


When the XBT-A terminal is powered-up, a series of tests is performed automatically. These tests are also performed in Configuration mode, in the Tests procedure. These tests are performed to ensure that the terminal is operating correctly.

To quit a permanent fault condition, power to the terminal must be switched off.

TEST	DISPLAY	COMMENTS
PROM	* * * * *	Internal FAULT if displayed permanently
	CHECK. PROG XXXX	Micro-program FAULT. If displayed permanently, return the device for servicing
	XBT-A7 - 101 VX.X	Brief display of the model and software version
RAM	> RAM FAULT <	Buffer memory FAULT. If displayed permanently, return the device
REGISTER	> KEYBOARD FAULT <	Keyboard decoding circuit fault. If displayed permanently, return the device for servicing
MESSAGE MEMORY	> EEPROM FAULT <	Message memory FAULT. Permanent blinking display, press (ENTER) to reset the terminal
	* RUNNING *	The XBT-A terminal is ready for use

MESSAGE DISPLAYED	OPERATING MODE	PROBABLE CAUSE	CORRECTIVE ACTION
> LINE FAULT <	ADJUST MODE	XBT/TSX 7 line failure	<ul style="list-style-type: none"> - Check the wiring - Test the XBT-A CL - Test TSX 7 programming port
> TSX DATA FAULT <	ADJUST MODE	Non existant TSX 7 variable	<ul style="list-style-type: none"> - Check variable utilization, with the TSX 7 used
<p>*** --- ***</p> <p>(IN THE DIGITAL FIELD)</p>	ADJUST MODE ASCII MODE	Value greater than acceptable by the digital field	<ul style="list-style-type: none"> - Check the digital field length - Check the conversion factor
> XXX = MESS ABSENT <	ADJUST MODE ASCII MODE	No message stored at address XXX	<ul style="list-style-type: none"> - Program the message - Change the command address
> AD PARITY FAULT <	ASCII MODE MULTIPOINT	Incorrect address wiring	<ul style="list-style-type: none"> - Check the address wiring
> BAD RECORD <	MESSAGE STORAGE	Message incorrectly written to memory	<ul style="list-style-type: none"> - Check message syntax
> EEPROM FAULT <	MESSAGE STORAGE	Power-down during the procedure	Press:  to validate

MESSAGE SENT ON THE LINE	OPERATING MODE	PROBABLE CAUSE	CORRECTIVE ACTION
ESC @ LF CR	ADJUST MODE ASCII MODE	Transmission fault - Parity error	<ul style="list-style-type: none"> - Check line parameters (reduce speed) - Check interference on the line (install optical isolation) - Check wire shielding
ESC ? LF CR	ADJUST MODE ASCII MODE	- Syntax error	Check command syntax
	ASCII MODE MULTIPOINT	Wrong address detection	Check address coding

11.2 ASCII Character Table

(ASCII: American National Standard Code for Information Interchange)

BINARY				HEXADECIMAL				DECIMAL											
				b ₆	b ₅	b ₄	b ₃	b ₃	b ₂	b ₁	b ₀	0	1	2	3	4	5	6	7
0	0	0	0	0	0	0	0	0	0	0	0	NUL TC7 (DEL)	SP	0	@	P	`	p	
0	0	0	1	1	1	0	0	1	1	0	0	TC1 (SOH)	DC1	!	1	A	Q	a	q
0	0	1	0	2	2	1	0	2	2	1	0	TC2 (STX)	DC2	"	2	B	R	b	r
0	0	1	1	3	3	1	1	3	3	1	1	TC3 (ETX)	DC3	#	3	C	S	c	s
0	1	0	0	4	4	0	0	4	4	0	0	TC4 (EOT)	DC4	\$	4	D	T	d	t
0	1	0	1	5	5	0	1	5	5	0	1	TC5 (ENO)	TC8 (NAK)	%	5	E	U	e	u
0	1	1	0	6	6	0	1	6	6	0	1	TC6 (ACX)	TC9 (SYN)	&	6	F	V	f	v
0	1	1	1	7	7	0	1	7	7	0	1	BEL	TC10 (ETB)	'	7	G	W	g	w
1	0	0	0	8	8	1	0	8	8	1	0	FE0 (BS)	CAN	(	8	H	X	h	x
1	0	0	1	9	9	1	0	9	9	1	0	FE1 (HT)	EM	)	9	I	Y	i	y
1	0	1	0	A	10	1	0	A	10	1	0	FE2 (LF)	SUB	*	:	J	Z	j	z
1	0	1	1	B	11	1	1	B	11	1	1	FE3 (VT)	ESC	+	;	K	[	k	é
1	1	0	0	C	12	1	0	C	12	1	0	FE4 (FF)	IS4 (FS)	,	<	L	\	l	ù
1	1	0	1	D	13	1	1	D	13	1	1	FE5 (CR)	IS3 (GS)	-	=	M	]	m	è
1	1	1	0	E	14	1	0	E	14	1	0	SO	IS2 (RS)	.	>	N	^	n	-
1	1	1	1	F	15	1	1	F	15	1	1	SI	IS1 (US)	/	?	O	_	o	DEL

Control characters

Displayable characters

Characters displayed by XBT-A

11.3 Table of Displayable Characters

The characters that can be displayed by the XBT-A terminal correspond to ASCII 20(H) to 5F(H).

MSB: Most Significant Bits

LSB: Least Significant Bits

MSB \ LSB	2	3	4	5
0		N V	X	P
1	V --	I	F	V N
2	"	2	0	F N
3	H	3	E	5
4	G G	4	0	T
5	Z N	5	E	L
6	V N	G	F	V V
7	/	7	G	W
8	<	G	H	X
9	/	G	I	V
A	V N	--	L	Z Z
B	+ +	7	K	I
C	.	/	L	\
D	--	--	M	I
E	.	\	N	\
F	/	F	G	--

11.5 Checksum Calculation

Example of display command transmission ESC V012 + 3 LF CR (with checksum).

Calculate the corresponding checksum (EXCLUSIVE OR).

MESSAGE	HEXADECIMAL CODE	BINARY CODE							
		b ₇	b ₆	b ₅	b ₄	b ₃	b ₂	b ₁	b ₀
ESC	1B	0	0	0	1	1	0	1	1
V	56	0	1	0	1	0	1	1	0
1	31	0	0	1	1	0	0	0	1
2	32	0	0	1	1	0	0	1	0
+	2B	0	0	1	0	1	0	1	1
3	33	0	0	1	1	0	0	1	1
LF	0A	0	0	0	0	1	0	1	0
CR	0D	0	0	0	0	1	1	0	1
CHECKSUM RESULT	Q	0	1	0	1	0	0	0	1

In 7-bit format
bit 6 forced

Q	51	0	1	0	1	0	0	0	1
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Message sent: ESC V012 + 3 Q LF CR

In 8-bit format
bit 7 forced

EXTENDED ASCII									
D1	1	1	0	1	0	0	0	0	1

Message sent: ESC V012 + 3

: Extended ASCII character