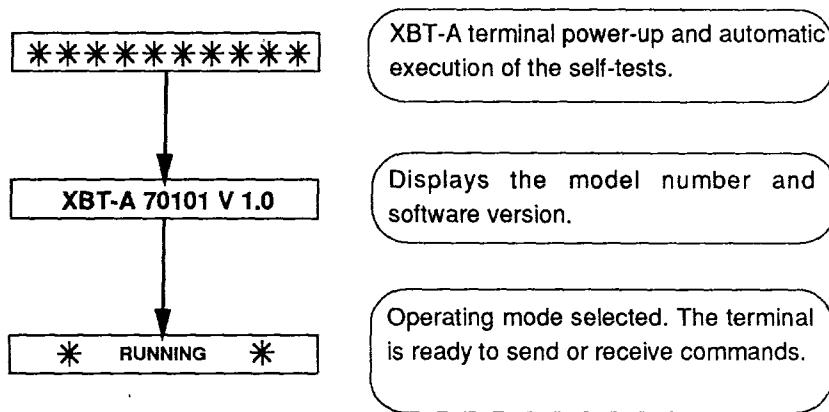


4.1 General

On power-up, the XBT-A terminal automatically executes a series of self-tests (refer to section 9, Automatic self-tests, page 135).

The terminal will display a succession of screens before displaying the definitive operating mode display:



The stored configurations are:

RUNNING (CONFIGUR. LINE)	Mode	Link	Speed	Exch.	Format	Parity	Stop	Check-sum	Confirm
	ASCII	RS232	9600	HDX	8 Bits	Odd	1 Bit	None	None

MESSAGES DISPLAY (CONFIGUR. MEMORY)	Link	Speed	Format	Parity	Stop	Dialog	Confirm
	RS232	9600	8 Bits	Odd	1 Bit	WITH	MESS

4.2 Selecting Operating Modes

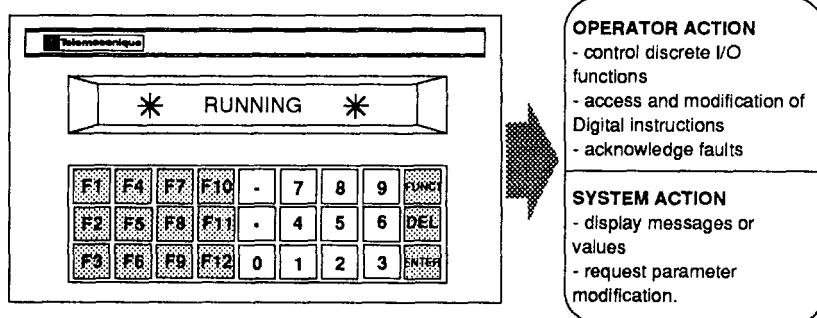
The XBT-A terminal offers two modes of operation. Holding the **[ENTER]** key down while pressing **[FUNC]** enables access to the Configuration and Operation modes.

On power-up:

- The XBT-A terminal will automatically set to the
*** RUNNING *** position

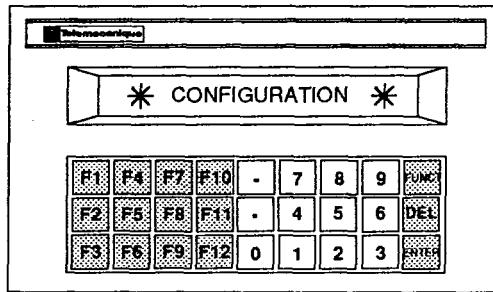
This is the mode used for operator dialog, when the XBT-A terminal is in communication with automated systems.

- On power-up, the XBT-A will default to English language messages.



Selecting Operating Modes

In the Operation mode, holding the **ENTER** key down and pressing **FUNCT** keeps the terminal in ***CONFIGURATION*** mode.



ENTER

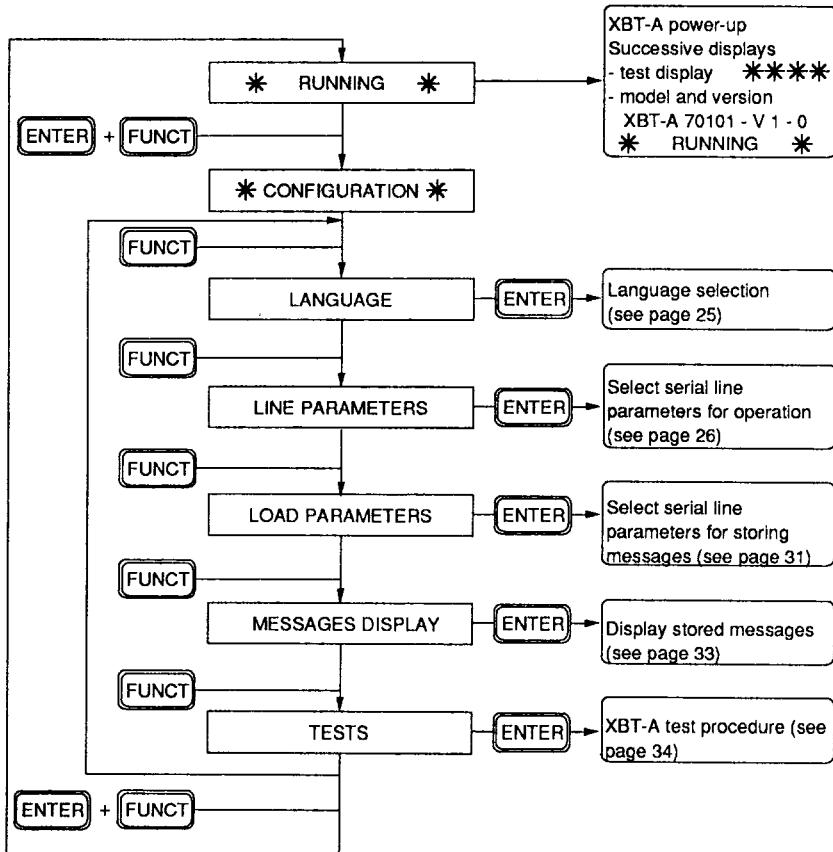
OPERATOR ACTION

- language selection
- serial line configuration
- memory configuration (storing messages)
- checking stored messages
- manually selecting self-tests

In the Configuration mode, holding the **ENTER** key down and pressing **FUNCT** keeps the terminal in *** RUNNING *** mode.

4.3 Accessing the Main Functions

[ENTER] + [FUNCT] = hold down ENTER and press FUNCT

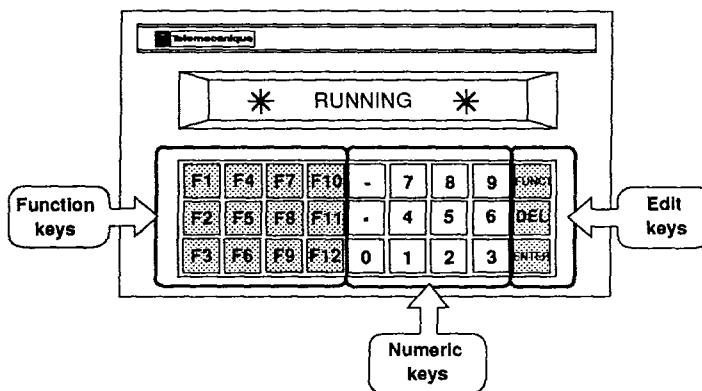


AT ANY LEVEL OF THE PROCEDURE, PRESS **[ENTER] + [FUNCT]** TO RETURN TO OPERATION MODE

THE SELECTED LANGUAGE AND LINE CONFIGURATION
PARAMETERS ARE SAVED BY PRESSING
[FUNCT] OR **[ENTER] + [FUNCT]**

4.4 Operation

- The XBT-A **terminal** dialogs via the serial link with the application program of the automated system. The various exchange modes are described in section 6, Communication, page 55.
- The **operator** has a display unit to check the data input and a keyboard for:
 - . sending orders or requesting access using Function keys **[F1]** to **[F12]**
 - . entering responses via the Number keys (**0** to **9** **[.]** **[DEU]**) or acknowledging faults by pressing **[ENTER]**
 - . set the XBT-A terminal in the required mode using the Edit keys **[FUNC]** **[DEL]** and **[ENTER]**).



Automation system commands can be accessed by:

- Direct Access by pressing **[F1]** to **[F12]**
- Indirect Access by pressing **[FUNC]** **[X]** **[X]** **[ENTER]**
 $13 \leq XX \leq 99$.

Digital responses are entered by changing the blinking display characters: **[DEL]** to erase, enter **[X]** **[X]** and **[ENTER]** to validate, blinking messages are acknowledged by pressing **[ENTER]**.

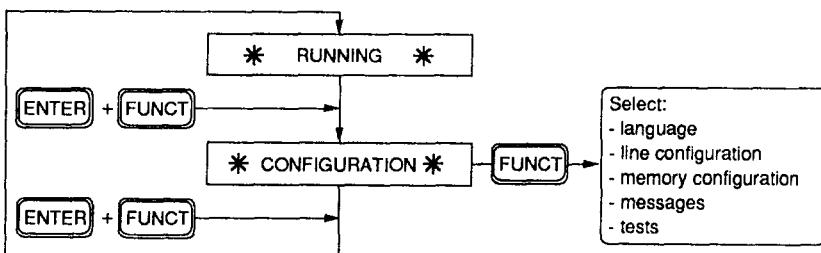
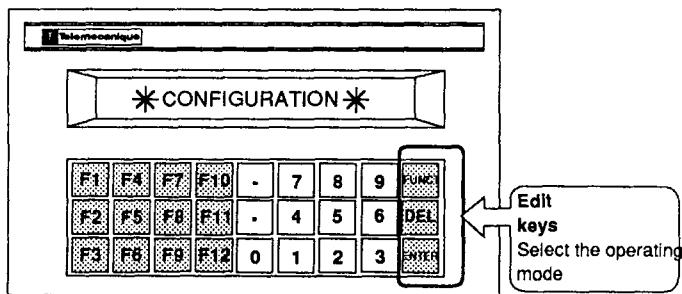
4.5 Configuration

This mode is used when installing the XBT-A terminal.

It enables the system engineer or user to make selections using the Edit keys, affecting:

- message language (English/French/German/Italian/Spanish),
- serial transmission line parameters for exchanges with the automated system in *** RUNNING *** mode,
- serial transmission line parameters for storing messages in *** CONFIGURATION *** mode,
- checking stored messages,
- checking the XBT-A terminal (self-tests),

The above functions will be described in detail in this section.

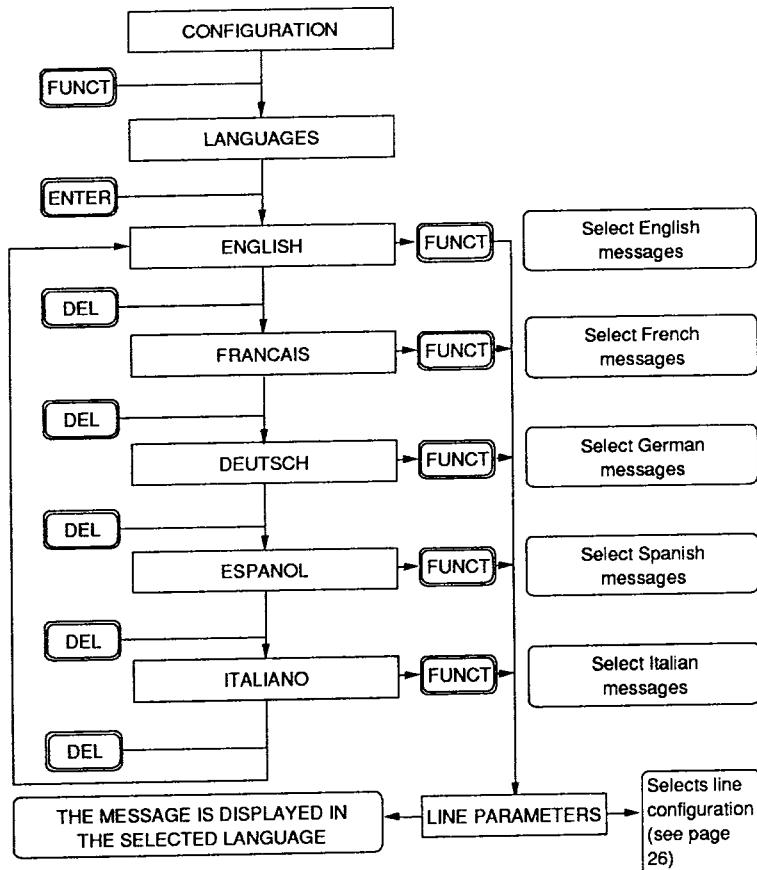


THE SELECTED LANGUAGE AND THE TRANSMISSION LINE
PARAMETERS ARE SAVED ON POWER-DOWN

Configuration

4.5.1 Language Configuration: **LANGUAGES**

WHEN IT IS FIRST POWERED-UP THE XBT-A TERMINAL
DISPLAYS ENGLISH LANGUAGE MESSAGES

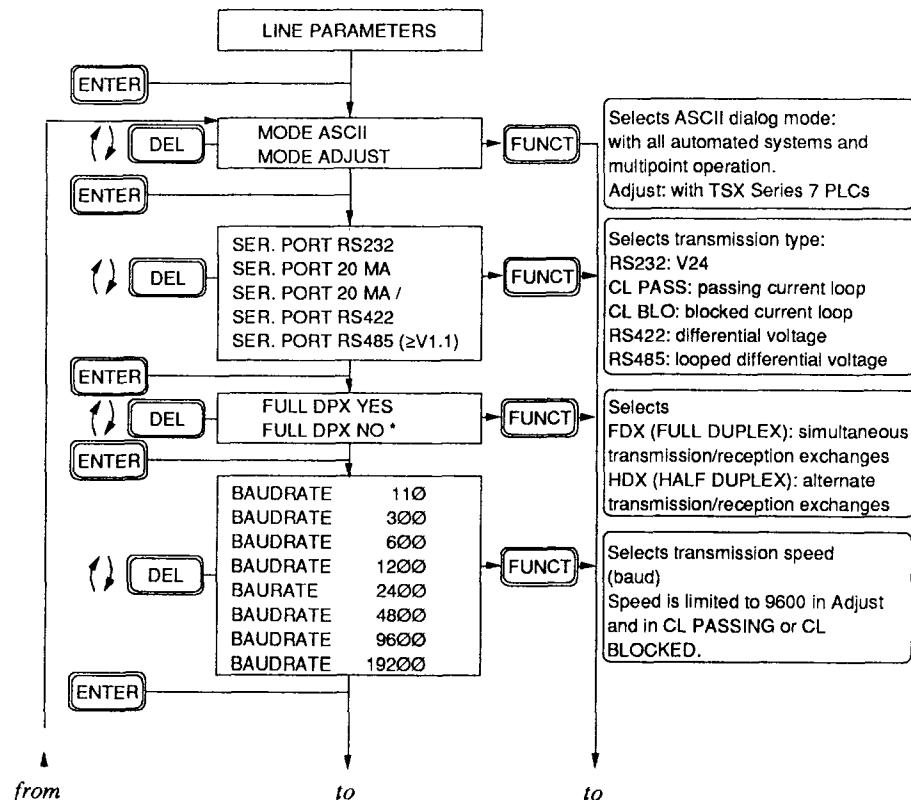


FROM ALL LEVELS IT IS POSSIBLE TO RETURN TO OPERATION MODE BY PRESSING **ENTER** + **FUNCT**. THE PARAMETERS ARE SAVED BY PRESSING **FUNCT** OR **ENTER** + **FUNCT**

Configuration

4.5.2 Serial Line Configuration: LINE PARAMETERS

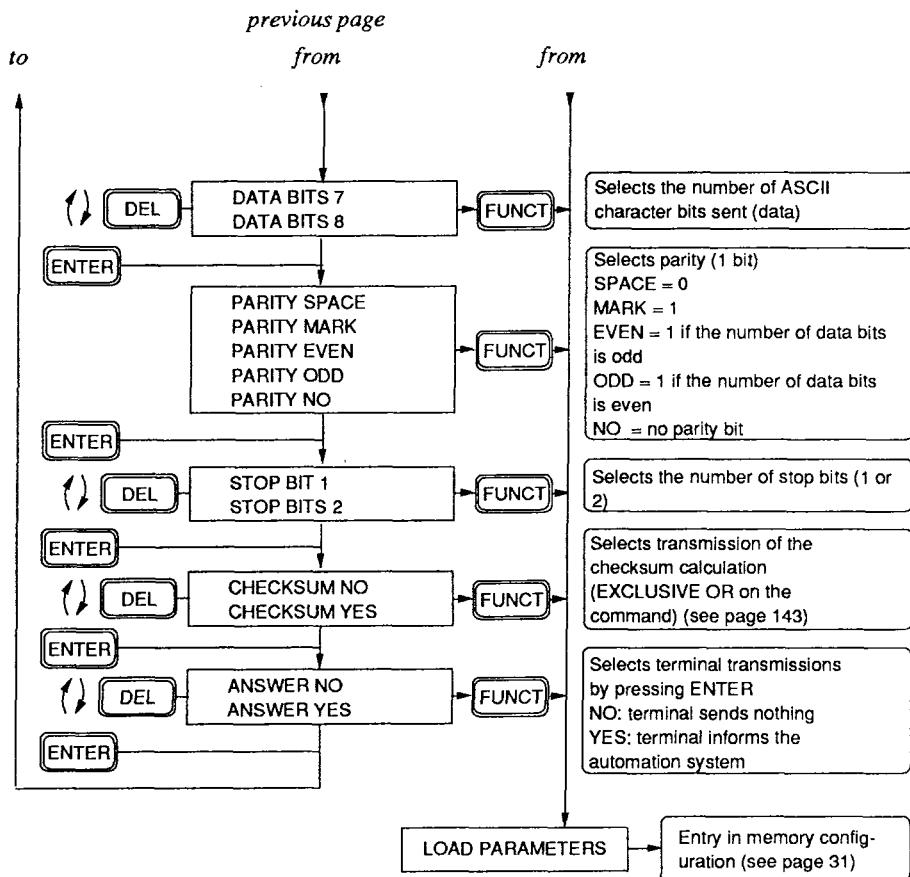
DEFAULT VALUES: ASCII RS232 9600 BAUD HDX
8 BITS ODD 1 STOP NO CHECKSUM NO CONFIRM



next page

* required in RS485 (>V 1.1) Adjust mode or in multipoint operation

Line Configuration



**SELECTING FORMAT 7 BITS, NO PARITY, 1 STOP BIT
IS NOT ALLOWED**

**AT ALL PROCEDURE LEVELS, THE SERIAL LINK PARAMETERS
FOR OPERATION ARE SAVED BY PRESSING
[FUNCT] OR [ENTER] + [FUNCT]
(RETURN TO OPERATION MODE)**

Line Configuration

ADJUST MODE

The following parameters are set:

- half duplex exchange (HDX)
- speed 9600 baud
- 8 bit format
- odd parity
- 1 stop bit
- no checksum.

The following parameters must be selected:

- data link: RS485 with TSX17-20
CL PASS with TSX27/47/67/87
- answer: WITH, the XBT-A terminal returns a
confirm to the automation system
NONE, the XBT-A terminal returns no
confirm to the automation system.

ASCII MODE

All of the transmission parameters must be adapted to those of the associated automation system.

Line Configuration

ADDITIONAL INFORMATION

Checksum: corresponds to an Exclusive OR between all bytes of the command including the LF and CR characters (refer to the calculation example in sub-section 11.5, page 143). It can only be used in ASCII mode (checksum with selected).

Confirm: When a stored N (digital) or D (blinking) message is displayed, this parameter selects between two types of XBT-A terminal operation. Immediately pressing **[ENTER]** will cause the XBT-A terminal to send the following messages:

		CONFIRM WITH	CONFIRM NONE	DESIGNATION
TYPE N MESSAGE	empty field	ESC # LFCR	/	CONFIRM
	full field	ESC R <u>CONFIRM</u> LFCR CONFIRM = FIELD VALUE	/	
TYPE D MESSAGE		ESC FXXX LFCR XXX = message number	/	ACKNOWLEDGE

Multipoint: this mode is described in sub-section 6.8, page 95.

Line Configuration

4.5.3 Memory Configuration: LOAD PARAMETERS

Operating messages are stored in the XBT-A terminal using a TSX T407 terminal, a display terminal or a PC/PS microcomputer.

The message storage procedures are described in section 5, Storing Messages, page 39.

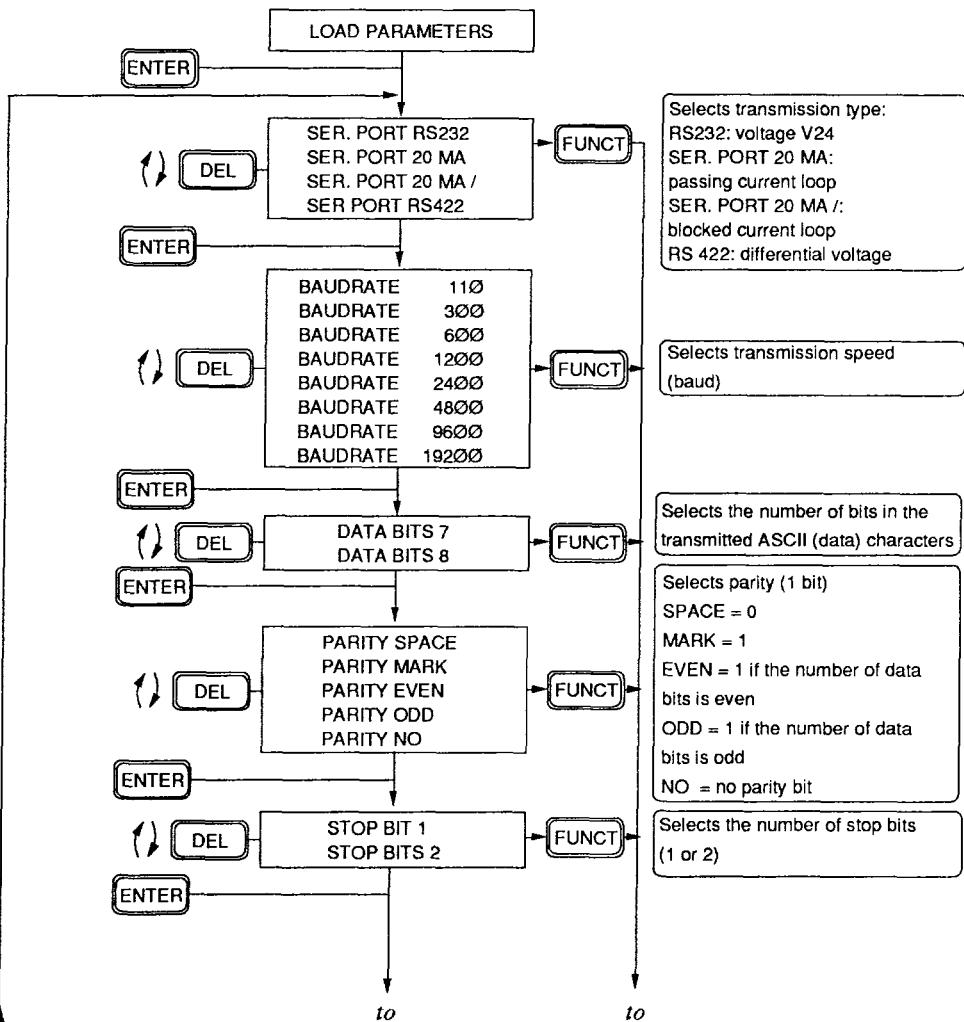
The XBT-A terminal in Configur. Memory mode, enables the serial link parameters to be adapted to those of the storage device used.

THE PARAMETERS OF THE SERIAL LINK USED TO STORE THE MESSAGES ARE SAVED ON POWER-DOWN

These parameters are stored separately from those stored in LINE. PARAMETERS

Memory Configuration

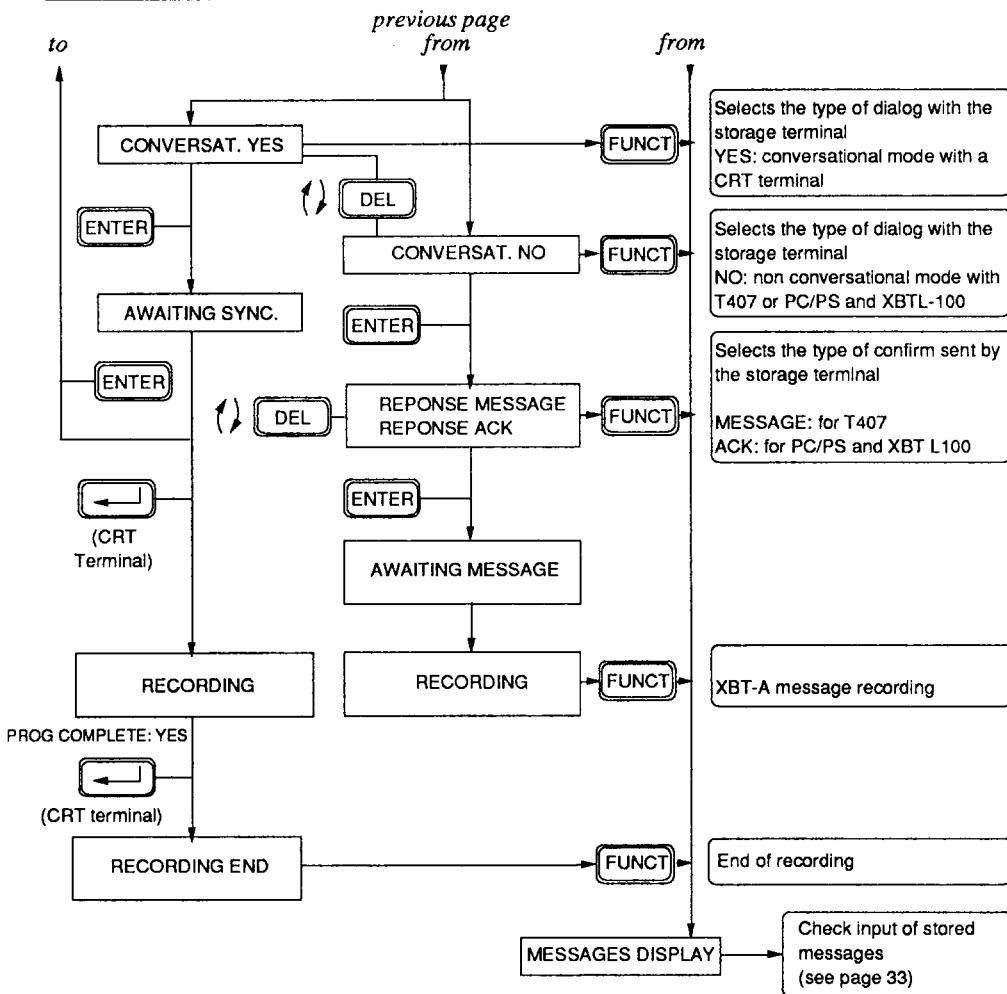
DEFAULT VALUES ARE: RS 232 9600 BAUD 8 BITS
ODD 1 STOP BIT DIALOG WITH CONFIRM. MESSAGE



from

next page

Memory Configuration



THE SERIAL LINK PARAMETERS USED TO STORE MESSAGES ARE
SAVED ON

AWAIT SYNC., CONVERSATIONAL

AWAIT MESSAGE : NON CONVERSATIONAL

**IN DIALOG WITHOUT AND MESSAGE ACKNOWLEDGEMENT IS
DISPLAYED ON THE CRT TERMINAL
NOT DISPLAYED BY TSX T407**

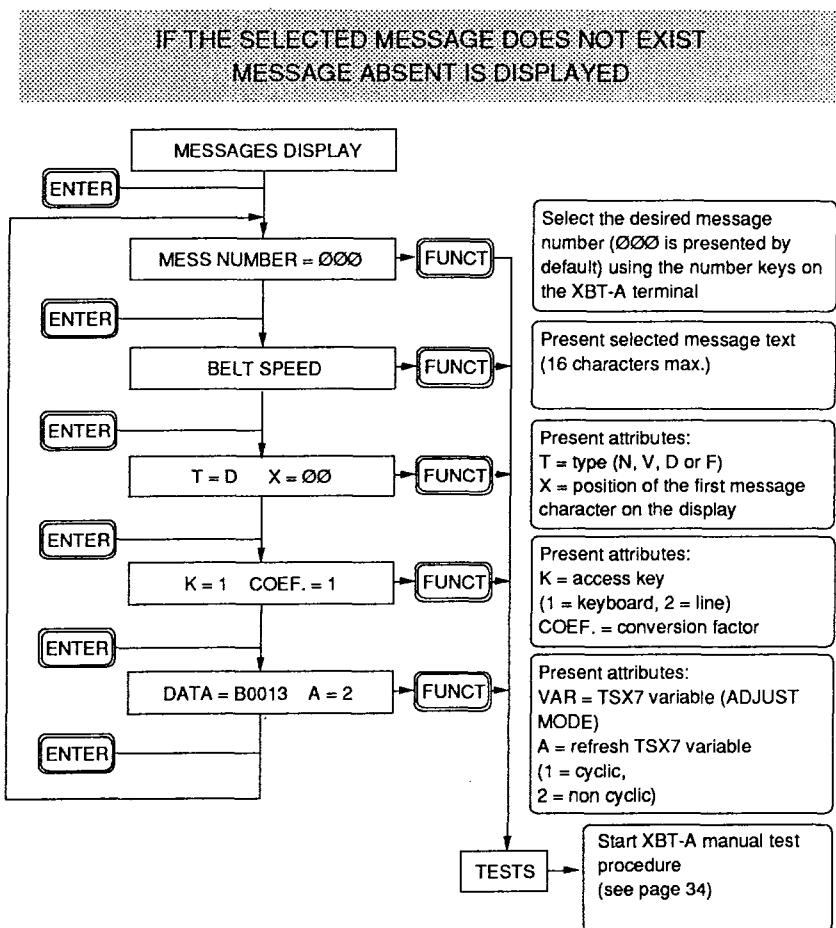
Configuration

4.5.4 Checking stored messages: MESSAGES DISPLAY

This procedure enables a check of messages saved in the EEPROM memory of the XBT-A terminal.

Messages are incremented:

- by automatically incrementing the XBT-A after each checking procedure.
- by entering the required number when: MESS NUMBER = XXX is displayed



Configuration

4.5.5 Self-tests: TESTS

This procedure is used to check that all electrical sub-units of the XBT-A terminal are operating correctly.

The self-tests can be triggered by the user in the Operation phase of the XBT-A terminal (exchanges with the connected automation system). In this case it is necessary to:

- select Configuration by pressing **[ENTER]** + **[FUNCT]**
- select TESTS by repeatedly pressing **[FUNCT]**

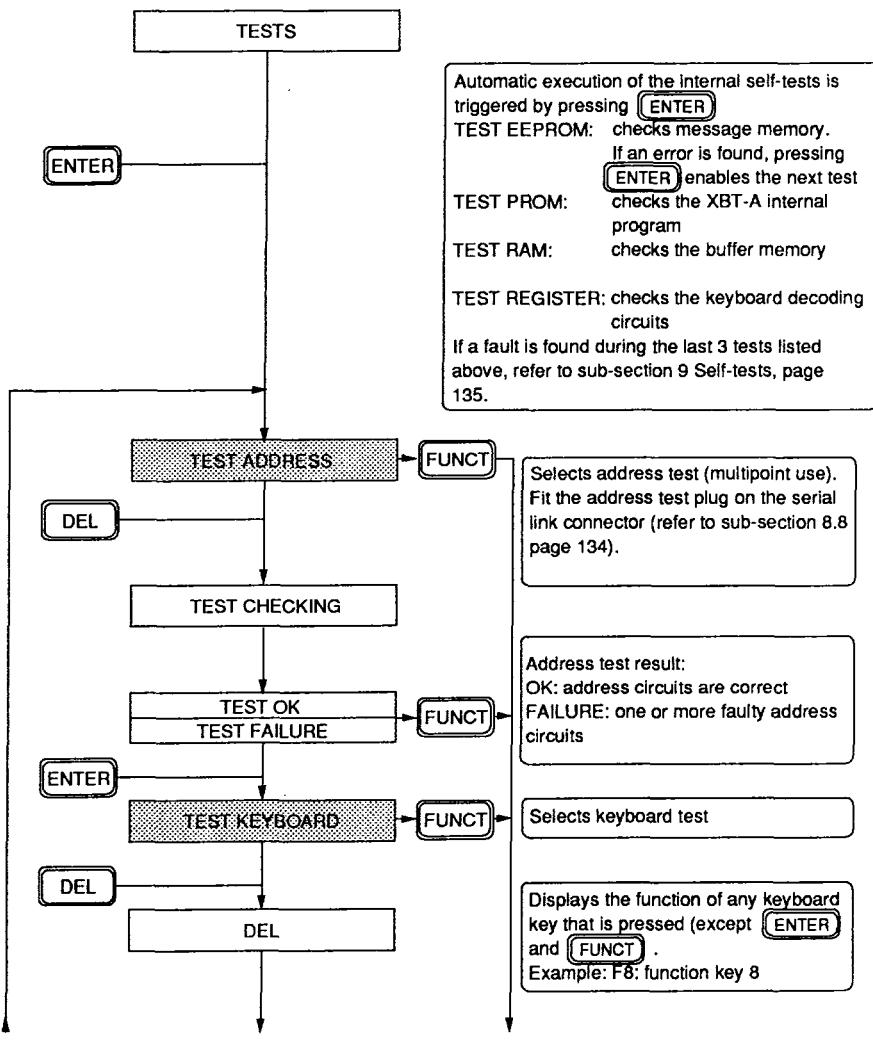
During this procedure, the XBT-A terminal does not communicate with the automated system (it is off-line).

The full self-test procedure is the same regardless of the type of terminal connected:

- XBT-A 70101 = 12 function keys (F1 to F12)
- XBT-A 71101 = 12 function keys with label holders
- XBT-A 72101 = 12 function keys with LEDs and label holders
- XBT-A 73101 = 8 function keys + 4 keys without LEDs, with label holders + 4 indicators LED'S

The LED tests do not apply to models XBT-A 70101 and XBT-A 71101.

Configuration (Self-tests)



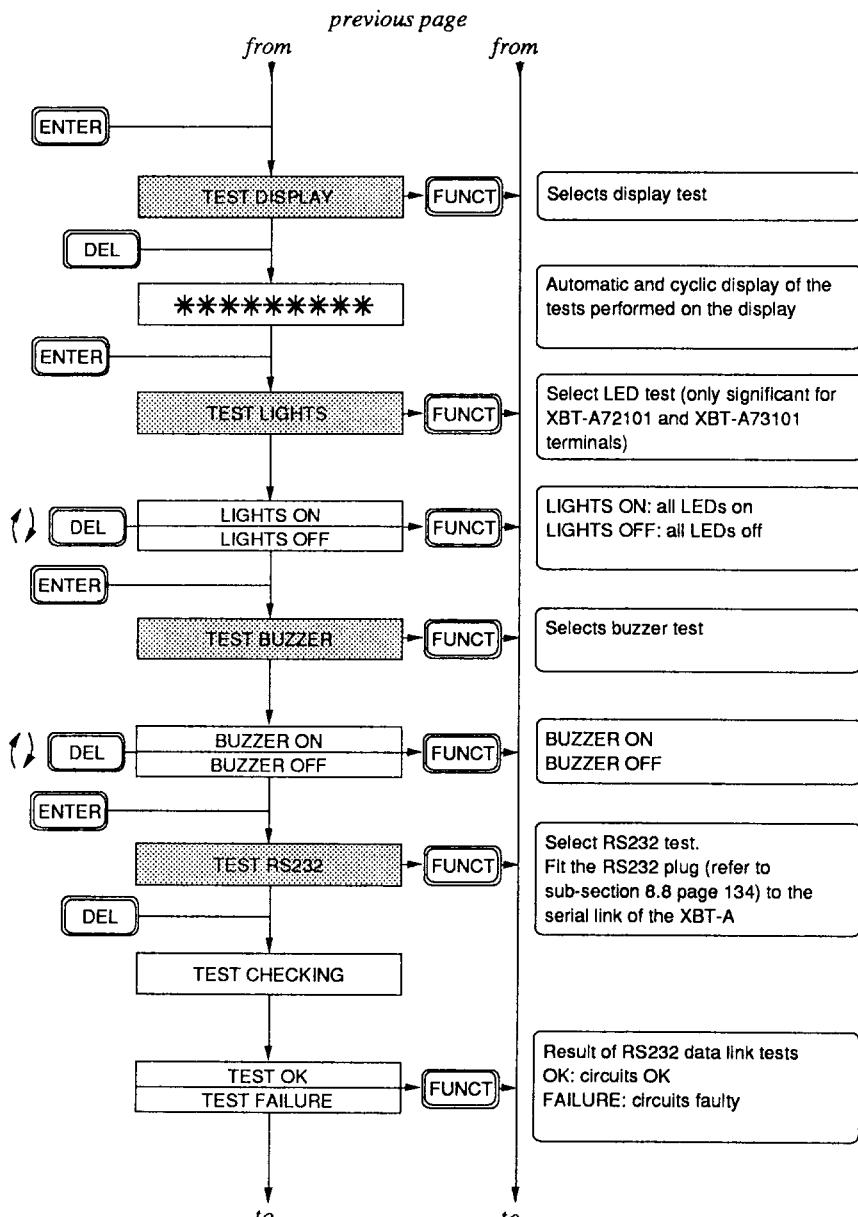
From end of tests

to

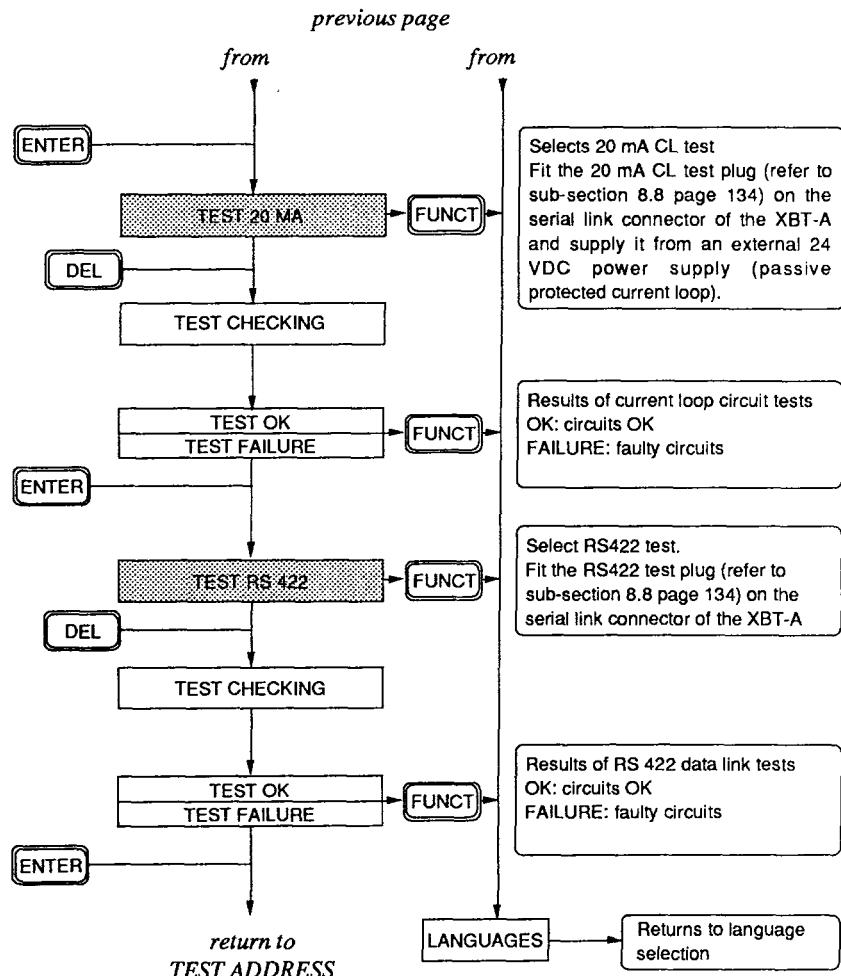
to

next page

Configuration (Self-tests)

*next page*

Configuration (Self-tests)



FROM ANY LEVEL OF THE PROCEDURE RETURN TO OPERATION
MODE BY PRESSING **ENTER** + **FUNCT**