

**OPERATION MANUAL
FOR THE MESSAGE EDITOR TDL
FOR THE DISPLAYS
DT-101/102/103/104/105/110
(Version 2.4)**

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1.1. Computer requirements for using the TDL program.

The display's message edition programs need a PC with the following characteristics :

- a) A PC compatible , models XT, AT, PS2, 386,486 or Pentium.
- b) 512 Kbytes RAM, minimum.
- c) A video card :
Hercules or compatible.
IBM colour CGA, EGA, VGA, or compatible.
- d) Operative system MS-DOS or PC-DOS version 2.1 or newer.
- e) One floppy disk :
5 ¼" de 720 Kbytes o 1,2 Mbytes..
3 ½" de 720 Kbytes o 1,44 Mbytes.
- f) One RS-232C serial output

The message editor programs can't be executed from the diskette, you shall install them in the hard disk for executing them .

1.2 Necessary tools for loading the program in the computer.

The elements named here are necessary only the first time you use a DT-100G display, although they'll be still valid for further applications.

- a) The diskette with the TDL program.
- b) Connection cable between the computer and the display.
 - Displays DT-101 y DT-104 SC-101B (9 pins) or SC-101 A (25 pins) models.
 - Displays DT-105 y DT-110 SC-105B (9 pins) or SC-105 A (25 pins) models.
 - Display DT-102SC-102B model.

1.3 Installing the program in the hard disk.

The procedure for the installation of the message editor it's very simple. You'll only have to do it the first time. You need the installation diskette:

- 1) Introduce the installation diskette in your PC.
- 2) Select the installation diskette's disk unit . For instance if it's in unit **A**.
Type **a**: [Return]
- 3) Execute the installation program, type : **INSTALL** [Return]
- 4) The program that will install the message editor, asks you if do you want to continue or not. Type "y" and **return** if you want to continue or " n" and **return** if you don't

5) **"In which disk do you want to install the files ?"**

Answer with the letter that identifies the disk where you'll install the programs. Normally it'll be the C disk (as default).

6) **"Directory where you want to copy the program:"**

As default , takes `\LARTET` directory, where the message editor program will be copied . If you prefer another directory , you must do it now. This directory specified here, can't be a directory that existed previously, it's the installation program that creates the directory .

7) **"Directory where you want to edit the text files"**

While working with the TDL editor you'll create messages files. The directory specified here, will be the one used for saving those files. As default it will be `\LARTET\TEXT`, but it can be changed, for another one.

8) Once we've answered the previous questions, the text **"Installing"** will appear. The files from the disk will be copied to the hard disk you specified.

This process will last a little minutes, when it finishes the text **"Installation done"** will appear.

9) Now the message editor program is installed in your PC hard disk. Retire the disk and select the disk unit where you just installed the programs. For instance
C: [Return]

Now you're ready to execute the program.

1.4 Message editor execution.

The following steps have to be done each time you switch on you computer :

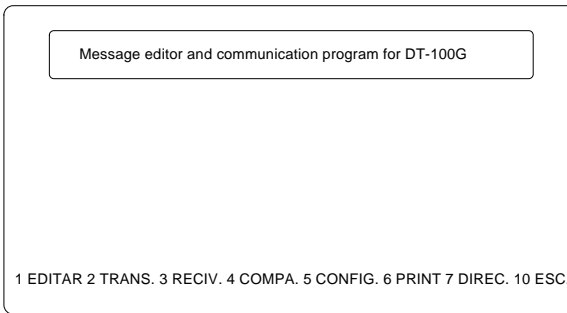
- 1) Change to the directory where you copied the programs of the applications
For instance: CD\LARTET [Return]
- 2) Call the message editor. Type: TDL [Return]
In this moment you'll accede to the messages editor programs menu. You can choose
:
 - Type F1, for editing messages for the DT-101, DT-103 y DT-104 displays with the messages editor **DT**.
 - Type F2, for editing messages for the DT105/P, DT-110P y DT-102*P displays, with the message editor program **TED**.
 - Type F3, for going back to the operative system.

2. "DT" MESSAGE EDITOR FOR THE DT101G, DT-103GS, DT-103GD AND DT-104G.

Programming the display .

DT program options.

Once the DT program is running we can choose different options

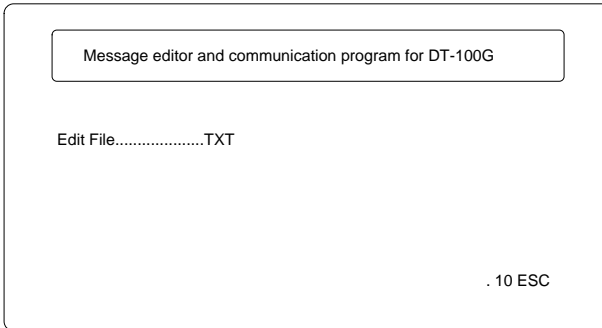


- "F1" = EDIT Messages and variables edition.
- "F2" = TRANSMIS.. Sending the messages from the PC to the display.
- "F3" = RECEIVE Receiving the messages from the display and saving them in a file.
- "F4" = COMPARE Comparing the display's messages with the ones stored in the .. file.
- "F5" = CONFIGURE Configuring the language and attributes of the serial communications with the display .
- "F6" = PRINTER Printing edited messages.
- "F7" = DIRECTORY Showing edited messages.
- "F10" =END Exit from the "DT" program and go back to the O.S.

The first time you're using the program, you have to execute , first of all, the F5 function "CONFIGURE". See point 2.5

2.1. [F1] Edit.

To start editing messages, press the [F1] key from the main menu.



Enter the file name that you want to edit and press [Return].

The file name can't have more than 8 characters length, and has to fulfil the rules that the MS-DOS operative system impose about the file names.

If you want to come back to the main menu before accessing to the editor, press the [F10] key..

If the file name that you have entered corresponds with a file edited before, it will be loaded and shown on the screen.

Once you have introduced the file name and pressed [Return] you access to the Edition screen.

1	2	3	
Message editor for the DT-103G editing PROVA.TXT Col1			UPPER AREA
0	STOP PLC.....	SI	CENTRAL AREA
1	SI	
2	SI	
3	SI	
4	SI	
n	SI	
20	SI	
1flash 2DELETE 3INSER. 4PRINT 5VARIA. 6QUIT 7HELP 10END			LOWER AREA

The screen is divided in three parts: upper, middle and lower.

UPPER AREA

- Left:** It shows the display type that have been configured (DT-101G or DT-103G). With the DT-104G model, you have to specify the DT-103G option. If the display type shown in this line is not the one you are going to use, it will be necessary to abandon the editor by means of the [F6] function key, and configure the program with the suitable display type.
- Central:** It shows the file name that you are editing (PROVA in the example).
- Right:** It shows the column number in which the cursor is located. If this number surpass the number of characters of the chosen display (20 characters for the DT-103G, and 16 characters for the DT-101G) the column will be printed in "reverse", to advice that the text edited will be presented in scroll mode, that is rotating.

MIDDLE AREA

In the middle part of the screen is where the texts are introduced, to the left there's the message's number, in the middle there are the texts themselves (60 characters maximum) to the right there's the mark that notices if the texts are going to be kept in the printer buffer (YES) or not (NO).

The first time we edit a file, the message " STOP PLC " will be loaded at the address 0. This text can be changed but we recommend to use this one or a similar one, for pointing out that the PLC is not setting the outputs, it means that the PLC is not in the RUN mode. If you don't specify any text at the address 0, when the PLC stops working , the output won't give us any signal, and the message "code 0" will be shown.

In the last position of the file the mark T.D. is shown joined to the text "CODE". The meaning of T.D. is Default Text, and it corresponds with the text that is going to be displayed when we send a code that corresponds to an empty message. The Default Text can be only 12 characters long.

Example: If we have the text "CODE" as T.D., and we only have the text in the first 100 messages, then every time a code greater than 100 is enabled from the PLC, the text "CODE" followed by the message number will be shown on the display.

When you want to stop introducing messages press [F10].

LOWER AREA: FUNCTION KEYS.

2.1.1 [F1] FLASH.

You should use it when you want the selected characters to shown flashing on the display.

The [F1] key acts as an on / off switch , that means it enables / disables the flashing pressing several times the same key. To identify the status of the key, the word "**FLASH**" (when disabled) is shown.

The rhythm of the flashing can't be changed by the user. It is configured in factory.

2.1.2 [F2] DELETE.

It deletes the text of the current line, shifting the remaining messages one position upwards. Therefore, the last messages (number 253) will be lost.

2.1.3 [F3] INSERT.

It inserts a line before the current line, shifting the remaining messages one position downwards. Therefore, the text of the last message (number 253) will be lost.

2.1.4 [F4] PRINT.

It allows the text of the last message enabled to be printed.

Every time the messages allowed to be printed are enabled, they will be loaded in a printer buffer. The messages are kept in this buffer in order of appearance. The buffer's capacity is 255 messages, and if we surpass it, the other messages will be lost.

If a message is not selected (**NO**), even if it's enabled, it won't be kept in the buffer. The purpose of this function is to avoid that the messages that are used frequently (for instance " Auto ", " Manual ", etc) won't be printed.

The [**F4**] acts as an on/off switch; that means , it enables/ disables the printing pressing several times the same key.

When we create a new file, in the beginning, all the messages are printable (YES). It will be necessary to change to unprintable (NO) the messages you don't want to be kept in the buffer .

2.1.5 [F5] VARIABLE

The **variable** function allows you to define the position and the number of characters of a numerical variable. To define variables you have to follow this directives:

- 1) The variable's maximum number of characters is 8.
- 2) The characters that can be part of a variable are:
 - Digits from 0 to 9.
 - The signs **point** (.) and **comma** (,). In the same variable there can be only one of these signs.
 - The **minus** sign (-) can be sent by the PLC, so you have to reserve one position for it, as though it was a numerical digit.
- 3) Every text can have only one variable.
- 4) If you reserve "n" characters for variable and the PLC doesn't send all the digits of "n", the remaining characters to the left of the variable will be filled with blanks.

The character representing a variable is "#", that on the screen is shown like three parallel horizontal stripes. We must put this symbol in the position in which we want to put the variable.

Example:

TEMPERATURE ###.#. The variable is 4 characters long.

PIECES The variable is 4 characters long.

PRESSURE ###,### The variable is 6 characters long.

The points and the commas can be edited in two different ways:

- 1) As a variable. Then we send from the PLC the code corresponding with the sign we want to visualise, in the position that we wish. This would be the convenient option to visualise values in which the position of the point and the coma should be changed. With this option, the sign, point or coma, holds the space of a variable.
- 2) Printing it in the pre-defined position that we wish. This would be the convenient option when the position of the point or the coma is always the same.
See chapter 3 for more information about sending messages.

2.1.6 [F6] QUIT.

Selecting this option you'll leave the file without modifying the file.

Any modification done in the edition process won't be saved on the file. The file will remain unmodified. In order to avoid possible mistakes, before executing this option the program will ask if we are sure, showing the text:

"FILE HAS BEEN MODIFIED. QUIT ANYWAY (Y/N) ?"

```
Messages editor for DT-103G      editing PROVA.TXT      Col1

FILE HAS BEEN MODIFIED, QUIT ANYWAY (Y/N)?

1flash 2DELETE 3INSER. 4PRINT. 5VARIA. 6QUIT. 7HELP      10END
```

If we want to maintain the file without the modifications we have done, we must press the "Y" key (yes). Pressing any other key we'll go back to the edition screen.

2.1.7 [F7] HELP.

It points put the characters that can be used, beside the ones of the alphabet.

The possible ascii for the DT103G are :

The capital letters, small letters, numbers, and the following characters :

ī ° á Ä Å Ö Ü ç ° > ÿ è é ê ë à ä å ö ü ñ { | } ÷ ¼ ¡ ¢ #
\$ % & ' () * + , - . / []

Special characters combinations (only DT-103G)

°	Alt-R	á	Alt-B	Ä	Alt-A	°	Alt-O	○	Alt-C	á	Alt-S
^	Alt-F		Alt-I	}	Alt-G	÷	Alt-P	¼	Alt-4	@	Alt-D
		æ	Alt-L	¥	Alt-Y	½	Alt-2	~	Alt-N	þ	Alt-T

The ascii for the DT-101G are:

! " # \$ % & ' () * + , ; . / : < = > ? \

It appears a help screen showing the characters code used by the DT-101G and DT-103G , that can be edited directly either with the keyboard of your personal computer, or pressing the "Alt" key and the specified key together. For the DT-104G, use the DT-103G option .

Example:

For writing the "ñ" key, press [Alt] and [I] together .

For writing the "@" symbol, press [Alt] and [D].

2.1.8 OTHER FUNCTION KEYS .

The keys [Next] and [Prev] allows you going back and forward a page every time you press a key.

The keys [Home] and [End] go directly to the beginning or end of the message.

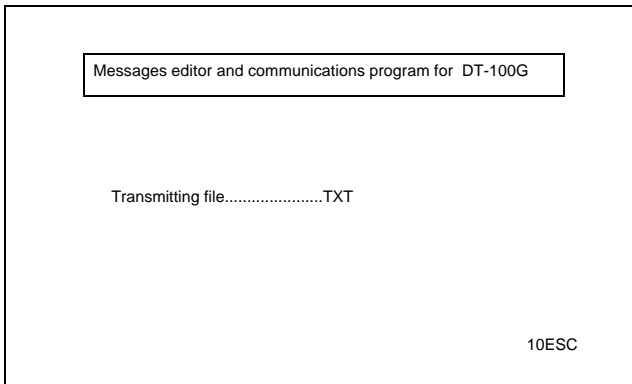
The keys [Ctrl] + [Home] and [Ctrl] + [End] go directly to the beginning and end of a file. Firstly press [Ctrl] key and then keeping it pressed press either [Home] or [End].

2.2 [F2] SENDING MESSAGES TO THE DISPLAY

Once we have edited a file, we can send the texts to the display. Before sending a file you should verify that:

- 1) Either the SC-101A or the SC-101B communication's cable is connected to the display (either the DT-101G or the DT-104G). For the DT-103G verify that the user connection is right.
- 2) Previously you have configured the serial line as COM1 or COM2.
- 3) The power supply is connected to the display.
- 4) The display shows the message "PROGRAMACIO"

From the main menu, press F2 and enter the file name that you want to send to the display.



During the transmission the texts of the messages that have been sent will be shown in the upper line of the screen. The main menu screen will appear once ended the transmission.

The display already has the text into. Disconnect the cable and the message "PROGRAMACIO" will disappear from the screen. Now the display is ready for starting working under the PLC control.

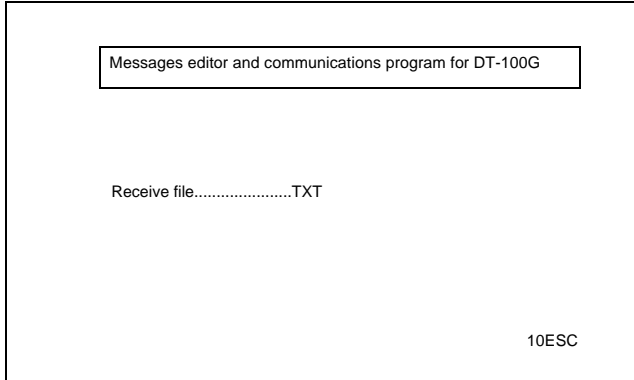
2.3[F3] RECEIVING TEXTS FROM THE DISPLAY.

This function is used for reading the messages from the display, and save it in a given file in the computer.

To receive the messages from the DT-100G display, verify that:

- 1) Either the SC-101A or the SC-101B communication's cable is connected to the display (either the DT-101G or the DT-104G. In case of the DT-103G verify that the user connection is right.)
- 2) Previously you have configured the serial line as COM1 or COM2.
- 3) The 220VAC power supply is connected to the display.
- 4) The display shows the message "PROGRAMACIO".

We are now in conditions for receiving the texts of the display into the computer. Once in the main menu, press [F3] and enter the file name in which you want the messages to be kept.



Once ended the messages receiving, the program returns automatically to the main menu.

2.4 [F4] COMPARING TEXTS.

The function is used to verify whether the texts of the display are the same that the ones on the file or not.

To compare a file with the messages installed on the display, you have to do the following steps to verify that :

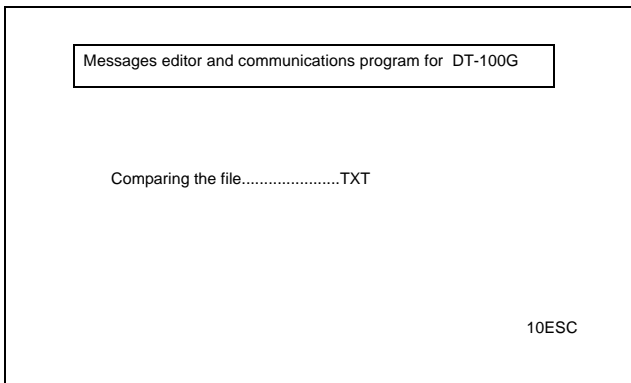
1) Either the SC-101A or the SC-101B communication's cable is connected to the display (either the DT-101G or the DT-104G. In case of the DT-103G verify that the user connection is right) .

2) Previously you have configured the serial line as COM1: or COM2: .

3 The power supply is connected to the display.

4) The display shows the message "PROGRAMACIO".

Now we can compare a file with the texts that are saved on the display. Press [F4]:



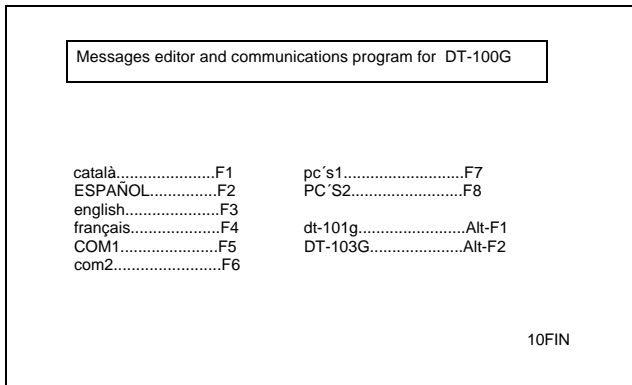
First of all, the messages of the display will be loaded, and then compared with the ones on the computer. Once finished the comparison process, the screen will show the result, "SAME" or "DIFFERENT", and will return back to the main menu.

2.5 [F5] CONFIGURING.

The first time you load the DT program, it will be necessary to verify if the initial configuration is adequate for our necessities.

To modify the configuration, press [F5] from the main menu.

The screen will show:



The selected options appear in capital letters, whereas the alternatives don't.

To change options press the suitable function key.

The language option is used so that the texts of the program can be shown in the selected language. And also the texts of the messages at address 0 and T.D. every time we open a new file, but not the ones of an already existing file.

Obviously, this option doesn't translate the texts written by the user.

The options PC'S1 and PC'S2, allow you to try between two different ways of treat the serial line in communications. Normally, you must use the PC'S1 option. Only if your computer have some problems in communications you should use the PC'S2 option.

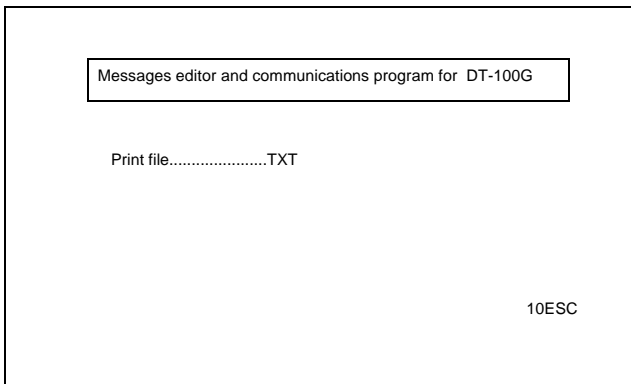
The options COM1 and COM2, are used to specify which serial communications port are we going to use.

The options DT-101G and DT-103G are used to specify which model of display have we got. For the DT-104G model you have to use the DT-103G options.

Once configured the program you have to go back to the main menu by pressing the "F10" key. Every time we press this key, the current configuration will be kept in the disk. This configuration will be loaded automatically again the next time we execute the DT program, therefore, it won't be necessary to configure every time we start working.

2.6 [F6] PRINTING.

If we want to print the edited messages, we have to use the [F6] function key, which will send to the printer the messages of the specified file. To exit, press [F10]. The printer that you are going to use could be either a serial or a parallel one.



This option will be very useful to you in order to check the printed messages.

2.7[F7] DIRECTORY.

This function allows you to visualise all the edited files that are located in the current directory.

To access, press the [F7] function key from the main menu.

DT-101G	DT-103G
1.Prova1.TXT	1.Termic.TXT
2.Foler.TXT	2.Gel23.TXT
<hr/>	
1 + DT101 2 + DT103 3 PRINT	10 END

The files names are visualised in two columns : to the left, the ones corresponding with the DT-101G model; and to the right, the ones corresponding with the DT-103G and DT-104G models. The function keys [F1] and [F2] make the directory listing to advance. And the [F3] allows you to do a dump of the directory listing to the printer.

3. Messages editor "TED" for Dt-102, Dt-105 and Dt-110 displays

Up to this point, we'll explain, the TED menu options. Their utilities, and how to reach them. If it's your first time that you use TED we recommend to try the concepts explain.

3.1 Introduction to the TED program.

TED is a messages editor for the LARTET displays. With it you will be able to create your own messages files, edit them at any moment, modify and send again to the display.

It works with menus situated at the upper area of the screen, you can access through the mouse, or through the keyboard with the ALT key and key of the letter in capitals in the chose option.

Once chose the option, a window will opens showing the different options.

In the window we have two possibilities type ESC for leaving the menu, or chose one of the options (either with the mouse or typing the capital letter shown in the option). We can move in the window using the keys ↑ ↓ selecting the options, or use the ← → keys for changing the window.

When we enter in the editor, from the operative system, the last file saved will be edited automatically.

The first time we execute the program, the file edited will be NO TITLE.TED located in the working directory. (See 4.1.5)

3.2 Screen information

In the upper part of the screen, there's the menu, and also some information, from the left to the right: the name of the open file, the number of the line where we are, and the total number of lines in the open file, finally we find the column number where we are.

```

L A R T E T, S. L. ³ File DT102-1.TXT  Line 0019/0019  Column 02  ³↑ ↓
File Y Goto ³ Edit ³ Transmission ³ Search ³ Commands ³ Others ³ Help
UAAAAAAAAAAAAA¿
³ New ³
³ Edit ³
³ Save ³
³ save As ³
³ Configure ³ITCH ON
³ eXit ³
AAAAAAAAAAAAAAU][V][V]
[4]
[S]ALARM EMPTY PUMP [T3]
[5]
[S]***[F]ATTENTION[f]***

[6]
[S]P. GOOD [V][V][V] P. BAD[V][V][V]
[10]
[S]MESSAGE FOR A TWO LINES DISPLAY
[L2]2ND LINE OF THE 10TH MESSAGE
[240]

[S] SWITCH LIMIT FAIL X24

Insert mode

```

In the lower part of the screen, we find the status line. Its utilities are:

- Warning of any particularity or error during the edition. In this case the messages can be erased typing ESC (or with mouse's left button) .
- Showing the edition mode were we are working (Insert or modify)
- Demanding the user some values during the edition, if the selected option implies so. In this cases the mouse's right button acts as typing the ESC key, while the mouse's left button acts as typing RETURN, validating the input entered.
- Demanding an operation conformity (yes or no). In this case, the mouse's right button acts as typing "no" and mouse's left button as typing "yes".

3.3 Basic keys

We'll use the mouse and this keys for moving in the editor's screen:

↑ one line up.
↓ one line down.
→ one column to the right.
← one column to the left.
UpPag..... one page up.
DownPag one page down.
Home line's beginning.
End line's end.
Insert..... changes the insert and overwrite mode.

In the insert mode, all the characters typed , move to the right all the characters on the right of the cursor. In the overwrite mode, all the characters go over the existing characters.

Sup deletes all the characters on the right of the cursor.
Control+Home..... goes to the file's beginning.
Control+End..... goes to the file's end.
Control+UpPag goes to the actual page's beginning.
Control+DownPag..... goes to the actual page's end.
Backspace deletes the characters on the cursor's left.
Esc exits from the menu's windows.

We can use ESC also for deleting a message appearing in the status line, once we have read it. TED informs the user in this line of what he is doing, and possible mistakes. This messages disappear when we type ESC, or in approximately 5 seconds.

3.4 Mouse

If you have a mouse, you can use it in the following way: move the cursor over the screen, for placing the cursor press any button of the mouse.

If you want to jump line to line place the mouse on the characters on the top right corner of the screen, and press the mouse's right button.

If you want to page do the same but pressing the mouse's left button.

Its important to say that, although the mouse is connected, at the moment you press a key the mouse's cursor will disappear, will appear the moment we do any movement with the mouse.

For selecting the options in the menu, put the cursor on the wished option, and press the mouse's left button. If you press the mouse's left button on menu window, we'll close the window.

When TED asks a question with the answers "Yes" or "No", we can also use the mouse. In this case pressing the left buttons means "Yes" and pressing the right button means "No".

As we said in the previous chapter, TED shows messages in the status line, there can be error messages or just warning messages. These messages will disappear in 5 seconds approximately, but you can delete them before pressing the right mouse button.

3.5 Concept "Command"

Reached this point we'll explain what is for the TED program the concept command. With the text inserted in the program there will be also commands. This commands can be used for instance: for showing the message number that we are using, for showing if the message is printable or not, put a text in intermission, etc... (further we'll explain the possible commands) .

The format of the commands is very simple. Normally there are 3 characters:

```
Brace opened..... [
A letter or number .....V
Brace closed..... ]
```

The characters that belong to a command, appear in the screen in a more vivid colour.

The commands have the following particularities:

- When we put the cursor on an command, the status line will show to which command are we referring to.
- We can't write over a command. If we try it , we'll place the characters before, if we are in the insertion mode or we'll substitute the command for the characters typed if we are in the overwrite mode.
- When deleting an command, we'll delete all the characters that compound the command.
- The first command in a text message has to be " printable message " or "unprintable message ". When we insert any of this two commands, TED will place the command at the beginning of the message, independently of the cursor's situation. For every message introduced there has to be one of this two commands at the beginning of the line, otherwise the message will lose the first character.

- When we want to define a new message, firstly we have to insert the command "n° message". In this case, TED will ask us which message n° we want to define. Afterwards, once the message n° has been given, the program will insert the command in the line corresponding to the message specified, so the messages will be ordered numerically from minor to the greater. Automatically the first command will be "printable message" afterwards TED will be waiting for the introduction of the message.
- The line with the "n° message" can't be either edited or deleted. If we want to put the text of a message it will go in the following line (further we'll see how to delete a message).

4. TED menu

4.1 File

You can access to the menu typing ALT+F, or with the mouse. You'll have the options that appear in the window, figure 4.1:

```
New
Edit
Save
save As
Configure
eXit
```

```
L A R T E T, S. L. ³ File DT102-1.TXT  Line 0019/0019  Column 02  ³↑ ↓
File Y Goto ³ Edit ³ Transmission ³ Search ³ Commands ³ Others ³ Help
UAAAAAAAAAAAAA;
³ New          ³
³ Edit        ³
³ Save        ³
³ save As     ³
³ Configure   ³ITCH ON
³ eXit        ³
AAAAAAAAAAAAAU][V][V]
[4]
[S]ALARM EMPTY PUMP [T3]
[5]
[S]***[F]ATTENTION[f]***

[6]
[S]P. GOOD [V][V][V] P. BAD[V][V][V]
[10]
[S]MESSAGE FOR A TWO LINES DISPLAY
[L2]2ND LINE OF THE 10TH MESSAGE
 [240]

[S] SWITCH LIMIT FAIL X24

Insert mode
```

Figure 4.1

4.1.1 New file

You can access typing N, or with the mouse. This way we delete the file in the memory, previously TED makes a question so we can give our conformity. If we validate, the screen erases and the name of the file will be "NO-TITOL.TED." The file loaded before, now don't appear in the screen, but it's in the disk of your PC, as was before loading it.

4.1.2 Editing a file

You can aced typing E, or with the mouse. This instruction loads in the TED a new message file. If the file that we were editing has changed, it asks if we want to save it .

```

L A R T E T, S. L. ³ File DT102-1.TXT   Line 0019/0019   Column 02   ³↑↓
File ³ Goto ³ Edit ³ Transmission ³ Search ³ Commands ³ Others ³ Help
[0] ³ UAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
[S]³STO³ EDIT FILE
[1] ³ UÁ Path  AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA UÁ File  AAAA ³
[S]³*[H]³ ³ D:\LARTET\BIN\TED\TEXT ³³³ * * ³
[2] ³ AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA UAAAAAAAAAAAAAAAAA
[S]³MACH³ UÁ File List  AAAAAAAAAAAAAAAAAAAAAAAAAA UÁ Disk/Dir  AA ³
[3] ³ ³ CARES.ASC  MENU.ANG  TED.EXE ³³³ ³
[S]³PIEC³ ³ COMMAND.COM  MENU.CAT  TED.RCV ³ . ³
[4] ³ ³ CONFIG.DAT  MENU.ESP  TED00000.ANG ³ <-A-> ³
[S]³ALAR³ ³ DT.CON  MENU.FRA  TED00000.CAT ³ <-B-> ³
[5] ³ ³ DT.EXE  MISOMS.ANG  TED00000.ESP ³ <-C-> ³
[S]³***[³ ³ DT.HLP  MISOMS.CAT  TED00000.FRA ³ <-D-> ³
[6] ³ ³ DT.MSG  MISOMS.ESP  TED00001.ANG ³ <-E-> ³
[S]³P.BU³ ³ HELP0001.ANG  MISOMS.FRA  TED00001.CAT ³ <-F-> ³
[10] ³ ³ HELP0001.CAT  NEWCHAR.DAT  TED00001.ESP ³ <-G-> ³
[S]³MESS³ ³ HELP0001.ESP  TDL.BLD  TED00001.FRA ³ <-H-> ³
[L2]³LIN³ ³ HELP0001.FRA  TDL.EXE  TED00002.ANG ³ <-I-> ³
[240] ³ ³ LANGUAGE.DAT  TED.BCK  TED00002.CAT ³³ <-J-> ³
[S]³FAIL³ AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA UAAAAAAAAAAAAAAAAA
³ ESC-Go Back  TAB-Change Window  MOUSE:RIGHT-Validate ³
³ RETURN-Validate  ↑↓-Select  MOUSE:LEFT.-Select ³
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
Insert mode

```

Next, we'll go to a window (see figure 4.2) where we specify the file we want to edit. In this window we can:

Type the name of the file we want to edit.
Change the disk.
Change de directory.
Choose a file from the file list of the showed directory.

In the window were we edit the name of the file there are 4 options:

Path

We specify the path of the directory were we are.

File

Using the MS-DOS "methacharacters" we'll change the file list appearing in the window file list, with the names of the files of the directory in course. We can also use it typing directly the name of the wished file.

File list

It's a list of all the files of the directory in course, that satisfy the specifications of the file window . For instance , if there's a "*" in the file window of the files will be visualised. Once in this window , we can move in the screen using the cursor keys, to select the wished file. Once selected we validate the option through the **RETURN** key.

Disc / dirs.

This window allows you changing the directory and/or the disk. In this window there's a list containing the actual directory (.), the previous directory (..) , all the accessible disks (specified between < >) and finally all the directories contained in the actual directory. Once in this window we can use the cursor keys for moving in the screen, select the directory/disk wished and validate the option pressing **RETURN**.

For passing from window to window, you can use the key **TAB**, or with the mouse pressing the right button.

To exit the file edit window press **ESC** or place the mouse on the text **ESC** of the window and press the left button.

4.1.3 Saving a file

You can save typing **S**, or with the mouse. Saves the edited messages in the current file, with any confirmation needed.

4.1.4 save As

The access can be done typing **A**, or with the mouse. Saves the edited messages in the file specified by the user. The edition of the file name where the messages will be saved, it's similar to the process specified in the option Edit (see paragraph 4.12 and figure 4.3)

```

L A R T E T , S . L . ³ File DT102-1.TXT  Line 0019/0019  Column 02  ³↑ ↓
File Y Goto ³ Edit ³ Transmission ³ Search ³ Commands ³ Others ³ Help
UAAAAAAAAAAAAA;
³ New ³
³ Edit ³
³ Save ³
³ save As ³
³ Configure ³ITCH ON
³ eXit ³
AAAAAAAAAAAAAU][V][V]
[4]
[S]ALARM EMPTY PUMP [T3]
[5]
[S]***[F]ATTENTION[f]***

[6]
[S]P. GOOD [V][V][V] P. BAD[V][V][V]
[10]
[S]MESSAGE FOR A TWO LINES DISPLAY
[L2]2ND LINE OF THE 10TH MESSAGE
[240]

[S] SWITCH LIMIT FAIL X24

Insert mode

```

Figure 4.3

4.1.5 Configuration

You can aced typing **C** or with the mouse. This option allows you configure the work conditions of TED. Once selected, we'll see a screen (see figure 4.4) where the user will be asked for some information.

```

L A R T E T, S. L. ³ File DT102-1.TXT Line 0019/0019 Column 02 ³↑↓
File ³ Goto ³ Edit ³ Transmission ³ Search ³ Commands ³ Others ³ Help
[0]
[S]*PAR GENERAL CONFIGURATION
[1] Monitor type..... 4
[S]*[H] Directory for"backups" files..... text
[2] Directory ..... text
[S]MACH Number of lines of the printer.... 66
[3] Language..... 1
[S]PIEC Communications serial port..... 2
[4] Default message..... CODE:
[S]ALAR Connection type..... 0
[5] Listing ON/OFF-Line..... 0
[S]***[
[6]
[S]P.BU PRINTER COMPUTER
[10] Speed..... 9600 9600
[S]MESS Parity..... 0 2
[L2]LIN Number of bits..... 8 8
[240] Stop bits..... 2 1
[S]FAIL
ESC-Go Back F1-Salvar MOUSE: LEFT-Save RIGHT-Go back
1=HERCULES 2=CGA 3=EGA 4=VGA 0=OTHERS

Insert mode
    
```

Figure 4.4

Monitor type

Numerical value:

- 1=Hercule
- 2=cga
- 3=ega
- 4=vga
- 0=others

Directory for copy files

When saving a file, if TED finds an existing directory with this name (same path), saves in this directory a copy of the file that you want to save, before modifying. This option it's very interesting for recuperating old versions.

Temporary directory

This directory, it's utility for the user, is for editing there his messages files. The first we execute the program we'll be in this directory for beginning with the messages edition.

Number of lines of the printer

When doing a list of all the messages in a file, TED will jump into a new page each time there's a surpassing the number of lines here indicated. This field must have a value between 50 and 75.

Language

Possible languages:

- 0=Catalan
- 1=Spanish
- 2=French
- 3=English

TED can work in this four languages. When we change the language, when returning to the main screen, all the texts will be in the selected language.

Communication serial port

It defines the port where we'll communicate with the display. It can be:

- 1= COM1
- 2=COM2
- 3=COM3

Default message

When we enable a message in the display, without text associated, automatically a message is visualised showing the text specified here and the message N° enabled, so the user knows which is the message sent. The text as default is "CODI" this message is modifiable.

Connection type

Possible numerical values:

0= a computer to a display

1=computers to different displays. Net RS 485.

In case of choosing option n°1, several displays, each time we're asked for a message number, we're asked also for the display associated. Therefore, the command message number will have implicit, separated for a coma, the display number assigned.

Listings ON/OFF line

Possible numerical value:

0=Off line

1=On line

When a message containing the command "printable message" is enabled, in the first option the message goes to a printer buffer, ready for printing when the user wants. In the second case, we introduce values for defining the printer connected to the display (if there's one) and the communications of the computer with the display.

This values are:

Speed

Computer: numerical value, it can be 150,300,600,1200,4800,9600 bits/second.

Printer: JBUS/MODBUS: 150,300,600,1200,2400,4800,9600, or 19200 bits/second.

Parity

Possible numerical value:

0=no parity

1=odd parity

2=even parity

Number of bits

Numerical value between 7 or 8 bits.

Stop bits

Numerical value between 1 or 2 bits.

Once edited all this values, we can type **ESC** and exit TED without saving any change, or type **F1**, for saving the edited information. We can also move in this fields with the cursor keys.

With the mouse, the left button do the functions for **F1**, and the right button do the functions of the ESC key. If we move the mouse up and down, we'll change to the following field.

4.1.6 eXit

Type **X**, or with the mouse. It allows us leave **TED** for going back to the operative system , without saving the changes made in the file. If we haven't done any change we'll leave the program without any previous step. Otherwise, if **TED** finds any change in the file, before leaving there will be a warning, and the chance to exit or to follow with the file edition.

4.2 Goto

You accede typing **ALT+G** or with the mouse. It has the following options (see figure 4.5)

```
L A R T E T, S. L. ³ File DT102-1.TXT  Line 0019/0019  Column 02  ³↑↓
File Y Goto P Edit ³ Transmission ³ Search ³ Commands ³ Others ³ Help
[0]  UAAAAAAAAAAAAAAAAAAAj
[S]*STOP ³ Begin of file ³
[1]      ³ End of file ³
[S]*[H]  ³ beGin of line ³
[2]      ³ eNd of line ³
[S]MACHIN³ begIn of Page ³
[3]      ³ eNd of page ³
[S]PICES ³ Line ³
[4]      ³ Mark ³
[S]ALARM AAAAAAAAAAAAAAAAAAU]
[5]
[S]***[F]ATTENTION[f]***
[6]
[S]P.GOOD[V][V][V] P.BAD[V][V][V]
[10]
[S]MESSAGE FOR A TWO LINES DISPLAYS
[L2]LINE 2 FROM MESSAGE 10
[240]
[S]SWITCH LIMIT FAILS X24

Insert mode
```

Figure 4.5

4.2.1 Begin of file

The access is either typing **B** or with the mouse. Puts the cursor in the first line of the file we're editing

4.2.2 End of file

The access can be either typing **E** or with the mouse. Puts the cursor in the last line of the file we're editing.

4.2.3 beGin of line

The access can be either typing **G** , or with the mouse. Places the cursor in the first column of the enabled line.

4.2.4 eNd of line

The access can be either typing **N** or with the mouse. Places the cursor in the last column of the enabled line.

4.2.5 begIn of page

The access is done typing **I** or with the mouse. Places the cursor in the first line of the enabled page.

4.2.6 enD of page

The access is done typing **D** or with the mouse. Places the cursor in the last line of the enabled page.

4.2.7 Line

The access is done typing **L** or with the mouse. When we select this option TED will ask in the **status line** to which line do we want to go. Once chose the line, the cursor will be placed in the desired line. (If the line chose it's not correct, it's a number smaller than 1 or it's a number greater than the last line in the file, TED asks it again.)

If instead of a number line we introduce **ESC** we'll come back to the edition mode.

4.2.8 Mark

The access is done typing **M**, or with the mouse. Previously we'll the mark as a concept. The user ,through an option we'll explain later, can mark a position in the file where he can come back later (see paragraph 4.3.2).

You can put 10 marks in 10 different points in the file. Then with this option, TED will ask us for the number of the mark where we want to go. The user will have to introduce a value between 0 and 9. Once introduced this value the cursor will place in the corresponding mark. If this mark doesn't exist, TED will come back to the edition mode, were we where , making a sound.

4.3 Edit

We can accede typing **ALT+E** or with the mouse. It has the options specified in the windows (see figure 4.6).

```

L A R T E T, S. L. ³ File DT102-1.TXT  Line 0019/0019  Column 02  ³↑ ↓
File  Y Goto  P Edit ³ Transmission ³ Search ³ Commands ³ Others ³ Help
[0]  ÜAAAAAAAAAAAAAAAAA- -Ä
[S]*STOP ³ Graphic ³
[1] ³ Set mark ³
[S]*[H] ³ Insert line ³
[2] ³ Delete line ³
[S]MACHINE ³ dElete message ³
[3] ³ duPlicate message ³
[S]PIECES ³ Line ³
[4] ³ Mark ³
[S]ALARM  ÅAAAAAAAAAAAAAAAAA- -Ü
[5]
[S]**[F]ATTENTION[f]**
[6]
[S]P.GOOD[V][V][V] P.BAD[V][V][V]
[10]
[S]MESSAGE FOR A TWO LINES DISPLAYS
[L2]LINE 2 FROM MESSAGE 10
[240]
[S]SWITCH LIMIT FAILS X24

Insert mode

```

Figure 4.6

4.3.1 Graphic

You can accede typing **G**, or with the mouse. This option allows insert characters with ASCII codes higher than 127 (semi-graphic characters and specials) normally you can't introduce this characters through the keyboard. When selecting this option **TED** will ask for a value between 128 and 255. If the value entered isn't between this two values **TED** will ask again.

If instead of typing a value we type **ESC**, we'll come back to the edition, where we were, otherwise **TED** will insert the value in the position of the cursor.

4.3.2 Set mark

The access is done typing **S** or with the mouse. With this option we can leave a mark on any point in the file we're editing, so we'll be able to return there at any moment during the edition (see point 4.2.8). We have up 10 marks, numbered from 0 to 9. TED will ask us in the status line which one do we want to use in the mark. If the value entered is out of the accepted ones TED will repeat the question. If instead of entering a valid value we type **ESC**, we'll come back to the edition mode where we were before. If the value is correct, the mark will be counted, but we won't observe any special change in the text. So the marks are invisible for the user, and it's his responsibility knowing where are situated each one .

4.3.3 Insert line

The access is done typing **I**, or with the mouse. It allows to introduce a blank line before the line where's the cursor.

4.3.4 Delete line

The access is done typing **D** with the mouse. It allows to delete the line where's the cursor. This option deleted all the line, without the possibility of recovering . If the line we want to delete has a message number, TED won't permit the deleting. (For deleting a whole message see point 4.3.5)

4.3.5 dElete message

The access is done typing **E**, or with the mouse. When we chose this option, TED will ask in the status line a message number (between 0 and 1023).

Once entered the message number, TED will look for it, if TED finds the message number the message will be deleted completely, all the text lines defined in this message.

If TED doesn't find the message number, will make a sound and visualise a message, as when the values were out of the edge, and come back to the edition mode. But if instead of typing a message number we type **ESC**, we'll return to the edition mode without deleting any message.

4.3.6 duPlicate message

The access is done typing **P**, or with the mouse. It permits to copy the text from one message to another.

You can't copy from one message to another message whose number exists already. If we type **ESC** we'll come back to the edition mode to the place we were.

If the field Connection type is 1 (connection to several displays, Net RS485) we'll be asked for the display number also, to which we want to associate the copied message.

If we enter 0 for the display number, that means we want to send this message to all the displays connected to the net.

If we specify a display number, different from 0, when we visualise the message number, it will have next to him , separated with a coma, the number of the display.

4.4 Transmission

The access is done typing **ALT+T**, or with the mouse. It has the different options (see figure 4.7)

```

L A R T E T, S. L. ³ File DT102-1.TXT Line 0019/0019 Column 02 ³↑↓
File ³ Goto ³ Edit Y Transmission P Search ³ Commands ³ Others ³ Help
[0]                                0AAAAAAAAAAAAAAAAA¿
[S]*STOP PLC*                      ³ Send ³
[1]                                ³ Receive ³
[S]*[H] [d]*                        ³ Verify ³
[2]                                ³ Only 1 text ³
[S]MACHINE ON                      ³ Date & time ³
[3]                                ³ sCrroll ³
[S]PIECES [V][V][V][V]            AAAAAAAAAAAAAAAAAAU
[4]
[S]ALARM PUMP [T3]
[5]
[S]**[F]ATTENTION[f]**
[6]
[S]P.GOOD[V][V][V] P.BAD[V][V][V]
[10]
[S]MESSAGE FOR 2 LINES DISPLAY
[L2]LINE 2 MESSAGE 10
[240]
[S] SWITCH LIMIT FAIL X24

Insert Mode
    
```

Figure 4.7

These are direct actions to the display, to chose in:

- Send
- Receive
- Verify
- only 1 Text
- Date & time
- sCrroll

4.4.1 Send

You can accede typing **S** , or with the mouse. This option sends the file in course to the display. The messages that were in the display will be loose, substituted for the new ones. If there's a problem in the transmission, TED will warn us. Verify before sending a message that the cable between the computer and the display is connected correctly, and that the communication port is correctly defined in the configuration.

TED before sending will ask for our conformity.

The messages send are **kept in the display's EEPROM**, for being called from the parallel entrances or for being displayed correlativey in the Presentation mode.

In Net RS485, we'll work in Presentation mode, we can charge the messages to the EEPROM of the display and exit from TED, so that way we can use the computer for other tasks. The displays will keep indefinitely the messages, it only would be necessary to send the messages again if they have to be modified.

4.4.2 Receive

You can aced typing **R**, or with the mouse. It allows receiving messages from the displays, and put this messages in the file in course.

Before beginning the receipt TED requests confirmation. Once validated, if the file in course has been modified, TED will ask if we want to save before receiving the new messages. When receiving the messages from the display, the messages in course are substituted for the messages that were in the display. If we don't want to loose the old messages we have to keep then in a disk previously.

If there's any problem during the reception TED will warn us. Verify, before receiving ,that the cable between the display and the computer it's connected correctly, and also that the communications serial port has the right configuration (see paragraph 4.1.5)

This option isn't possible in Net RS485.

4.4.3 Verify

You can access typing **C**, or with the mouse. This option verifies if the messages that are actually in the file in course are the same that are in kept in the display. TED will verify the messages and the configuration values, indicating the result in the status line.

Before verifying, TED will ask confirmation for the operation. If once the verification is done, finds a difference in the messages, TED will place on the first line that provoked the difference.

TED will warn if during the verify process there's any problem. Verify that the cable between the computer and the display is connected correctly, that the communications serial port is defined correctly and well configured (see paragraph 4.1.5).

In Net RS485, this function isn't possible.

4.4.4 only 1 Text

You can access typing **T**, or with the mouse. It's utility it's sending just one message to the display, that will visualise it immediately.

Once selected this option we'll be asked for what message do we want to send. With this message we won't send neither the default message or the configuration, just the message selected.

This message will be installed in the RAM memory of the display, if this has no power supply we'll have to send the message again.

4.4.5 Date & time

You can accede typing **D**, or with the mouse. It's utility is actualising the date and time of the display or displays connected to the computer.

The new date and time, will be the ones that has the computer at that moment.

This option is very useful when you have several displays in a Net RS485, connected to the computer, instead of changing the date and time one by one, we can send it from the computer so all will have the same date and time.

4.4.6 sCroll

You can accede typing **C**, or with the mouse.

This option indicated the display that has to show all the messages kept in the EEPROM sequentially.

The command scroll will be saved in the EEPROM.

The messages will also respect the commands included in every message, like individual showing time in the display's screen, intermissions etc. ...

This command is specially indicated for displays in Net RS 485.

4.5 Search

You can accede typing **ALT+S** or with the mouse. It has this different options (see figure 4.8).

```

L A R T E T, S. L. ³ File DT102-1.TXT   Line 0019/0019   Column 02   ³↑ ↓
File ³ Goto ³ Edit ³ Transmission Y Search P Commands ³ Others ³ Help
[0] ³ UAAAAAAAAAAAAAAAAAAAAAAAAA;
[S]*STOP PLC*           ³ Find           ³
[1]                    ³ Next           ³
[S]*[H] [d]*           ³ Previous        ³
[2]                    ³ Substitute      ³
[S]MACHINE WORKING    ³ Global substitute ³
[3]                    ³ AAAAAAAAAAAAAAAAAAÙ
[S]PIECES [V][V][V][V]
[4]
[S]PUMP ALARM[T3]
[5]
[S]**[F]ATTENTION[f]**
[6]
[S]P.GOOD[V][V][V] P.BAD[V][V][V]
[10]
[S]MESSAGE FOR A 2 LINES DISPLAY'S
[L2]LINE 2 OF MESSAGE 10
[240]
[S]SWITCH LIMIT FAIL X24

Insert mode
    
```

4.5.1 Find

You can accede typing **F**, or with the mouse. When selecting this option TED will ask us for a text, after writing the text TED will keep the text for finding it further on.

If instead of writing a text we type **ESC** , we'll come back to the edition mode, placed were we where.

It's important to notice that this option doesn't looks for the text, its just for saving it For finding text we'll use the two following options (paragraphs 4.5.2 and 4.5.3)

4.5.2 Next

You can accede typing **N** or with the mouse.

We only can use this functions if previously we have done one of those:

Find (see 4.5.1)

Substitute (see 4.5.4)

Global substitute (see 4.5.5)

if not TED will come back to the edition mode automatically.

This option can operate in three different ways, depending on which one of the last 3 options we have done last.

4.5.2.1 Having done a "Find"

In this case TED will look for the text defined before. The searching will be forward from where the cursor is. If the text is founded TED will place there the cursor. If it doesn't find the message TED will warn us displaying a message in the status bar.

4.5.2.2 Having done a "Substitute"

In this case, TED will execute the substitution defined previously (see 4.5.4) for this first of all it will look for the text that's going to be substituted, forward from where the cursor is.

Once founded the text, the cursor places on this text and substituted the old one for the new one. If TED can't find the text there'll be a warning showing a message in the status bar, and the command substitution will be invalidated.

4.5.2.3 Having done a "Global substitution"

In this case TED will execute the operation done previously (see paragraph 4.5.5). Firstly TED will look for the text to substitute forward from where the cursor is placed. Once it finds the text there are two possibilities :

- 1) The substitution is done without a confirmation, and the old texts it's substituted for the new one. Then TED will look for the following repetition of old text, for repeating the process, until it doesn't find any other texts to substitute.
- 2) The substitution is done with a confirmation, in this case the process stops waiting for the user to choose between:

C for changing the old one for the new one.

S for jumping this change and follow with the other one.

A for leaving the process and returning to the edition process.

If we type **C** or **S** the operation repeats until there aren't more texts to substitute.

4.5.3 Previous

You can accede to this option typing **P**, or with the mouse. The way this option works is exactly the same as the option of point 4.5.2 with the only difference that it looks for the texts back from where the cursor is. For all the rest it's the same.

4.5.4 Substitute

You accede typing **S**, or with the mouse. When we select this option TED will ask for two texts: the one that's going to be substituted and the new one. Once entered the texts are kept for TED for realise the substitution when the user selects the options Next or Previous.

4.5.5 Global substitute

You can accede typing **G** or with the mouse.

When selecting this option, TED asks for 3 texts: the one that's going to be substituted, the one that's going to substitute the old text, and the third one for saying if we want to give confirmation to the substitutions. If in the first question we type **ESC** we'll come back to the edition mode.

Once this values are introduced, the substitution won't be made immediately, TED saves the values for making effective the operation when the user validates it trough typing the commands Next or Previous (paragraph 4.5.2 and 4.5.3).

While making the substitutions, if we asked for confirmation, before each substitution, we can decide about them.

4.6 Commands

You can accede typing **ALT+C** or with the mouse.

This menu has all the command the editor has (see chapter 3). Apart from the standard way of selecting the options, here in the window next to there's the name of the function key (see figure 4.9) pressing this keys from the edition, it's exactly the same as selecting the option.

```

L A R T E T, S. L. ³ File DT102-1.TXT Line 0019/0019 Column 02 ³↑↓
File ³ Goto ³ Edit ³ Transmission ³ Search Y Commands Y Others ³ Help
[0] UAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAZ
[S]*STOP PLC* ³ new Message F1 ³
[1] ³ Printable message F2 ³
[S]*[H] [d]* ³ Unprintable message F3 ³
[2] ³ Flashing on F4 ³
[S]MACHINE WORKING ³ fLashing off F5 ³
[3] ³ Variable 1 character F6 ³
[S]PIECES [V][V][V][V] ³ Time (HH:MM) F7 ³
[4] ³ tIme (HH:MM:SS) F8 ³
[S]PUMP ALARM[T3] ³ Date (DD-MM-YY) F9 ³
[5] ³ Show message code F10 ³
[S]***[F]ATTENTION[f]*** ³ mess. duRing time Shf+F1 ³
[6] ³ New line Shf+F2 ³
[S]P.GOOD[V][V][V] P.BAD[V][V][V] AAAAAAAAAAAAAAAAAAAAAAAAAAAZ
[10]
[S]MESSAGE FOR A 2 LINES DISPLAY
[L2]LINE 2 MESSAGE 10
[240]
[S] SWITCH LIMIT FAIL X24

Insert mode
    
```

- new MessageF1
- Printable message.....F2
- Unprintable messageF3
- Flashing onF4
- fLashing offF5
- Variable 1 characterF6
- Time (HH:MM)F7
- tIme (HH:MM:SS)F8
- Date (DD-MM-YY).....F9
- Show message codeF10
- message duRing timeShf+F1
- New lineShf+F2

4.6.1 new Message

You can accede typing **M**, or with the mouse. You can also use the key **F1** in the edition mode.

TED will ask the number of the message we want to insert. The value has to be a number between 0 and 1023. If not TED will warn the user, and won't do anything.

If the value is correct, then TED will insert the message in the correspondent position, and automatically order the messages from minor to greater. If we press **ESC** instead of a value we'll come back to the edition mode.

When we insert a new message, TED puts automatically the command "printable message" first, (see paragraph 4.6.2). That's because the first command in a message has to be printable or unprintable message. This command can't be deleted or otherwise the display will omit the first command of the message affected.

The display when we don't enable any message, as default shows the message n°0.

Finally just say that if we have several displays connected (see field Connection type of the configuration) we'll be asked also to which number the message is going to be send.

We'll see the display number, when the command is shown, next to the message number, except if the display number is 0, that means we want to send the message to all the displays connected at the moment.

4.6.2 Printable message

You can accede typing **P**, or with the mouse. It's the same effect as type F2 from the edition mode. When we select this option, TED will insert at the beginning of the message the command printable message. If this command already exists, it doesn't have any effect, if there's a command non printable message then substitutes one for the other one.

The finality of this command is that each time the display shows the message that has the command associated, it prints in the printer connected to the display. A message always has to have the command printable or unprintable message otherwise the first character associated to the message will be lost when showing in the display.

4.6.3 Unprintable message

You can accede typing **U**, or with the mouse. You can get the same effect typing F2 from the edition mode. When selecting this option TED will insert at the beginning of the message the command unprintable message. If this command already exists, it won't have any effect, if there was the command printable message, then TED substitutes one for the other.

The finality of this command is that every time that shows the associated message, it doesn't print in the printed connected to the display. A message always has to have the command printable or unprintable message otherwise the first character associated to the message will be lost when showing in the display.

4.6.4 Flashing on

You can accede typing **F**, or with the mouse. You can also type **F4** from the edition mode, and get the same effect.

When selecting this option TED will insert where the cursor is placed the order for enabling the characters in intermission, that will continue until it finds the command fLashing off.

4.6.5 fLashing off

You can accede typing **L** or with the mouse. You can also type **F5** from the edition mode and get the same effect.

When selecting this option TED will insert where the cursor is placed the command for disabling the characters in intermission.

4.6.6 Variable 1 character

You can accede typing **V** or with the mouse. You can also type **F6** from the edition mode and get the same effect.

When selecting this option TED will insert where the cursor is placed this command, that will keep a space in the message for a value given for the entrances of the display.

You can link several variables of 1 characters for forming one variable with several characters, all depends on how are the entrances to the display connected.

4.6.7 Time (HH:MM)

You can accede typing **T**, or with the mouse. You can also type **F7** from the edition mode and get the same effect.

When we select this option TED will insert where the cursor is placed this command so when the message shows , time will be shown in hours and minutes in this format HH:MM, where TED finds the command.

4.6.8 tme (HH:MM:SS)

You can accede typing **I**, or with the mouse. You can also type **F8** from the edition mode and get the same effect.

When selecting this option TED will insert where the cursor is placed this command so when the message shows. Time will be shown in hours minutes and seconds in this format HH:MM:SS, where TED finds the command.

4.6.9 Date (DD-MM-YY)

You can accede typing **D**, or with the mouse. You can also type **F9** from the edition mode and get the same effect.

When selecting this option TED will insert where the cursor is placed this command, so when the message is shown, the date with the day, month, and year, in this format DD-MM-YY where TED finds the command.

4.6.10 Show message code

You can accede typing **S**, or with the mouse. You can also type **F10** from the edition mode and get the same effect.

When selecting this option TED will insert in the position of the cursor this command so when the message shows in the display it also shows the message number where you can find the command.

4.6.11 message duRing time

You can accede typing **R** or with the mouse. You can also type **Shift+F1** from the edition mode and get the same effect.

When selecting this command TED will insert in the position of the cursor this command, that specifies for how long the message associated has to keep enabled.

After selecting this command, TED will require the time in seconds, and in the screen we'll see an **R** followed for the time in seconds we specified.

Once specified a time, this will be unaltered until another message changes it with another time command.

For instance if we have enabled a time of 3 seconds in message n°1 and in message n°10 we enabled a time of 1 second, then all the messages from n°1 to n°9 will have an enabling time of 3 seconds, and from message n°10 will have an enabling time of 1 second.

If we insert this command in a message that for its length shows in the scroll mode, this message won't unable immediately after the specified time, when the time finishes the message will continue scrolling until all the message has been shown totally.

4.7 Others

You can accede typing **ALT+O** or with the mouse. It has this options (see figure 4.10)

```

L A R T E T, S. L. ³ File DT102-1.TXT   Line 0019/0019   Column 02   ³↑ ↓
File ³ Goto ³ Edit ³ Transmission ³ Search Y Commands Y Others ³ Help
[0]                                     UAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
[S]*STOP PLC*                           ³ new Message           F1 ³
[1]                                     ³ Printable message     F2 ³
[S]*[H] [d]*                             ³ Unprintable message  F3 ³
[2]                                     ³ Flashing on          F4 ³
[S]MACHINE WORKING                       ³ fLashing off         F5 ³
[3]                                     ³ Variable 1 character F6 ³
[S]PIECES [V][V][V][V]                   ³ Time (HH:MM)         F7 ³
[4]                                     ³ tIme (HH:MM:SS)      F8 ³
[S]PUMP ALARM[T3]                         ³ Date (DD-MM-YY)      F9 ³
[5]                                     ³ Show message code    F10 ³
[S]***[F]ATTENTION[f]***                 ³ mess. duRing time Shf+F1 ³
[6]                                     ³ New line              Shf+F2 ³
[S]P.GOOD[V][V][V] P.BAD[V][V][V]       AAAAAAAAAAAAAAAAAAAAAAAAAAAAAU
[10]
[S]MESSAGE FOR A 2 LINES DISPLAY
[L2]LINE 2 MESSAGE 10
[240]
[S] SWITCH LIMIT FAIL X24

Insert mode
    
```

Figure 4.10

- List
- Redraw

4.7.1 List

You can accede typing **L** or with the mouse.

When we select this option TED will ask us if we want to save the file first.

Then TED requires us for verifying the printer, charge the paper, and asks if we want to continue.

If we say no we'll come back to the edition mode, or it will begin to list the file in course. You have to consider that:

- 1) The list will be send for the parallel port of your computer, we have to verify that the printer is connected to this port, and that have the power on.
- 2) If the list is longer that one page, TED will do a page jumping every 66 or 72 lines, depending on the specified value in the configuration (see paragraph 4.1.5)

IMPORTANT: We recommend saving the file, because if there was any problem with the printer (not connected to the power supply for instance) the computer could block. In this case, we'll have to switch off and on the computer, so all the files edited and not saved will be lost .

4.7.2 Redraw

You can accede typing **R** or with the mouse. When we select this option there'll we a redraw on the screen.

4.8 Help

You can accede typing **H** or with the mouse. This option doesn't have any associated window, it's a direct option that shows a help file for the user. In this file it's possible to use the mouse or the cursor keys. For returning to the edition mode type **ALT+H** or with the mouse. Not disposable by now.

D	H	BINARY	D	H	BINARY	D	H	BINARY	D	H	BINARY
000	00	000 0000	032	20	0010 0000	064	40	0100 0000	096	60	0110 0000
001	01	0000 0001	033	21	0010 0001	065	41	0100 0001	097	61	0110 0001
002	02	0000 0010	034	22	0010 0010	066	42	0100 0010	098	62	0110 0010
003	03	0000 0011	035	23	0010 0011	067	43	0100 0011	099	63	0110 0011
004	04	0000 0100	036	24	0010 0100	068	44	0100 0100	100	64	0110 0100
005	05	0000 0101	037	25	0010 0101	069	45	0100 0101	101	65	0110 0101
006	06	0000 0110	038	26	0010 0110	070	46	0100 0110	102	66	0110 0110
007	07	0000 0111	038	27	0010 0111	071	47	0100 0111	103	67	0110 0111
008	08	0000 1000	040	28	0010 1000	072	48	0100 1000	104	68	0110 1000
009	09	0000 1001	041	29	0010 1001	073	49	0100 1001	105	69	0110 1001
010	0A	0000 1010	042	2A	0010 1010	074	4A	0100 1010	106	6A	0110 1010
011	0B	0000 1011	043	2B	0010 1011	075	4B	0100 1011	107	6B	0110 1011
012	0C	0000 1100	044	2C	0010 1100	076	4C	0100 1100	108	6C	0110 1100
013	0D	0000 1101	045	2D	0010 1101	077	4D	0100 1101	109	6D	0110 1101
014	0E	0000 1110	046	2E	0010 1110	078	4E	0100 1110	110	6E	0110 1110
015	0F	0000 1111	047	2F	0010 1111	079	4F	0100 1111	111	6F	0110 1111
016	10	0001 0000	048	30	0011 0000	080	50	0101 0000	112	70	0111 0000
017	11	0001 0001	049	31	0011 0001	081	51	0101 0001	113	71	0111 0001
018	12	0001 0010	050	32	0011 0010	082	52	0101 0010	114	72	0111 0010
019	13	0001 0011	051	33	0011 0011	083	53	0101 0011	115	73	0111 0011
020	14	0001 0100	052	34	0011 0100	084	54	0101 0100	116	74	0111 0100
021	15	0001 0101	053	35	0011 0101	085	55	0101 0101	117	75	0111 0101
022	16	0001 0110	054	36	0011 0110	086	56	0101 0110	118	76	0111 0110
023	17	0001 0111	055	37	0011 0111	087	57	0101 0111	119	77	0111 0111
024	18	0001 1000	056	38	0011 1000	088	58	0101 1000	120	78	0111 1000
025	19	0001 1001	057	39	0011 1001	089	59	0101 1001	121	79	0111 1001
026	1A	0001 1010	058	3A	0011 1010	090	5A	0101 1010	122	7A	0111 1010
027	1B	0001 1011	059	3B	0011 1011	091	5B	0101 1011	123	7B	0111 1011
028	1C	0001 1100	060	3C	0011 1100	092	5C	0101 1100	124	7C	0111 1100
029	1D	0001 1101	061	3D	0011 1101	093	5D	0101 1101	125	7D	0111 1101
030	1E	0001 1110	062	3E	0011 1110	094	5E	0101 1110	126	7E	0111 1110
031	1F	0001 1111	063	3F	0011 1111	095	5F	0101 1111	127	7F	0111 1111

D	H	BINARY	D	H	BINARY	D	H	BINARY	D	H	BINARY
128	80	1000 0000	160	A0	1010 0000	192	C0	1100 0000	224	E0	1110 0000
129	81	1000 0001	161	A1	1010 0001	193	C1	1100 0001	225	E1	1110 0001
130	82	1000 0010	162	A2	1010 0010	194	C2	1100 0010	226	E2	1110 0010
131	83	1000 0011	163	A3	1010 0011	195	C3	1100 0011	227	E3	1110 0011
132	84	1000 0100	164	A4	1010 0100	196	C4	1100 0100	228	E4	1110 0100
133	85	1000 0101	165	A5	1010 0101	197	C5	1100 0101	229	E5	1110 0101
134	86	1000 0110	166	A6	1010 0110	198	C6	1100 0110	230	E6	1110 0110
135	87	1000 0111	167	A7	1010 0111	199	C7	1100 0111	231	E7	1110 0111
136	88	1000 1000	168	A8	1010 1000	200	C8	1100 1000	232	E8	1110 1000
137	89	1000 1001	169	A9	1010 1001	201	C9	1100 1001	233	E9	1110 1001
138	8A	1000 1010	170	AA	1010 1010	202	CA	1100 1010	234	EA	1110 1010
139	8B	1000 1011	171	AB	1010 1011	203	CB	1100 1011	235	EB	1110 1011
140	8C	1000 1100	172	AC	1010 1100	204	CC	1100 1100	236	EE	1110 1100
141	8D	1000 1101	173	AD	1010 1101	205	CD	1100 1101	237	ED	1110 1101
142	8E	1000 1110	174	AE	1010 1110	206	CE	1100 1110	238	EE	1110 1110
143	8F	1000 1111	175	AF	1010 1111	207	CF	1100 1111	239	EF	1110 1111
144	90	1001 0000	176	B0	1011 0000	208	D0	1101 0000	240	F0	1111 0000
145	91	1001 0001	177	B1	1011 0001	209	D1	1101 0001	241	F1	1111 0001
146	92	1001 0010	178	B2	1011 0010	210	D2	1101 0010	242	F2	1111 0010
147	93	1001 0011	179	B3	1011 0011	211	D3	1101 0011	243	F3	1111 0011
148	94	1001 0100	180	B4	1011 0100	212	D4	1101 0100	244	F4	1111 0100
149	95	1001 0101	181	B5	1011 0101	213	D5	1101 0101	245	F5	1111 0101
150	96	1001 0110	182	B6	1011 0110	214	D6	1101 0110	246	F6	1111 0110
151	97	1001 0111	183	B7	1011 0111	215	D7	1101 0111	247	F7	1111 0111
152	98	1001 1000	184	B8	1011 1000	216	D8	1101 1000	248	F8	1111 1000
153	99	1001 1001	185	B9	1011 1001	217	D9	1101 1001	249	F9	1111 1001
154	9A	1001 1010	186	BA	1011 1010	218	DA	1101 1010	250	FA	1111 1010
155	9B	1001 1011	187	BB	1011 1011	219	DB	1101 1011	251	FB	1111 1011
156	9C	1001 1100	188	BC	1011 1100	220	DC	1101 1100	252	FC	1111 1100
157	9D	1001 1101	189	BD	1011 1101	221	DD	1101 1101	253	FD	1111 1101
158	9E	1001 1110	190	BE	1011 1110	222	DE	1101 1110	254	FE	1111 1110
159	9F	1001 1111	191	BF	1011 1111	223	DF	1101 1111	255	FF	1111 1111