

ND SOFTWARE LIBRARY DISKETTE

PAGE 1

Containing :
ND-5000 Test Microprograms

Directory Name :
250247A00-XX-01D

User Name : FLOPPY-USER

No	File name	Type	T	Public	Friend	Own	Pages	Bytes
0	TFE-MON-100-A04	PROG	I	R	RWACD	RWACD	29	56320
1	SEMICS-1-A00	TEST	I	R	RWACD	RWACD	39	76288
2	SEMICS-2-A00	NEXT	I	R	RWACD	RWACD	25	48128
3	SEMICS-3-A00	NEXT	I	R	RWACD	RWACD	25	48128
4	ALU-VERIFY-A00	EXT	I	R	RWACD	RWACD	4	6144
5	MIC-REGISTER-A00	EXT	I	R	RWACD	RWACD	5	8192
6	MIC-SEQUENCE-A00	EXT	I	R	RWACD	RWACD	2	2048
7	ALU-CARD-A00	EXT	I	R	RWACD	RWACD	22	43008
8	CACHE-TEST-A00	EXT	I	R	RWACD	RWACD	39	77824
9	IAC-TEST-A00	EXT	I	R	RWACD	RWACD	5	8192
10	DAC-TEST-A00	EXT	I	R	RWACD	RWACD	9	16384
11	IDU-REGISTER-A00	EXT	I	R	RWACD	RWACD	5	8192
12	IDA-VERIFY-A00	EXT	I	R	RWACD	RWACD	5	8192
13	DMM-REGISTER-A00	EXT	I	R	RWACD	RWACD	10	18432
14	IMM-REGISTER-A00	EXT	I	R	RWACD	RWACD	10	18432
15	MM-VERIFY-A00	EXT	I	R	RWACD	RWACD	6	10240
16	AAP1-2-TEST-A00	EXT	I	R	RWACD	RWACD	13	24576
17	AAP2-VERIFY-A00	EXT	I	R	RWACD	RWACD	4	6144
18	INST-SEMICS-A00	MODE	I	R	RWACD	RWACD	4	491
19	INST-EXT-A00	MODE	I	R	RWACD	RWACD	2	1669

20 files using 263 pages. 610 pages reserved out of 610 pages.

ND SOFTWARE LIBRARY DISKETTE

PAGE 1

Containing :
ND-5000 Test Microprograms

Directory Name :
250247A00-XX-02D

User Name : FLOPPY-USER

No	File name	Type	T	Public	Friend	Own	Pages	Bytes
0	ALU-VERIFY-A00	LABE	I	R	RWACD	RWACD	2	1608
1	ALU-VERIFY-A00	TEST	I	R	RWACD	RWACD	5	135168
2	MIC-REGISTER-A00	LABE	I	R	RWACD	RWACD	2	744
3	MIC-REGISTER-A00	TEST	I	R	RWACD	RWACD	9	139264
4	MIC-SEQUENCE-A00	LABE	I	R	RWACD	RWACD	2	552
5	MIC-SEQUENCE-A00	TEST	I	R	RWACD	RWACD	8	139264
6	ALU-CARD-A00	LABE	I	R	RWACD	RWACD	2	960
7	ALU-CARD-A00	TEST	I	R	RWACD	RWACD	32	180224
8	CACHE-TEST-A00	LABE	I	R	RWACD	RWACD	9	16200
9	CACHE-TEST-A00	TEST	I	R	RWACD	RWACD	24	165888
10	IAC-TEST-A00	LABE	I	R	RWACD	RWACD	2	456
11	IAC-TEST-A00	TEST	I	R	RWACD	RWACD	14	143360
12	DAC-TEST-A00	LABE	I	R	RWACD	RWACD	2	936
13	DAC-TEST-A00	TEST	I	R	RWACD	RWACD	45	200704
14	IDU-REGISTER-A00	LABE	I	R	RWACD	RWACD	2	1392
15	IDU-REGISTER-A00	TEST	I	R	RWACD	RWACD	30	176128
16	IDA-VERIFY-A00	LABE	I	R	RWACD	RWACD	6	8400
17	IDA-VERIFY-A00	TEST	I	R	RWACD	RWACD	4	133120
18	DMM-REGISTER-A00	LABE	I	R	RWACD	RWACD	2	792
19	DMM-REGISTER-A00	TEST	I	R	RWACD	RWACD	35	184320
20	IMM-REGISTER-A00	LABE	I	R	RWACD	RWACD	2	792
21	IMM-REGISTER-A00	TEST	I	R	RWACD	RWACD	35	184320
22	MM-VERIFY-A00	LABE	I	R	RWACD	RWACD	4	5112
23	MM-VERIFY-A00	TEST	I	R	RWACD	RWACD	5	135168
24	AAP1-2-TEST-A00	LABE	I	R	RWACD	RWACD	2	1440
25	AAP1-2-TEST-A00	TEST	I	R	RWACD	RWACD	67	237568
26	AAP2-VERIFY-A00	LABE	I	R	RWACD	RWACD	3	3744
27	AAP2-VERIFY-A00	TEST	I	R	RWACD	RWACD	9	141312
28	INST-TESTS-A00	MODE	I	R	RWACD	RWACD	4	5053
29	ALU-VERIFY-A00	DATA	I	R	RWACD	RWACD	13	22880

CONTINUED

ND SOFTWARE LIBRARY DISKETTE

PAGE 2

Containing :
ND-5000 Test Microprograms

Directory Name :
250247A00-XX-02D

User Name : FLOPPY-USER

No	File name	Type	T	Public	Friend	Own	Pages	Bytes
30	MIC-REGISTER-A00	DATA	I	R	RWACD	RWACD	6	8544
31	MIC-SEQUENCE-A00	DATA	I	R	RWACD	RWACD	5	7296
32	ALU-CARD-A00	DATA	I	R	RWACD	RWACD	11	19392
33	CACHE-TEST-A00	DATA	I	R	RWACD	RWACD	52	102496
34	IAC-TEST-A00	DATA	I	R	RWACD	RWACD	7	10688
35	DAC-TEST-A00	DATA	I	R	RWACD	RWACD	11	19424
36	IDU-REGISTER-A00	DATA	I	R	RWACD	RWACD	10	16624
37	IDA-VERIFY-A00	DATA	I	R	RWACD	RWACD	26	50496
38	DMM-REGISTER-A00	DATA	I	R	RWACD	RWACD	7	12256
39	IMM-REGISTER-A00	DATA	I	R	RWACD	RWACD	7	10544
40	MM-VERIFY-A00	DATA	I	R	RWACD	RWACD	21	40512
41	AAP1-2-TEST-A00	DATA	I	R	RWACD	RWACD	11	20128
42	AAP2-VERIFY-A00	DATA	I	R	RWACD	RWACD	10	17120
43	files using 565 pages. 610 pages reserved out of 610 pages.							

Product	Name	Reg. no.	Category
	ND-5000 Test Microprograms	250247A	SPEC
Reason	X New product		
Documen- tation	Title	Reg. no.	
	SEMICS User Guide TPE user guide	20.024.1 not yet available	
Purpose	Microcoded test programs for ND-5000 CPU		
Prerequi- sites	Computer	Type	Floating format
	ND-5000	All	All
	Op. system	Version	
	SIN III	VSX/500 K	Work mode 401
	Minimum mass storage resources for installation		
	User	User space	Number of files
	ND5000-SEMICS	830 pages on	60 files
	Minimum permanent mass storage resources		
	User	User space	Number of files
	ND5000-SEMICS	830 pages on	60 files
			Reg. no. Source 250245A

File Name	Type	Containing	
TPE-MON-100-A<rev>	PROG	TPE monitor	
SEMICS-1-A<rev>	TEST	Main command overlay	
SEMICS-2-A<rev>	NEXT	Second command overlay	
SEMICS-3-A<rev>	NEXT	Third command overlay	
INST-SEMICS-A<rev>	MODE	Copy TPE + SEMICS to disk	
INST-EXT-A<rev>	MODE	Copy ext. error files to disk	
ALU-VERIFY-A<rev>	EXT	Extended error information files.	
MIC-REGISTER-A<rev>	EXT		
MIC-SEQUENCE-A<rev>	EXT		
ALU-CARD-A<rev>	EXT		
CACHE-TEST-A<rev>	EXT		
IAC-TEST-A<rev>	EXT		
DAC-TEST-A<rev>	EXT		
IDU-REGISTER-A<rev>	EXT		
IDA-VERIFY-A<rev>	EXT		
DMM-REGISTER-A<rev>	EXT		
IMM-REGISTER-A<rev>	EXT		
MM-VERIFY-A<rev>	EXT		
AAP1-2-TEST-A<rev>	EXT		
AAP2-VERIFY-A<rev>	EXT		
INST-TESTS-A<rev>	MODE		Copy micro tests to disk
ALU-VERIFY-A<rev>	TEST		
ALU-VERIFY-A<rev>	LABE		
ALU-VERIFY-A<rev>	DATA		
MIC-REGISTER-A<rev>	TEST		
MIC-REGISTER-A<rev>	LABE		
MIC-REGISTER-A<rev>	DATA		
MIC-SEQUENCE-A<rev>	TEST		
MIC-SEQUENCE-A<rev>	LABE		

Product	Name	Reg. no.	Category
	ND-5000 Test Microprograms	250247A	SPEC

MIC-SEQUENCE-A<rev> DATA
 ALU-CARD-A<rev> TEST
 ALU-CARD-A<rev> LABE
 ALU-CARD-A<rev> DATA
 CACHE-TEST-A<rev> TEST
 CACHE-TEST-A<rev> LABE
 CACHE-TEST-A<rev> DATA
 IAC-TEST-A<rev> TEST
 IAC-TEST-A<rev> LABE
 IAC-TEST-A<rev> DATA
 DAC-TEST-A<rev> TEST
 DAC-TEST-A<rev> LABE
 DAC-TEST-A<rev> DATA
 IDU-REGISTER-A<rev> TEST
 IDU-REGISTER-A<rev> LABE
 IDU-REGISTER-A<rev> DATA
 IDA-VERIFY-A<rev> TEST
 IDA-VERIFY-A<rev> LABE
 IDA-VERIFY-A<rev> DATA
 DMM-REGISTER-A<rev> TEST
 DMM-REGISTER-A<rev> LABE
 DMM-REGISTER-A<rev> DATA
 IMM-REGISTER-A<rev> TEST
 IMM-REGISTER-A<rev> LABE
 IMM-REGISTER-A<rev> DATA
 MM-VERIFY-A<rev> TEST
 MM-VERIFY-A<rev> LABE
 MM-VERIFY-A<rev> DATA
 AAP1-2-TEST-A<rev> TEST
 AAP1-2-TEST-A<rev> LABE
 AAP1-2-TEST-A<rev> DATA
 AAP2-VERIFY-A<rev> TEST
 AAP2-VERIFY-A<rev> LABE
 AAP2-VERIFY-A<rev> DATA

Files containing
test microprograms

NOTE: <rev> is to be replaced by the current revision of the DIRECTORY or FILE. The revision level is found on the preceding "ND SOFTWARE LIBRARY DISKETTE" pages.

Date 87.10.02		Norsk Data A.S PROGRAM DESCRIPTION		Page 3 of 6	
Product	Name	Reg. no.	Category		
	ND-5000 Test Microprograms	250247A	SPEC		

1 THE PRODUCT

The ND-5000 Test Microprograms (SEMICS) contains tools for examining the ND-5000 hardware. It also contains most of the test microprograms which have been written for the ND-5000 CPU up to now.

2 INSTALLATION PROCEDURE

SEMICS is delivered on two DS/DD floppy diskettes.

- 1) The floppy diskette 250247A<rev>-XX-01D contains :
 - TPE-monitor
 - SEMICS command overlays
 - Extended Error Information
- 2) The floppy diskette 250247A<rev>-XX-02D contains the collection of microtests.

At present we have two ways of running the microtests:

- 1) Running microtests from the floppy.
- 2) Running microtests from the hard disk.

In both cases the TPE monitor and SEMICS itself must be loaded to the hard disk. If the extended error information is to be used, the microtests must be run from the hard disk also. (Regarding extended error information, see the SEMICS User Guide.)

2.1 Preparations for running SEMICS.

As we have two ways of running SEMICS, you can decide which way suits you best.

- 1) Running SEMICS from the hard disk requires approximately 125 pages. (TPE-monitor and the SEMICS command overlays.)
- 2) Running microtests from the hard disk requires approximately :
 - I) 690 pages if the extended error information is not used.
 - II) 830 pages if the extended error information is used.

2.1.1 Loading the TPE monitor and SEMICS command overlays.

- Log in as user SYSTEM.
- Create the user ND5000-SEMICS.

@Create-user ND5000-SEMICS↓

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	ND-5000 Test Microprograms	250247A	SPEC

- Give the number of pages required for the way you want to run the microtests (125, 690 or 830).

@Give-User-Space ND5000-SEMICS,<number of pages>↓

- Log in as user ND5000-SEMICS.
- Insert diskette 250247A<rev>-XX-01D (with TPE, SEMICS and Extended Error Information) and enter the directory with the command:

@Enter-Directory 250247A<rev>-XX-01D,<Device name>,<Device unit>↓

- Install the SEMICS by running the mode file:

@Mode (250247A<rev>-XX-01D:FLOPPY-USER)INST-SEMICS-A<rev>:MODE,,,↓

This mode job will copy the SEMICS command overlays, and the TPE-Monitor to user ND5000-SEMICS on the hard disk.

- If you are going to use the Extended Error Information, install the files by running the mode file:

@Mode (250247A<rev>-XX-01D:FLOPPY-USER)INST-EXT-A<rev>:MODE,,,↓

This mode job will copy all :EXT files to user ND5000-SEMICS on the hard disk.

- Release the directory with the command:

@Release-Directory 250247A<rev>-XX-01D↓

2.1.2 Copying the Test Microprograms to the hard disk.

This section will install the microtests on the hard disk. There will be no need for the floppy diskette after doing this.

- Log in as user ND5000-SEMICS.
- Ensure that the user ND5000-SEMICS has enough pages.
- Insert diskette 250247A<rev>-XX-02D (with the microtests) and enter the directory with the command:

@Enter-Directory 250247A<rev>-XX-02D,<Device name>,<Device unit>↓

Date 87.10.02		Norsk Data A.S PROGRAM DESCRIPTION		Page 5 of 6	
Product	Name	Reg. no.	Category		
	ND-5000 Test Microprograms	250247A	SPEC		

- Install the microtests by running the mode file:

```
@Mode (250247A<rev>-XX-02D:FLOPPY-USER)INST-TESTS-  
A<rev>:MODE,,,↓
```

This mode job will copy all testprogram files to user ND5000-SEMICS on the hard disk.

- Release the directory with the command:

```
@Release-Directory 250247A<rev>-XX-02D↓
```

You can now start the TPE monitor and then run SEMICS. Instructions on how to start the TPE monitor are given in the section 2.2 "Starting the TPE monitor". After starting the TPE monitor you can load and run SEMICS. This is described in the "SEMICS User Guide".

2.1.3 Prepare running the Test Microprograms from the floppy diskette.

As long as the TPE monitor and SEMICS are loaded in your system, you can run microtests directly from the floppy diskette.

- Log in as user SYSTEM.
- Insert diskette 250247A<rev>-XX-02D (with microtests) and enter the directory with the command:

```
@Enter-Directory 250247A<rev>-XX-02D,<Device name>,  
<Device unit>↓
```

You can now start the TPE monitor and then run SEMICS. Instructions on how to start TPE monitor are given in the section 2.2 "Starting the TPE monitor". After starting the TPE monitor you can load and run SEMICS.

NOTE: The Extended Error Information can not be used when running microtests from the floppy diskette.

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	ND-5000 Test Microprograms	250247A	SPEC

2.2 Starting the TPE monitor.

To get the TPE monitor started:

- Log in as user SYSTEM.
- Type the following:

```
@(ND5000-SEMICS)TPE-MON-100-:PROG↓
```

When the TPE monitor has started it will identify itself with this heading:

```
TPE Monitor, ND-100 / ND-110 - Version: lnn - yyyy-mm-dd
```

The TPE monitor is now ready to accept your commands.

2.3 Starting SEMICS.

When the TPE monitor is running, you can load the testprogram as follows:

```
>Load (ND5000-SEMICS)SEMICS
```

The program will identify itself and the SEMICS program commands will be available.

Remember that the first command used after starting SEMICS is: INVESTIGATE-AND-RESERVE.

Exeption: When the ND-5000 CPU has very poor HW status it may be impossible to run this command. System parameters are then set by the command SET-PARAMETER.

If you are running the microtests from the floppy diskette, after entering the floppy diskette 250247A<rev>-XX-02D, you must specify directory and user name when you run the first test. Example:

```
TPE>RUN↓
```

```
Test system: (250247A<rev>-XX-02D:FLOPPY-USER)<Test name>↓
```

The command 'INFO' may be useful. It gives information concerning the current version of SEMICS.