address, Subnet Mask and Gateway for the BHT. Enter the option required then key the new setting. The C key returns you to the main menu.

```
UNIT SETTINGS
1. MY IP
  198.162.13.40
2. S/NET
  255.225.255.0
2. G/WAY
  198.162.13.1
```

Host Settings:

Enter the IP Address and Port details for the 3 Host Servers. By Default the unit will attempt to connect to the first one but if there is a problem it will automatically switch to the next one.

Enter the option required then key the new setting, e.g. option 3 for Server 2 IP. The C key returns you to the main menu.

```
SERVER 1 SETTINGS
1: 198.162.13.50
2: PORT 81
SERVER 2
3: 198.162.13.51
4: PORT 81
SERVER 3
5: 198.162.13.52
6: PORT 81
```

Screen Settings:

Backlight. Select if you want the backlight ON or OFF and how many seconds it will stay on after each action (key press, scan etc)

Prompt. Select the type of prompt required for the entry fields either underscore, dashes, dots and spaces.

Enter the option required then key the new setting, the C key returns you to the main menu.

Key Beep. Select if you want a BEEP when a key is pressed during keyed entry.

```
BACK LIGHT
  1:ON  2:OFF
ON (0-255) 3:5

PROMPT TYPE
  4:_____ 5:-----
  6:..... 7:
KEP BEEP
  8:ON  :OFF
```

Other Settings:

Resume. OFF is the default and recommended so that the user is always starting from a known position.

RF Timeout. Number of seconds the BHT waits for a response before timing out.

RF Retries. Number of timeouts before the BHT fails the transfer.

Enter the option required then key the new setting, the C key returns you to the main menu.

```
RESUME
  1:ON  2:OFF

RF TIMEOUT 3: 3
RF RETRIES 4: 2
POWER OFF 5: 3 MIN
```

RF Link Status:

This screen displays the status of the RF connection to the Access Point.

ASSOC TO: Shows what it is has connected to. Displays the access point address, the SPEED and CHannel number.

SIGNAL STRENGTH, RXD BEACONS & LINK QUALITY shows the quality of the link.

```
RF LINK STATUS
ASSOC TO 0007404D654
SPEED 11 Mbps CH 11
SIGNAL STRENGTH 100%
RXD BEACONS 100%
LINK QUALITY (0-4) 4

PRESS ANY KEY TO EXIT
```

LOG FILE:

These options are used to record the RF and transfer status and should ONLY be in the event of problems and under the instruction of BancTec or an Authorised agent.