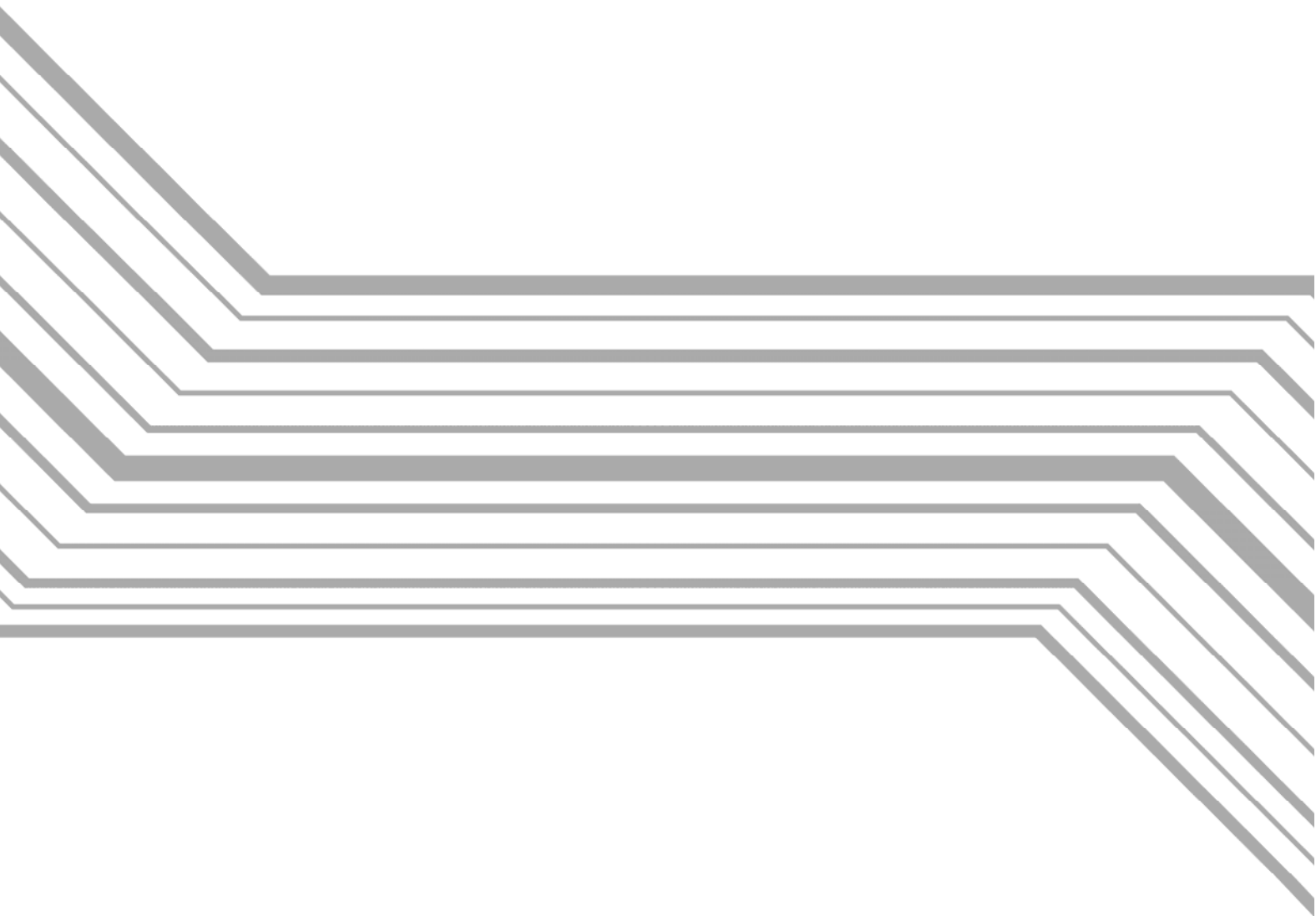


***DENSO***



BHT Software  
**Easy Pack Ad for BHT-900**  

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**User's Manual**

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## 1. Introduction

This manual is the operating manual of “Easy Pack Ad for BHT-900”, which is simplified operation software for the BHT-900 series.

### 1.1. Features

The “Easy Pack Ad for BHT-900” has the following features:

- Upon shipment, the BHT-900 is ready for the following operations by default. After unpacking, the BHT-900 allows starting operations anytime soon.

"Collect"	:	Enter multiple part numbers (Part No.) and the corresponding quantities (Qty.), and then save a record of the data in the "JISSEKI.CSV" file.
"1 to 1 Verify"	:	Two sets of data are read in order, and then compared. If the two sets of data do not match, an error is reported. Input data and comparison results are not saved.
"1 to n Verify"	:	A set of data is read and repeatedly compared to a master data file. If the data does not match with the master data, an error is reported. Input data and comparison results are not saved.
- Connects the BHT-900 and PC (personal computer) directly with each other with a USB cable. By dragging and dropping on the Windows Explorer, a track record file is stored in a desired folder.
- Connects the BHT and PC (personal computer) via the communication unit (CU-901 and CU-921). By dragging and dropping on the Windows Explorer through the Easy Pack Ad special tool, a track record file is stored in a desired folder.
- On a PC, the default operations above are edited with the special tool for the “Easy Pack Ad for BHT-900”. By sending an edited operation file to the BHT, operation using the prepared data is made possible. In addition, the setting tool can prepare new operations on the basis of “Collect”, “1 to 1 Verify”, and “1 to n Verify”.

## **2. Inquiry**

### **2.1. Obtaining latest information**

For the latest information about the “Easy Pack Ad for BHT-900”, refer to the following URL:

<http://www.denso-wave.com/>

If you register at QBdirect, more detailed questions such as usage are accepted. Please feel free to use the service.

<http://www.qbdirect.net/>

### 3. Product specifications

#### 3.1. PC environment

Have a PC that satisfies the following requirements ready to use the “Easy Pack Ad for BHT-900”:

OS	Windows XP (32-bit version) *1, Windows Vista (32-bit version), Windows7 (32-bit/64-bit version)
.NET	.NET Framework 2.0 SP2 or later

\*Refer to DENSO WAVE’s web site for latest support of OS.

\*1: Windows Media Player 11 or later is required for file transfer with BHT by connecting BHT and PC directly with a USB cable.

The following hardware items are required to exchange files between BHT and PC.

PC hardware	USB port (*2) or RS-232C COM port (*3)
Cable	USB cable (USB(A) male – USB (mini-B) male (*2) or RS-232C cable (9-pin crossed-cable) (*3)
Communication unit	CU-901(RS-232C) CU-921(USB)

\*2: This is required to connect BHT and PC directly with a USB cable, or to connect using the communication unit (CU-921).

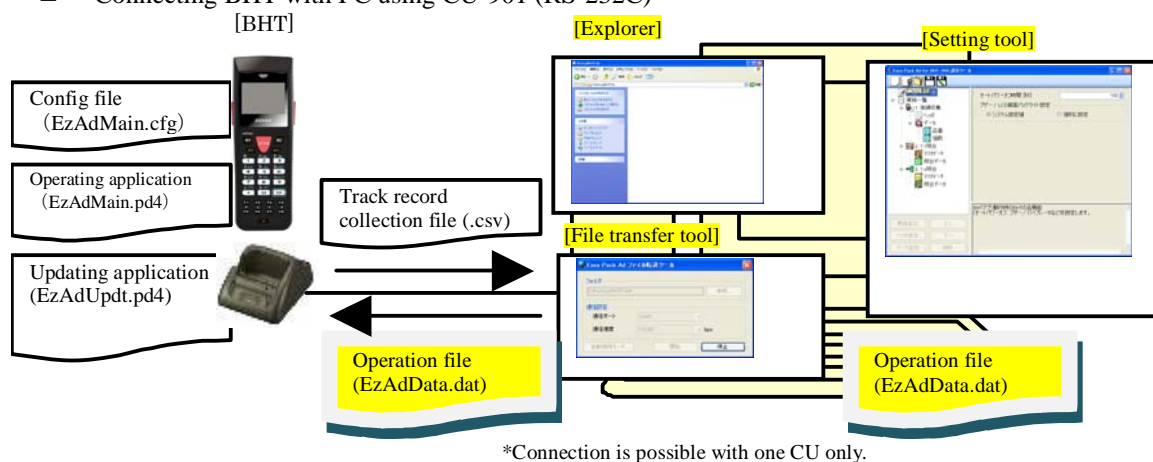
\*3: This is required to use the communication unit (CU-901)

#### 3.2. Product and operating configuration

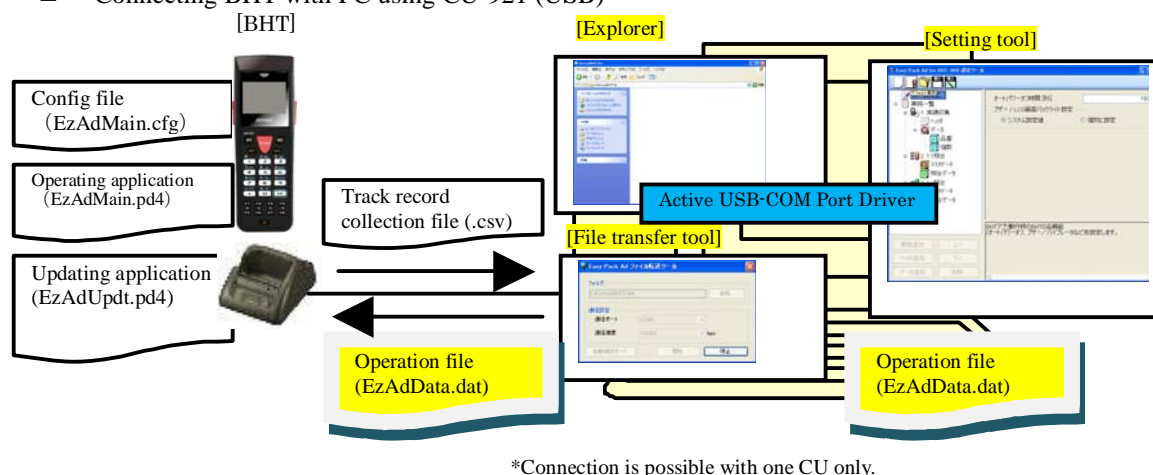
The “Easy Pack Ad for BHT-900” is composed of the following products.

File name	Location of use	Outline	Description
EzAdMain.pd4	BHT	Operating application	The BHT application reads in default operating information and user-specified operation setting file, and performs operations. <b>(Pre-installed upon shipment of the BHT-900.)</b>
EzAdUpdt.pd4	BHT	Updating application	The BHT application updates operating application, config file and operation file. <b>(Pre-installed upon shipment of the BHT-900.)</b>
EzAdMain.cfg	BHT	Config file	The file contains registered information such as key guidance used for operating application. <b>(Pre-installed upon shipment of the BHT-900.)</b>
EzAdData.dat	PC BHT	Operation file	File created and saved by user with the setting tool, containing information about operations. The file is transmitted to the BHT and used.
EzAdSetting.exe	PC	Easy Pack Ad for BHT-900 Setting Tool	Tool for editing default operation installed on the BHT upon shipment, or for creating new operations.
EzAdTrans.exe	PC	Easy Pack Ad File Transfer Tool	Tool for transmitting track record file collected on the BHT to the PC, and for transmitting the operation file to the BHT.

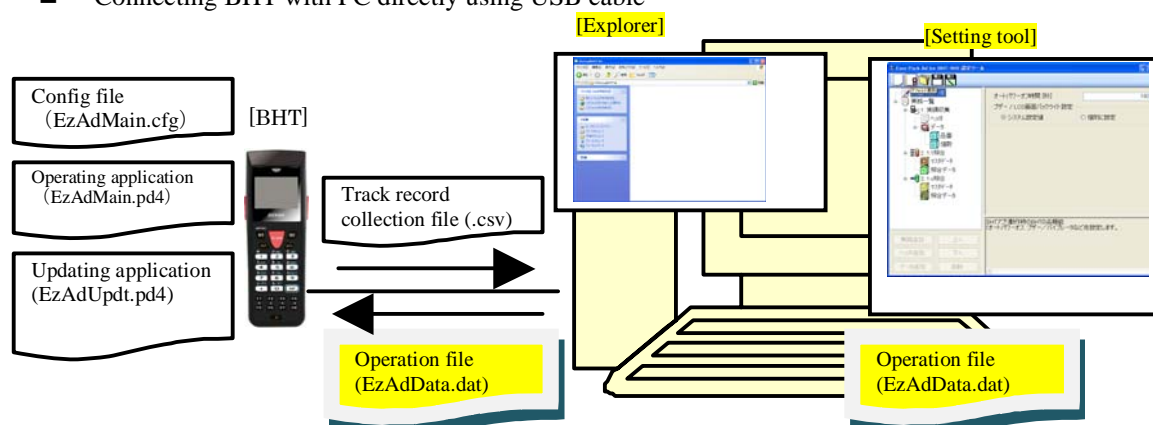
■ Connecting BHT with PC using CU-901 (RS-232C)



■ Connecting BHT with PC using CU-921 (USB)

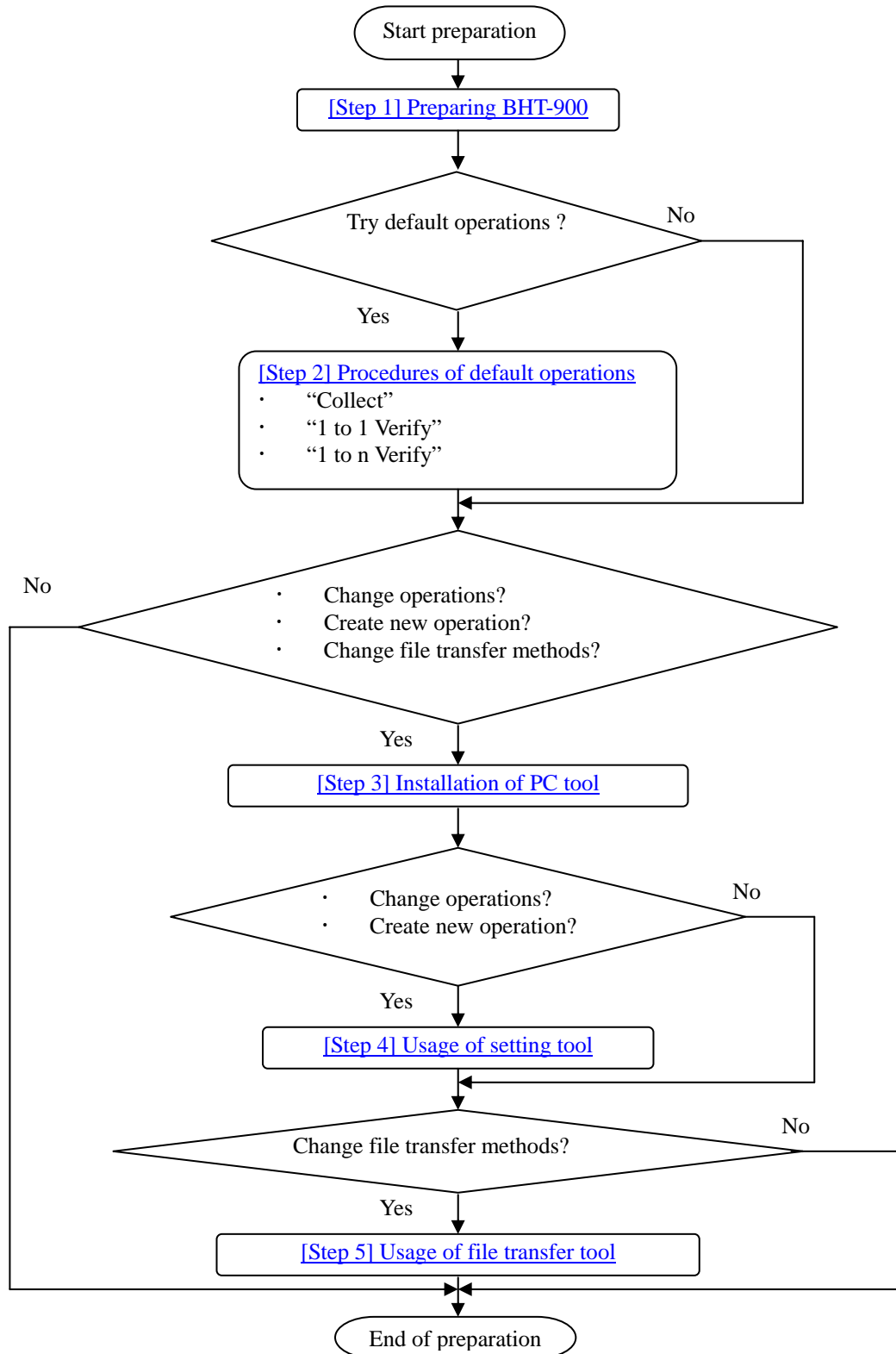


■ Connecting BHT with PC directly using USB cable



## 4. Preparation

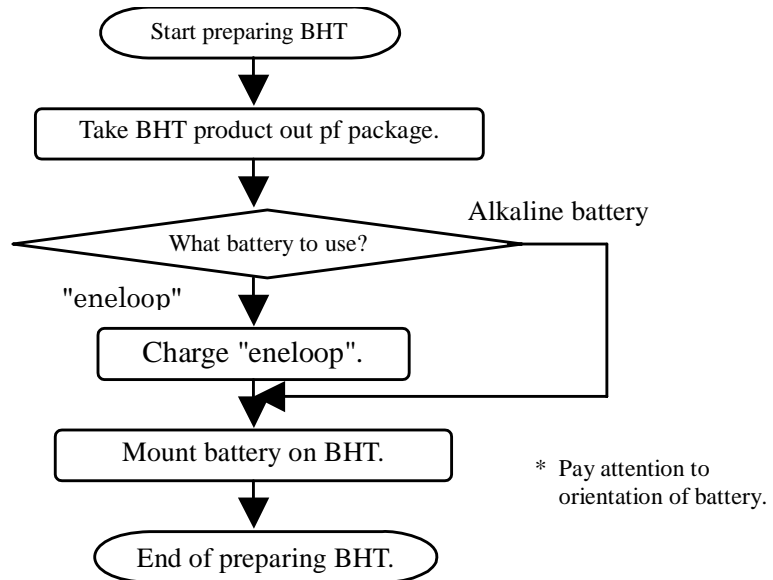
The following shows the flow of using the “Easy Pack Ad for BHT-900”





#### 4.1. [Step 1] Preparing BHT-900

Follow the operation guide of user's manual of the BHT-900 to place the BHT under conditions ready to start.  
The following shows the flow of preparing the BHT-900:


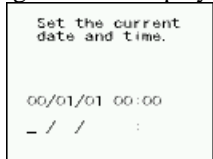

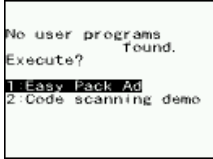
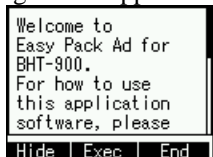





## 4.2. [Step 2] Procedures of default operations

### 4.2.1. First startup through operation menus

#### ■ Starting up operating application

The following show procedures for using the “Easy Pack Ad for BHT-900” upon first startup process.

Procedure			
(1)	Press power key to turn on the BHT power.		The following screen is displayed. (*1) 
(2)	Enter date and time with numeric keys.  <u>Point</u> Enter the last 2 digits of Christian Era year for year, and enter time in 24-hour notation.	Numeric key	
(3)	Press enter key to set date and time.	[ENT]	After date and time is set, the following screen appears. 
(4)	Press [1] of numeric key, select “1. Easy Pack Ad” on screen, and then press enter key.	[1] [ENT]	The following screen appears. 
(5)	Press scan key to start up the “Easy Pack Ad for BHT-900”.  <u>Point</u> Pressing [M1] key also starts up the “Easy Pack Ad for BHT-900”, just as the scan key. However, the (4) screen above will not be displayed in the second time and onward. Pressing [SCAN] key will display the (4) screen again in the second time of starting up. Pressing [M2] key turns the power off.		The following screen appears.   Upon completion of reading data of the “Easy Pack Ad for BHT-900”, the following screen appears. 

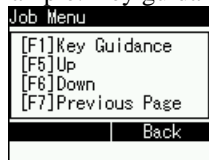
\*1: If date and time have been specified, the (3) screen appears.

■ Key guidance display

On operating application, pressing [F1] key displays the key guidance menu.  
This is useful when key operation is unknown.

To display all information, scroll the screen up and down using [F5] and [F6] keys.

Example: Key guidance of operation menu





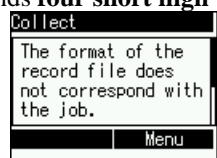



To return the before screen, press [M2] key.


## 4.2.2. "Collect" operation

### 4.2.2.1. Data collecting procedures

#### ■ Data collecting operation


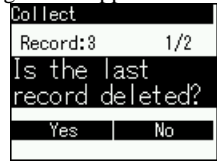
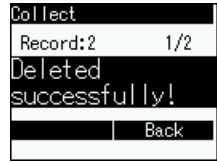


The following shows data collecting procedures in track record collecting operation:

Procedure			
(1)	Start up the "Easy Pack Ad for BHT-900".		<p>The following screen appears.</p> 
(2)	Press numeric key [1] to select "1. Collect", and then press enter key.	[1] [ENT]	<p>The following screen appears.</p>  <p><u>Point</u></p> <p>If the track record file is already used in other operations, the following warning screen appears. When the warning screen appears, the <b>red LED</b> lights up and the buzzer sounds <b>four short high beeps</b>.</p>  <p>After transmitting the track record file, delete the track record file and then restart operations.</p>
(3)	<p>Press the scan key to read the bar code, and input a part number. Entry is automatically accepted.</p> <p>Example: Barcode for "491235678904"</p> <p><u>Point</u></p> <p>A part number can be entered using numeric keys. In that case, press the enter key to confirm entry.</p>		<p>When an entry is confirmed, the following screen appears.</p>  <p><u>Point</u></p> <p>When an entry is confirmed, the <b>blue LED</b> lights up and the buzzer sounds <b>a short high beep</b>.</p> <p>If input data is invalid, the <b>red LED</b> lights up and the buzzer sounds <b>three short low beeps</b>.</p>
(4)	<p>Input quantity using numeric keys. Press enter key to confirm entry.</p> <p>Example: 20</p>	[2] [0] [ENT]	<p>When an entry is confirmed, the following screen appears.</p> 

(5)	<p>Press the enter key to repeat entry of part numbers and quantities.</p> <p><u>Point</u></p> <p>Pressing the direction keys ([F5] key and [F6] key) allows checking values of part numbers and quantities. Change of values is allowed also.</p> <p>To confirm collected data, return to screen (4) and press the enter key.</p> <p><u>Point</u></p> <p>Date is automatically attached to collected data. Data format is as follows:  “Year, month, day (yymmdd)”, “Part No.”, “Qty.”  “100824”, “4912345678904” , “20”</p>	[ENT]	<p>Pressing the enter key displays the following screen.</p>  <p>Repeat steps (3) through (5) onward to collect track records.</p> <p><u>Point</u></p> <p>When entry is confirmed, the <b>blue LED</b> lights up and the buzzer sounds <b>two short high beeps</b>.</p>
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## ■ Deleting record

After confirming data entry, it is possible to delete the record entered immediately before. The following shows the procedures of deleting a record.




Procedure			
(1)	If "Del Record" guidance exists on screen after confirming data entry, it is possible to delete the record input immediately before. ("Del Record" does not appear immediately after starting operations. The menu appears after collecting data. The guidance does not appear immediately after deleting a record either.)		
(2)	Press [M1].	[M1]	<p>The following screen appears.</p> 
(3)	Press [M1] key to delete a record input immediately before.	[M1]	<p>A record is deleted and the following screen appears.</p>  <p><u>Point</u> Upon completion of deleting a record, the <b>blue LED</b> lights up and the buzzer sounds <b>two short high beeps</b>.</p>
	To cancel deleting of a record, press [M2] key.	[M2]	<p>Record deletion is cancelled and the following screen appears.</p> 
(4)	After completing deletion of a record, press [M2] key.	[M2]	<p>The following screen appears.</p>  <p><u>Point</u> The number of records on screen decreases. "Del Record" does not appear immediately after deleting a record.</p>

## ■ Returning to "Job Menu"

Pressing [M2] key in operating on track record returns to "Job Menu".

#### 4.2.2.2 Obtaining track record file





The following shows the procedures of obtaining a track record file collected on the BHT:

Procedure			
(1)	<p>Start up the "Easy Pack Ad for BHT-900".</p> <p><u>Point</u> During operation of collecting a track record, pressing [M2] key returns "Job Menu".</p>		<p>The following screen appears.</p> 
(2)	<p>Press [M1].</p>	[M1]	<p>The following screen appears.</p> 
(3)	<p>Connect the BHT with a PC using a USB cable.</p> <p><u>Point</u> It is also possible to use a communication unit. To use a communication unit, an application must be installed on a PC. Refer to "<a href="#">[Step 3] Installation of PC tool</a>" for installation of PC tool.</p>		<p>The following screen appears.</p> 
(4)	<p>A folder opens on the PC. Obtain "JISSEKI.CSV" on the folder that opened.</p>		






### 4.2.3 "1 to 1 Verify" operation

#### 4.2.3.1 Comparison procedures

The following shows the procedures for 1:1 comparison operation:

Procedure			
(1)	Start up the "Easy Pack Ad for BHT-900".		<p>The following screen appears.</p> 
(2)	Press [2] of numeric key to select "2. 1 to 1 Verify" and then press the enter key.	[2] [ENT]	<p>The following entry screen for master data appears.</p> 
(3)	<p>Press the scan key to read the barcode and input master data. Input is automatically accepted.</p> <p>Example: Barcode for "4912345678904"</p>		<p>When an entry is confirmed, the following screen appears.</p>  <p><u>Point</u></p> <p>When an entry is confirmed, the <b>blue LED</b> lights up and the buzzer sounds <b>a short high beep</b>.</p> <p>If input data is invalid, the <b>red LED</b> lights up and the buzzer sounds <b>two short high beeps</b>.</p>













(4)	<p>Press the scan key to read the barcode.  “Check OK” appears if the data matches the master data. “Check NG” appears if the data does not match the master data.</p> <p><u>Point</u>  The input data and comparison results are not saved.</p>		<p>The following screen appears for “Check OK.”</p>  <p><u>Point</u>  The <b>blue LED</b> lights up and the buzzer sounds a <b>long high beep</b>.</p> <p><u>Point</u>  If comparison fails, the <b>red LED</b> lights up and the buzzer keeps sounding <b>long low beeps</b>.</p>  <p>Pressing [M2] key stops the buzzer sound and displays the following screen.</p>  <p>Repeat steps (3) and (4) onward to repeat "1 to 1 Verify".</p>
(5)	<p>Pressing [M2] key returns to "Job Menu".</p>	<p>[M2]</p>	<p>The following screen appears.</p> 

## 4.2.4 "1 to n Verify" operation

### 4.2.4.1 Comparison procedures

The following shows the procedures of 1:n comparison operation:

Procedure			
(1)	Start up the "Easy Pack Ad for BHT-900".		<p>The following screen appears</p> 
(2)	Press [3] of numeric key to select "2. 1 to n Verify" and then press the enter key.	[3] [ENT]	<p>The following entry screen for master date appears.</p> 
(3)	Press the scan key to read the barcode and input master data. Input is automatically accepted. Example: Barcode for "4912345678904"		<p>When an entry is confirmed, the following screen appears.</p>  <p><u>Point</u></p> <p>When an entry is confirmed, the <b>blue LED</b> lights up and the buzzer sounds <b>a short high beep</b>. If input data is invalid, the <b>red LED</b> lights Up and the buzzer sounds <b>two short high beeps</b>.</p>

(4)	<p>Press the scan key to read the barcode. "Check OK" appears if the data matches the master data. "Check NG" appears if the data does not match the master data.</p> <p><u>Point</u> The input data and comparison results are not saved.</p>		<p>The following screen appears for "Check OK."</p>  <p><u>Point</u> The <b>blue LED</b> lights up and the buzzer sounds a <b>long high beep</b>.</p> <p><u>Point</u> If comparison fails, the <b>red LED</b> lights up and the buzzer keeps sounding <b>long low beeps</b>.</p>  <p>Pressing [M2] key stops the buzzer sound and displays the following screen.</p>  <p>Repeat step (4) onward to repeat "1 to n Verify".</p>
(5)	<p>Pressing [M1] key returns to entry of master data.</p>	[M1]	<p>The following entry screen for master data appears.</p> 
(6)	<p>Pressing [M2] key returns to "Job Menu".</p>	[M2]	<p>The following screen appears.</p> 

### 4.3. [Step 3] Installation of PC tool

Execute “LAUNCHER.EXE” and follow instruction on screen to install the tool.

Note: To install the tool, log in the system as a user with authorization of an administrator.  
For details of authorization on Windows, check up with the web site of Microsoft and other information sources.

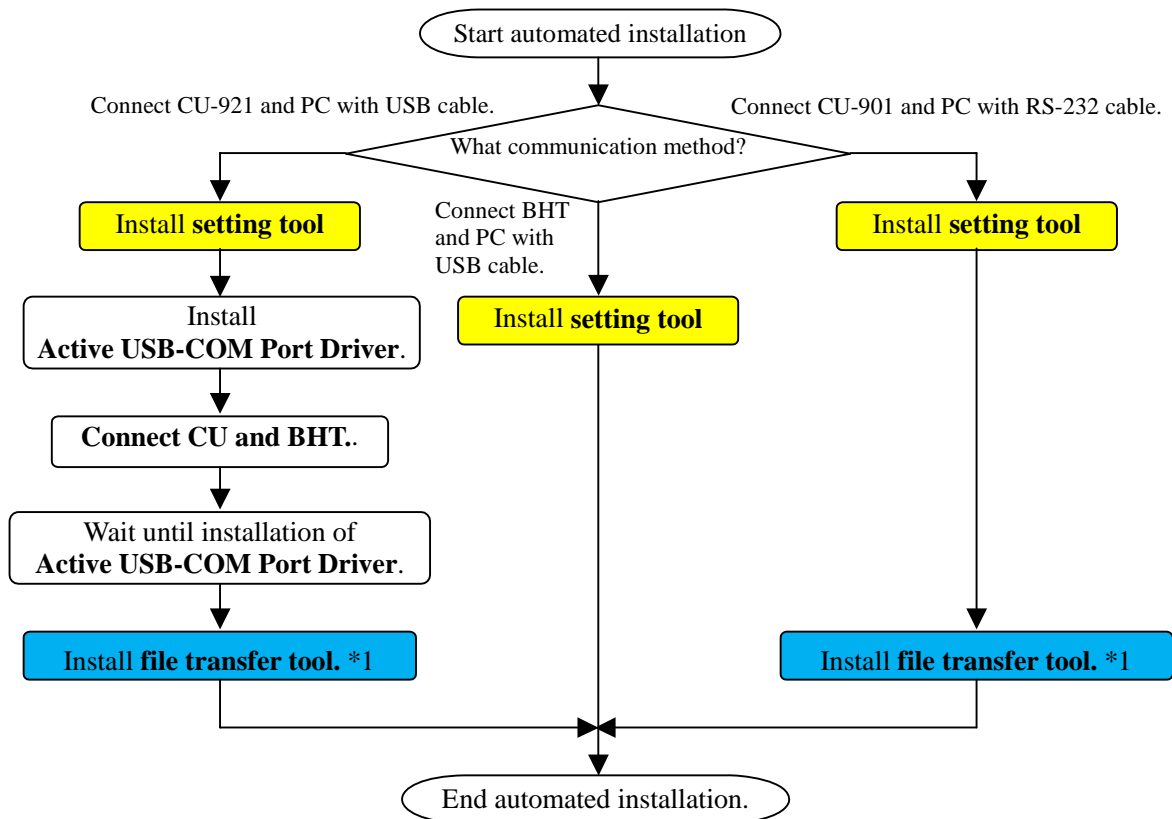
The following two installation procedures are provided:

- Automated installation (For beginners. This is recommended.)
- Custom installation (For advanced-level users)

Perform installation following the procedures provided below.

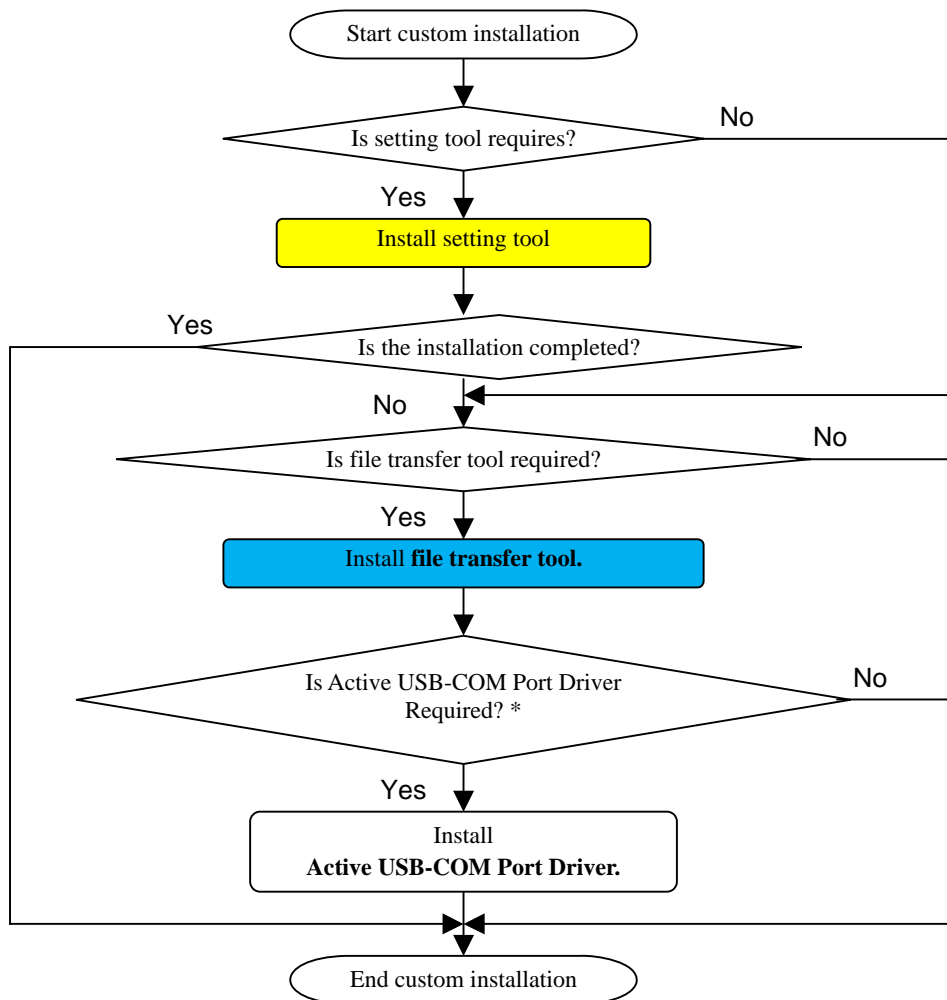
Note: For uninstalling the PC tool, refer to “[7. Uninstalling](#)”

#### 4.3.1. Automated installation (For beginners. This is recommended.)



\*1: After installing the file transfer tool, specify settings of the communication port and communicate rate used between the BHT and the file transfer tool.  
Specify a communication port and a communication rate following instruction on the installation screen.

#### 4.3.2. Custom installation (For advanced-level users)



\*1.1 Required when CU-921 (USB) is used.

## **4.4 [Step 4] Usage of setting tool**

The “Easy Pack Ad for BHT-900” setting tool is the tool for editing default operations installed on the BHT upon shipment, and for preparing new operations.

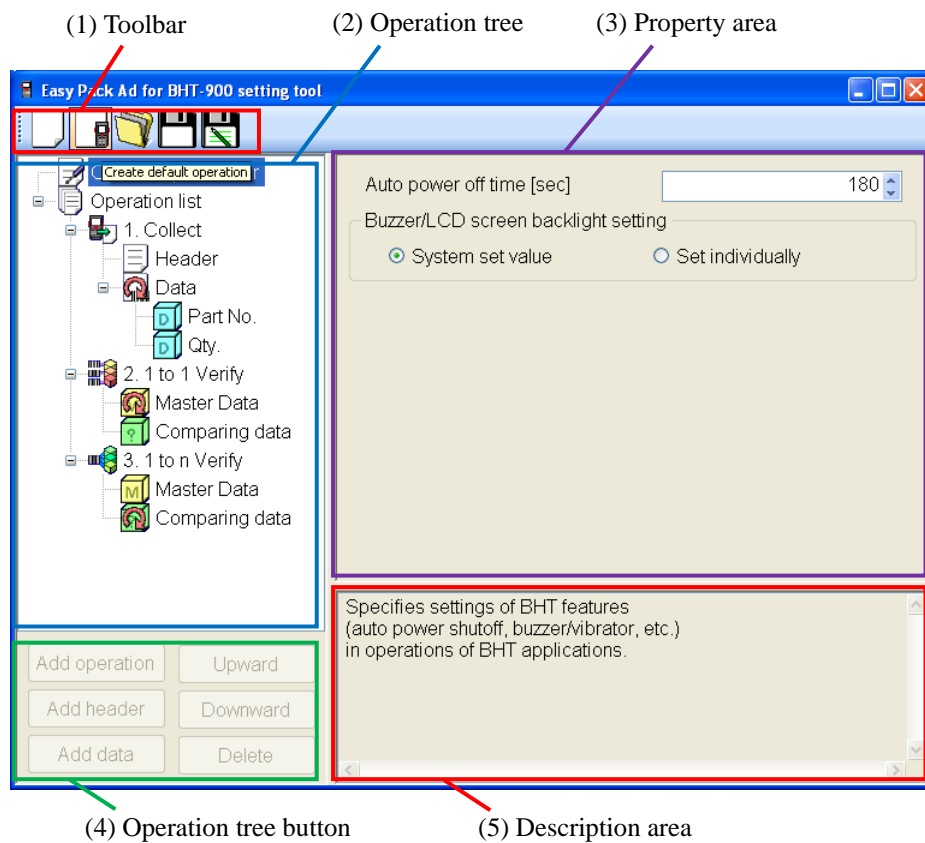
The “Easy Pack Ad for BHT-900” setting tool the special tool dedicated to the BHT-900.

### **4.4.1. What is setting tool**

The setting tool specifies the following parameters and operations:

- (1) Setting common parameters  
Specifies automatic power shutdown time, buzzer/vibrator, and LCD settings.
- (2) Track record collecting operation  
Repeats entry of data items such as part numbers and quantities, and saves the data in a track record file.
- (3) 1:1 comparison operation  
Reads two data items sequentially and compares them with each other.  
(Input data and comparison results are not saved.)
- (4) 1:n comparison operation  
Against one master data item, repeats reading data and comparing data items.  
(Input data and comparison results are not saved.)






#### 4.4.2. Description of setting tool



- (1) Tool bar  
Provides buttons to execute operations on operation file (New/Open/Save/...etc.).
- (2) Operation tree  
Displays configuration of operations in tree-structured directory.
- (3) Operation tree button  
Provides buttons to perform operations on operation tree(Add operation/Add header/...etc.).
- (4) Property area  
This area displays parameters of information when each item of operation tree is selected.
- (5) Description area  
This area displays detailed descriptions when an operation tree or a property parameter is selected.



The following are buttons to perform operations on operation files:

Button	Description
 (Create new operation file)	Creates a new operation file. Temporary operations based on the three operations are displayed. For the temporary operations, refer to the following “For reference: Operations for creating new file”.
 (Create default operation)	Displays the default operation patterns installed upon shipment of BHT. When making changes on the basis of the default operations above, editing the pattern will be useful.
 (Open operation file)	Opens an existing operation file.
 (Save operation file by overwriting)	Saves an edited operation in an operation file. For a new operation file, verify a saving file name. (Same as “Save as”.)
 (Save operation file under a new name)	Add a new name to an edited operation and saves it in a file. * <b>A file name to save an operation file can be specified freely. However, an operational file to be transferred to BHT must have a name “EzAdData.dat”.</b>

[For reference: Operations for creating new file]

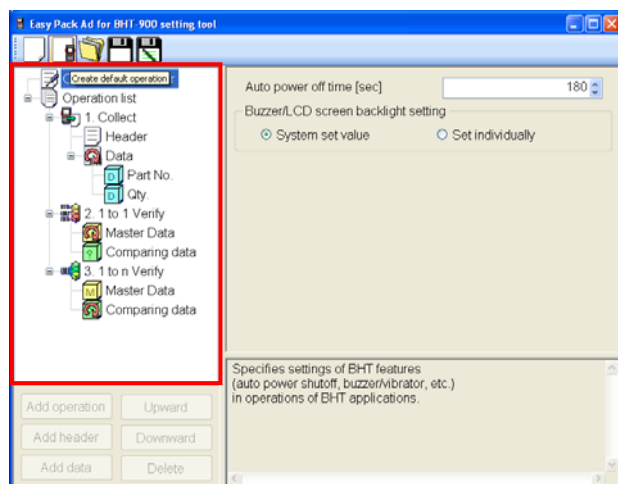
The following summarizes parameter values specified in creating a new operation file.

The following summarizes parameter values specified in creating a new operation file.

Operation tree		Parameter	Setting value	
Common parameter		Automatic power shutoff time	180 sec.	
		Buzzer/	System set value	
		LCD screen backlight setting		
Operation list	Collect1		Automatic adding of date and time	Date (YYMMDD)
		Header1	Input method	Barcode/Key
			Reading code	All codes
			Overlapping regisyraton	Allowed
			Minimum number of input digits	1
			Maximum number of input digits	99
			Add-on code reading	Disallowed
			Check digit verification	Not checked
			Start character verification	?
			Stop character verification	?
			Date1	*Same has “Header1”.
	Date2	*Same has “Header1”.		
	1:1 Verify1			
		Master data	Add-on code reading	Disallowed
			Check digit verification	Not checked
		Comparing data	* Change disallowed. The same setting as “Master data” is always used.	
	1:n Verify1			
		Master data	* Same as “Master data” of “1:1 Verify1”.	
		Comparing data	* Change disallowed. The same setting as “Master data” is always used.	

#### 4.4.2.1 Operation tree

Displays configuration of operations in tree-structured directory.



Selecting an item in the operation tree displays the parameters of each item in the property area.  
Descriptions of a selected item appear in the description area.

Operation tree item	Description
<b>Common parameter</b>	Specifies settings of BHT features (auto power off, buzzer/vibrator, etc.) in operations of BHT applications.
<b>Operation list</b>	<p>Displays list of operations.</p> <p>The “Easy Pack Ad for BHT-900” supports the following operations:</p> <ul style="list-style-type: none"><li>• Collecting track records (e.g. Inventory, product inspections)</li><li>• 1:1 comparison (e.g. Avoiding fool proof device, etc.)*</li><li>• 1:n comparison (e.g. Wrong item check, etc.)*</li></ul> <p>*1:1 comparison and 1:n comparison operations do not save reading data.</p> <p>Press [Add operation] button to add operation. Addition of a maximum of 10 operations is allowed.</p>

<b>x.[ Collecting track record ] *1 *2</b>	<p>About track record collecting operation</p> <p>The track record collecting operation repeats reading barcodes or key entries, and saves input data in a track record file.</p> <p>Displays parameters allowed for specifying with the track record collecting operation. For details of parameters, refer to descriptions displayed upon setting.</p>
<b>Header</b>	<p>About header</p> <p>The header is an item saved in a track record file, containing information added to collected data (operator ID, shelf number, etc.).</p> <p>The header, different from data, is not repeated. (Data input is done only once upon starting operation.)</p> <p>If a header item exists, it is added before the input data of the data item upon saving the data in a track record file.</p> <p>Press [Add header] button to add a header item. A maximum of 10 header items can be added.</p> <p>[Setting example] To verify who collected data of which shelf at later time: ○Header item 1 Header item name "Operator ID" Input method "Barcode reading" ○Header item 2 Header item name "Shelf number" Input method "Key input"</p>
<b>[Header item] *3</b>	<p>Displays parameters specified in header item. For details of parameters, refer to descriptions displayed upon setting.</p>
<b>Data</b>	<p>About data</p> <p>Data is the items in the data to be actually collected (part number and quantity) and saved in a track record file.</p> <p>Data input can be performed repeatedly.</p> <p>Press [Add data] button to add data item. A maximum of 10 data items can be added.</p> <p>[Setting example] "To manage part numbers and quantities." ○Data 1 Data item name "Part No." Input method "Barcode reading" ○Data 2 Data item name "Qty." Input method "Key input"</p>
<b>[Data item]*3</b>	<p>Displays parameters specifiable in data item. For details of parameters, refer to descriptions displayed upon setting.</p>

\*1. "x" indicates an operation number (serial number).

\*2. Name specified in [Operation name] in property is displayed

\*3. Name specified in [Item name] in property is displayed

<b>x. [1:1 comparison operation]</b> <b>*1 *2</b>	<p>About 1:1 comparison operation</p> <p>The 1:1 comparison operation reads 2 barcodes and checks if the two items match with each other.          *The 1:1 comparison operation does not save reading data.</p> <p>The following barcodes are readable:</p> <ul style="list-style-type: none"> <li>• POS</li> <li>• ITF</li> <li>• STF</li> <li>• CODABAR(NW-7)</li> <li>• CODE39</li> <li>• CODE93</li> <li>• CODE128</li> <li>• RSS(GS1 DataBar)</li> </ul> <p>Displays parameters specifiable in the 1:1 comparison operation. For details of parameters, refer to descriptions displayed upon setting.</p>
<b>[Master data] *4</b>	<p>*Select “x. [1:1 comparison operation]” in the operation tree to change a “Master data name”.</p>
<b>Comparing data</b>	<p>*No parameters can be specified for comparison data.</p>
<b>x. [1:n comparison operation]</b> <b>*1 *2</b>	<p>About 1:n comparison operation</p> <p>The 1:n comparison operation takes the barcode read out first as master data, and checks if data items read afterwards match with the master data.          *The 1:n comparison operation does not save reading data.</p> <p>The following barcodes are readable:</p> <ul style="list-style-type: none"> <li>• POS</li> <li>• ITF</li> <li>• STF</li> <li>• CODABAR(NW-7)</li> <li>• CODE39</li> <li>• CODE93</li> <li>• CODE128</li> <li>• RSS(GS1 DataBar)</li> </ul> <p>Displays parameters specifiable in the 1:n comparison operation. For details of parameters, refer to descriptions displayed upon setting.</p>
<b>[Master data] *4</b>	<p>*Select “x. [1:n comparison operation]” in the operation tree to change a “Master data name”.</p>
<b>Comparing data</b>	<p>*No parameters can be specified for comparison data.</p>

\*1. “x” indicates an operation number (serial number).

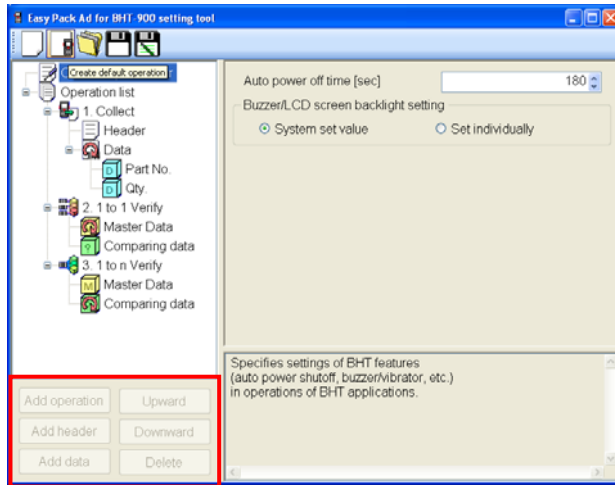
\*2. Name specified in [Operation name] in property is displayed

\*4. Displays a name specified with [Master data name] in property.

([Master data name] is displayed in the property of 1:1 comparison operation and 1:n comparison operation.

#### 4.4.2.2 Operation tree buttons

Those are buttons to perform operations on the operation tree.

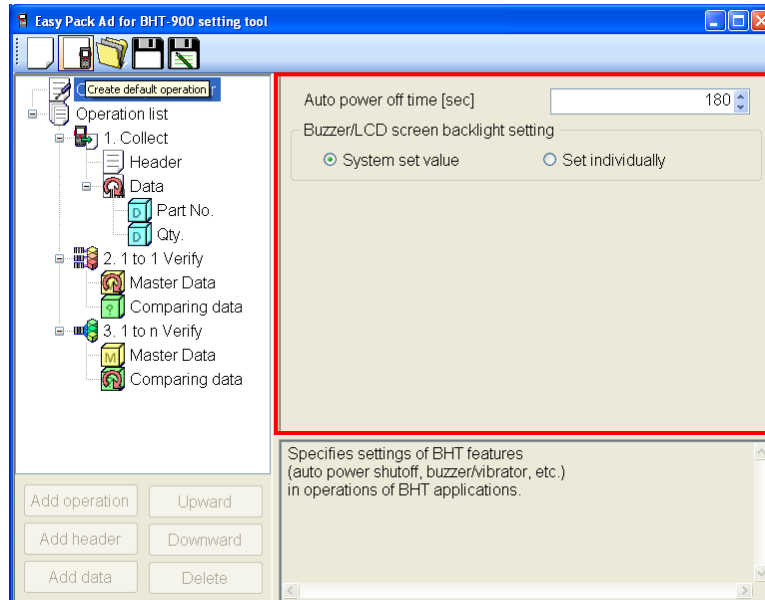


Button	Description
<b>Add operation</b>	Adds a new operation This is valid only when “Operation list” is selected in the operation tree. Pressing the button displays the following menu. Selecting an operation to add adds an operation. <ul style="list-style-type: none"> <li>• Track record collecting operation</li> <li>• 1:1 comparison operation</li> <li>• 1:n comparison operation</li> </ul>
<b>Add header</b>	Adds a header item to track record collecting operation. This is valid only when “Header” is selected on the track record collecting operation in the operation tree.
<b>Add data</b>	Adds a data item to track record collecting operation. This is valid only when “Data” is selected on the track record collecting operation in the operation tree.
<b>Upward</b>	Moves a selected operation, a header item, or a data item upward.
<b>Downward</b>	Moves a selected operation, a header item, or a data item downward.
<b>Delete</b>	Deletes a selected operation, a header item, or a data item.

#### 4.4.2.3. Property area

This area displays parameters of items selected on the operation tree (common parameters, operations, etc.). Information to be displayed depends on items selected on the operation tree.

##### 1. Common parameters

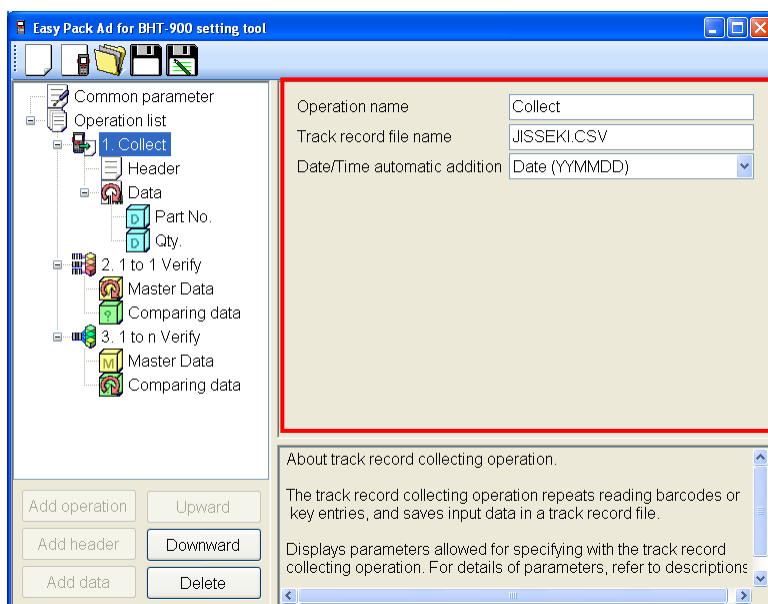


With the common parameters, specify the following parameters:

Parameter	Description
<b>Auto power off time [seconds]</b>	Specifies the time before BHT automatically shuts off the power. (The power is turned off automatically, if key operation does not occur for a specified period of time.)  0 : Auto power off function is invalid. 1 to 32767 : Shuts off the power automatically in specified time. [seconds]
<b>Buzzer/ LCD screen backlight setting</b>	Specifies operation settings of “Buzzer/Vibrator”, and “LCD screen backlight”.  System set value : Complies with BHT system setting value. Set individually : Specifies operations of devices individually.
* <b>Buzzer/Vibrator</b>	Specifies permission of operations of buzzer/vibrator.  System set value : Complies with BHT system setting value. None : Both buzzer and vibrator do not operate. Buzzer : Buzzer only operates. Vibrator : Vibrator only operates. Buzzer + Vibrator : Both buzzer and vibrator operate.
* <b>Buzzer volume</b>	Specifies buzzer volume.  System set value : Complies with BHT system setting value. 0 (mute) : Does not sound. 1 (low) : Sounds in low volume. 2 (mid) : Sounds in middle volume. 3 (high) : Sounds in high volume.
* <b>LCD backlight brightness</b>	Specifies brightness of LCD backlight.  System set value : Complies with BHT system setting value. 0 (off) : Backlight does not light up. 1 to 5 : Specifies brightness of backlight in 5 levels. *Greater values make the backlight brighter.
* <b>LCD backlight lighting time</b>	Specifies time before backlight automatically turns off. (The backlight is turned off automatically, if key operation does not occur for a specified period of time.)  System set value : Complies with BHT system setting value. 0 : Backlight does not light up. 5 to 30 [seconds] : Turns off backlight in specified time.

\* Those are displayed when “Set individually” is specified in “Buzzer/LCD screen backlight setting”.

## 2. Track record collecting operation



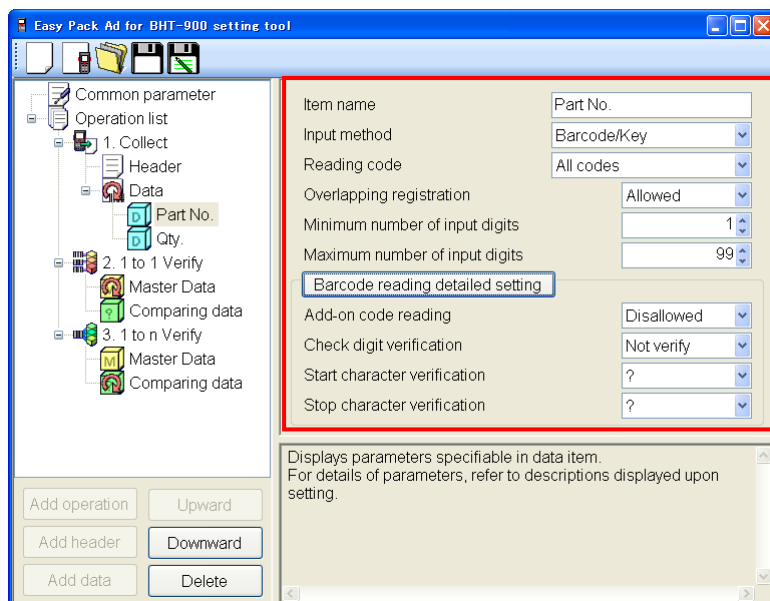
The track record collecting operation specifies the following parameters:

The track record collecting operation specifies the following parameters.

Parameter	Description															
Operation name	<p>Specifies an operation name.</p> <p>Specify an operation name of 14 characters or shorter.</p> <p>Symbol (“”) cannot be used in an operation name.</p>															
Track record file name	<p>The following characters cannot be used in an track record file name, in which the collection result of the track result collecting operation are saved:</p> <p>A track record file name must have a maximum of 8 characters before an extension, and “.CSV” or “.TXT” must be specified for an extension.</p> <p>In addition, the following characters are not allowed in a name: (space), “, *, +, (comma , ), /, :, ;, &lt;, =, &gt;, ?, [, (backslash), ], {, and }.</p>															
Date and time automatic addition	<p>Specifies whether to add date and time automatically to collected data.</p> <table><tr><td>None</td><td>:</td><td>Do not add date and time.</td></tr><tr><td>Date (YYMMDD)</td><td>:</td><td>Add date with 2 digits for year, 2 digits for month, and 2 digits for day.</td></tr><tr><td>Date (YYYYMMDD)</td><td>:</td><td>Add date with 4 digits for year, 2 digits for month, and 2 digits for day.</td></tr><tr><td>Date and time (YYMMDDhhmm)</td><td>:</td><td>Add date and time with 2 digits for year, 2 digits for month, 2 digits for day, 2 digits for hour, and 2 digits for minute.</td></tr><tr><td>Date and time (YYYYMMDDhhmm)</td><td>:</td><td>Add date and time with 4 digits for year, 2 digits for month, 2 digits for day, 2 digits for hour, and 2 digits for minute.</td></tr></table> <p>* Time is indicated in time of day clock.</p> <p>* Date and time data is added before the header item when saving.</p>	None	:	Do not add date and time.	Date (YYMMDD)	:	Add date with 2 digits for year, 2 digits for month, and 2 digits for day.	Date (YYYYMMDD)	:	Add date with 4 digits for year, 2 digits for month, and 2 digits for day.	Date and time (YYMMDDhhmm)	:	Add date and time with 2 digits for year, 2 digits for month, 2 digits for day, 2 digits for hour, and 2 digits for minute.	Date and time (YYYYMMDDhhmm)	:	Add date and time with 4 digits for year, 2 digits for month, 2 digits for day, 2 digits for hour, and 2 digits for minute.
None	:	Do not add date and time.														
Date (YYMMDD)	:	Add date with 2 digits for year, 2 digits for month, and 2 digits for day.														
Date (YYYYMMDD)	:	Add date with 4 digits for year, 2 digits for month, and 2 digits for day.														
Date and time (YYMMDDhhmm)	:	Add date and time with 2 digits for year, 2 digits for month, 2 digits for day, 2 digits for hour, and 2 digits for minute.														
Date and time (YYYYMMDDhhmm)	:	Add date and time with 4 digits for year, 2 digits for month, 2 digits for day, 2 digits for hour, and 2 digits for minute.														



### 3. Track record collecting operation: Header information/Data information



The header item/data item of track record collecting operation specifies the following parameters:

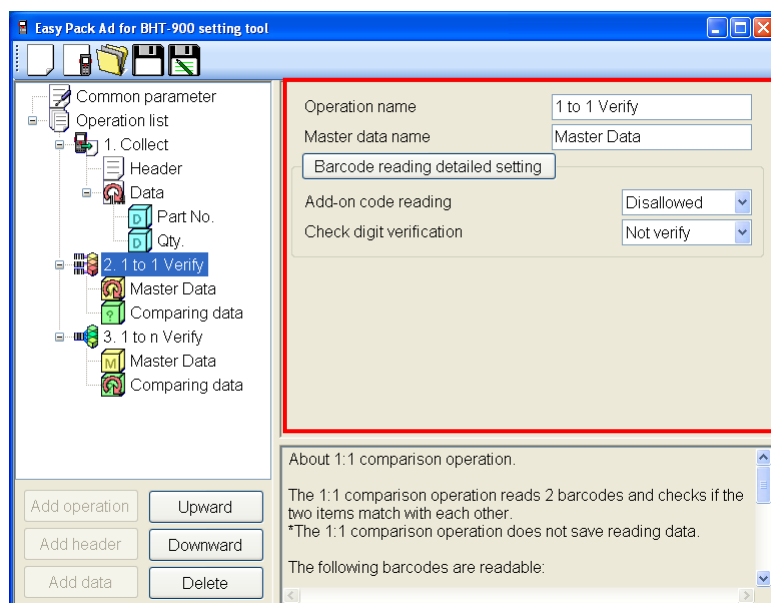
Parameter	Description
<b>Item name</b>	<p>Specifies item name.</p> <p>Specify an item name of 16 characters or shorter.</p> <p>Symbol (“”) cannot be used in an item name.</p>
<b>Input method</b>	<p>Specifies a data input method.</p> <p>Barcode : Data is input by reading a barcode.</p> <p>Key : Data is input by keys.</p> <p>Barcode/key : Data is input by reading a barcode or by keys.</p>
<b>Reading code</b>	<p>Specify codes allowed for reading.</p> <p>POS : POS only is read.</p> <p>ITF : ITF only is read.</p> <p>STF : STF only is read.</p> <p>CODABAR(NW-7) : CODABAR(NW-7) only is read.</p> <p>CODE39 : CODE39 only is read.</p> <p>CODE93 : CODE93 only is read.</p> <p>CODE128 : CODE128 only is read.</p> <p>RSS(GS1 DataBar) : RSS(GS1 DataBar) only is read.</p> <p>All codes : All barcodes above are read.</p>
<b>Overlapping registration</b>	<p>Upon data input, overlapping with input data in the past is checked. Overlapping check is valid only within the same input item.</p> <p>Allowed : Overlapping of input data is allowed.</p> <p>Disallowed : Overlapping of input data is not allowed.</p>
<b>Minimum number of input digits</b>	<p>Specifies a minimum number of input digits.</p> <p>Specify the number of digits not exceeding a maximum number of digits, in a range from 1 to 99.</p>
<b>Maximum number of input digits</b>	<p>Specifies a maximum number of input digits.</p> <p>Specify the number of digits at a minimum number of input digits or more, in a range from 1 to 99.</p>

* <b>Add-on code reading</b>	<p>Specifies reading of add-on code.</p> <p>* This setting time is valid for reading [POS] barcode.</p> <p>Allowed : A code with add-on code added is read.</p> <p>Disallowed : Add-on code part is not read.</p>
* <b>Check digit verification</b>	<p>Specifies check digit verification.</p> <p>*This setting item is valid for reading the following barcodes: [ITF]、[STF]、[CODABAR(NW-7)]、[CODE39]</p> <p>Verify : Only code with correct check digit are read.</p> <p>Not verify : Codes are read without verifying check digit.</p>
* <b>Start character verification</b>	<p>Only codes with a specified start character are read.</p> <p>*This setting item is valid when reading [CODABAR(NW-7)] barcodes.</p> <p>? : Reads codes with any start character.</p> <p>A : Reads only codes with start character [A].</p> <p>B : Reads only codes with start character [B].</p> <p>C : Reads only codes with start character [C].</p> <p>D : Reads only codes with start character [D].</p>
* <b>Stop character verification</b>	<p>Only codes with a specified stop character are read.</p> <p>*This setting item is valid when reading [CODABAR(NW-7)] barcodes.</p> <p>? : Reads codes with any stop character.</p> <p>A : Reads only codes with stop character [A].</p> <p>B : Reads only codes with stop character [B].</p> <p>C : Reads only codes with stop character [C].</p> <p>D : Reads only codes with stop character [D].</p>

\* This is displayed when clicking “Barcode reading detailed setting” button on the property screen.

\* Displayed data depends on code types specified with “Reading code”.

#### 4. 1:1 comparison operation/1:n comparison operation




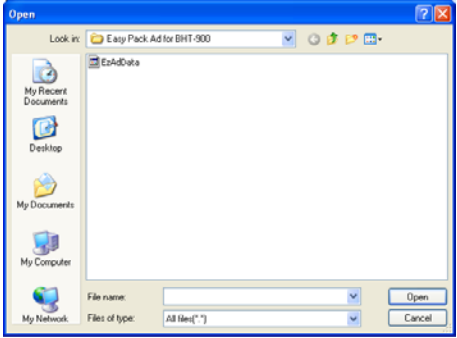
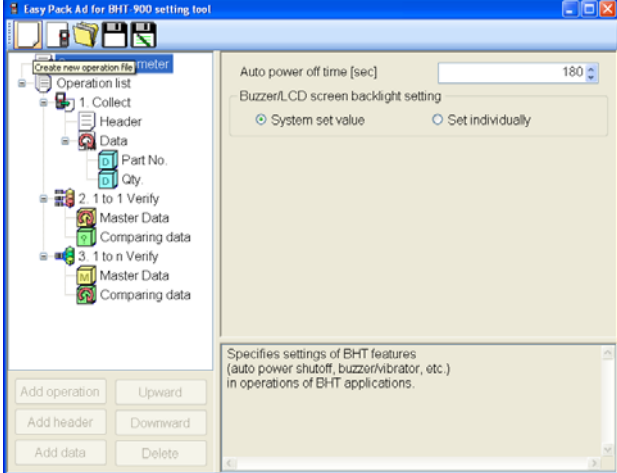
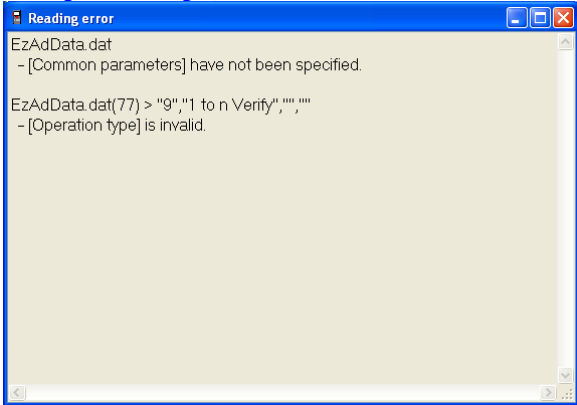
Specify the following parameters in 1:1 comparison operation/1:n comparison operation.

Parameter	Description
<b>Operation name</b>	Specifies an operation name.  Specify an operation name of 14 characters or shorter.  Symbol (“”) cannot be used in an operation name.
<b>Master data name</b>	Specify master data  Specify a master data name of 16 characters or shorter.  Symbol (“”) cannot be used in a master data name.
* <b>Add-on code reading</b>	Specifies reading of add-on code. *This setting time is valid for reading [POS] barcode.  Allowed : A code with add-on code added is read. Disallowed : Add-on code part is not read.
* <b>Check digit verification</b>	Specifies check digit verification. *This setting item is valid for reading the following barcodes: [ITF]、[STF]、[CODABAR(NW-7)]、[CODE39]  Verify : Only code with correct check digit are read. Not verify : Codes are read without verifying check digit.

\* This is displayed when clicking “Barcode reading detailed setting” button on the property screen.

### 4.4.3. Reading operation file

The following shows the procedures for reading operation file in the setting tool.

Procedure	
(1) Click [  ] (Open operation file) on the toolbar.	<p>The dialog in the following figure appears.</p> 
(2) Select the operation file (“EzAdData.dat” or other file name) and open the file.	<p>If an operation file is read successfully, the operations are displayed on the setting tool as shown in the figure below:</p>  <p>If reading of an operation file failed, the following reading error dialog appears. (For a reading error dialog, refer to <a href="#">“About reading error dialogs”</a>)</p> 

## ■ About reading error dialogs

If data of an operation file is invalid for incorrect format, in correct setting values and others in reading with the setting tool, a warning message appears on a dialog.

The following messages appear on a reading error dialog:

Warning message	Action				
<b>The length of a line exceeds 350 bytes.</b>	A maximum length of a line in operation file is 350 bytes. A line exceeding 350 bytes cannot be read correctly in the setting tool or operating applications.				
<b>[COMMON] tag is not found.</b>	<p>[COMMON] tag is not found in an operation file. [COMMON] tag is essential in an operation file. <b>If a [COMMON] tag is not found, the setting tool substitutes the common parameters as follows.</b></p> <table border="1"> <tr> <td>Auto power off time</td><td>180 sec.</td></tr> <tr> <td>Buzzer/ LCD screen backlight setting</td><td>Complies with BHT system setting value.</td></tr> </table>	Auto power off time	180 sec.	Buzzer/ LCD screen backlight setting	Complies with BHT system setting value.
Auto power off time	180 sec.				
Buzzer/ LCD screen backlight setting	Complies with BHT system setting value.				
<b>[Common parameters] have not been specified.</b>	<p>Common parameters are not specified after [COMMON] tag in an operation file. <b>The setting tool substitutes the following values if common parameters have not been specified.</b></p> <table border="1"> <tr> <td>Auto power off time</td><td>180 sec.</td></tr> <tr> <td>Buzzer/ LCD screen backlight setting</td><td>Complies with BHT system setting value.</td></tr> </table>	Auto power off time	180 sec.	Buzzer/ LCD screen backlight setting	Complies with BHT system setting value.
Auto power off time	180 sec.				
Buzzer/ LCD screen backlight setting	Complies with BHT system setting value.				
<b>[MENU] tag is not found.</b>	<p>[MENU] tag is not found in an operation file. <b>Without [MENU] tag in an operation file, the setting tool finishes reading without operation.</b></p>				
<b>[Operation menu parameters] have not been specified.</b>	<p>“Operation menu parameter” does not exist after [MENU] tag in an operation file. <b>Without “Operation menu parameter”, the setting tool finishes reading.</b></p>				
<b>[Operation type] is invalid.</b>	<p>“Operation type” value among the operation menu parameters is invalid. Specifiable values for an operation type are “0” (Track record collecting operation), “1” (1:1 Comparison operation), and “2” (1:n Comparison operation). <b>The setting tool ignores operation menu parameters if an invalid value is specified for “Operation type”.</b></p>				
<b>[Operation name] is invalid.</b>	<p>“Operation name” value among operation menu parameters is invalid. An “operation name” must be specified with 14 characters or less. <b>If an invalid value is specified, the setting tool handles the first 14 characters as an operation name.</b></p>				
<b>[Track record file name] is invalid.</b>	<p>A track record file name among operation menu parameters is invalid. A track record file name must have a maximum of 8 characters before an extension, and “.CSV” or “.TXT” must be specified for an extension. In addition, the following characters are not allowed in a name: (space), “, *, +, (comma ,), /, :, ;, &lt;, =, &gt;, ?, [, (backslash) ], {, and }.</p> <p><b>The setting tool specifies blank for a track record file name if an invalid value has been specified for a track record file.</b></p>				
<b>[Work_xxx] tag is not found.</b> (xxx: Operation number)	<p>Item list parameter tag is not found. <b>Without an item list parameter tag, the setting tool reads a track record collecting operation without any header item and data item. For 1:1 comparison operation and 1:n comparison operation, the tool reads an operation by specifying the default master data.</b></p>				

<p><b>“Item list parameter” has not been specified for [WORK_xxx] tag.</b> (xxx: Operation number)</p> <p><b>No setting value exists for “Data item” of [WORK_xxx] tag.</b> (xxx: Operation number)</p>	<p>An item list parameter is not specified after the item list parameter tag.</p> <p><b>Without an item list parameter, the setting tool reads track collecting operation data without header item and data item. The tool reads 1:1 comparison operation or 1:n comparison operation by specifying default master data.</b></p> <p>“Data item” setting value is missing in the item list parameters of track record collecting operation. 1 to 10 entries of “data items” is required for track record collecting operation.</p>
<p><b>No setting value exists for “Master data item” of [WORK_xxx] tag.</b> (xxx: Operation number)</p>	<p>“Master data item” value has not specified in item list parameters of 1:1 comparison operation or 1:n comparison operation. 1:1 comparison operation and 1:n comparison operation requires one “Master data item”.</p>
<p><b>“Item type” is invalid.</b></p>	<p>“Item type” in item list parameter is invalid. Only “H” (header) and “D” (data or master data) are specifiable for “Item type”.</p> <p><b>The setting tool ignores this item list parameter.</b></p>
<p><b>“Item name” is invalid.</b></p>	<p>An invalid value has been specified in “Item name” of the item list parameter. An “Item name” must be specified with 14 characters or shorter.</p> <p><b>If an invalid value is specified, the setting tool handles the first 14 characters as an item name.</b></p>
<p><b>A specified “Reading code” is not readable for the setting tool.</b></p>	<p>A value set for “Reading code” in item list parameters is not readable for the setting tool. If detailed information has been added to the reading code, the setting tool cannot read the information.</p> <p><b>The setting tool read the data by default (all codes).</b></p>
<p><b>The number of items is invalid.</b></p>	<p>The number of items in a parameter is insufficient.</p> <p><b>The setting tool reads only readable parameters.</b> <b>Example: Common parameters: “180”, “3”, “3”</b> <b>Auto power off time: 180 seconds</b> <b>Buzzer/vibrator: 3 (buzzer and vibrator)</b> <b>Buzzer volume: 3 (high)</b> <b>LCD screen backlight brightness: -1 [Default]</b> <b>LCD screen backlight lighting time: -1 [Default]</b></p>
<p><b>Specified values contain one out of range.</b></p>	<p>Parameter setting value contains one out of range.</p>


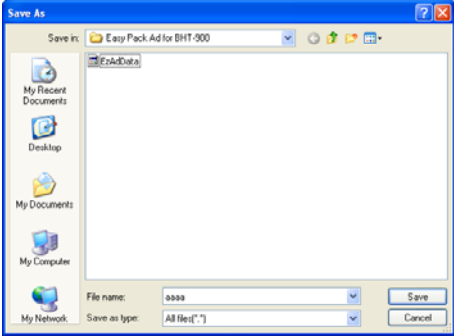
<b>11 or more operations exist.</b> <b>The 11th operation and later are ignored.</b>	11 or more operation menu parameters exist. A maximum number of operations is 10. <b>The setting tool ignores 11<sup>th</sup> and later “Operation menu parameters”.</b>
<b>11 or more data items exist for track record collecting operation ([WORK_xxx]). The 11th and later items are ignored.</b> (xxx: Operation number)	11 or more data items exist for “Item list parameter” (track record collecting operation). A maximum number of track record collecting operations is 10. <b>The setting tool ignores 11<sup>th</sup> and later data items of “Item list parameters”.</b>
<b>11 or more header items exist for track record collecting operation ([WORK_xxx]). The 11th and later items are ignored.</b> (xxx: Operation number)	11 or more data items exist for “Item list parameter” (track record collecting operation). A maximum number of track record collecting operations is 10. <b>The setting tool ignores 11<sup>th</sup> and later data items of “Item list parameters”.</b>
<b>Two or more master data items exist for comparison operation ([WORK_xxx]). The second and later items are ignored.</b> (xxx: Operation number)	Two or more master data items exist for “Item list parameter” (1:1 comparison operation or 1:n comparison operation). The number of master data item for 1:1 comparison operation or 1:n comparison operation is 1. <b>The setting tool ignores 2<sup>nd</sup> and later data items of “Master data item” of 1:1 comparison operation or 1:n comparison operation.</b>
<b>A header item cannot be specified for comparison operation ([WORK_xxx]). Header item is ignored.</b> (xxx: Operation number)	A header item is specified for “Item list parameter” (1:1 comparison operation or 1:n comparison operation). A header item cannot be specified for 1:1 comparison operation or 1:n comparison operation. <b>The setting tool ignores a header item for 1:1 comparison operation or 1:n comparison operation.</b>

#### 4.4.4. Saving operation file


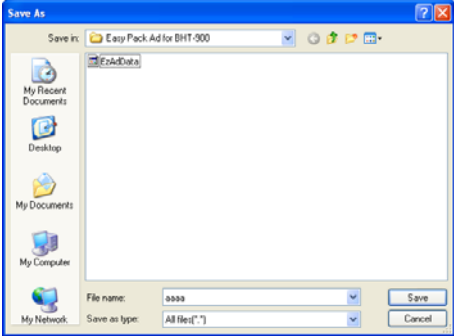
The following two methods are provided to save operation files:

- Overwriting (Save)
- Saving under new name (Save as)

The following shows the procedures for overwriting an operation file.

Procedure	
(1) Click [  ] (Overwriting operation file) on the toolbar.	<p>Saves an operation file.</p> <p>If a file name has not been specified, in the case of creating a new file, the following dialog appears:</p>  <p>Entering a file name and clicking [OK] button saves an operation file.</p>

The following shows the procedures for saving an operation file under a new name:

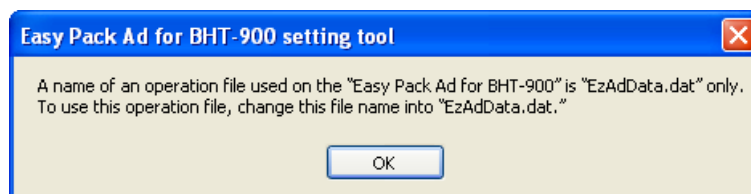
Procedure	
(1) Click [  ] (Saving operation file under a new name) on the toolbar.	<p>The following dialog appears.</p>  <p>Entering a file name and clicking [OK] button saves an operation file.</p>

#### Notes:

When saving a file by overwriting or by adding a new name, change the file name into “EzAdData.dat” to transfer a file to BHT, if a file name is “EzAdData.dat”.

(A file name of an operation file handled with the operation application of the “Easy Pack Ad for BHT-900” is fixed to be “EzAdData.dat”).

If a file name other than “EzAdData.dat” is specified when overwriting or saving data, the following message appears.





## 4.5. [STEP 5] Usage of file transfer tool

The Easy Pack Ad file transfer tool is the tool for transferring the track record files collected on BHT and transferring an operation file to BHT.

### 4.5.1. What is file transfer tool

The file transfer tool is the function of virtually implementing functions of file copy/move/delete of Windows Explorer, assuming the BHT as a virtual folder on PC.

(The file transfer tool detects accesses to the virtual folder on PC and performs transmission/reception/deletion of files.)




The following processes are implemented with the file transfer tool:

- (1) Transferring track record files (PC <- BHT: File reception by PC)  
A track record file containing track record data collected on BHT can be transferred to any folder on Windows Explorer by drag and drop operation.
- (2) Transferring operation file (PC -> BHT: File transfer by PC)  
An operation file created and edited with the setting tool can be transferred to BHT on Windows Explorer by drag and drop operation.
- (3) Communication port automatic setting  
Connected BHT is automatically detected and COM port number and communication rate are automatically determined.

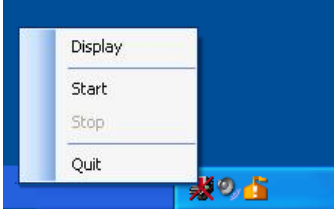
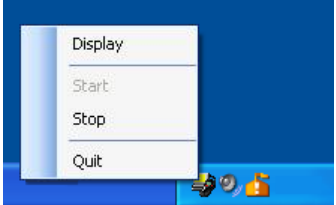
### 4.5.2. Description of file transfer tool

When the file transfer tool is activated, it is stored in the task icon of the Windows task bar.

Task icon indications depend on status of the file transfer tool.

Status		Icon
<b>Halting standby for connection with BHT.</b>		
<b>Starting standby for connection with BHT.</b>	Not connected yet	
	Connected	

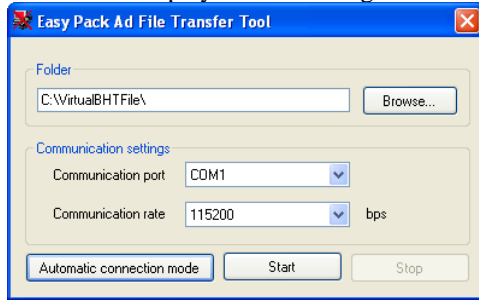
Right clicking on the task icon displays the following menu:

Status	Icon
<b>Halting standby for connection with BHT.</b>	
<b>Starting standby for connection with BHT.</b>	

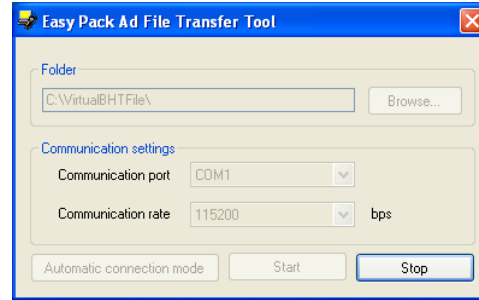
The menu provides the following operations:

Menu	Operation
<b>Display</b>	Displays the main screen of the file transfer tool.
<b>Start</b>	Starts standby status for connection with BHT. (This menu is valid when standby status for connection with BHT is halting.)
<b>Stop</b>	Halts standby status for connection with BHT. (This menu is valid when standby status for connection with BHT is active.)
<b>Quit</b>	Quits the file transfer tool.  <u><b>Point</b></u> Clicking on the [x] button on the main screen does not close the file transfer tool. Quit the file transfer tool on the menu.

The main screen displays the following:



**Halting standby for connection with BHT.**



**Starting standby for connection with BHT.**

		Description
<b>Folder</b>		Specifies a folder to handle the BHT as a virtual folder. A specified folder is handled as a virtual folder for the BHT. Files are transferred to BHT by copying/moving/deleting folder on the specified folder.  Clicking [Browse] allows specifying a folder using the folder dialog for specifying folder.
<b>Communication settings</b>	Communication port	Specifies a communication port and a communication rate used by the file transfer tool
	Communication rate	
<b>[Automatic connection mode] button</b>		Specifies a communication port and a communication rate automatically and starts file transfer. For automatic connection to port, refer to “ <a href="#">4.5.3. About communication port automatic setting</a> ”
<b>[Start] button</b>		Starts connection standby status with BHT.
<b>[Stop] button</b>		Halts connection standby status with BHT.

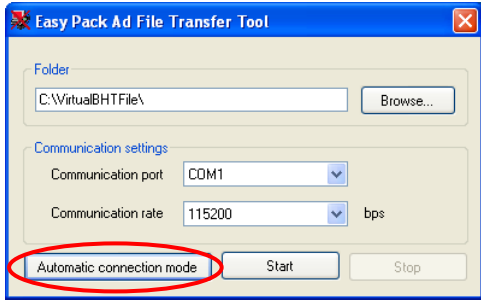
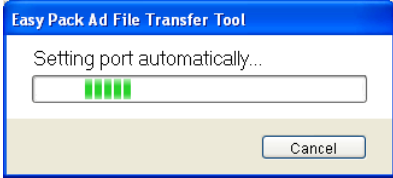

### 4.5.3. About communication port automatic setting

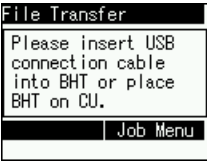

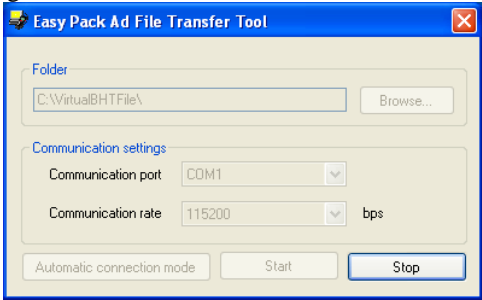
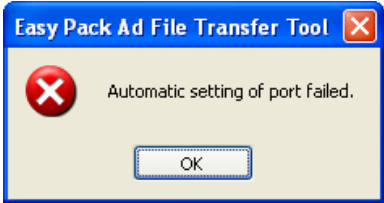

The file transfer tool can be used by automatically specifying a communication port (COM1, ...) to make communication between the file transfer tool and BHT and a communication rate.

The following shows the procedures for automatic settings of communication port:

- The main screen of the file transfer tool appears and “Automatic connection mode” button is clicked.

The following shows the procedures for automatic setting of a communication port.

PC side	BHT side
<p>(1) Start automatic setting of communication port</p> <ul style="list-style-type: none"> <li>Click “Automatic connection mode” button on the main screen of the file transfer tool.</li> </ul> 	
<p>(2) The following dialog appears.</p>  <p><b>Point</b> After the dialog appears, make preparation on the BHT side.</p>	
	<p>(3) Start up the “Easy Pack Ad for BHT-900” and display the operation menu.</p>  <p><b>Point</b> During track record collecting operation, pressing [M2] key returns to "Job Menu".</p>

	<p>(4) Pressing [M1] key displays the following screen.</p>  <p>Under the status above, <b>place the BHT on CU connected with the PC</b>, and wait for completion of automatic setting of a communication port.</p> 
<p>(5) If the BHT is placed on CU, available communication ports and communication rates are searched for. After finding available communication ports and communication rates, the following screen appears and connection begins.</p>  <p><u>Point</u> If no port was found, the following dialog appears.</p> 	<p>(5) Upon completion of automatic settings of a communication port on PC, the following screen appears and connection begins.</p> 

If automatic setting of port failed, verify the following:

- Verify communication rate  
If the communication unit **CU-901 (RS-232C)** is used, verify that **115200 bps** is selected for a communication rate of BHT.  
(CU-901 is not compatible with 460800 bps.)  
For setting procedures of BHT communication rate, refer to “[5.1.2. Communication setting](#)”
- Verifying communication environment  
Verify that CU and PC are connected with each other normally.  
If the communication unit CU-901 (RS-232C) is used, verify that power is supplied.  
If the communication unit CU-921 (USB) is used, verify that the Active-USB COM Port Driver has been installed on PC normally.

## **5. Other functions**

### **5.1. BHT application administrator menu**

Operation applications provide administrator menus.

Administrator menus provide the following functions:

- **Track record file deletion**  
Deletes track record file collected in track record collection operations.
- **Communication settings**  
Specifies a communication rate for transferring files with a communication unit.
- **Version information**  
Displays version information of the “Easy Pack Ad for BHT-900”.
- **Date and time setting**  
Specifies date and time setting of BHT.
- **Application updating**  
Updates main application of the “Easy Pack Ad for BHT-900”.



### 5.1.1. Deleting track record file

Deletes track record files of data collected in track record collecting operations.




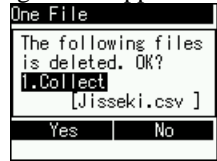
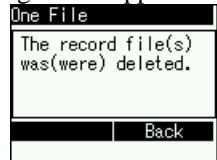

The following two methods are provided to delete a track record file:

- Deleting specified file  
Deletes a track record file of specified track record collecting operation.
- Deleting all files  
Deletes all track record files of registered track record collecting operations.

The following shows the procedures for deleting track record files:






Procedure			
(1)	Start up the "Easy Pack Ad for BHT-900".  <u>Point</u> During operations, pressing [M2] key returns to the operation menu.		The following screen appears. 
(2)	Hold down [SF] key and [M2] key at the same time.	[SF] + [M2]	The following screen appears. 

# Deleting specified track record file

Procedure			
(3)	On "Admin Menu" screen, press numeric key [1] to select "1. Del Rec File" and press the enter key.	[1] [ENT]	<p>The following screen appears.</p> 
(4)	Press numeric key [1] to select "1. One File" and press the enter key.	[1] [ENT]	<p>The following screen appears.</p>  <p>* If two or more track record files exist, those track record file names are displayed on the screen.</p> <p><u>Point</u> If no track record file exists, the following screen appears. The <b>red LED</b> lights up and the buzzer sounds three short mid-tone beeps.</p> 
(5)	<p>Press numeric key [1] to select "1. Collect" and press the enter key.</p> <p><u>Point</u> If two or more track record file exist, press [F5] key and [F6] key to select a track record file to delete.</p>	[ENT]	<p>The following screen appears.</p> 
(6)	<p>Press [M1] key to delete a track record file.</p> <p><u>Point</u> Press [M2] key to cancel deletion.</p>	[M1]	<p>The following screen appears.</p>  <p><u>Point</u> Upon completion of the track record file deletion, <b>blue LED</b> lights up and the buzzer sounds a short high beep.</p>
(7)	Pressing [M2] key to return to "Del Rec File" menu.	[M2]	<p>The following screen appears.</p> 







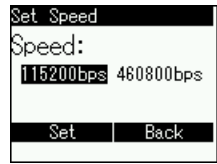
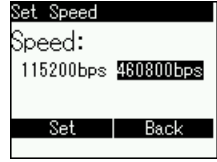
## Deleting all track record files



Procedure		
(3)	On "Admin Menu" screen, press numeric key [1] to select "1. Del Rec File" and press the enter key.	<p>[1] [ENT]</p> <p>The following screen appears.</p> 
(4)	Press numeric key [2] to select "2. All Files" and press the enter key.	<p>[2] [ENT]</p> <p>The following screen appears.</p>  <p><u>Point</u> If no track record file exists, the following screen appears. The <b>red LED</b> lights up and the buzzer sounds three short mid-tone beeps.</p> 
(5)	<p>Press [M1] key to delete a track record file.</p> <p><u>Point</u> Press [M2] key to cancel deletion.</p>	<p>[M1]</p> <p>The following screen appears.</p>  <p><u>Point</u> Upon completion of the track record file deletion, <b>blue LED</b> lights up and the buzzer sounds a short high beep.</p>
(6)	Pressing [M2] key to return to track record file deletion "Del Rec File" menu.	<p>[M2]</p> <p>The following screen appears.</p> 

### 5.1.2. Communication setting

Specify a communication rate of file transfer performed by the communication unit (CU-901, CU-921).

The following shows the procedures for setting a communication rate:



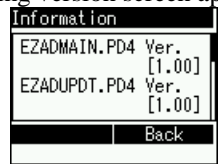
Procedure			
(1)	Start up the "Easy Pack Ad for BHT-900".  <u>Point</u> During operations, pressing [M2] key returns to "Job Menu".		The following screen appears. 
(2)	Hold down [SF] key and [M2] key at the same time.	[SF] + [M2]	The following screen appears. 
(3)	Press numeric key [2] to select "2. Set Com Para" on the screen and press the enter key.	[2] [ENT]	The following screen appears. 
(4)	Press the enter key.	[ENT]	The following screen appears.  <p>* Selection status depends on specified communication rates.</p>
(5)	Press [F7] key or [F8] key to select a communication rate.  <u>Point</u> To use the communication unit <b>CU-901 (RS-232C)</b> , be sure to select the <b>communication rate of 115200 bps</b> . (CU-901 is not compatible with 460800 bps.)  To use the communication unit <b>CU-921 (USB)</b> , specifying the communication rate of 460800 bps can reduce file transfer time.	[F7] Or [F8]	Pressing [F7] key and [F8] key switches selection status of communication rates.  Select communication rate 115200 bps.   Select communication rate 460800 bps. 

(6)	Press [M2] key.	[M1]	<p>Pressing [M1] key sets a communication rate and displays the following screen.</p>  <p><u>Point</u></p> <p>Upon completion of a communication rate, the <b>blue LED</b> lights up and the buzzer sounds a short high beep.</p>
	To cancel communication rate settings, press [M2] key.	[M2]	<p>Pressing [M2] key cancels settings of communication rate and displays the following screen.</p> 

### 5.1.3. Version information

Displays the version information of the “Easy Pack Ad for BHT-900”.

The following shows the procedures for displaying the version information.

Procedure			
(1)	Start up the “Easy Pack Ad for BHT-900”.  <u>Point</u> During operations, pressing [M2] key returns to the operation menu.		The following screen appears. 
(2)	Hold down [SF] key and [M2] key at the same time.	[SF] + [M2]	The following screen appears. 
(3)	Press numeric key [3] to select “3. Information” and press the enter key.	[3] [ENT]	The following version screen appears.   * A version display depends on environments. * Press [M2] to close the screen.  <u>Point</u> Pressing [F5] and [F6] keys scrolls the screen to verify all items.



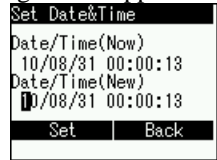

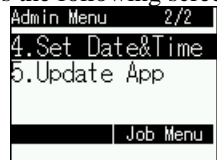

[Reference] Items verified in version information.

Display name	Description
<b>EZADMAIN.PD4 version</b>	Displays version information of operation application.
<b>EZADUPDT.PD4 version</b>	Displays version information of updater application.
<b>EZADMAIN.CFG version</b>	Displays version information of definition file.
<b>System version</b>	Displays version information of BHT system.
<b>Device number</b>	Displays device number of BHT (16 characters).
<b>Serial number</b>	Displays serial number of BHT (6 characters).

#### 5.1.4. Date setting


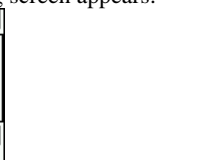



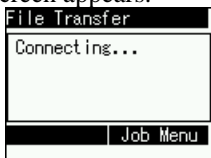
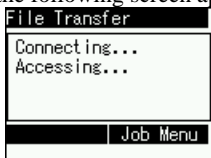

Specifies date and time setting of BHT.

The following shows the setting procedures of date and time:



Procedure			
(1)	<p>Start up the "Easy Pack Ad for BHT-900".</p> <p><u>Point</u> During operations, pressing [M2] key returns to "Job Menu".</p>		<p>The following screen appears.</p> 
(2)	<p>Hold down [SF] key and [M2] key at the same time.</p>	[SF] + [M2]	<p>The following screen appears.</p> 
(3)	<p>Press numeric key [4] to select "4. Set Date&amp;Time" and press the enter key.</p> <p><u>Point</u> Date and time settings are provided on the next screen. Use [F5] key and [F6] key to switch the menu screens.</p>	[4] [ENT]	<p>The following screen appears.</p> 
(4)	<p>Enter date and time by pressing numeric keys.</p>	Numeric keys	
(5)	<p>Press [M1] key.</p>	[M1]	<p>Pressing [M1] key specifies date and time and displays the following screen.</p>  <p><u>Point</u> Upon completion of date and time, the <b>blue LED</b> lights up and the buzzer sounds a short high beep.</p>
	<p>To cancel date and time settings, press [M2] key.</p>	[M2]	<p>Pressing [M2] key cancels date and time settings and displays the following screen.</p> 

## 5.2. Communication menu

Communication menu is used when a PC obtains a track record collection file from the BHT. Displays of communication menu depend on communication methods.

	Direct connection	Using communication unit
(1) Initial screen	<p>Upon startup of the communication menu, the following screen appears:</p> 	<p>Upon startup of the communication menu, the following screen appears:</p> 
(2) Connection with PC	<p>When the BHT and PC are connected with each other via USB, the following screen appears.</p>  <p>Upon completion of connection, the following screen appears.</p> 	<p>When the BHT is mounted on the communication unit, the following screen appears.</p>  <p>Upon completion of connection, the following screen appears.</p> 
(3) Transferring file	<p>*1</p>	<p>During file transfer executed between the BHT and the PC, the following screen appears.</p>  <p>Pressing [M2] key interrupts file transfer and displays the following screen.</p> 

\*1 Under direct connection, a screen of error occurring in file transfer does not appear.

(4) Error occurrence	*1	<p>If an error occurs during connection, the following screen appears.</p>  <p>(xx: BHT execution error)</p> <p>Pressing [M1] key resumes connection. The following screen appears.</p> 
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\*1 Under direct connection, a screen of error occurring in file transfer does not appear.

## 6. Troubleshooting

This section describes errors that may occur on the “Easy Pack Ad for BHT-900”.

### 6.1. Errors on BHT application (operating application)

When an error occurs on operating application, the following messages appear on the BHT screen:

Timing of occurrence	Error description (display)	Action
Upon startup	Please run Easy Pack Ad for BHT-900 Setting Tool and review the parameter.	The data in operation file is invalid. Correct the data in operation file. To correct the data in an operation file, start up the “Easy Pack Ad for BHT-900” setting tool and read the operation file. The setting tool issues a warning about invalid parameters in the operation file. For reading an operation file using the setting tool, refer to <a href="#">“4.4.3. Reading operation file”</a>
Executing track record collecting operation	The number of record is 99999 count. Please transfer the record file to PC and delete it.	An upper limit of a track record file was reached. Transfer the track record file to a PC and delete the track record file. For the procedures of transferring a track record file, refer to <a href="#">“4.2.2.2 Obtaining track record file”</a> For the procedures of deleting a track record file, refer to <a href="#">“5.1.1. Deleting track record file”</a> .
	There is insufficient memory of BHT.	There is not enough memory (area) in BHT for saving input data. Transfer the track record file to the PC and delete the track record file. For the procedures of transferring a track record file, refer to <a href="#">“4.2.2.2 Obtaining track record file”</a> For the procedures of deleting a track record file, refer to <a href="#">“5.1.1. Deleting track record file”</a> .
	The format of the record file does not correspond with the job.	The track record file used in the current track record operation is already used in some other operation. Transfer the track record file to a PC and delete the track record file. For the procedures of transferring a track record file, refer to <a href="#">“4.2.2.2 Obtaining track record file”</a> For the procedures of deleting a track record file, refer to <a href="#">“5.1.1. Deleting track record file”</a> .
Executing file transfer	Connect failed.	File transfer failed during file transfer operation using the “Easy Pack Ad File Transfer Tool”. There may be a problem with communication environment. For verifying communication environment, refer to <a href="#">“4.5.3. About communication port automatic setting”</a> .
Updating application	EZADUPDT.PD4 is not found. Please download EZADUPDT.PD4.	Updating application “EzAdUpdt.pd4” is not found. Download “EzAdUpdt.pd4” using the transfer menu. For details of the transfer menu, refer to <a href="#">“5.2. Communication menu”</a> .



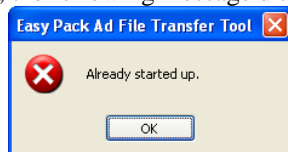
## 6.2. Errors in setting tool

When an error occurs on the setting tool, the following messages appear:

Timing of occurrence	Error description (display)	Action
In reading operation file	Reading error	The data in an operation file is defective. For information to be displayed, refer to " <a href="#">4.4.3. Reading operation file</a> ".
In editing track record collecting operation	A file extension is invalid. Valid extensions are ".CSV" and ".TXT" only.	A file name extension specified in "Operation file name" of the track record collecting operation is invalid. Only two extensions, ".CSV" and ".TXT" are specifiable for a track record file.
	A file name has not been specified. Enter a file name.	A file name specified in "Track record file name" of the track record collecting operation is blank. Enter a track record file name.
	A file name is invalid. Use of "." (period) as a heading character of file name is not allowed.	A period "." is specified as a heading character of a file name specified in "Track record file name" of the track record collecting operation. Use of "." (period) as a heading character is not allowed in a track record file name. Enter a different file name.
	A file name is invalid. Multiple use of "." (period) in the characters of file name is not allowed.	Multiple periods "." are specified as a heading character of a file name specified in "Track record file name" of the track record collecting operation. Use of "." (period) as a heading character is not allowed in a track record file name. Enter a different file name.
	A specified file name is already used in some other operation. Use a different file name.	A file name specified in "Track record file name" of the track record collecting operation is already used in another operation. The "Easy Pack Ad for BHT-900" does not allow using the same track record file in different operations. Enter a different file name for a track record file.
In saving operation file	No operation is available. Add an operation.	No operation is found. One or more operation is required. Add an operation.
	No data item is found in the track record collecting operation. Add one or more data items to the track record collecting operation.	No data item is found in the track record collecting operation. A track record operation requires one or more data item. Add a data item to the track record collecting operation.
	A track record file name of the track record collecting operation is invalid. Verify a track record file name.	A track record file name of the track record collecting operation is invalid. Verify the track record file name of the track record collecting operation. * This message appears in the case where an invalid track record file name was specified when a track record file was read in, and the track record file name was saved without correcting.

### 6.3. Errors in file transfer tool

If an error occurs in the file transfer tool, the following message dialog appears.



**Example: Case where the communication tool has been activated.**

The following describes details of the messages:

Timing of occurrence	Error description (display)	Action
Upon startup	Already started up.	This message appears if the file transfer tool has already been started up. <b>Note</b> <b>Activating two or more file transfer tools is not allowed.</b>
In automatic setting of port	Automatic setting of port failed.	This message appears if automatic setting of a communication port failed. Verify the communication environment. For the procedures of verifying communication environment, refer to <a href="#">“4.5.3. About communication port automatic setting”</a> . After verifying the communication environment, perform automatic setting of communication port again.
Upon starting connection with BHT	Error response was sent from BHT.  Verify the following: <ul style="list-style-type: none"> <li>• The BHT in use is supported.</li> <li>• The file name is not the same as that of a program file that is running already.</li> </ul>	This message appears if an error response is sent from BHT. The operational application may be running in other system than BHT-900. The transfer menu of operational application (“EzAdMain.pd4”) cannot transfer “EzAdMain.pd4”. Transfer “EzAdMain.pd4” with an updating application.  The updating application (“EzAdUpdt.pd4”) cannot transfer “EzAdUpdt.pd4”. Transfer “EzAdUpdt.pd4” using the transfer menu of an operational application.
	Creation of folder failed. Verify the following: <ul style="list-style-type: none"> <li>• The length of a specified folder name is between 1 character or longer and 248 character or shorter.</li> <li>• Characters :, *, ?, “, &lt;, &gt;, and   are not used.</li> <li>• Authorization to access to this folder has been specified.</li> </ul>	This message appears if creation of a folder specified by the file transfer tool failed. Verify the specified folder name.
	The folder is not accessible. Verify that the specified folder is available.	This message appears if access to a folder specified by the file transfer tool failed. Verify if the specified folder is accessible.
	The files remains in the specified folder. The files may not have been sent to BHT. After saving the files in another folder, make the specified folder empty and make connection of BHT again.	This message appears if the files used in a previous connecting session remains in the files specified by the file transfer tool. If the files remain, the previous connecting session may not have terminated normally. Save the remaining files in a different folder, make the folder empty, and then attempt connection again. In addition, transfer remaining files as required.

	Opening a communication port failed. The port may be used by another application already. To make connection again, terminate the application using the port and attempt restarting.	This message appears when the port used by the file transfer tool is already used by another application. Terminate the application and then make re-connection.
	Opening a communication port failed. An invalid communication port may have been selected.  Do you want to start in automatic communication mode?	The port settings are initial status (unspecified setting). Specify settings of port in automatic connection mode or change the port settings manually, and make connection again. For the automatic connection mode, refer to <a href="#">“4.5.3. About communication port automatic setting”</a> .
	Opening a communication port failed. An invalid communication rate may have been selected.  Do you want to start in automatic communication mode?	This message appears when an invalid communication rate to be prepared on this tool is set. Specify settings of rate in automatic connection mode or change the rate settings manually, and make connection again. For the automatic connection mode, refer to <a href="#">“4.5.3. About communication port automatic setting”</a> .
	File transfer failed. (xx) (xx: Error code)	In connecting process of BHT, this message appears when an error occurs in receiving a file from BHT.
	Timeout occurred in the communication sequence. The BHT may have been disconnected from CU during communication.	This message appears when a communication timeout occurs in connecting process with BHT. The BHT may have been disconnected from CU during connecting process with BHT. Place CU on BHT and attempt re-connection.
	Connection was cancelled.	This message appears when the “Cancel” button is clicked on the progress dialog that appears during connecting process with BHT.
Connecting with BHT	Details: Folder is not accessible. Verify if a specified folder is available. (*1)	This message appears when access to the folder specified by the file transfer tool failed in connection with BHT. Access authorization of the specified folder may have been changed during connection with BHT. Verify folder access authorization.
	Details: File is not accessible. Verify access authorization of file and folder. (*1)	This message appears when a transferring file is not accessible during connection with BHT. Access authorization of the transferring file may have been changed during connection with BHT. Verify file access authorization.
	Details: File name is invalid. Verify the following: • File name is in 8.3 format. • An extension is not “.FLD” or “.ZIP.” (*1)	This message appears when creating/copying/moving an invalid file is attempted. Because the file name cannot be used in BHT, the file is not transferred to BHT.
	Details: A timeout occurred in a communication sequence. BHT was disconnected from CU during communication. (*1)	The message appears when a communication timeout occurs during connection with BHT. The BHT may have been disconnected from CU. Place the BHT on CU and attempt re-connecting.
	Details: File transfer failed. (xx) (xx: Error code) (*1)	In connecting process of BHT, this message appears when an error occurs in receiving a file from BHT.
	Details: Connection was cancelled. (*1)	This message appears when the “Cancel” button is clicked on the progress dialog that appears during file transfer with BHT.
	Renaming File failed. File name is undone.	This message appears when a file name cannot rename. The file name is undone and transmitted to BHT.

\*1. The following message is added to the message box during connection with BHT.

“Disconnection was made.”  
If the files remain in a specified folder, the files may not have been sent to BHT.  
Save the files in different folder, make the specified folder empty and make connection of BHT again.

## **7. Uninstalling**

On “Add or remove programs” of Windows to uninstall, select an installed application and execute uninstalling.

- Setting tool for Easy Pack Ad for BHT-900
- File transfer tool for Easy Pack Ad
- Active USB-COM Port Driver

## 8. Appendix

### 8.1. Exception errors of file transfer tool

The following error messages may be displayed in the file transfer tool.

If the following error codes appear, restart the file transfer tool or contact an administrator:

Error description (display)	
Internal error Restart the file transfer tool.	An unexpected communication error occurred in the file transfer tool. Restarting the file transfer tool solves the problem.
Internal error Received data is invalid. Restart the file transfer tool.	
Internal error Data transfer failed. Restart the file transfer tool.	
Internal error The port was closed unexpectedly. Restart the file transfer tool.	
Internal error Opening a communication port failed. The port may be used by another application already. To make connection again, terminate the application using the port and attempt restarting.	An unexpected error with opening a port occurred in the file transfer tool. The specified port may be currently used by another application. Terminating the application and restarting the file transfer tool solves the problem.
Internal error Creation of a temporary folder failed. Contact an administrator.	An unexpected file access error occurred in the file transfer tool. Verify access authorization of the file and folder.
Internal error A temporary folder is not accessible. Contact an administrator.	
Internal error A transferring file is not accessible. Contact an administrator.	

## **8.2 About operation file**

The operation files used in the “Easy Pack Ad for BHT-900” can be edited directly on a tool such as text editor, without using the “Easy Pack Ad for BHT-900” setting tool.

Details of the operation file format and values are described in the operation file. Edit the file in accordance with the descriptions.

### **Escape clause (Caution)**

If an invalid value is specified in an operation file, the “Easy Pack Ad for BHT-900” may behave unexpectedly. The manufacturer takes no responsibility for loss of a file due to an unexpected action. Specify values at your own risk.

BHT Software

Easy Pack Ad for BHT-900 User's Manual

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