

CRAF DEC/X11 SYSTEM EXERCISER MODULE
XCRAFO.P11 12-OCT-78 11:57

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SEQ 0001

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IDENTIFICATION

PRODUCT CODE: AC-F694F-MC
PRODUCT NAME: CXCRAFO CR11 MODULE
PRODUCT DATE: SEPTEMBER 1978
MAINTAINER: DEC/X11 SUPPORT GROUP

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MAIN DEC CHANGE NOTICE
MAY BE REQUIRED FOR
PROGRAM TO OPERATE

1. -----
ABSTRACT

CRA IS AN IOMOD THAT EXERCISES THE CR11 OR CM11 CARD READER. IT READS
A PRE-PUNCHED ALPHANUMERIC DECK FORMING A CHECKSUM FOR EACH CARD
READ. THE CALCULATED CHECKSUM IS COMPARED AGAINST A KNOWN CKSUM
AND ANY ERRORS REPORTED ON THE TTY. THE MODULE TESTS BOTH THE
IMAGE AND ENCODED DATA.

2. -----
REQUIREMENTS

HARDWARE: ONE CR11 CARD READER WITH CONTROLLER
 ONE PRE-PUNCHED ALPHANUMERIC DECK (80 CARDS)
 MAINDEC-89-D1B1-C FOR 80 COLUMN READERS
 MAINDEC-89-D2C1-C FOR 40 COLUMN CM11 READERS

STORAGE:: CRA REQUIRES:
 1. DECIMAL WORDS: 300
 2. OCTAL WORDS: 0454
 3. OCTAL BYTES: 1130

3. -----
PASS DEFINITION

ONE PASS OF THE CRA MODULE CONSISTS OF READING 80 80-COLUMN
CARDS (6400 CHARACTERS) AT WHICH TIME THE INPUT HOPPER
SHOULD BE EMPTY.

4. -----
EXECUTION TIME

ONE PASS OF CRA RUNNING ALONE ON A PDP11/20 PROCESSOR TAKES
APPROXIMATELY .4 MINUTES (80 CARD DECK)

5. -----
CONFIGURATION REQUIREMENTS

DEFAULT PARAMETERS:

DEVADR: 177160, VECTOR: 230, BR1: 6, DEVCNT: 1

REQUIRED PARAMETERS:

NONE

DEVICE/OPTION SET-UP

- A. POWER UP THE READER
B. LOAD THE PROPER ALPHA DECK
C. READY THE READER

7.

MODULE OPERATION

TEST SEQUENCE:

A. SET UP VECTORS AND INITIALIZE MODULE VARIABLES
B. IF ON-LINE GO TO C ELSE WAIT FOR READY
C. READ A CARD - ENABLE INTERRUPT
D. INTERRUPT SERVICE:
1. CHECK FOR NON-DATA ERRORS (TIMING, ETC.)
2. COUNT COLUMNS (DIRECT AND ENCODED)
3. FORM CHECKSUMS (CHECK DATA - REPORT ANY ERRORS
4. IF 80 COLUMNS READ: CHECK AND GO TO B.
E. IF HOPPER NOT EMPTY COUNT A CARD AND GO TO B.
F. AT HOPPER EMPTY (OFF-LINE) AND 80 CARDS READ, REPORT
END OF PASS AND START AT A. ELSE REPORT ERROR AND
GO TO A.

OTHER ERROR CONDITIONS TESTED FOR AND REPORTED:

A. READER NOT READY ('CHECK' CONDITIONS)
B. READING DATA DIDN'T CLEAR COLUMN DONE
C. TIMING
D. UNEXPECTED OFF-LINE (EG: TOO FEW TEST CARDS)

IF OFF-LINE CONDITION IS NOT CORRECTED MODULE WILL BE DROPPED.

8.

OPERATION OPTIONS

NONE

9.

NON-STANDARD PRINTOUTS

NONE: ALL PRINTOUTS HAVE THE STANDARD FORMAT.

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144          .LIST SEQ,BTN
145          000000*  -
146          000000*  <CRAF >,177160,230,6,44,80,,15
147          000000*  MODULE 140000,CRAF 177160,230,6,,RO,,15
148          000000*  TITLE  CRAF DEC/X11 SYSTEM EXERCISER MODULE
149          000000*  ; DDICOM VERSION 6 23-MAY-78
150          000000*  ;*****X11*****
151          000000*  051103 043101 040  BEGIN:
152          000000*  000000*  MODNAM: .ASCIT /CRAF / ;MODULE NAME
153          000005*  000000*  XFLAG: .RYTE OPEN ;USED TO KEEP TRACK OF WBUFF USAGE
154          000006*  177160 ADDR: 177160+0 ;1ST DEVICE ADDR
155          000010*  000230 VECTOR: 230+0 ;1ST DEVICE VECTOR.
156          000012*  300 BR1: .RYTE PRTV6+0 ;1ST RR LEVEL.
157          000013*  000 BR2: .RYTE PRTV+0 ;2ND RR LEVEL.
158          000013*  000001 BVID1: .1 ;DEVICE INDICATOR 1.
159          000016*  000000 SR1: OPEN ;SWITCH REGISTER 1.
160          000020*  000000 SR2: OPEN ;SWITCH REGISTER 2.
161          000022*  000000 SR3: OPEN ;SWITCH REGISTER 3.
162          000024*  000000 SR4: OPEN ;SWITCH REGISTER 4.
163          000026*  140000 STAT: 140000 ;STATUS WORD.
164          000027*  000224*  INT: START ;MODULE STACK ADDR.
165          000032*  000224*  SPINT: MODSP ;MODULE STACK POINTER.
166          000034*  0000000 PASCNT: 0 ;PASS COUNTER.
167          000036*  000120 ICOUNT: 80. ;# OF ITERATIONS PER PASS=80.
168          000037*  000000 ICMNT: 0 ;LOC TO COUNT ITERATIONS.
169          000042*  000000 SOFCNT: 0 ;LOC TO SAVE TOTAL SOFT ERRORS
170          000044*  000000 HRDCNT: 0 ;LOC TO SAVE TOTAL HARD ERRORS
171          000046*  000000 SOFPAS: 0 ;LOC TO SAVE SOFT ERRORS PER PASS
172          000050*  000000 HRDPAS: 0 ;LOC TO SAVE HARD ERRORS PER PASS
173          000052*  000000 SYSCNT: 0 ;# OF SYS ERRORS ACCUMULATED
174          000054*  000000 RANNUM: 0 ;HOLDS RANDOM # WHEN RAND MACRO IS CALLED
175          000056*  000000 CONFIG: 0 ;RESERVED FOR MONITOR USE
176          000060*  000000 RES1: 0 ;RESERVED FOR MONITOR USE
177          000062*  000000 RES2: 0 ;RESERVED FOR MONITOR USE
178          000064*  000000 SVRO: OPEN ;LOC TO SAVE RO.
179          000066*  000000 SVR1: OPEN ;LOC TO SAVE R1.
180          000068*  000000 SVR2: OPEN ;LOC TO SAVE R2.
181          000070*  000000 SVR3: OPEN ;LOC TO SAVE R3.
182          000072*  000000 SVR4: OPEN ;LOC TO SAVE R4.
183          000074*  000000 SVR5: OPEN ;LOC TO SAVE R5.
184          000076*  000000 SVR6: OPEN ;LOC TO SAVE R6.
185          000100*  000000 CSRA: OPEN ;ADDR OF CURRENT CSR.
186          000102*  000000 SBADR: ;ADDR OF GOOD DATA, OR
187          000104*  000000 ACSR: OPEN ;CONTENTS OF CSR.
188          000106*  000000 BASADR: ;ADDR OF BAD DATA, OR
189          000110*  000000 ASAT: OPEN ;STATUS REG CONTENTS.
190          000112*  000000 ERRTP: ;TYPE OF ERROR.
191          000114*  000000 ASB: OPEN ;EXPECTED DATA.
192          000116*  000000 AWAS: OPEN ;ACTUAL DATA.
193          000118*  000240*  AWAS: RESTART ;RESTART ADDRESS AFTER END OF PASS
194          000120*  000000 WDT0: OPEN ;WORDS TO MEMORY PER ITERATION
195          000122*  000000 WDFR: OPEN ;WORDS FROM MEMORY PER ITERATION
196          000124*  000000 INTR: OPEN ;# OF INTERRUPTS PER ITERATION
197

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198          000122*  000015 IDNUM: 15 ;MODULE IDENTIFICATION NUMBER=15
199          000040          .REPT SPSIZ ;MODULE STACK STARTS HERE.
200          000040          .NLST
201          000040          .WORD 0
202          000040          .LIST
203          000040          .ENDD
204          000224*  MODSP:
205          000224*  ;*****

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205 000224 012767 000120 177662 START: MOV #80,,WDT0 ;80 WORDS TO NEW FROM READER
206 000232 012767 000121 177660 MOV #81,,INTR ;81 INTERRUPTS PER ITERATION
207
208
209 000240 016700 177542 RESTRT: MOV ADDR,R0 ; GET DEVICE ADDRESS
210 000244 010067 000652 MOV R0,CRS ; LOAD DEVICE ADDRESS
211 000250 005720 TST R0 ;
212 000256 010067 000646 MOV R0,CRB1 ; LOAD DATA 1 ADDRESS
213 000256 005720 TST (R0)+ ;
214 000264 010067 000642 MOV R0,CRB2 ; LOAD DATA 2 ADDRESS
215 000264 016700 177520 MOV VECTOR,R0 ; GET DEVICE VECTOR
216 000270 012720 000454 MOV #INTER,(R0)+ ; POINT TO SERVICE ROUTINE
217 000274 116710 177512 MOV #BRI,(R0) ; GET PRIORITY
218
219 ;
220 000300 005067 000604 CLR CRDCNT ; ZERO CARD COUNTER
221 000304 032777 000400 000610 BIT #BIT8,ACRS ; READER ON-LINE ?
222 000312 001416 000652 BEQ NUCAR1 ; YES, BEGIN THE TEST
223 000314 005767 177514 TST PASCNT ; FIRST PASS ?
224 000320 001013 BNE NUCAR1 ; NO, DON'T LOG ERROR YET
225 000322 004767 000540 JSR R7,ERSUB ; YES, LOAD ERROR INFORMATION
226 000326 012767 000006 MOV #ERRTYP ; OFF LINE CODE
227 ; *****
228 000334 104405 000000 000000 HDRS,REGIN,NULL ;READER OFF-LINE ... WAITING
229 ; *****
230 000342 000402 BR NUCAR1
231
232 NUCARD: ENDDITS,BEGIN ; SIGNAL END OF ITERATION.
233 ; MONITOR SHALL TEST END OF PASS
234 000350 005067 000536 NUCAR1: CLR COLUMN ; ZERO COLUMN COUNTER
235 000354 005067 000536 CLR SUM1 ; ZERO THE RUNNING SUM
236 000364 012767 177777 000522 MOV #177777,CLK ; SET CLOCK COUNTER
237
238 1S:
239 000372 104407 000000 BREAKS,BEGIN ; TEMPORARY RETURN TO MONITOR...
240 000402 032777 000400 000512 BIT #BIT8,ACRS ; THEN CONTINUE AT NEXT INSTRUCTION.
241 000410 001412 BFC GO ; READY ?
242 000412 005367 000476 DEC CLK ; YES, CONTINUE
243 000416 012767 000412 BNE IS ; NO, WAIT SOME MORE ?
244 000420 004767 000442 JSR R7,ERSUB ; NO, LOAD ERROR INFORMATION
245 ; *****
246 000424 104405 000000 000000 HDRS,REGIN,NULL ;READER STILL NOT READY... GIVE
247 ; *****
248 000432 104410 000000 Snds,REGIN ;
249 ; DROP THE MODULE
250 000436 005267 000446 GO: INC CRDCNT ; COUNT A CARD
251 000440 000000 000452 G01: MOV #101,ACRS ; ADD ENCDED TO RUNNING SUM
252 ; ENABLE INTERRUPT AND READ ;EXIT TO MONITOR. MODULE WAIT FOR INTERRUPT.
253 ;
254 ; INTERRUPT SERVICE
255 000454 105777 000442 INTR: TST CRCS ; COLUMN READY TO BE READ ?
256 000460 100011 RPL IS ; NO, FIND OUT WHY
257 000462 067767 000436 000422 ADD #ACRB1,SUM1 ; ADD IMAGE TO RUNNING SUM
258 000476 067767 000432 000422 ADD #ACRB2,SUM2 ; ADD ENCODED TO RUNNING SUM
259 000478 000410 INC COLUMN ; COUNT COLUMN
260 000502 000002 RTI ; GO ON TO OTHER THINGS
261 ;
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262 000504 004767 000356 1S: JSR R7,ERSUB ; SAVE ADDR AND CONTENTS OF CONTROL RFGS.
263 000510 042777 000100 000404 BIT #BIT6,ACRS ; DISABLE INTERRUPT
264
265 000516 000004 000000 000524 PIRQS,BEGIN,WHY ; QUEUE UP TO CONTINUE AT WHY AND RTI
266
267 000524 005767 177352 WHY: TST ACSR ; ERROR ?
268 000530 100435 BMI 2S ; YES, GO CHECK IT OUT
269 000532 032767 040000 177342 BIT #BIT14,ACSR ; CARD DONE ?
270 000540 001011 BNE IS ; YES, GO CHECK CHECKSUMS
271 000542 032767 002000 177332 BIT #BIT10,ACSR ; TRANSITION TO ON-LINE ?
272 000550 001775 BNE NUCARD ; YES, GO GET A CARD
273 000552 032767 000400 177322 BIT #BIT8,ACSR ; READER READY ?
274 000560 001671 BEQ NUCARD ; YES, GO GET ANOTHER CARD
275 000562 000447 BR 4S ; NO, GO REPORT ERROR
276
277 1S:
278 000564 022767 000120 000320 CMP #80,COLUMN ; 80 COLUMNS CHECKED ?
279 000572 001457 BEQ CHECK ; YES, GO CHECK CHECKSUMS
280 000574 022767 000050 000310 CMP #40,COLUMN ; 40 COLUMN CARD ?
281 000602 001717 BFC G01 ; YES, GET SECOND CARD
282 000604 012767 000011 177274 MOV #11,ERRTYP ; DONE OCCURED BUT SHOULD NOT HAVE
283 ; *****
284 000612 104405 000000 000000 HDRS,REGIN,NULL ;CARD DONE SET BUT NOT 40 OR 80 COLUMNS READ
285 ; *****
286 000620 000167 177520 2S: JMP NUCARD ; GO TRY ANOTHER CARD
287 000624 032767 004000 177250 BIT #BIT11,ACSR ; TIMING ERROR ?
288 000632 001410 BFC 3S ; NO, LOOK FOR OTHERS
289 000634 012767 000002 177244 MOV #2,ERRTYP ; TIMING ERROR CODE
290 ; *****
291 000642 104406 000000 000000 HDRS,REGIN,NULL ;TIMING ERROR
292 ; *****
293 000650 000167 177470 3S: JMP NUCARD ; GO TRY ANOTHER CARD
294 000654 032767 000400 177220 BIT #BIT8,ACSR ; ON-LINE ?
295 000662 001007 BNE 4S ; NO, GO REPORT ERROR
296 000664 005067 177216 CLR #ERRTYP ; UNKNOWN ERROR
297 ; *****
298 000670 104405 000000 000000 HDRS,REGIN,NULL ;ERROR BIT WAS SET - OTHERS WEREN'T
299 ; *****
300 000676 000167 177442 4S: JMP NUCARD ; GO TRY ANOTHER CARD
301 000702 022767 000120 000200 CMP #80,CRDCNT ; REQUIRED NUMBER OF CARDS READ ?
302 000710 001410 BFC CHECK ; YES, GO CHECK DATA
303 000712 012767 000006 177166 MOV #C,ERRTYP ; OFF LINE CODE
304 ; *****
305 000720 104405 000000 000000 HDRS,REGIN,NULL ;OFF-LINE --- EXAMINE READER FOR "CHECK" CONDITIONS
306 ; *****
307 000726 000167 177412 ; JMP NUCARD IF HOPPER EMPTY, PROBABLY TOO FEW TEST CARDS (80 REQUIRED)
308 ; GO SET UP FOR NEXT CARD
309 ;
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309 000732- 026767 000160 000144 CHECK: CMP SUM1,CKSUM1 ; IMAGE CHECKSUM CORRECT ?
310 000740- 001416 ; BEQ IS ; YES, CHECK THE ENCODED
311 000742- 012767 001104- 177132 MOV #CKSUM1,SRADR ; NO, LOAD ADDRESS OF GOOD CHECKSUM
312 000750- 016767 000130 177130 MOV #SUM1,ASR ; LOAD GOOD CHECKSUM
313 000756- 012767 001116- 177120 MOV #SUM1,ASADR ; LOAD ADDRESS OF BAD CHECKSUM
314 000764- 016767 000126 177116 MOV SUM1,AWAS ; LOAD THE CALCULATED CHECKSUM
315 *****
316 000772- 104404 000000- DATERS,REGIN ;DATA ERROR!!!
317 *****
318 ;
319 000776- 026767 000116 000102 15: CMP SUM2,CKSUM2 ; IMAGE CHECKSUM INCORRECT
320 000784- 001416 ; BEQ 25 ; ENCODED CHECKSUM CORRECT ?
321 001006- 012767 001106- 177066 MOV #CKSUM2,SRADR ; YES, GO CHECK FOR MORE CARDS
322 001014- 016767 000066 177064 MOV #CKSUM2,ASR ; NO, LOAD ADDRESS OF GOOD CHECKSUM
323 001022- 012767 001120- 177054 MOV #SUM2,ASADR ; LOAD GOOD CHECKSUM
324 001030- 016767 000064 177052 MOV SUM2,AWAS ; LOAD ADDRESS OF BAD CHECKSUM
325 *****
326 001036- 104404 000000- DATERS,REGIN ;DATA ERROR!!!
327 *****
328 ;
329 001042- 032767 000400 177032 25: BIT #BIT8,ACSR ; ENCODED CHECKSUM INCORRECT
330 001050- 001404 ; BEQ 35 ; READY FOR NEXT CARD ?
331 001052- 022767 000120 000030 CMP #R0,CRDCNT ; YES, GET ANOTHER CARD
332 001060- 001727 177256 RNE #R0,CRDCNT ; REQUIRED NUMBER OF CARDS READ ?
333 001062- 000167 ; JNP NUCARD ; NO, MUST BE AN ERROR
334 ; ; GO WAIT FOR READY
335 001066- 016767 000030 177004 ERSUB: MOV CRS,CSRA ; SAVE ADDRESS OF CONTROL STATUS REG.
336 001068- 001727 000022 177000 MOV #CRS,ACSR ; SAVE CONTENTS OF CONTROL STATUS REG.
337 001102- 000207 ; RTS ; RETURN
338 ;
339 001104- 067443 ; CKSUM1: 67443 ; DESIRED TOTAL FOR ALPHA-NUM IMAGE DATA
340 000026- 014173 ; CKSUM2: 14173 ; DESIRED TOTAL FOR ENCODED DATA
341 001110- 000000 ; CRDCNT: 0 ; CARD COUNTER
342 001112- 000000 ; COLUMN: 0 ; CARD COLUMN COUNTER
343 001114- 000000 ; CLK: 0 ; CLOCK COUNTER
344 001116- 000000 ; SUM1: 0 ; RUNNING TOTAL FOR IMAGE DATA
345 001120- 000000 ; SUM2: 0 ; RUNNING TOTAL FOR ENCODED DATA
346 001122- 000000 ; CRS: 0 ; CARD READER STATUS REGISTER
347 001124- 000000 ; CRB1: 0 ; CARD READER DATA 1 REGISTER
348 001126- 000000 ; CRB2: 0 ; CARD READER DATA 2 REGISTER
349 ;
350 000001 .END
    
```

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CROSS REFERENCE TABLE -- USER SYMBOLES
ACSR 000102R 188# 267 269 271 273 286 293 329 336*
ADDR 000006R 154# 209
ADDR22= 000106R 192# 312*
ASB 000106R 190#
ASTAT 000104R 190#
AWAS 000110R 193# 314* 324*
BEGIN 000000R 151# 231 238 239 246 248 252 265 283 290 297 304
BIT0 = 000001 206#
BIT1 = 000002 206#
BIT10 = 000000 206#
BIT11 = 004000 271 286
BIT12 = 010000 206#
BIT13 = 020000 206#
BIT14 = 040000 206#
BIT15 = 100000 269 206#
BIT2 = 000004 206#
BIT3 = 000010 206#
BIT4 = 000020 206#
BIT5 = 000040 206#
BIT6 = 000100 206#
BIT7 = 000200 263 206#
BIT8 = 000400 220 240 273 293 329 206#
BIT9 = 001000 206#
BREAKS= 104407 206# 238 239
BR1 000012R 156# 217
BR2 000013R 157#
BTODS = 104421R 206#
CNATS = 104412 206#
CHECK 000732R 278 301 309#
CKSUM1 001104R 309 311 312 319#
CKSUM2 001106R 313 314 315 340#
CLK 001114R 216* 242* 345#
COLUMN 001112R 233* 259* 277 279 342#
CNTRIG 000056R 176#
CRB1 001124R 214* 257 347#
CRB2 001126R 214* 257 348#
CRDCNT 001110R 219* 250* 300 331 341#
CRS 001122R 210* 220 240 251* 255 263* 335 336 346#
CSRA 000106R 186# 335*
DATCKS= 104411 206#
DATERS= 104404 206# 316 326
DVID1 000014R 158#
ENDITS= 104413 206# 231 248
ENDS = 104410 206# 225*
ERRTYP 000106R 191# 201* 288* 295* 302*
ERSUB 001066R 224 244 262 315*
EXITTS = 104400 206# 252
GETPAS= 104415 206#
GI 000436R 241 250#
G1 000442R 251# 280
GWBUFFS= 104414 206#
HRDCNT 000044R 171#
HRDRS= 104405 206# 227 246 283 297 304
HRDPAS 000050R 173#
ICONT 000036R 168#
    
```

ICOUNT	000040R	169#																		
IDNUM	000122R	165#																		
INIT	000030R	165#																		
INTER	000454R	216#	255#																	
INFR	000120R	137#	207#																	
MAP225=	104416	206#																		
MDDNAM	000000R	152#																		
MDDSP	000224R	166#	204#																	
MSCNS	= 104403	206#																		
MSCSS	= 104402	206#																		
MSS	= 104401	206#																		
NUCARD	000344R	230#	272	274	285	292	299	307	333											
NUCARI	000350R	221#	227	246	283#	290	297	304												
NULL	000000	206#	159	160	161	162	179	180												
OPEN	= 000000	153	190	192	193	195	196	197	206#	182	183	184	185	186						
OTGAS	= 104420	188#																		
PASCNT	000034R	206#	222																	
PTRQS	= 000004	206#	265																	
POPSP	= 005726	206#																		
POPSP2	= 022626	206#																		
PRTY	= 000090	157	206#																	
PRTY0	= 000000	206#																		
PRTY1	= 000040	206#																		
PRTY2	= 000100	206#																		
PRTY3	= 000140	206#																		
PRTY4	= 000200	206#																		
PRTY5	= 000240	206#																		
PRTY6	= 000300	156	206#																	
PRTY7	= 000300	206#																		
PS	= 177776	206#																		
PSW	= 177776	206#																		
PUSH	= 005746	206#																		
PUSH2	= 024646	206#																		
RANDS	= 104417	206#																		
RANNUM	000054R	175#																		
RESTART	000240R	194	209#																	
RPS1	000056R	177#																		
RPS2	000060R	178#																		
RSTRT	000112R	194#																		
SHADR	000102R	187#	311*	321*																
SOPCNT	000040	170#																		
SOPFNS	= 104406	206#	290																	
SOPPAS	000046R	172#																		
SOPINT	000032R	166#																		
SPOST	= 000000	1	199																	
SR1	000016R	155#																		
SR2	000020R	160#																		
SR3	000022R	161#																		
SR4	000024R	162#																		
START	000224R	165	206#																	
STAT	000026R	164#																		
SUM1	001116R	234*	257*	309	313	314	344#													
SUM2	001120R	235*	258*	319	323	324	345#													
SVR0	000062R	179#																		
SVR1	000064R	180#																		

SVR2	000066R	181#																		
SVR3	000070R	182#																		
SVR4	000072R	183#																		
SVR5	000074R	184#																		
SVR6	000076R	185#																		
SYSCNT	000052R	174#																		
TRPDFD	= 000022	206#																		
VECTUR	000010R	155#	215																	
WASDR	000104R	189#	313*	323*																
WDFR	000116R	196#																		
WDTN	000114R	195#	206*																	
WDFY	000524R	265#	267#	332																
XFLAG	000005R	153#																		

. ARS. 000000 000
 001130 001

ERRORS DETECTED: 0
 DEFAULT GLOBALS GENERATED: 0

XCRAFO, XCRAFO/SOL/CRP:SYM=DDXCON, XCRAFO
 RUN-TIME: 11 2 SECONDS
 RUN-TIME RATIO: 10/3=3.3
 CORE USED: 7K (13 PAGES)

digital

DECO DEPO SUBMISSION

FOR RELEASE ENG. USE
 NEW CHANGE DELETE

PRODUCT IDENTIFICATION													
MD	LIBRARY	PRODUCT NUMBER	REV	PATCH	ECO TALLY	PRODUCT DATE			STATUS	DISTRIBUTION		1ST COPY - RIGHT YEAR	LAST COPY - RIGHT YEAR
	XX	CXCRA	F	1	0	26	MAR	79	OBSOLETE	X	G	R	1973

TITLE CXCRAF1 CR11 MODULE

AUTHOR D. BUTENHOF MAINTAINING GROUP DEC/X11 SUPT GRP MAINTAINER D. BUTENHOF SUBMITTING ENGINEER D. BUTENHOF

PRODUCT COMPONENTS						
CK	DESCRIPTION	PRODUCT NO.	REV	CK	DESCRIPTION	PRODUCT NO.
	DOCUMENT				INDEX	
	LISTING				SOURCE MEDIA	
	OBJECT MEDIA				TEST MEDIA	
X		AF-E694F-M1				

PRODUCTS OBSOLETE (other than previous version)								
LIBRARY	PRODUCT NUMBER	REV	LIBRARY	PRODUCT NUMBER	REV	LIBRARY	PRODUCT NUMBER	REV
MD			MD			MD		

PRODUCT CHARACTERISTICS															
PROCESSORS PRODUCT OPERATES WITH (Enter all applicable 2-digit codes representing the Processor the product operates with. See separate instructions.)															
03	04	05	10	20	21	34	35	40	45	50	55	60	70		
OPERATIONAL CODES (Enter all applicable 2-digit codes that describe the product. See separate instructions.)															
02	03	04	06	50											
ACT/APT/XXDP		EXT	ACT SEQ NUMBER	ACT/XXDP COMPATIBLE?	APT COMPATIBLE?	1ST PASS RUN TIME		SUBSEQUENT PASS RUN TIME							
INFORMATION FIELD				<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	SECONDS		SECONDS							

DECO/DEPO INFORMATION							
PROBLEM REPORTS CLOSED.							
DEVICE AFFECTED DEC/X11				MULTIMEDIA AFFECTED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
KIT NUMBERS	ZJ129-RZ, FR	ZJ239-RB, RY	ZJ240-RB, RE	ZJ240-FR	ZJ215-RY, RZ	ZJ239-RZ, PB	ZJ240-RZ, PB

PROBLEM: MODULE DOES NOT WORK PROPERLY UNDER "NEW" DEC/X11 MONITOR. WILL GET HARD ERRORS (WRONG # OF CARDS) AFTER RELOCATION, DUE TO MONITOR ALLOWING PARTIAL PASS PRIOR TO RELOCATION.

SOLUTION: INSTALL THE FOLLOWING PATCH

DEPO PATCH AREA					
CHANGE LOC	FROM	TO	CHANGE LOC	FROM	TO
36	120	1			
550	1275	1277			
560	1671	1673			
622	177520	177524			
652	177470	177474			
700	177442	177446			
730	177412	177416			
1050	1404	1726			

SUBMITTING ENGINEER <i>D. Butenhof</i>	MANUFACTURING ENGINEER <i>J. E. Casella</i>	SUPPORT ENGINEER	CHARGE DECO/DEPO TO DISCRETE PROJECT NUMBER
DATE: 26 MAR 79	DATE: 25-APR-79	DATE:	
MAINTAINER <i>D. Butenhof</i>	FIELD SERVICE	WAIVERING MANAGER	COORDINATION NO. 3076
DATE:	DATE:	DATE:	