

9V01A

CRT DISPLAY AND OUTPUT RECORDER TEST

A. UNIT TESTED

1. PURPOSE OF TEST
TO PROVIDE A COMPREHENSIVE CRT TEST PROGRAM.
2. METHOD OF TEST
FIVE PATTERNS ARE DISPLAYED ON THE CRT. SENSE CAMERA IS UNDER SENSE SWITCH CONTROL. EACH PATTERN IS ALSO UNDER SENSE SWITCH CONTROL.

PATTERN 1. A UNION JACK WITH INTENSITY SPOTS AT THE CORNERS AND MIDDLE.

PATTERN 2. A DOT CHECKERBOARD PATTERN, DOTS EVERY 100 OCTAL POSITIONS

PATTERN 3. AN AXIS INTENSITY PATTERN,

PATTERN 4. A DOT INTENSITY PATTERN,

PATTERN 5. FILM CREEP TEST

AT LEAST ONE SENSE SWITCH MUST BE DEPRESSED. WITHOUT DEPRESSING A SENSE SWITCH PROGRAM LOOPS IN THE ROUTINE WHICH TEST SENSE SWITCHES. SENSE SWITCH SIX IN UP CONDITION LOOPS PROGRAM IN PARTICULAR PATTERN SELECTED, BY DEPRESSING OTHER SENSE SWITCHES.

THE CAMERA IS SENSED BY DEPRESSING SWITCH SIX. THE PROGRAM THEN STOPS AND WHEN START IS DEPRESSED THE PROGRAM AGAIN EXAMINES SENSE SWITCHES, IF SIX IS DOWN THE CAMERA IS SENSED AGAIN.

B. AREA OF MACHINE REQUIRED

1. UNITS

CR, MF, CF, AND CRT

2. STORAGE LOCATIONS 0030 - 0246

C. PROGRAM CONTROL

1. DECK 000 9LD01 LOADER
 001 - 007 PROGRAM CARDS
 008 TRANSFER CARD - TRA 0030
 009 - 010 TWO BLANK CARDS

2. SENSE SWITCH CONTROL

SWITCH #1	UP	CHECK SWITCH 2
	DN	PERFORM UNION JACK PATTERN WITH DOTS IN CORNERS AND CENTER
SWITCH #2	UP	CHECK SWITCH 3
	DN	PERFORM DOT CHECKER BOARD PATTERN
SWITCH #3	UP	CHECK SWITCH 4
	DN	PERFORM AXIS INTENSITY PATTERN
SWITCH #4	UP	CHECK SWITCH 5
	DWN	PERFORM DOT INTENSITY PATTERN
SWITCH #5	UP	CHECK SWITCH 6
	DWN	PERFORM FILM CREEP TEST
SWITCH #6	UP	REPEAT, CHECK SWITCH 1
	DWN	SENSE CAMERA, HALT AND TRANSFER TO EXAMINE SENSE SWITCHES

D. NORMAL STOPS

0055 STOP AFTER FILM FRAME ADVANCE WITH SWITCH SIX DOWN. PUSH START
TO REPEAT OR CONTINUE

0175 STOP WITH SWITCH FIVE DOWN. TEST OF FILM CREEP TEST. PUSH
START TO CONTINUE.

0201 STOP AT END OF FILM CREEP TEST. PUSH START TO PROCEED.

E. PRINT OUTS NONE

F. COMMENTS

AT LEAST ONE OF THE SENSE SWITCHES OTHER THEN SENSE SWITCH SIX MUST BE
DEPRESSED TO HAVE PROGRAM DISPLAY A PATTERN.

SENSE LIGHTS ARE USED THROUGHOUT THE PROGRAM. THE LIGHTS ARE INDICATIVE
OF RESPECTIVE PATTERN BEING SELECTED.

SENSE LIGHT ONE	- SWITCH ONE DOWN, UNION JACK
SENSE LIGHT TWO	- SWITCH TWO DOWN, DOT CHECKERBOARD.
SENSE LIGHT THREE	- SWITCH THREE DOWN, AXIS INTENSITY
SENSE LIGHT FOUR	- SWITCH FOUR DOWN, DOT INTENSITY
SENSE LIGHT ONE AND FOUR	- SWITCH FIVE DOWN, FILM CREEP

00000 0 00000 0 00000

9V01A

					00030	ORG 24	
00030	0500	00	0	00227		CLA TRA	POST
00031	0601	00	0	00000		STO 0	RESTART
00032	0760	00	0	00140	BEGIN	SLF	TURN OFF SENSE LIGHTS
00033	0760	00	0	00161	SS1	SWT 1	TEST SENSE SWITCH ONE
00034	0020	00	0	00036		TRA SS2	UP- TEST SSW2
00035	0020	00	0	00056		TRA JACK	DWN- PERFORM UNIONJACK
00036	0760	00	0	00162	SS2	SWT 2	TEST SENSE SWITCH TWO
00037	0020	00	0	00041		TRA SS3	UP- TEST SSW3
00040	0020	00	0	00065		TRA DOT	DWN- PERFORM DOT CHECKERBOARD
00041	0760	00	0	00163	SS3	SWT 3	TEST SENSE SWITCH THREE
00042	0020	00	0	00044		TRA SS4	UP- TEST SSW4
00043	0020	00	0	00127		TRA LIGHT	DWN- PERFORM INTENSITY TEST
00044	0760	00	0	00164	SS4	SWT 4	TEST SENSE SWITCH FOUR
00045	0020	00	0	00047		TRA SS5	UP- TEST SSW5
00046	0020	00	0	00146		TRA BIG	DWN-PERFORM DOT INTENSITY TEST
00047	0760	00	0	00165	SS5	SWT 5	TEST SENSE SWITCH FIVE
00050	0020	00	0	00052		TRA SS6	UP- TEST SSW6
00051	0020	00	0	00170		TRA BRAKE	DWN- PERFORM FILM CREEP TEST
00052	0760	00	0	00166	SS6	SWT 6	
00053	0020	00	0	00032		TRA BEGIN	REPEAT PROGRAM
00054	0760	00	0	00030		PSE 24	ADVANCE FILM ONE FRAME
00055	0000	00	0	00032		HTR BEGIN	STOP AFTER FILM ADVANCE

* UNION JACK ROUTINE

00056	0534	00	1	00216	JACK	LXA KK1,1	L 12
00057	0766	00	0	00030		WTV	
00060	0760	00	0	00141		SLN 1	SET LIGHT ONE ON
00061	0700	00	1	00216		CPY KK1,1	
00062	2 00001	1	00061			TIX *-1,1,1	
00063	0760	00	0	00140		SLF	TURN OFF LIGHTS
00064	0020	00	0	00036		TRA SS2	GO TEST SSW

*DOT CHECKERBOARD TEST

00065	0766	00	0	00030	DOT	WTV	
00066	0760	00	0	00142		SLN 2	TURN ON SENSE LIGHT TWO
00067	0600	00	0	00223		STZ DIS	
00070	0534	00	4	00220		LXA Q,4	L 2000
00071	0534	00	2	00220	ROW	LXA Q,2	L 2000

00072	-0754	00	2	00000	NEXT	PXD 0,2			
00073	0402	00	0	00221		SUB Q1	L 002000	000000	
00074	0760	00	0	00003		SSP			
00075	0601	00	0	00223		STO DIS			
00076	0700	00	0	00223		CPY DIS			
00077	2	00100	2	00072		TIX NEXT,2,64			
00100	0500	00	0	00223		CLA DIS			
00101	0400	00	0	00225		ADD KON2	L 77		
00102	0601	00	0	00223		STO DIS			
00103	0700	00	0	00223		CPY DIS			
00104	-0754	00	4	00000		PXD 0,4			
00105	0771	00	0	00022		ARS 18			
00106	0402	00	0	00222		SUB Q2	L 000000	002100	
00107	0760	00	0	00003		SSP			
00110	0621	00	0	00223		STA DIS			
00111	2	00100	4	00071		TIX ROW,4,64			
00112	0534	00	1	00220		LXA Q,1	L 2000		
00113	-0754	00	1	00000	LAST	PXD 0,1			
00114	0402	00	0	00221		SUB Q1	L 002000	000000	
00115	0760	00	0	00003		SSP			
00116	0601	00	0	00226		STO SIN			
00117	0700	00	0	00226		CPY SIN			
00120	2	00100	1	00113		TIX LAST,1,64			
00121	0500	00	0	00226		CLA SIN			
00122	0400	00	0	00225		ADD KON2	L 77		
00123	0601	00	0	00226		STO SIN			
00124	0700	00	0	00226		CPY SIN			
00125	0760	00	0	00140		SLF	TURN OFF SENSE LIGHT		
00126	0020	00	0	00041		TRA SS3	RETURN TO SENSE SWITCH		

*INTENSITY TEST

00127	0766	00	0	00030	LIGHT	WTV			
00130	0760	00	0	00143		SLN 3	TURN LIGHT THREE ON		
00131	-0534	00	2	00236		LXD P,2	L 2		
00132	0534	00	1	00232	B	LXA W,1	L 400		
00133	0700	00	2	00235	A	CPY Z,2			
00134	0500	00	2	00235		CLA Z,2			
00135	0400	00	2	00232		ADD W,2			
00136	0601	00	2	00235		STO Z,2			
00137	2	00001	1	00133		TIX A,1,1			
00140	2	00001	2	00132		TIX B,2,1			
00141	0500	00	0	00235		CLA Z			
00142	0621	00	0	00233		STA X			
00143	0622	00	0	00234		STD Y			
00144	0760	00	0	00140		SLF	TURN OFF SENSE LIGHT		
00145	0020	00	0	00044		TRA SS4	RETURN TO SENSE SWITCH		

*START DOT INTENSITY TEST

00146	0766	00	0	00030	BIG	WTV		
00147	0760	00	0	00144		SLN 4	TURN LIGHT FOUR ON	
00150	0534	00	4	00241		LXA N,4		
00151	0500	00	0	00237	F	CLA CPY		
00152	-0760	00	0	00003		SSM		
00153	0400	00	0	00240		ADD M L-000100	000100	
00154	0601	00	0	00237		STO CPY		
00155	0700	00	0	00237		CPY CPY		
00156	0500	00	0	00237		CLA CPY		
00157	0400	00	0	00240		ADD M	L-000100	000100
00160	0760	00	0	00003		SSP		
00161	0601	00	0	00237		STO CPY		
00162	0700	00	0	00237		CPY CPY		
00163	2	00001	4	00151		TIX F,4,1		
00164	0500	00	0	00242		CLA G	L-377677	777677
00165	0601	00	0	00237		STO CPY		
00166	0760	00	0	00140		SLF	TURN OFF SENSE LIGHT	
00167	0020	00	0	00047		TRA SS5		

*START FILM CREEP

00170	0766	00	0	00030	BRAKE	WTV		
00171	0760	00	0	00141		SLN 1	TURN ON SENSE LIGHTS	
00172	0760	00	0	00144		SLN 4	ONE AND FOUR	
00173	0760	00	0	00030		PSE 24		
00174	0700	00	0	00243		CPY POINT		
00175	0420	00	0	00000		HPR		
00176	0700	00	0	00244		CPY V		
00177	0700	00	0	00245		CPY H		
00200	0760	00	0	00140		SLF		
00201	0000	00	0	00052		HTR SS6		

*CONSTANTS FOR PROGRAM

*UNIONJACK CONSTANTS

00202	+200000000000	OCT	200000000000	LEFT VERTICAL
00203	+101777000000	OCT	101777000000	TOP HORIZONTAL
00204	+100000000000	OCT	100000000000	BOTTOM HORIZONTAL
00205	+200000001777	OCT	200000001777	EXTREME RIGHT VERITCAL
00206	+300000000000	OCT	300000000000	DIAGONAL
00207	+101000000000	OCT	101000000000	CENTER HORIZONTAL
00210	-000000000000	OCT	-000000000000	LOWER LEFT HIGH INTENSITY SPOT
00211	-001777000000	OCT	-001777000000	LOWER RIGHT HIGH INTENSITY SPOT

00212	-000000001777		OCT	-000000001777	UPPER LEFT HIGH INTENSITY SPOT
00213	-001777001777		OCT	-001777001777	UPPER RIGHT HIGH INTENSITY SPOT
00214	-001000001000		OCT	-001000001000	CENTER HIGH INTENSTIY SPOT
00215	+200000001000		OCT	200000001000	CENTER VERITAL
00216	+000000000014	KK1	OCT	14	

*DOT CHECKERBOARD CONSTANTS

00217	+000002000007	K	OCT	2000007	
00220	+000000002000	Q	OCT	2000	
00221	+002000000000	Q1	OCT	2000000000	
00222	+000000002100	Q2	OCT	2100	
00223	+000000000000	DIS	OCT		
00224	+000000000000	KON1	OCT	000000000000	
00225	+000077000000	KON2	OCT	77000000	
00226	+000000001777	SIN	OCT	1777	
00227	0020 00 0 00032	TRA	TRA	BEGIN	RESET TRANSFER

*INTENSITY TEST CONSTANTS

00230	+000000000004	T	OCT	4	
00231	+000004000000	U	OCT	4000000	
00232	+000000000400	W	OCT	400	
00233	+200000000000	X	OCT	200000000000	
00234	+100000000000	Y	OCT	100000000000	
00235	+000000000000	Z	OCT	000000000000	
00236	+000002000000	P	OCT	2000000	

*DOT INTENSITY CONSTANTS

00237	-376777777677	CPY	OCT	-376777777677	
00240	-001000000100	M	OCT	-0001000000100	
00241	+000000000010	N	OCT	10	
00242	-376777777677	G	OCT	-376777777677	

*FILM CREEP CONSTANTS

00243	+001000001000	POINT	OCT	1000001000	
00244	+101000001020	V	OCT	101000001020	
00245	+201020001000	H	OCT	201020001000	
	00000		END		

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