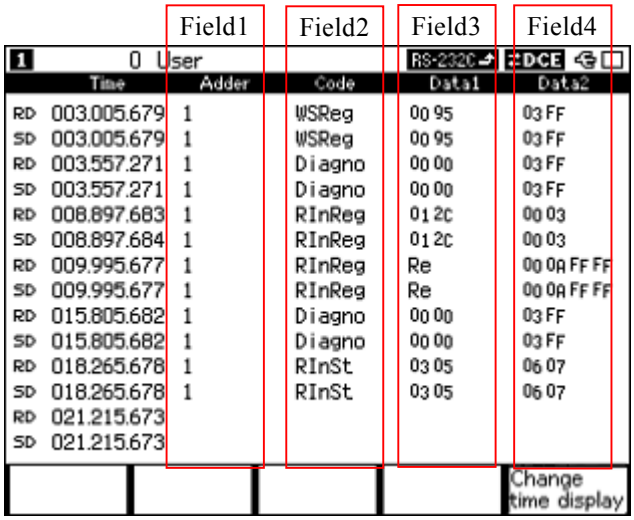
User Translation Definition Function (supported by the firmware version after 1.05)

User Translation Definition Function is the function that translates the frame data of communication into the character strings or numbers according to the rule defined by user.
*This function is in the standard sub board, OP-SB85, OP-SB85C and OP-SB85IR. But not in the other expand sets.

< User's defined translation display screen >



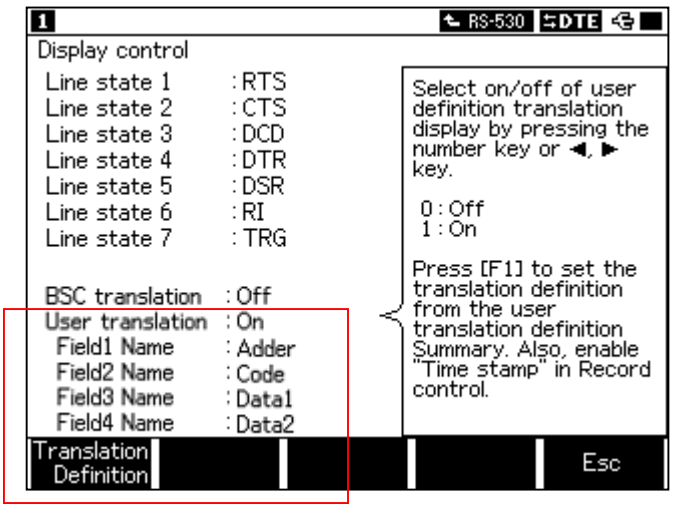
The translated contents are displayed at field1 to 4. Furthermore, you can display this screen by pressing [Data] several times ,and print out the data by pressing [Print], when "User translation" is on in setting and the data is now on the screen.

*In the protocol of ASYNC, SYNC/BSC, BURST, the data must be with the time stamps for User Translation Difinition Function. So the time stamps should be set to be valid in advance.
* Flag in SDLC/HDLC, Block check code(BCC) and Frame check sequence(FCS)set in the "Configuration" , Break[B] and Abort[A] are not included to the frame data. In the protocol of I^2C, Re-start sequence is not included. In the protocol of PPP or IrDA, Escape sequence is decoded.

Procedure of setting User's defined translation

1, Press [Shift]+[F5](Display control) on the data display screen and set the "User translation" in "Display control".

< The screen of setting User's translation >



Now you can see the “User Translation” setting at “Display control” screen.

User translation

Set the display of "User translation" on/off.

On: User's translation is on.

Then when you press [Data], you can change the screen to that of User's translation.

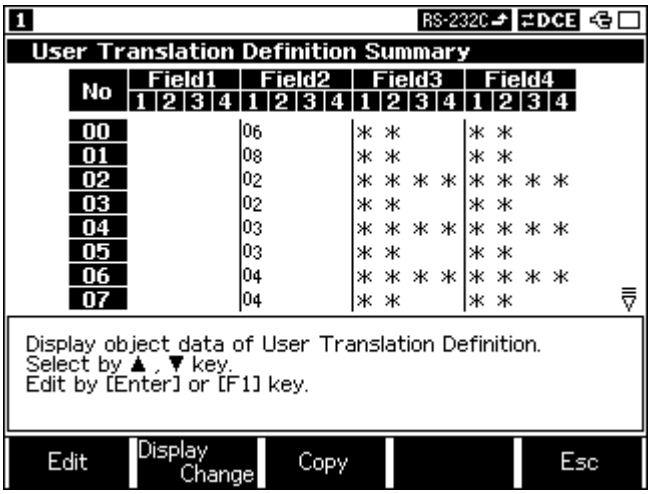
Off: User's translation is off.

Field1 name to Field4 name

Set the name of Field1 to Field4 within six characters.

2, Press [F1]"Translation Definition" to go to "User Translation Definition Summary" screen.

< The screen of "User Translation Definition Summary" >



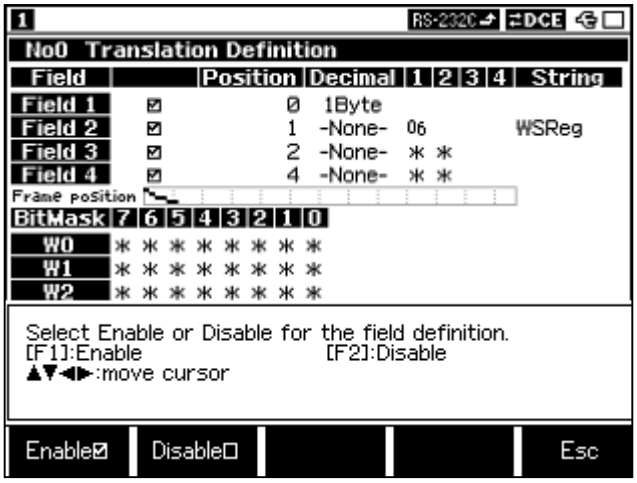
The settings of User's defined translation are listed in this area, so you can select the No. which you want to edit from this list.
"User Translation Definition" can be made up to 16 sets (No. 00 to 15).
On the data display screen, the frames are checked along with the condition from No. 00 to 15.
If the frames are corresponding to more two definitions, the definition of low number is displayed.
All fields(Field1 to Field4) of the frame not corresponding to any translating definitions are empty.

[F1]: "Edit"	Press [F1] to edit the translating definition that you've selected by the cursor.
[F2]: "Display Change"	Press [F2] to change the area of "Field" whether "1,2,3,4"(for the object of translation) or "String"(for translated characters). (Color of gray means invalid settings. The character of number displayed in decimal is blue and boldfaced type.)
[F3]:"Copy"	Press [F3] to copy the translating definition.
[F4]:"Paste"	Press [F4] to paste the data that was copied.
[F5]:"Esc"	Press [F5] to go back to "Display control" screen.
[Shift]+[F2]:"All filed Enable"	Press [Shift]+[F2] to make Field1 to Field4 of translating definition enable.
[Shift]+[F3]:"All filed Disable"	Press [Shift]+[F3] to make Field1 to Field4 of translating definition disable. (In spite of this setting, the content is not deleted)
[Shift]+[F4]:"Delete"	The contents of Field1 to Field4 are all deleted.

* When [Print] is pressed, the definition are all printed.

3,Select the No. by moving the cursor with [▲] and [▼], and press [Enter] or [F1] to enter the editing screen of User's translating definition.

< "Translation Definition" screen >



Set the condition on which the measured frame is translated and displayed in the raw of Field1 to Field4.

In the data display screen, the frame is translated only when it meets Field1 to Field4 all.

When the definition is changed, the display will be changed according to it.

If pressing [F5]"Esc". you can go back to the screen of "User Translation Definition Summary".

Check box

Set each field valid or invalid.

Only the fields which are checked(valid) are used for translation. Although some contents(including "Position", "Decimal", "1" to "4" and "String") of the "Field" are set, the "Field" which is invalid is not used for translation.

[F1]:"Enable"	Each field's definition is valid.
[F2]:"Disable"	Each field's definition is invalid.

While the definition is invalid, Position, Decimal, 1 to 4 and String are displayed in gray and cannot be edited.

Position

Set position(byte) of data from top of the frame to translate.(from 0 to 60)

[F1]:"Decrement"	Reduces the value by 1.
[F2]:"Increment"	Adds the value by 1.

If more two "Field" start bits are the same, the "Field" must be set to the same value or "*"(Don't care.) or same Bit mask(W0 to W2). Or the frames cannot be translated and displayed according to the definition.

The flag of SDLC/HDLC is not the object to be translated.

Decimal

Select how to display the translated data in decimal in "Field".

[F1]:"None"	The frame data is displayed in characters or HEX (not in decimal).
[F2]:"1Byte"	1 byte data from the "Position" is displayed in decimal.
[F3]:"Little"	2 bytes data from the "Position" are displayed in decimal from lowest bit(Little endian).
[F4]:"Big"	2 bytes data from the "Position" are displayed in decimal from highest bit(Little endian).

When something except for "None" is selected, 1 to 4 and String are invalid and it is not translated to characters. Furthermore 1 to 4 and String are in grey and cannot be edited.

1 to 4

Set target data to be translated into characters. The data of the size set in this term from the point of "Position" will be translated and the MAX size is 4 bytes in HEX. The setting starts from 1. Then " * "(Don't care) and "W0" to "W2" can be set.
If nothing is set in this term, the "Field" is invalid.

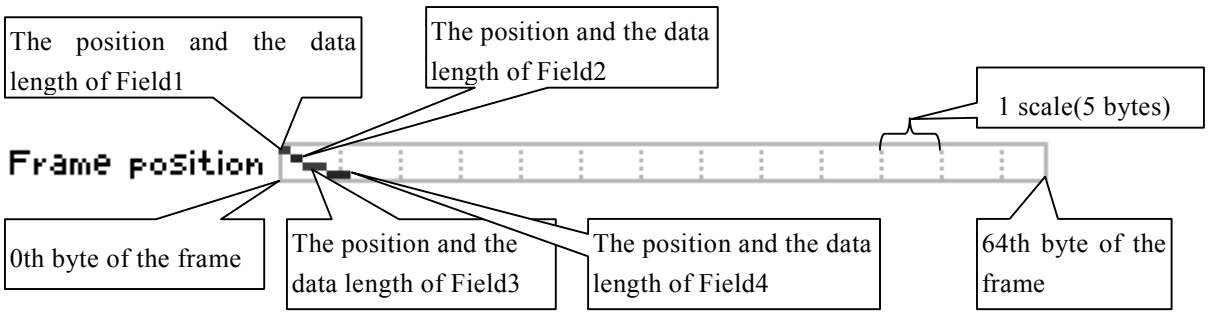
[F2]:"W0" Press [F2] to input the bit mask "W0".
[F3]:"W1" Press [F3] to input the bit mask "W1".
[F4]:"W1" Press [F4] to input the bit mask "W2".
[End/X]: Press [End/X] to input " * "(Don't care).

String

Set how to translate data "1" to "4" into characters.
you can set up to 6 characters. When nothing is set, the data is displayed in HEX.

Frame position

"Frame position" means the position to be defined in the frame. The line in the frame presents the position to be set and



BitMask

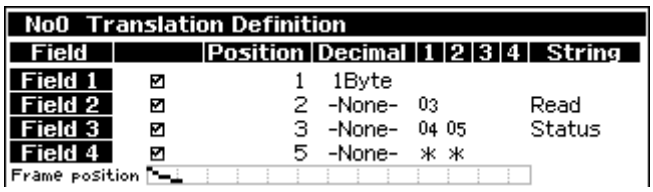
Set bit mask(Bit7 to 0) of Data1 to 4 to specify in bit unit.
You can set "Bitmask" per "No". And There are 3 kinds of "BitMask"("W0","W1","W2") in one "No".
"BitMask" changes in order to Bit7 to Bit0 from the left.

[0]: Press [0] to input "0".
[1]: Press [1] to input "1".
[End/X]: Press [End/X] to input "*"(the mask).

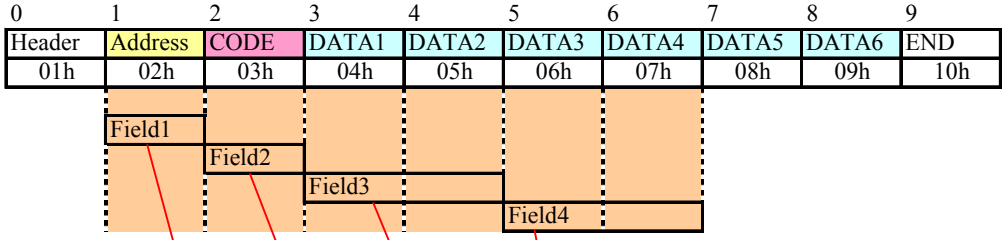
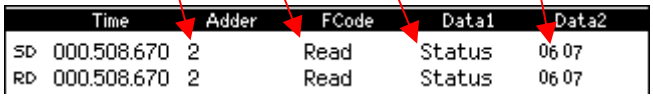
<Example>

When the analyzer measures the frame [01h,02h,03h,04h,05h,06h,07h,08h,09h,10h],
in Field1 it displays 1 byte in decimal from 1st byte from the top of the frame,
in Field2 it displays 1 byte(03h) as "Read" from 2nd byte from the top of the frame,
in Field3 it displays 2 byte2(04h, 05h) as "Status" from 3rd byte from the top of the frame,
in Field4 it displays 2 byte(if there is some of 2 bytes data) in HEX from 5th byte from the top of the frame.

Translating definition



Frame



Display screen