SWTPC GT-6144 Graphics Diagnostic BARTST-1

The BARTST diagnostic program is designed to operate in a SWTPC 6800 computer and will help in locating problems in a GT-6144 graphics terminal. The program uses $\emptyset 009_{16}$ words of memory and starts at location $\emptyset 000_{16}$ and may be stored on tape or loaded in from the terminal instruction by instruction using MIKBUG R . When loading the program, the program counter locations A048 and A049 should be set to $\emptyset 016$. The program assumes that the parallel interface board in the computer is in the #3 interface slot.

The program itself has several test functions. After initiating the program the first thing done is to erase the terminal's memory. This can be verified if you have the screen in the UNBLANKED condition - going from left to right the screen should go black in a period of about 0.5 seconds. After the erase is over the screen should fill with 32 vertical bars starting at horizontal location 0. After the vertical bars appear the screen blanking/reversing functions can be checked by typing in the appropriate number from 1 - 6 on your keyboard.

1	REVERSE SCREEN (black on white)
	NORMAL SCREEN (white on black)
	BLANK CT-1024 (if used)
4	ENABLE CT-1024 (if used)
5	ENABLE GRAPHICS
6	BLANK GRAPHICS

The BARTST program can be modified to test odd numbered vertical bars and odd and even horizontal bars. When using the modifications below be sure to reload the program in its original form and then make the modifications. In all cases the program counter should be set to 0016.

	CHANGE	TO
ODD VERTICAL BARS	ø ø 58	41
	ØØ5D	81
EVEN HORIZONTAL BARS	ØØ71 ØØ72	7C ØØ 59
doggara de la Santa de la S	ØØ73	15 m
	ØØ7D ØØ7E Ø Ø 7F	Ø1 Ø1 Ø1
ODD HORIZONTAL BARS	ØØ71 ØØ72 ØØ73	7C ØØ 59
	ØØ7D ØØ7E ØØ7F	Ø1 Ø1 Ø1
	ØØ59 ØØ66 ØØ77	Ø1 61 Ø1

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0000	00					0039) BD		JSR	OUTCH
000	00					003 <i>E</i>				00:1011
0002	2 00					003E				
0000	3 00					0030			INC	EVPOS
0004	98 4		PARADI	RMSB		0031		a de la companya de		
0005	5 OC		PARADI	RLSB		003E	27			
0006	5 FE	OUTCH:	LDX	PARADRLSB		003F			BRA	INCREM
0007						0040	FO			
9000						0041		SPEC:	LDA A	#\$ Ø Ø
0009			STA A	Ø,X		.0042		andre de la companya de la companya La companya de la co		
000 <i>F</i>						0043			STA A	EVPOS
000E			LDA B	#\$37		0044				1
0000						0045			INC	EHPOS
0001			STA B	1,X		0046				
000E			TDA D	A 37		0047			SELLAR	
0010			LDA B	Ø,X		0048			BRA	OVER
0010			מ אמז	#ear		0049		OTTO:	TD4 4	11 A A A
0012			LDA B	#\$3F		004A 004B		OUT:	LDA A	#\$ Ø Ø
0013			STA B	1,X		004E			C/TIA A	FUDOG
0014			JIA D	Ι,Δ		0040 004D			STA A	EHPOS
0015			RTS			004E			STA A	EVPOS
0016			LDA A	#\$3C		004F			DIT 'W	EALO2.
0017				<i>"</i> +30		0050	36		LDA A	#\$E4
0018			STA A	#\$8 øø 7		0051	E4			# YES
0019				, - ~ ~ .		0052			JSR	OUTCH
001A	07					0053	00		777	00101
001B	FE	4	LDX	PARADRMSB		0054	06		*	
001C						0055	20		BRA	SKP
001D						0056	03			
001E			LDA B	#\$FF		0057	01		NOP	
001F						0058	40		BHPOS	" .
0020			STA B	Ø,X		0059	00		BVPOS	
0021	00			" +		005A	96	SKP:	LDA A	BHPOS
0022			LDA B	#\$3F		005B	58			
0023 0024			CMA D	1 77		005C			CMP	#\$4 Ø
0024			STA B	1,X		005D				
0025			EHPOS			005E 005F			BEQ	OUT1
0027			EVPOS			0057			TCD	OT THE OTT
0028		OVER:	LDA A	EHPOS			00		JSR	OUTCH
0029			LD11 11	шиоо			06			
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002B	40			" T · 🔑			59		DDII II	VIOS
002C	27		BEQ	OUT			81		CMP	#\$6 Ø
002D	1 C		•				60			+ 0 %
002E			JSR	OUTCH		0067	27		BEQ	SPEC1
002F						0068	OD			•
0030							8B		ADD	#\$8 Ø
0031		INCREM:	LDA A	EVPOS		006A				
0032				11 + 0 d		006B			JSR	OUTCH
0033			CMP	#\$6 ø		0060				
0034			DEO	CDEC			06			
0035			BEQ	SPEC		006E			INC	BVPOS
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0000	00					0071	O I		NOP	

0072 01						
		NOP		00AB 86	TWO:	LDA A #\$E1
- 0073 01		NOP		OOAC EI		
0074 20		BRA	INCREM1	00AD 20		BRA OUT1
0075 ED				00AE 16		
0076 86	SPEC1:	LDA A	# ø ø	00AF 86	THREE:	LDA A #\$E2
0077 00				00B0 E2		HDA A 1/5EZ
0078 97		STA A	BHPOS	00B1 20		DD 4
0079 59		DIN A	DITE 02	00B2 12		BRA OUT1
007A 7C		TNO	PITOG		- <u>- 1811 -</u> 1948 A	
007B 00		INC	BVPOS	00B3 86	FOUR:	LDA A #\$E3
				00B4 E3		
0070 58		-1		00B5 20	and the great	BRA OUT1
007D 7C		INC	BHPOS	00H6 0E		
007E 00				00B 7 86	FIVE:	LDA A #\$E4
007F 58				00B8 E4		1311 11 # VE4
0080 20		BRA	SKP	00B9 20		DDA OTTEL
0031 D8				OOBA OA		BRA OUT1
0082 BD		JSR	TAITETT	00BB 86	0.737	
0083 E1	OVERT,	JOK	INEEE		SIX:	LDA A #\$E5
0084 AC				OOBC E5		
				00BD 20		BRA OUT1
0085 81		CMP A	#\$31	00BE 06		
0086 31				00BF 86	SEVEN:	LDA A #\$E6
0087 27		BEQ	ONE	00C0 E6		
0038 1E				00C1 20		BRA OUT1
0089 81		CMP A	#\$32	0002 02		5141 0011
008A 32				0003 86	EIGHT:	LDA A #\$E7
008B 27		BEQ	TWO	00C4 E7		HOM W MAEL
008C 1E		PEQ	IWO	00C5 BD	OTTO 1	Top
008D 81		CD CD A	" A A A		OUT1;	JSR OUTCH
008E 33		CMP A	#\$33	0006 00		
			**	0007 06		
008F 27		BEQ	THREE	0008 20		BRA OVER1
0090 IE				00C9 B8		
0091 81		CMP A	#\$34			
0092 34						
0093 27		BEQ	FOUR			
0094 1E			1 3011			
0095 81		CMP A	#\$35			
0096 35		Orn A	πγοσ			
0097 27		DEIO	77.77.77			
		BEQ	FIVE			
0099 81		CMP A	#\$36			
009A 36						
0099 27		BEQ	SIX			
009C 1E						
009D 81		CMP A	<i>#</i> \$37			
009E 37			,			
009F 27		BEQ	SEVEN			
00A0 1E		DEQ	DE VEIV			
00A1 81		CMD A	#629			
00A1 31		CMP A	#\$38			
00A2 38		DTA	T.T. 033-			
		BEQ	EIGHT			
00A4 1E						
00A5 20		BRA	OVER			
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00A9 20		BRA	OUT1			
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