

NORD SOFTWARE LIBRARY DISKETTE

CONTAINING : TEST-PROGRAMS NO.3 FOR  
ND-10, ND-12 AND ND-100.

DIRECTORY NAME : ND-10326B  
USER NAME : FLOPPY-USER

FILE 0 : (ND-10326B:FLOPPY-USER)1158-SIMPL-2219A:BFUN;1  
FILE 1 : (ND-10326B:FLOPPY-USER)DRUMS-1297A:BFUN;1  
FILE 2 : (ND-10326B:FLOPPY-USER)ES-PICT-2216A:BFUN;1  
FILE 3 : (ND-10326B:FLOPPY-USER)FL-LOOPS-1996A:BFUN;1  
FILE 4 : (ND-10326B:FLOPPY-USER)HPMAG-1523C:BFUN;1  
FILE 5 : (ND-10326B:FLOPPY-USER)INTER-T-2233A:BFUN;1  
FILE 6 : (ND-10326B:FLOPPY-USER)MEM-TEST-2304A:BFUN;1  
FILE 7 : (ND-10326B:FLOPPY-USER)MPM-MAINT-2177B:BFUN;1  
FILE 8 : (ND-10326B:FLOPPY-USER)PASCAN-2226A:BFUN;1  
FILE 9 : (ND-10326B:FLOPPY-USER)S1172-HAR-2235B:BFUN;1  
FILE 10 : (ND-10326B:FLOPPY-USER)STC-RUNNER-2410B:BFUN;1  
FILE 11 : (ND-10326B:FLOPPY-USER)STC-TEST-2411E:BFUN;1  
FILE 12 : (ND-10326B:FLOPPY-USER)T32KMOS-2178D:BFUN;1  
FILE 13 : (ND-10326B:FLOPPY-USER)TCODR-1299A:BFUN;1  
FILE 14 : (ND-10326B:FLOPPY-USER)TESTMONO-1534A:BFUN;1  
FILE 15 : (ND-10326B:FLOPPY-USER)TET2200-A:BFUN;1  
FILE 16 : (ND-10326B:FLOPPY-USER)TNCT-2039A:BFUN;1  
FILE 17 : (ND-10326B:FLOPPY-USER)TREAL-1399B:BFUN;1  
FILE 18 : (ND-10326B:FLOPPY-USER)TSTAD-1870B:BFUN;1  
FILE 19 : (ND-10326B:FLOPPY-USER)VERSATEST-2297A:BFUN;1

18 JANUARY 1982

PRODUCT	NAME	ND-NUMBER	CATEGORY
	TEST-PROGRAMS No. 3 for ND-10, ND-12 and ND-100.	10326B	T
		ND-NUMBER FOR SOURCE	10329B
ISSUED	DATE: 15 JANUARY 1982	BY (INITIALS)	DG
COMPUTERS	X 10 ! X 12 ! 50 ! X 100 !	500 !	!
INSTR.SET	48 BIT FL. ! 32 BIT FL. !	COMMERCIAL !	!
OP.SYSTEM	SIN III VS ! SIN III RT !	X ALONE !	!
DOCUMEN- TATION	NUMBER: ND-30.016 TITLE: Testprogram description. Vol. 3.		
PURPOSE	Testprograms for CPU, memory, discs and peripherals.		
PROGRAMS (FILES)	PROG.NUMB NAME	TYPE	CONTAINING
	HAR-2219A 1158-SIMPL	BPUN	Test 1158 module
	HUT-1297A DRUMS	BPUN	Drum maintenance system.
	HAR-2216A ES-PICT	BPUN	Evans & Sutherland pict.
	HAR-1996A FL-LOOPS	BPUN	Debugging loops floppy.
	HAR-1523C HPMAG	BPUN	HP magnetic tape test.
	HAR-2233A INTER-T	BPUN	External interrupts ND-10
	HAR-2304A MEM-TEST	BPUN	Memory test using DMA.
	HAR-2177B MPM-MAINT	BPUN	Multiport test
	HAR-2226A PASCAN	BPUN	Pack verification 75/288M
	HAR-2235B S1172	BPUN	Universal DMA S1172
	HAR-2410B STC-RUNNER	BPUN	STC magtape subsystem.
	HAR-2411E STC-TEST	BPUN	STC magtape controller
	HAR-2178D T32KMOS	BPUN	Memory & Big Multiport
	HAR-1299A TCODR	BPUN	Core and Drum test.
	HAR-1534A TESTMONO	BPUN	Monitor NORDCOM-74
	203097A TET2200	BPUN	Test TDV-2200
	HAR-2039A TNCT	BPUN	Nordcom Colour Terminal
	HAR-1399B TREAL	BPUN	Real time clock
	HAR-1870B TSTAD	BPUN	Check big disc addresses
	HAR-2297A VERSATEST	BPUN	Versatec printer/plotter

## LOADING PROCEDURE:

Place floppy in Floppy Disc Controller 1, Unit 0.  
Press Master Clear, Type 1560& and LOAD <program>.

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	for ND-10, ND-12 and ND-100.	

1158-SIMPL      Date: 78.05.31      (SUP)      Boundaries: 15<1070  
Start address:      177      Restart address: 20

When loaded , program stops in 17. Then one must write device number in location 15 and the ident-code in 16, and press restart (20!). If an error is found, the program stops. The program counter points to the location after the WAIT-instruction.

DRUMS            Date: 74.01.15      (DG)      Boundaries: 0<4021  
Start address:      20      Restart address: 20

ES-PICT          Date: 78.05.30      (SUP)      Boundaries: 0<2000  
Start address:      20      Restart address: 20

A PS-2 I/F test card and maxi-panel is required for the test.

FL-LOOPS         Date: 76.09.23      (SUP)      Boundaries: 0<500  
Start address:      See li      Restart address: See li

The loops are started manually by the user who must have a listing of the program (preferably 2PASS-listing) where loop addresses and necessary documentation can be found.

HPMAG            Date: 76.03.31      (DG)      Boundaries: 20<11025  
Start address:      20      Restart address: 51

INTER-T          Date: 79.01.12      (SUP)      Boundaries: 2000<6000  
Start address:      2000      Restart address: 2031

Program will test if device is ready (properly placed). Device ready will give entry to testprogram and test may be chosen. Explanation is given by program. Missing device will cause output. Missing device detected and program will stop. Restart is permitted by typing ! on Console or press Continue.

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MEM-TEST            Date: 79.01.16        (PVDV)        Boundaries: 0<12000  
                    Start address:        43            Restart address: 20

Memory testprogram using S1172 universal DMA interface.

MPM-MAINT           Date: 79.01.10        (PVDV)        Boundaries: 0<3520  
                    Start address:        20            Restart address: 23

Program will record errors found by the error correction system in big multiport memory when such a command character is typed on terminal 1. A maximum of 64 different errors can be recorded. Each error can be recorded up to 2048 times without overflow in the error counter.

Command characters:

- H= Print list of commands.
- I= Initialize device and errors file.
- B= Operator break, Machine stops.
- D= Display content of error log device.
- R= Scan error log device and accumulate errors.
- C= Clear accumulated errors file.
- P= Print accumulated errors file.

PASCAN              Date: 78.06.11        (DG)           Boundaries: 0<13070  
                    Start address:        0            Restart address: 20

S1172                Date: 79.01.21        (DG)           Boundaries: 0<26000  
                    Start address:        43            Restart address: 20

Device number is asked for. After these have been incerted, commands are available. HELP lists all commands. To access a program, program name is written.

STC-RUNNER          Date: 80.03.11        (DG)           Boundaries: 0<26642  
                    Start address:        20            Restart address: 20

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STC-TEST            Date: 80.10.30        (DG)            Boundaries: 0<35000  
                    Start address:        20              Restart address: 20

T32KMOS            Date: 81.01.15        (PVDV)          Boundaries: 0<17131  
                    Start address:        0                Restart address: 20

TCODR              Date: 74.04.17        (DG)            Boundaries: 0<4171  
                    Start address:        20                Restart address: 20

TESTMONO           Date: 74.11.15        (SUP)           Boundaries: 20<16560  
                    Start address:        10014            Restart address: 20

Patch for even parity:

156/170404        44222  
174/170404        44204  
  0/.....        44004

TET2200            Date: 81.06.01        (SUP)           Boundaries: 0<31122  
                    Start address:        0                Restart address: 20

Includes the TEST-MONITOR-2441D.

PROGRAM-COMMANDS:

>DEFINE-DEVICES -

Command which finds which terminal-devices that are present, and then asks if you want to run test in each of them. Answer "YES/NO" or "STOP". "NO" is default.

>TEST-TDV2200 -

Loads a test program into TDV-2200 and starts internal tests in the terminal(s).

Two different keyboard tests are available by pressing on the TDV keyboard:

P - Internal Keyboard test in TDV-2200

E - Keyboard test with echo from Nord-machine.

Non-volatile memory in the TDV-2200 pos.57 & 58 (Hex.) must contain 02 & 02 in addition to the correct configuration parameters in order to satisfy the

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internal RAM test.

TNCT            Date: 76.11.22      (SUP)      Boundaries: 20<23600  
                 Start address:      20            Restart address: 20

TREAL           Date: 76.02.10      (PVDV)      Boundaries: 20<1222  
                 Start address:      20            Restart address: 20

TSTAD           Date: 76.08.04      (DG)        Boundaries: 20<5056  
                 Start address:      20            Restart address:

The program will ask for some numbers, and then write all sectors on the big disc. Every sector is filled with its own address + wordno/2 in every second word, and extended cylinder address in the rest of the words. The sector with address 010 is f.ex. filled with 010, 0, 011, 0, 012, 0...,0407, 0. After all sectors are written, they are read back and checked.

VERSATEST      Date: 79.01.04      (SUP)      Boundaries: 0<16566  
                 Start address:      0            Restart address: 20

If 1200-plotter, PLACE program instead of LOADING.  
Then do following patch:  
162/000200 204  
and start program (0!).

! NORSK DATA A/S		! NORD SOFTWARE LIBRARY		! PAGE 1 OF 1	
		! REVISION LOG			
! PRODUCT	! NAME	! ND-NUMBER			
	! TEST PROGRAM NO. 3	! ND-10326B			
! ISSUED	! DATE 15 JAN 1982	! BY (INITIALS) DG			
! REASON	! ERROR CORRECTION	! DIFFERENT ENVIRONMENT			
	! * CHANGE/ADDITION				
! FILES	! PROG. NUMB. NAME				
! CHANGED	! HAR-2177B MPM-MAINT				
! OR NEW	! HAR-2178D T32KMOS				
! FILES	!				

MPM-MAINT and T32KMOS have been moved from TEST PROGRAM NO. 1