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BHT Initialisation & Programming

This manual provides a step-by-step guide to upgrade existing units.

IMPORTANT
This manual covers Denso OS device BHT-900. The BHT-900 application has a **.PD4** file extension, which uses the YMODEM protocol to load application.

It is important that once the new application has been loaded that the protocol is switched back to BHT-Protocol in order for the day-to-day standard data transfer to work.

To upgrade the software there are 3 areas to consider and all must be configured the same in order for the upgrade to work.
a) PC/Host software. This is used to transmit the application to the BHT.
b) Comms Hardware. This is either a cradle or cable connected via USB or Serial (RS232)
c) BHT. The device itself to receive the application.

Quick Guide Check List
Ensure the following have been set as per the instructions below.

1) PC Com port identified

2) If using a cradle, comms speed identified from DIP switches

3) New program saved to PC (in an appropriate folder)

4) Program Loader configured correctly
   a. Path to the new program
   b. Port number
   c. Speed to suit cradle (if used)

5) BHT Configured
   a. For Cradle - Optical set Transfer Speed to match Winartu3/Cradle speed
   b. For Cable – Connector set Transfer Speed to match Winartu3 speed
   c. Port – Set to Optical for cradle OR Connector for Cable
   d. Protocol – BHT8000 BHT Protocol, BHT300 YMODEM Protocol

6) Load Program, once loaded set as Default (Execute Program)

7) Activate License. Contact 01753 778899 to get license code

BHT System Menu Structure
The following menu structure shows the key menu options in the BHT SYSTEM MENU

```
SYSTEM MENU
    2: DOWNLOAD
            1: FILE   - Load Program from PC

    4: SET SYSTEM   (Page 1/2)
            1:EXECUTE PROGRAM – Set the default Boot program
            3:DATE/TIME - Set system date/time
            5:COMMUNICATION
                    1:OPTICAL – Settings for cradle connection
                    2:CONNECTOR – Settings for IFC cable connection
                    3:COM PORT – Set the default port (Optical to Connector)
                    4:PROTCOL TYPE – Set the Protocol
    4: SET SYSTEM   (Page 2/2)
            1:EXEC PROG OPT
                    1:RESUME – Set Resume function on/off

    8: DEVICE
            1:BLUETOOTH
            2:USB
                    1:SET CONNECT MODE
                            MTP or COM      -       MUST BE SET TO COM
```

Section 1. Identify the Comms Hardware

Before loading the BHT with new software or to resolve comms problems first identify the hardware used.

CRADLE or CABLE
Is the BHT connected to the PC/Host using a cradle or direct connect USB cable? If using a cradle then you will need to make sure the **Optical** Settings in the BHT are correct and the baud rate (speed) is set see below. For Cable connection the **Connector** Settings are used.
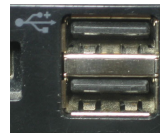
COMM PORT
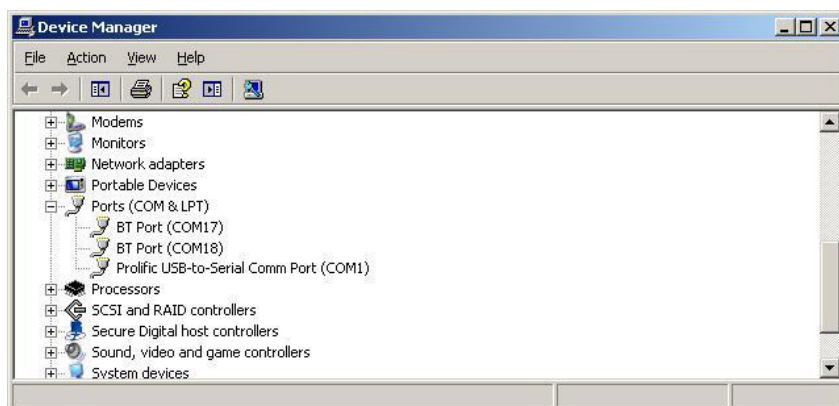The cradle cable will be connected to the PC/Host using an RS232 or USB connection.

RS232 connection, check what port the cable is connected to on the back on the PC case, or if there is only one then it will be COM1.

RS232 to USB Connection. If using a third party RS232 to USB adaptor then check the virtual com port number in the system properties. To find this from the **Control Panel**, select **System** then select the **Hardware** tab then **Device Manager**. (For Windows 7 Select **Device Manager** from the **Control Panel**)
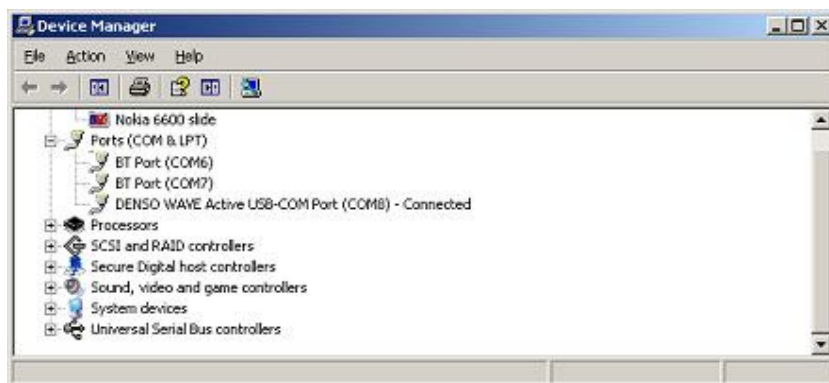
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In the **Ports (COM & LPT)** section the port number will be listed (Com 1 in this example).
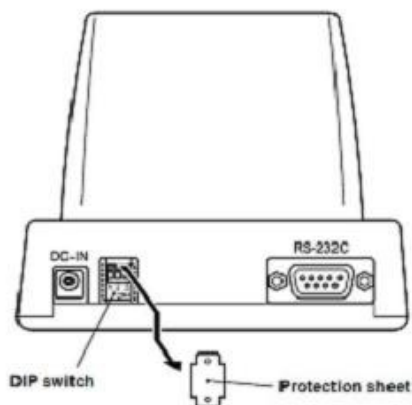

USB Active Port Connection. If using a USB cradle OR Direct USB Cable then check the virtual com port number in the system properties. To find this from the **Control Panel**, select **System** then select the **Hardware** tab then **Device Manager**. (For Windows 7 Select **Device Manager** from the **Control Panel**)

In the **Ports (COM & LPT)** section the port number will be listed (Com 8 in this example).

RS232 CRADLE SPEED
If using a cradle then identify the comms speed, or for a new install check that the comms speed is set to the application requirements (in most instances this should be 115,200)
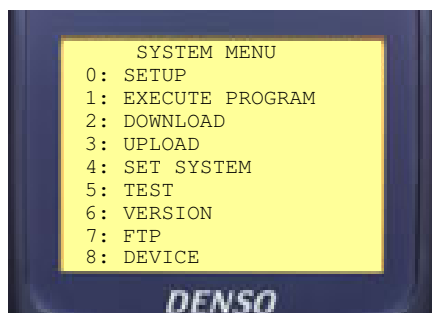

Transmission Speed	Lever NO. of DIP Switch		
	1	2	3
9600bps	ON	OFF	OFF
19.2Kbps	ON	OFF	ON
38.4Kbps	OFF	ON	ON
57.6Kbps	ON	ON	OFF
115.2Kbps	ON	ON	ON

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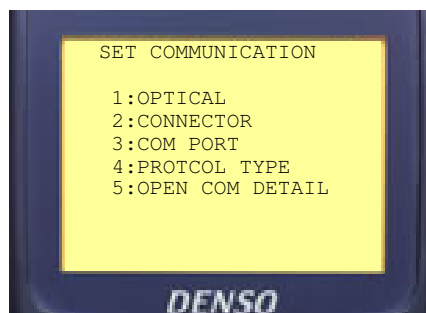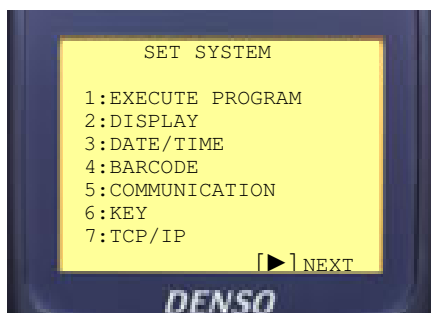## Section 2. BHT Program Loading

PREPARE THE UNIT FOR PROGRAMING
1) Press and hold down the `SF` and `1` keys + `PW` to enter the SYSTEM MENU.
    Note, this screen may be slightly different depending on the model.

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

        DENSO
```
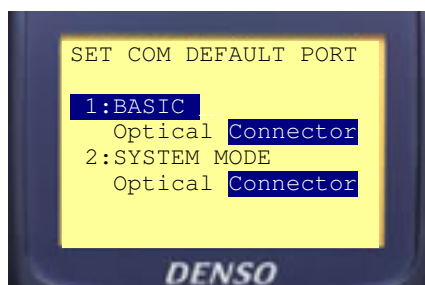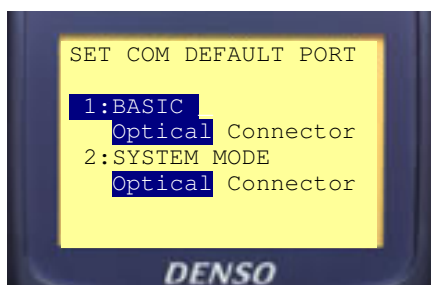
COMMUNICATIONS
2) From the system menu press `4` `ENT` for the SET SYSTEM menu then `5` `ENT` to display the COMMUNICATION MENU.

```
      SET SYSTEM

1:EXECUTE PROGRAM
2:DISPLAY
3:DATE/TIME
4:BARCODE
5:COMMUNICATION
6:KEY
7:TCP/IP
            [▶]NEXT
        DENSO
```

```
    SET COMMUNICATION

    1:OPTICAL
    2:CONNECTOR
    3:COM PORT
    4:PROTCOL TYPE
    5:OPEN COM DETAIL



        DENSO
```

CONNECTION
Press `3` `ENT` for the SET COM menu. Now check that the default port is as required; for cradle set to **Optical** and for IFC Cable set to **Connector**.

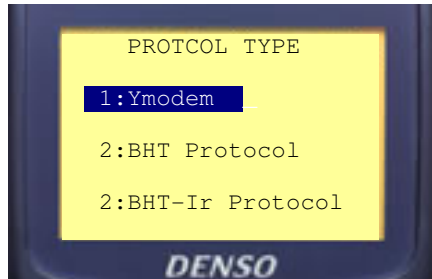To change these use the cursor keys (typically `F5` to `F8`) and set both options to match the comms hardware used.

```
SET COM DEFAULT PORT

1:BASIC
    Optical Connector
2:SYSTEM MODE
    Optical Connector

        DENSO
```

```
SET COM DEFAULT PORT

1:BASIC
    Optical Connector
2:SYSTEM MODE
    Optical Connector

        DENSO
```

Then press `ENT` to return to the COMMUNICATION MENU.

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PROTOCOL
From the COMMUNICATION MENU press **4** **ENT** to display the PROTCOL TYPE menu. Check that this is set to **Ymodem**. If this requires changes..

Press **1** **ENT** to set **Ymodem**, then press **C** **C** **C** to return to the SYSTEM MENU

```
      PROTCOL TYPE

  1:Ymodem

  2:BHT Protocol

  2:BHT-Ir Protocol

        DENSO
```
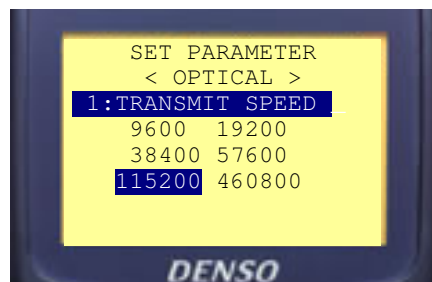
Important Once the new program has been loaded, the protocol must be set back to **BHT PROTOCOL** in order for the day to day data transfers to work correctly.

SPEED - Cradle Only
From the Communication Menu press **1** **ENT** for **Optical** (Cradle), now press **1** **ENT** for the **Parameters** and check the speed is correct.

Using the cursor keys (typically **F5** to **F8**) set the **Transmit Speed** to the required options. Then press **C** **C** to return to the communication menu.

```
      SET PARAMETER
       < OPTICAL >
  1:TRANSMIT SPEED
    9600  19200
    38400 57600
    115200 460800

        DENSO
```

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Section 3. Setup the PC to send the program

Save new Application
Before configuring the application to send the program you must first save the new BHT program file (MyProg.PD4) to a folder on the PC. e.g. "C:\BHTPROG\"

Note, the communications utilities do not accept folder names that are longer than 8 chars or have spaces in them. E.g. "My Desktop" or "NewBHTprogramFile" are not acceptable.

Program Loader Install
If the Program Loader has not been installed before then extract the files from the installation package run the setup.exe program, then follow the on screen prompts.

Get Program Loader from..
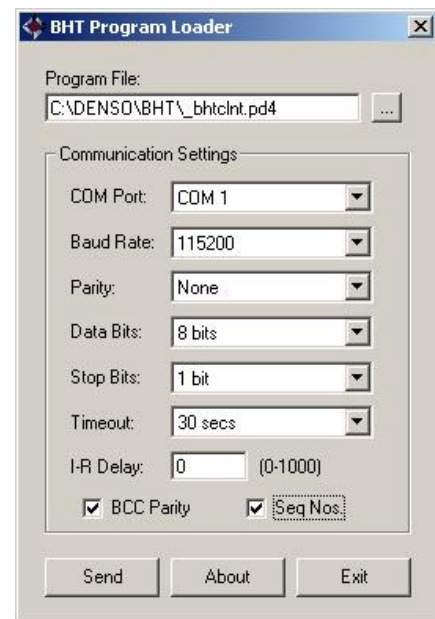http://www.autoidfirst.co.uk/downloads/programloader.zip

Once installed, run the Program Loader.

Select the options required. The parity, Data Bits, Stop Bits, Timeout, BCC and Seq Nos should all be left as defaults unless specifically instructed otherwise.
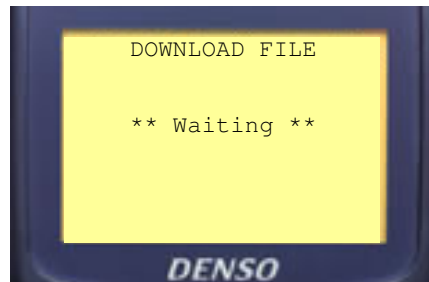
Press the Program File button and select the program required.

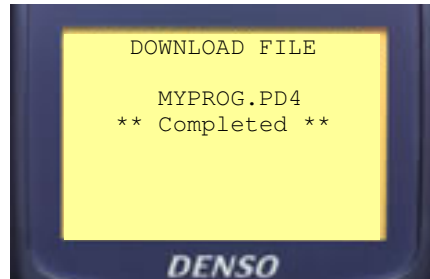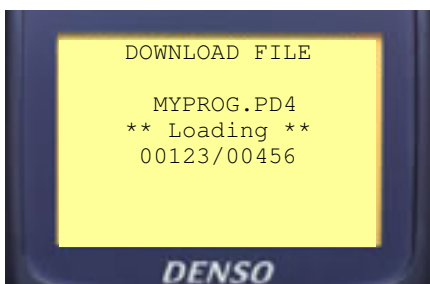Once the BHT is ready to receive the program press the send button.

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Section 4. Loading the program

1) Once the PC is ready to send the program enter the system menu (press `SF` and `1` keys + `PW`) then press `2` `ENT` for the Download Menu then `1` `ENT`.

```
        DOWNLOAD


1:FILE

2:HT< - >HT COPY



        DENSO
```

```
        DOWNLOAD FILE


     ** Waiting **




        DENSO
```
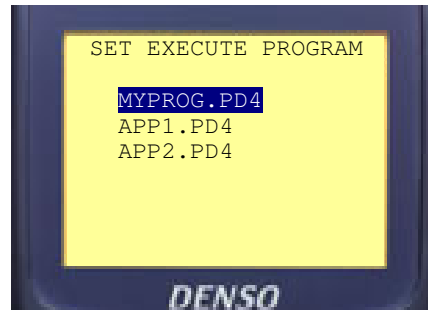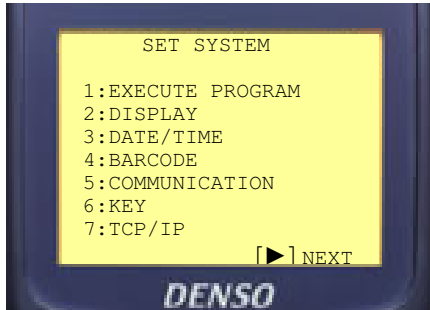
2) Transfer the new program (PD3 or PD4) file from the PC by running the Winartu3 shortcut (or selecting send on the Program Loader). The display will show the transfer progress and BEEP twice when completed. Now press `C` `C` to return to the SYSTEM MENU.

```
       DOWNLOAD FILE

      MYPROG.PD4
     ** Loading **
      00123/00456



       DENSO
```

```
       DOWNLOAD FILE

      MYPROG.PD4
    ** Completed **




       DENSO
```

3) Once the program has been transferred you will need to activate it. Please refer to section 5 (below)
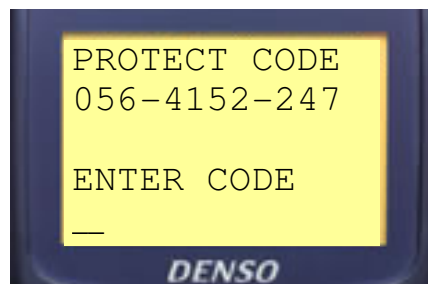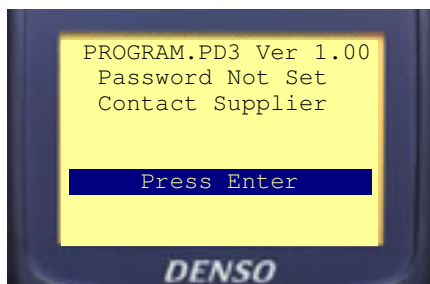
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Section 5. Activate the program

1) From the system menu press **4** **ENT** for the SET SYSTEM menu then **1** **ENT** to display the SET EXECUTE PROGRAM menu.

```
        SET SYSTEM

    1:EXECUTE PROGRAM
    2:DISPLAY
    3:DATE/TIME
    4:BARCODE
    5:COMMUNICATION
    6:KEY
    7:TCP/IP
                [▶]NEXT

        DENSO
```

```
     SET EXECUTE PROGRAM

        MYPROG.PD4
        APP1.PD4
        APP2.PD4




        DENSO
```

Ensure the loaded program is highlighted then press **ENT** now switch the unit off press **PW**.

Password

2) When the program is run for the first time it will prompt for a password.

```
    PROGRAM.PD3 Ver 1.00
     Password Not Set
     Contact Supplier


        Press Enter

        DENSO
```

```
    PROTECT CODE
    056-4152-247

    ENTER CODE
    _

        DENSO
```

Contact the BancTec ServiceFirst call centre on 01753 778899. Enter the passcode provided to activate the program
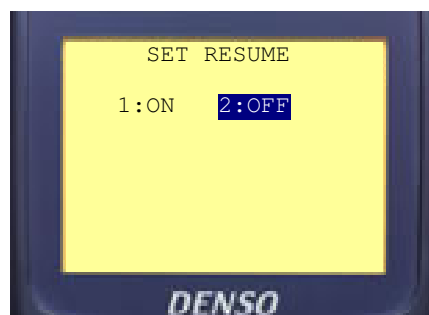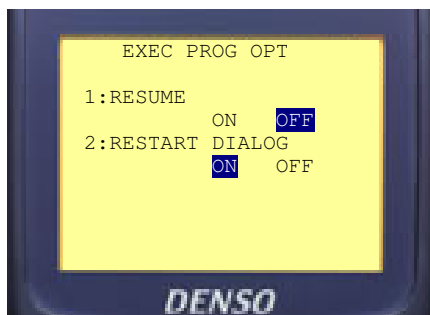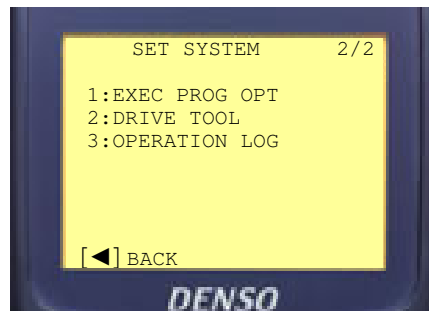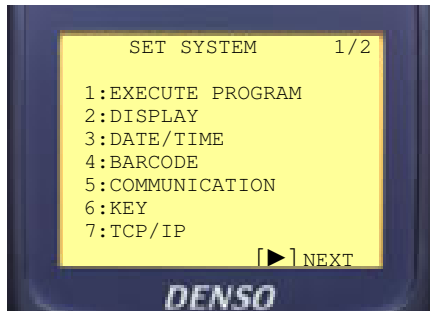
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Section 6. Other Settings

Depending on the application it may be important that the Resume function and Date/Time is set correctly.

RESUME

From the system menu press **4** **ENT** for the SET SYSTEM then **F8** for page 2 then **1** **ENT** to display the **EXEC PROG OPT** menu.

```
     SET SYSTEM      1/2

1:EXECUTE PROGRAM
2:DISPLAY
3:DATE/TIME
4:BARCODE
5:COMMUNICATION
6:KEY
7:TCP/IP
              [▶]NEXT

      DENSO
```

```
     SET SYSTEM      2/2

1:EXEC PROG OPT
2:DRIVE TOOL
3:OPERATION LOG




[◀] BACK

      DENSO
```

```
     EXEC PROG OPT

1:RESUME
          ON    OFF
2:RESTART DIALOG
          ON    OFF




      DENSO
```

```
     SET RESUME

1:ON    2:OFF





      DENSO
```

Now press **2** **ENT** to set resume off, then press **C** to return to the SYSTEM MENU

DATE/TIME

From the system menu press **4** **ENT** for the SET SYSTEM menu then **3** **ENT** to display the SET DATE/TIME menu. Enter this as YY/MM/DD HH:SS using the keypad then press ENT. Note to delete incorrect entries use BS key.

```
     SET DATE/TIME

07/02/25  17:32

_ /  /       :



      DENSO
```