



Project Template

Barcode Verifier

Descriptions of Functions/Project data

IDEC CORPORATION

Introduction

This text describes functions and project data of a project template called "Barcode Verifier."
Note that this template is only a sample and that IDEC does not guarantee operations of the template.

History of Issues

| | |
|----------------|---------------|
| October 2006 | First Edition |
| September 2009 | 2nd Edition |

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1 Functions of the Barcode Verifier

This barcode verifier template registers a maximum of 300 types of barcode data. The barcode verifier compares the registered data with data scanned on the barcode reader (IDEC DATALOGIC's GRYPHONE), which is connected to IDEC's programmable operator interface HG2F. It then displays the verification results on the HG2F screen.

The barcode verifier offers the following functions:

- Verification of registered data
Compares a maximum of 300 types of registered barcode data with barcode data read on a barcode reader.
The pre-registered data can be displayed in 20 alphanumeric or single-byte kana characters.
- Verification of specified data
Compares and verifies barcode data freely specified using the keypad on the operator interface, etc., with barcode data scanned on a barcode reader.
- Verification of sequentially scanned data
Compares and verifies barcode data that is scanned sequentially.

Also the pre-registered data can be saved to CF Card and the verification result can be logged.

The texts displayed on the screen of HG can be changed to Japanese/English/Chinese with pushing the left top corner on the screen.

1-1 Verifying pre-registered data

Pre-registered data verification screen

| Verify Mode: Pre-registered data | | |
|----------------------------------|------------------------|---------------|
| [Empty Input Field] | | Start |
| Result | | |
| No. | Barcode/Replacing data | Count |
| | | |
| | | Register data |

Procedures

- 1) Select Pre-registered data in "Verify Mode".
- 2) If barcode data to be verified has not been registered, press the "Register Data" button and register barcode data on the displayed data registration screen. (Refer to descriptions on the data registration screen for procedures of data registration.)
- 3) Press the "Start" button to get ready for verification. Data scanned on the barcode reader is verified. OK is displayed and a matching registration number and barcode (replacing data) are displayed if matching data exists. If matching data exists, the number of verifications is incremented on "Count" cell.
- 4) Pressing the "Count" cell initializes the number of verifications.

The texts displayed on the screen can be changed to Japanese/English/Chinese with pushing the left top corner on the screen.

Data registration screen

| Verify Mode: Data Registration | | |
|--------------------------------|---------------|----------------|
| 4945247676891 | | Register |
| | | Complete |
| Registered data | | |
| No. | Barcode | Replacing data |
| 1 | 4909411022808 | Barcode1 |
| 2 | 4901777137943 | ハ`-コ-ト`2 |
| 3 | 4945247676891 | |
| 4 | | |
| 5 | | |

Procedures

- 1) When a barcode is scanned on a barcode reader, scanned data appears next to the "Register" button.
- 2) Pressing the "Register" button registers the scanned barcode data under the number highlighted on the registration data list.
- 3) Pressing a cell in the barcode line displays a keypad, allowing registration and change of codes.
- 4) Pressing a cell in the replacement data line displays a keypad, allowing registration of a character string of up to 20 alphanumeric and single-byte kana characters for replacement data of a barcode.
- 5) Pressing an arrow button on the registration data list allows you to scroll the list display up and down. Pressing between the arrow buttons displays a keypad, allowing entry of a number to which the screen is scrolled.
- 6) Pressing the "Complete" button completes registration to return to the pre-registered data verification screen.

<Others>

- "?" is specifiable for a barcode to be registered. A digit with "?" specified allows any number. In other words, that digit allows entry of any number.
- For HG2F ready for a CF card, the registered barcode/replacement data is stored in a CF card at pressing "Complete" button. Pressing the ">>" button invokes Registered data screen. All the registered data and replacing data can be saved to CF Card and initialize.

Registered data screen

Registered data [X]

Copy Registered data from CF

Initialize Registered data

Close

1-2 Verification of Freely Specified Data

Freely specified data verification screen

| Verify Mode | | Freely specified data | |
|----------------|---------------|-----------------------|-------------|
| 4514603109511 | | | Specify |
| | | | Select list |
| Specified data | | | |
| No. | Barcode | Replacing data | |
| | 4514603109511 | | |
| Start | Result | Count | |
| | | OK: 0 | NG: 0 |

Procedures

- 1) Select Freely specified data in “Verify Mode”.
- 2) Data is specifiable in 3 methods: Scanning on a barcode reader, selecting from a registered data list, and entering data directly on the HG2F screen keypad.
- 3) To verify data scanned on a barcode reader, press the “Specify” button displayed next to the barcode data.
- 4) To verify data in the pre-registered data list, specify barcode data on the “Registered data list” screen displayed after pressing the “Select List” button. (For procedures of data registration, refer to descriptions on the data registration screen.)
In this case, a registration number and replacing data for specified barcode data are also displayed.
- 5) To verify data entered directly from a keypad, enter and edit data directly on the keypad displayed by pressing the “Barcode” cell of specified data. A digit with “?” specified allows entry of any number.
- 6) Press the “Start” button to get ready for verification. Data scanned on the barcode reader is verified. If matching data exists, OK is displayed and the OK count for the number of verifications is incremented. If the data does not match, NG is displayed and the NG count for the number of verifications is incremented.
- 7) Pressing the “Count” cell initializes the number of verifications.

Pre-registered data list screen

| Registered data List | | |
|----------------------|---------------|----------------|
| Registered data | | |
| No. | Barcode | Replacing data |
| 1 | 4909411022808 | |
| 2 | 4901777137943 | |
| 3 | 4945247676891 | |
| 4 | | |
| 5 | | |
| Select | | Close |

Procedures

- 1) Pressing an arrow button on the registration data list allows you to scroll the list display up and down. Pressing between the arrow buttons displays a keypad, allowing entry of a number to select.
- 2) Pressing the “Select” button specifies barcode data of the highlighted display for verification and returns to the freely specified data verification screen.
- 3) Pressing the “Close” button cancels selection from the pre-registered data list and returns to the freely specified data verification screen.

1-3 Verification of sequentially scanned data

Sequentially scanned data verification screen

| | | |
|-----------------------|---------------------------|-------------|
| Verify Mode | Sequentially scanned data | |
| 4901777160903 | | |
| Specify | | |
| Specified data | | |
| Previous scanned data | | |
| 4901777160903 | | |
| Start | Result | Count |
| | | OK: 0 NG: 0 |

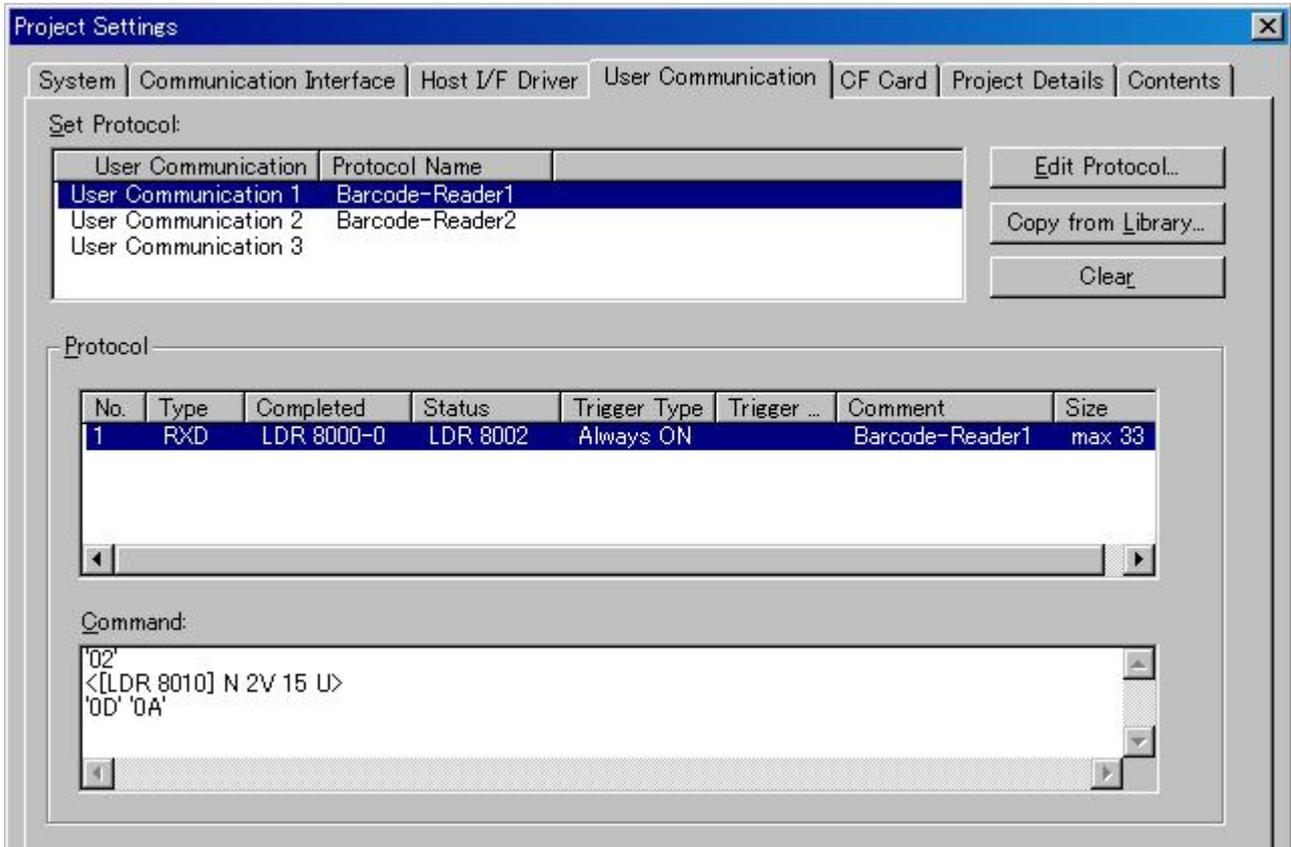
Procedures

- 1) Select Sequentially scanned data in “Verify Mode”.
- 2) Initial data for sequential scanning is specifiable in 2 methods: Scanning on a barcode reader, and entering data directly on the HG2F screen keypad.
- 3) To verify data scanned on a barcode reader, press the “Specify” button displayed next to the barcode data.
- 4) To verify data entered directly from a keypad, enter and edit data directly on the keypad displayed by pressing the “Previously scanned data” cell of specified data.
- 5) Press the “Start” button to get ready for verification. Data scanned on the barcode reader is verified. If data matches previously scanned data, OK is displayed and the OK count for the number of verifications is incremented. If the data does not match, NG is displayed and the NG count for the number of verifications is incremented.
- 6) Pressing the “Count” cell initializes the number of verifications.

2 Descriptions of Project Data

This section describes programs of this project template.

2-1 Settings of User Communication



The following devices are used for user communication 1 and 2:

Barcode-Reader1

| Device | Description |
|------------|--|
| LDR 8000-0 | Reception completion bit (Turns on when data reception is complete. <Automatically turned off.>) |
| LDR 8002 | Reception status (Bit 0 to 14: reception data error under ON status; Bit 15: Timeout under ON status <1 second>) |
| LDR 8003 | Number of received bytes |
| LDR 8010 | Received data 1, Received data 2 |
| LDR 8011 | Received data 3, Received data 4 |
| | |
| LDR 8016 | Received data 13, Received data 14 |

Barcode-Reader2

| Device | Description |
|------------|--|
| LDR 8050-0 | Reception completion bit (Turns on when data reception is complete. <Automatically turned off.>) |
| LDR 8052 | Reception status (Bit 0 to 14: reception data error under ON status; Bit 15: Timeout under ON status <1 second>) |
| LDR 8053 | Number of received bytes |
| LDR 8060 | Received data 1, Received data 2 |
| LDR 8061 | Received data 3, Received data 4 |
| | |
| LDR 8066 | Received data 13, Received data 14 |

* The received data is stored in LDR in ASCII data format by filling from the higher byte.

2-2 Base screen 1 (Pre-registered data verification screen)

Pre-registered data verification screen

| No. | Barcode/Replacing data | Count |
|-----|------------------------|-------|
| 123 | ¥@ ¥@ | 123 |

The following objects are assigned to base screen 1:

| No. | Name | Type | Device | Trigger Type | Trigger Condition |
|-----|----------------------|-----------------------|----------|-----------------------------------|-------------------|
| 1 | Text | Text | | | |
| 2 | Rectangle | Rectangle | | | |
| 3 | Rectangle | Rectangle | | | |
| 4 | Rectangle | Rectangle | | | |
| 5 | Text | Text | | | |
| 6 | Text | Text | | | |
| 7 | Text | Text | | | |
| 8 | Save VerifyMode LKRD | Word Write Command | LKR 0 | 0: Rising-edge | [LSM 1] |
| 9 | Start Button | Bit Button | LBM 0 | 3: Always ON | |
| 10 | Reset Reading Data | Word Write Command | LBR 0 | 0: Rising-edge | [LBM 0] |
| 11 | Reset Reading Flag | Bit Write Command | LBM 2 | 0: Rising-edge | [LBM 0] |
| 12 | Reset the Display | Word Write Command | LBR 0 | 1: Falling-edge | [LBM 0] |
| 13 | Verification Script | Screen Script Command | 103 | 0: Rising-edge | [LBM 2] |
| 14 | DisplayRegisteredNo. | Numerical Display | LBR 31 | 6: While satisfying the condition | [LBR 30] == 1 |
| 15 | Display Barcode | Message Display | LBR 10 | 3: Always ON | |
| 16 | DisplayReplacingData | Message Display | LBR 20 | 3: Always ON | |
| 17 | DisplayVerifyCounter | Numerical Display | LDR 7000 | 6: While satisfying the condition | [LBR 30] != 0 |
| 18 | DisplayVerifyResult | Multi-State Lamp | LBR 30 | | |
| 19 | Goto Registration | Goto Screen Button | 5 | 5: While OFF | [LBM 0] |
| 20 | Initialize Counter | Goto Screen Button | 3 | 5: While OFF | [LBM 0] |

2-3 Base screen 2 (Freely specified data verification screen)

Freely specified data verification screen

| | | |
|--|---------------|---------------------|
| Verify Mode Freely specified data ▼ | | |
| ¥@ | | Specify |
| Specified data | | Select list |
| No. | Barcode | Replacing data |
| 123 | ABCDEFGHIJKLM | ¥@ |
| Start | Result | Count |
| | | OK: 12345 NG: 12345 |

The following objects are assigned to base screen 2:

| No. | Name | Type | Device | Trigger Type | Trigger Condition |
|-----|----------------------|-----------------------|----------|-----------------------------------|-------------------|
| 1 | Text | Text | | | |
| 2 | Rectangle | Rectangle | | | |
| 3 | Rectangle | Rectangle | | | |
| 4 | Rectangle | Rectangle | | | |
| 5 | Text | Text | | | |
| 6 | Text | Text | | | |
| 7 | Text | Text | | | |
| 8 | Rectangle | Rectangle | | | |
| 9 | Text | Text | | | |
| 10 | Rectangle | Rectangle | | | |
| 11 | Text | Text | | | |
| 12 | Text | Text | | | |
| 13 | Text | Text | | | |
| 14 | Save VerifyMode LKRD | Word Write Command | LKR 0 | 0: Rising-edge | [LSM 1] |
| 15 | Initial Setting | Screen Script Command | 105 | 0: Rising-edge | [LSM 1] |
| 16 | Specify Reading Data | Bit Button | LBM 1 | 5: While OFF | [LBM 0] |
| 17 | Data Specify Script | Screen Script Command | 108 | 0: Rising-edge | [LBM 1] |
| 18 | Goto Registration | Goto Screen Button | 6 | 5: While OFF | [LBM 0] |
| 19 | DisplayRegisteredNo. | Numerical Display | LDR 25 | 6: While satisfying the condition | [LDR 25] != 0 |
| 20 | Display/Edit Barcode | Character Input | LBR 10 | 5: While OFF | [LBM 0] |
| 21 | DisplayReplacingData | Message Display | LBR 20 | 3: Always ON | |
| 22 | Start Verify | Bit Button | LBM 0 | 3: Always ON | |
| 23 | Reset reading Flag | Bit Write Command | LBM 2 | 0: Rising-edge | [LBM 0] |
| 24 | Reset Verify Result | Word Write Command | LBR 30 | 1: Falling-edge | [LBM 0] |
| 25 | Verification Script | Screen Script Command | 104 | 0: Rising-edge | [LBM 2] |
| 26 | DisplayVerifyResult | Multi-State Lamp | LBR 30 | | |
| 27 | Display OK Counter | Numerical Display | LDR 7300 | 3: Always ON | |
| 28 | Display NG Counter | Numerical Display | LDR 7301 | 3: Always ON | |
| 29 | Initialize Counter | Goto Screen Button | 3 | 5: While OFF | [LBM 0] |

2-4 Base screen 3 (Sequentially scanned data verification screen)

Sequentially scanned data verification screen

Verify Mode **Sequentially scanned data** ▼

¥@ Specify

Specified data

Previous scanned data
ABCDEFGHI JKLM

Start

Result

Count
OK: 12345 NG: 12345

The following objects are assigned to base screen 3:

| No. | Name | Type | Device | Trigger Type | Trigger Condition |
|-----|----------------------|-----------------------|----------|-----------------|-------------------|
| 1 | Text | Text | | | |
| 2 | Rectangle | Rectangle | | | |
| 3 | Text | Text | | | |
| 4 | Rectangle | Rectangle | | | |
| 5 | Rectangle | Rectangle | | | |
| 6 | Text | Text | | | |
| 7 | Text | Text | | | |
| 8 | Text | Text | | | |
| 9 | Text | Text | | | |
| 10 | Save VerifyMode LKRD | Word Write Command | LKR 0 | 0: Rising-edge | [LSM 1] |
| 11 | Specify Reading Data | Bit Button | LBM 1 | 5: While OFF | [LBM 0] |
| 12 | Data Specify Script | Screen Script Command | 108 | 0: Rising-edge | [LBM 1] |
| 13 | Display/Edit Barcode | Character Input | LDR 50 | 5: While OFF | [LBM 0] |
| 14 | Start Verify | Bit Button | LBM 0 | 3: Always ON | |
| 15 | Reset reading Flag | Bit Write Command | LBM 2 | 0: Rising-edge | [LBM 0] |
| 16 | Reset Verify Result | Word Write Command | LBR 30 | 1: Falling-edge | [LBM 0] |
| 17 | Verification Script | Screen Script Command | 106 | 0: Rising-edge | [LBM 2] |
| 18 | DisplayVerifyResult | Multi-State Lamp | LBR 30 | | |
| 19 | Display OK Counter | Numerical Display | LDR 7302 | 3: Always ON | |
| 20 | Display NG Counter | Numerical Display | LDR 7303 | 3: Always ON | |
| 21 | Initialize Counter | Goto Screen Button | 3 | 5: While OFF | [LBM 0] |

2-5 Base screen 4 (Data Registration screen)

Data Registration screen

Verify Mode Data Registration

¥@ Register

Complete

Registered data

| No. | Barcode | Replacing data |
|-----|---------|-----------------------|
| 1 | ¥@ | ABCDEFGHIJKLMN OPQRST |
| 2 | ¥@ | ABCDEFGHIJKLMN OPQRST |
| 3 | ¥@ | ABCDEFGHIJKLMN OPQRST |
| 4 | ¥@ | ABCDEFGHIJKLMN OPQRST |
| 5 | ¥@ | ABCDEFGHIJKLMN OPQRST |

The following objects are assigned to base screen 4:

| No. | Name | Type | Device | Trigger Type | Trigger Condition |
|-----|----------------------|-----------------------|----------|--------------------------|---|
| 1 | Text | Text | | | |
| 2 | Rectangle | Rectangle | | | |
| 3 | Rectangle | Rectangle | | | |
| 4 | Text | Text | | | |
| 5 | Text | Text | | | |
| 6 | Rectangle | Rectangle | | | |
| 7 | Text | Text | | | |
| 8 | Rectangle | Rectangle | | | |
| 9 | Save VerifyMode LKR0 | Word Write Command | LKR 0 | 0: Rising-edge | [LSM 1] |
| 10 | Initial Settings | Screen Script Command | 109 | 0: Rising-edge | [LSM 1] |
| 11 | 1st Registered No. | Message Display | LDR 30 | 3: Always ON | |
| 12 | 1st Barcode | Character Input | LDR 1000 | 3: Always ON | |
| 13 | 1st Replacing Data | Character Input | LDR 4000 | 3: Always ON | |
| 14 | 2nd Registered No. | Message Display | LDR 32 | 3: Always ON | |
| 15 | 2nd Barcode | Character Input | LDR 1000 | 3: Always ON | |
| 16 | 2nd Replacing Data | Character Input | LDR 4000 | 3: Always ON | |
| 17 | 3rd Registered No. | Message Display | LDR 34 | 3: Always ON | |
| 18 | 3rd Barcode | Character Input | LDR 1000 | 3: Always ON | |
| 19 | 3rd Replacing Data | Character Input | LDR 4000 | 3: Always ON | |
| 20 | 4th Registered No. | Message Display | LDR 36 | 3: Always ON | |
| 21 | 4th Barcode | Character Input | LDR 1000 | 3: Always ON | |
| 22 | 4th Replacing Data | Character Input | LDR 4000 | 3: Always ON | |
| 23 | 5th Registered No. | Message Display | LDR 38 | 3: Always ON | |
| 24 | 5th Barcode | Character Input | LDR 1000 | 3: Always ON | |
| 25 | 5th Replacing Data | Character Input | LDR 4000 | 3: Always ON | |
| 26 | Up Scroll Button | Bit Button | LBM 5 | 3: Always ON | |
| 27 | Down Scroll Button | Bit Button | LBM 6 | 3: Always ON | |
| 28 | ScrollControlScript | Screen Script Command | 111 | 2: Satisfy the condition | [LBM 5] [LBM 6] == 1 |
| 29 | Register Button | Bit Button | LBM 1 | 3: Always ON | |
| 30 | Register Script | Screen Script Command | 112 | 0: Rising-edge | [LBM 1] |
| 31 | Update List Script | Screen Script Command | 110 | 2: Satisfy the condition | 1 == [LSM 1] [LBM 1] [LBM 5] [LBM 6] [LSM 12] |
| 32 | Specify Active No. | Numerical Input | LDR 20 | 3: Always ON | |
| 33 | DataRegistrationFlag | Word Button | LBR 32 | 3: Always ON | |
| 34 | Goto PreviousScreen | Goto Screen Button | 1 | 3: Always ON | |
| 35 | Open Extend Screen | Goto Screen Button | 4 | 3: Always ON | |

2-6 Base screen 6 (Data Registration list screen)

Data Registration list screen

Registered data List

Registered data

| No. | Barcode | Replacing data | |
|-----|---------------|----------------------|---|
| ¥@ | ABCDEFGHIJKLM | ABCDEFGHIJKLMNOPQRST | ▲ |
| ¥@ | ABCDEFGHIJKLM | ABCDEFGHIJKLMNOPQRST | |
| ¥@ | ABCDEFGHIJKLM | ABCDEFGHIJKLMNOPQRST | |
| ¥@ | ABCDEFGHIJKLM | ABCDEFGHIJKLMNOPQRST | |
| ¥@ | ABCDEFGHIJKLM | ABCDEFGHIJKLMNOPQRST | ▼ |

Select

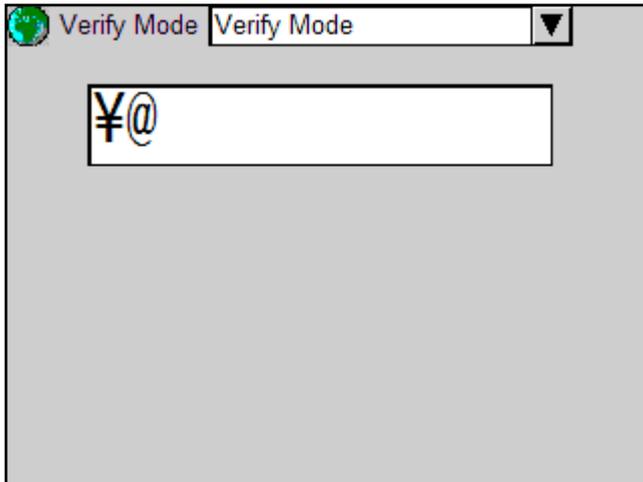
Close

The following objects are assigned to base screen 6:

| No. | Name | Type | Device | Trigger Type | Trigger Condition |
|-----|---------------------|-----------------------|----------|--------------------------|---|
| 1 | Text | Text | | | |
| 2 | Text | Text | | | |
| 3 | Rectangle | Rectangle | | | |
| 4 | Rectangle | Rectangle | | | |
| 5 | Rectangle | Rectangle | | | |
| 6 | Text | Text | | | |
| 7 | Text | Text | | | |
| 8 | Text | Text | | | |
| 9 | Rectangle | Rectangle | | | |
| 10 | Initial Settings | Screen Script Command | 109 | 0: Rising-edge | [LSM 1] |
| 11 | 1st Registered No. | Message Display | LDR 30 | 3: Always ON | |
| 12 | 1st Barcode | Character Input | LDR 1000 | 3: Always ON | |
| 13 | 1st Replacing Data | Character Input | LDR 4000 | 3: Always ON | |
| 14 | 2nd Registered No. | Message Display | LDR 32 | 3: Always ON | |
| 15 | 2nd Barcode | Character Input | LDR 1000 | 3: Always ON | |
| 16 | 2nd Replacing Data | Character Input | LDR 4000 | 3: Always ON | |
| 17 | 3rd Registered No. | Message Display | LDR 34 | 3: Always ON | |
| 18 | 3rd Barcode | Character Input | LDR 1000 | 3: Always ON | |
| 19 | 3rd Replacing Data | Character Input | LDR 4000 | 3: Always ON | |
| 20 | 4th Registered No. | Message Display | LDR 36 | 3: Always ON | |
| 21 | 4th Barcode | Character Input | LDR 1000 | 3: Always ON | |
| 22 | 4th Replacing Data | Character Input | LDR 4000 | 3: Always ON | |
| 23 | 5th Registered No. | Message Display | LDR 38 | 3: Always ON | |
| 24 | 5th Barcode | Character Input | LDR 1000 | 3: Always ON | |
| 25 | 5th Replacing Data | Character Input | LDR 4000 | 3: Always ON | |
| 26 | Up Scroll Button | Bit Button | LBM 5 | 3: Always ON | |
| 27 | Down Scroll Button | Bit Button | LBM 6 | 3: Always ON | |
| 28 | ScrollControlScript | Screen Script Command | 111 | 2: Satisfy the condition | [LBM 5] [LBM 6] == 1 |
| 29 | Update List Script | Screen Script Command | 110 | 2: Satisfy the condition | 1 == [LSM 1] [LBM 5] [LBM 6] [LSM 12] |
| 30 | Specify Active No. | Numerical Input | LDR 20 | 3: Always ON | |
| 31 | Goto PreviousScreen | Goto Screen Button | | 3: Always ON | |
| 32 | Select Button | Word Button | LDR 25 | 3: Always ON | |
| 33 | Cancel Button | Goto Screen Button | | 3: Always ON | |

2-7 Base screen 100 (Common screen)

Common screen



The following objects are assigned to base screen 100:

| No. | Name | Type | Device | Trigger Type | Trigger Condition |
|-----|----------------------|-------------------------|--------|----------------|-------------------|
| 1 | Text | Text | | | |
| 2 | Display Verify Mode | Message Switching Di... | LKR 0 | | |
| 3 | Open Verify Menu | Goto Screen Button | 100 | 3: Always ON | |
| 4 | Read Barcode1 Script | Screen Script Command | 101 | 0: Rising-edge | [LDR 8000-0] |
| 5 | Read Barcode2 Script | Screen Script Command | 102 | 0: Rising-edge | [LDR 8050-0] |
| 6 | Display read Barcode | Message Display | LBR 0 | 3: Always ON | |
| 7 | Switch Languages | Bit Button | LBM 7 | 3: Always ON | |
| 8 | Control Languages | Screen Script Command | 114 | 0: Rising-edge | [LBM 7] |
