

IDENTIFICATION

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PRODUCT CODE: MAINDEC-X8-DIKAD-B-D  
PRODUCT NAME: DEC/X8 MODULE "NOTFUN"  
NON-FUNCTIONAL IOT TEST  
DATE CREATED: MAY 18, 1972  
MAINTAINER: DIAGNOSTIC GROUP  
AUTHOR: JOHN VROBEL

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MAYNARD, MASS, 01754

1, MODULE DESCRIPTION  
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"NOTFUN" IS A DEC/X8 SOFTWARE MODULE WHICH VERIFIES THAT ALL NON-FUNCTIONAL IOT'S WITHIN A GIVEN SYSTEM DO NOT AFFECT THAT SYSTEM WHEN EXECUTED.

THE METHOD USED IS TO EXECUTE ALL IOT'S NOT INCLUDED IN A USER SUPPLIED LIST OF FUNCTIONAL IOT'S AND VERIFYING DIRECTLY THAT THE AC IS UNEFFECTED AND THAT NO SKIP OCCURS, THE DEC/X8 MONITOR AND/OR OTHER EXERCISER MODULES SHOULD DETECT ANY MORE SUBTLE INTERACTIVE PROBLEMS.

2, REQUIREMENTS  
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- 1, PROCESSORS: PDP-8,8/I,8/L,8/E,8/M AND PDP-12
- 2, OPTIONS: NONE
- 3, SPECIAL: NONE

3, RESTRICTIONS  
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NONE

4, OPERATING INFORMATION  
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4,1 SPECIAL CONSIDERATIONS  
-----

NONE

4,2 BUILDING  
-----

- 1, JOB TYPE: BACKGROUND
- 2, PRIORITY: MUST HAVE LOWER PRIORITY THAN ALL INTERRUPT JOBS; OTHERWISE UNIMPORTANT,
- 3, JOB SLOTS: ANY EXISTENT JOB SLOT; 2 PAGES REQUIRED.

4,3 INITIALIZING  
-----

AFTER "NOTFUN" IS PRINTED, TYPE "0" FOR A PDP-8/E OR 8/M, OR A "1" FOR A PDP-8,8/I,8/L OR PDP-12.

THEN AN OCTAL LIST STARTING AT "01" WILL BE PRINTED, FOLLOWING THE NUMBERED ITEMS IN THE LIST TYPE ALL EXISTING DEVICE CODES (EXCEPT 00) IN THE SYSTEM UNDER TEST, IF THE SYSTEM HAS EXTENDED MEMORY, DEVICE CODES 20 THROUGH 27 MUST BE SPECIFIED, WHEN COMPLETE TYPE "00" TO SIGNIFY THE END OF INPUT.

BELOW IS A TYPICAL EXAMPLE!

```
NOTFUN 0      (PDP-8/E)
01 03      (KEYBOARD)
02 04      (TELEPRINTER)
03 76      (DECTAPE)
04 77      (DECTAPE)
05 66      (LP08/LE8)
06 01      (READER)
07 02      (PUNCH)
10 20      (EXTENDED MEMORY DEVICE CODES 20-27)
11 21
12 22
13 23
14 24
15 25
16 26
17 27
20 00      (END OF INPUTS)
```

4.4 DEVICE SETUP  
-----

NONE

4.5 RUNNING  
-----

```
1, CNTR: UPDATED AFTER EACH IOT IS TESTED.
2, SR10: NO EFFECT
3, SR11: NO EFFECT
```

5. ERROR INFORMATION  
-----

ALL ERRORS ARE REPORTED AS "STAT ERR" AND ARE IN A WAY CONSIDERED FATAL; THE JOB IS THEREFORE AUTOMATICALLY KILLED AFTER ANY ERROR IS DETECTED;

5.1 ERROR SYMBOL DEFINITIONS  
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```
CODE: 0000  SETUP ERROR, THE USER HAS SPECIFIED THAT ALL DEVICE
          CODES ARE USED IN THE SYSTEM UNDER TEST OR THE MODULE
          HAS NEVER BEEN INITIALIZED.
          7776  ILLEGAL CHANGE IN THE AC.
          7777  ILLEGAL SKIP

SAI      IOT EXECUTED
SBI      GOOD AC
SCI      AQ AFTER IOT WAS EXECUTED
```

6. LISTING (ATTACHED)  
-----

/DEC/X8 EXTERNAL SYMBOL TABLE "EXTSYM"  
/FOR USE IN ASSEMBLING DEC/X8 SOFTWARE MODULES;  
/COPYRIGHT 1972, DIGITAL EQUIPMENT CORP., MAYNARD, MASS.  
XLIST  
PAUSE

/MAINDEC-X8-DIKAD=B-L "DEC/X8" NOTFUN  
/EXECUTES ALL IOTS NOT USED ON THE SYSTEM,  
/COPYRIGHT 1972, DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASS,  
/THIS MODULE OPERATIONAL ON PDP-8,8/1,8/L,8/E AND PDP-12,  
/PRG: JOHN VROBEL (X3621)

/BUILDER INSTRUCTIONS

- /1, PRIORITY: BACKGROUND JOB
- /2, JOB SLOT: 2 PAGES REQUIRED, ANY EXISTENT JOB SLOT;

/INITIALIZER INSTRUCTIONS

- /1, AFTER TITLE IS PRINTED, TYPE IN A 0 FOR PDP8/E OR A 1 FOR PDP8, PDP8/I OR PDP8/L,
- /2, THEN AN OCTAL LIST WILL BE PRINTED, STARTING WITH 01, FOR INPUT OF USED IOT CODES, TYPICAL LIST SHOWN BELOW;
- /3, AFTER ALL USED IOT CODES ARE TYPED IN, TYPE IN A 00 TO SIGNIFY LAST ENTRY;

```

/          NOTFUN 1
/          01 03
/          02 04
/          03 05
/          04 06
/          05 07
/          06 08
/          07 00
/
/          /SIGNIFIES LAST ENTRY

```

```

0200 0200  *0200
/
0200 0000  JOB, 0
0201 1617  TEXT1, TEXT "NOTFUN"
0202 2406
0203 2516
0204 0000
0205 0411  TEXT "DIKAD=B"
0206 1301
0207 0435
0210 0200
/
0211 0000  HOMEDEF, 0
0212 7402  HLT/ODF
0213 5611  JMP I HOMEDEF
/
0214 0202  INTACK, CIF 00
0215 4426  JMS I IHRETP

```



```

0357 0010 K10T, 0010
0360 1000 M7000, -7000
/
0361 *,
/
0361 0461 ABUF, STRBUF -1
/
0374 0400
0375 0440
0376 0462
0377 0201
0400 0400
*0400
/
0400 1257 LFBK, TAD B7700
0401 3260 DCA LOOP /COUNTER FOR EACH IOT
0402 1362 TAD BBUF /START OF BUFFER -1
0403 3010 AUT04, DCA 10
0404 1240 TAD TSTIOT
0405 0250 AND K0770 /MASK 3-8
0406 3255 DCA SAVAC2
0407 1410 CQMNX, TAD I 10
0410 7450 SNA /HAS IT AND OF BUFFER
0411 9217 JMP EXIOT /YES EXECUTE THE IOT
0412 7041 CIA
0413 1255 TAD SAVAC2
0414 7650 SNA CLA
0415 9777 JMP UPIOT
0416 9207 JMP CQMNX
/
0417 1240 EXIOT, TAD TSTIOT
0420 3776 DCA ERRSA /STORE FOR TYPE OUT
0421 1775 TAD KIND /TYPE OF COMPUTER
0422 7650 SNA CLA
0423 9230 JMP ,*5
0424 1240 TAD TSTIOT
0425 0075 AND K7
0426 7650 SNA CLA /HAS IT IOT 0
0427 9777 JMP UPIOT /GO TO NEXT
REEX, TAD I RANDAT /GENERATE RANDOM NUMBER
0430 1661 TAD ERRSB
0431 1774 TAD ERRSB
0432 2261 ISZ RANDAT
0433 7012 RTR
0434 7420 SNL
0435 1000 TAD 0
0436 3774 DCA ERRSB
0437 1774 TAD ERRSB
0440 7402 TSTIOT, HLT
0441 7410 SKP /DIDN'T SKIP
0442 9773 JMP SKPERR /SKIP ERROR
0443 3772 DCA ERRSC /STORE AC FOR TYPE OUT
0444 1772 TAD ERRSC
0445 7041 CIA
0446 1774 TAD ERRSB
0447 7640 SZA CLA /COMPARE TO INPUT AC
0450 9771 JMP ACERR /AC ERROR

```

```

0451 2260 ISE LOOP
0452 5230 JMP REEX /EXECUTE SAME IOT
0453 4770 JMS OUT
0454 9777 JMP UPIOT /GO TO NEXT IOT
/
0455 0000 SAVAC2, 0
0456 0770 K0770, 0770
0457 7700 B7700, 7700
0460 0000 LOOP, 0000
0461 2000 RANDAT, 2000
/
0462 STRBUF,
/
0562 *,+100
/
0562 0461 BBUF, STRBUF -1
/
/LOADER CALL
/
0570 0324
0571 0310
0572 0242
0573 0302
0574 0241
0575 0304
0576 0240
0577 0345

```

```

0000
0100
0200 11111111 11111111 11111111 11111111 11111111 11111111 11111111 11111111
0300 11111111 11111111 11111111 11111111 11111111 11111111 11000000 00001111
0400 11111111 11111111 11111111 11111111 11111111 11111111 11000000 00000000
0500 00000000 00000000 00000000 00000000 00000000 00000000 00100000 11111111

```

```

0600
0700

```

```

1000
1100

```

```

1200
1300

```

```

1400
1500

```

```

1600
1700

```

```

2000
2100

```

```

2200
2300

```

```

2400
2500

```

```

2600
2700

```

```

3000
3100

```

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3200
3300

```

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3400
3500

```

```

3600
3700

```

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4000
4100

```

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4200
4300

```

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4400
4500

```

```

4600
4700

```

```

5000
5100

```

```

5200
5300

```

```

5400
5500

```

```

5600
5700

```

```

6000
6100

```

```

6200
6300

```

```

6400
6500

```

```

6600
6700

```

```

7000
7100

```

```

7200
7300

```

```

7400
7500

```

```

7600
7700

```

0001		FIELD 1
0600	0243	INIT
0601	0336	RUN
0602	0000	0
0603	7773	-5
0604	0241	AUTO1
0605	0274	AUTO2
0606	0300	AUTO3
0607	0403	AUTO4
0610	0407	COHMX
0611	0000	0
0612	0000	0
0613	0000	0

S

0000  
0100  
0200  
0300  
0400  
0500

0600 11111111 11110000 00000000 00000000 00000000 00000000 00000000 \*00000000  
0700 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000

1000  
1100  
1200  
1300  
1400  
1500  
1600  
1700  
  
2000  
2100  
2200  
2300  
2400  
2500  
2600  
2700  
  
3000  
3100  
3200  
3300  
3400  
3500  
3600  
3700



4000  
4100  
  
4200  
4300  
  
4400  
4500  
  
4600  
4700  
  
5000  
5100  
  
5200  
5300  
  
5400  
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5600  
5700  
  
6000  
6100  
  
6200  
6300  
  
6400  
6500  
  
6600  
6700  
  
7000  
7100  
  
7200  
7300  
  
7400  
7500  
  
7600  
7700

A7701	0355	K290	0114	M43	0132
ABUF	0361	K272	0115	M5	0137
ACERR	0310	K277	0116	M7	0136
ASBUFF	4480	K3	0072	M7000	0360
ASBUFF	0060	K30	0103	MESSAGE	4444
AUTO	0017	K301	0117	MESSAGE	0044
AUTO1	0261	K32	0067	MUL20P	0065
AUTO2	0274	K323	0120	ONEOCP	0042
AUTO3	0300	K4	0073	ONEOCT	4442
AUTO4	0403	K40	0104	OUT	0324
B7700	0497	K400	0121	PNTR1	0317
BBUF	0562	K5	0074	PRNT1	4401
BGN	0342	K5200	0123	PRNT1P	0051
CNTR	0221	K540	0124	PRNT2	4492
CODE	0236	K5402	0003	PRNT2P	0092
COMNX	0407	K64	0070	PRNT4	4493
CRLF	4454	K7	0075	PRNT4P	0093
CRLF	0054	K70	0105	RANDAT	0461
ERROR	0222	K7510	0125	RECEV	0262
ERRP	0061	K7520	0126	REEX	0430
ERRSA	0240	K7540	0127	RLBUFF	4497
ERRSB	0241	K7600	0131	RLBUFF	0097
ERRSC	0242	K77	0106	RUN	0336
EXINIT	0020	K7735	0132	SAVAC1	0393
EXIOT	0417	K7740	0133	SAVAC2	0495
EXSERV	0004	K7750	0134	SEVEX	5004
EXTMEM	0161	K7760	0135	SEVERR	0315
FOROCP	0043	K7771	0136	SKPERR	0302
FOROCT	4443	K7773	0137	SPACE2	4495
HOMEDF	0211	K7774	0140	SPACEP	0095
IHRETP	0026	K7775	0141	STRBUF	0462
INCNT	0396	KCDF	0064	TEXT1	0201
INIT	0243	KCIF	0005	YSTIOT	0440
INITEX	5020	KCIFDF	0020	TWOCP	0041
INTACK	0214	KILL	0217	TWOCT	4441
IOFMS	0056	KILLED	0220	TYPE	4490
JOB	0200	KIND	0354	TYPEP	0090
K0	0066	KIOF	0004	UPIOT	0345
K0770	0456	KIOT	0397		
K10	0076	LISN	4440		
K100	0107	LISNP	0040		
K11	0077	LOOP	0460		
K116	0071	LPBK	0400		
K13	0100	M20	0135		
K17	0101	M200	0131		
K177	0130	M240	0127		
K20	0102	M260	0126		
K200	0110	M270	0125		
K2000	0122	M3	0141		
K212	0111	M30	0134		
K215	0112	M4	0140		
K240	0113	M40	0133		

ERRORS DETECTED: 0  
LINKS GENERATED: 20  
RUN-TIME: 4 SECONDS  
2K CORE USED