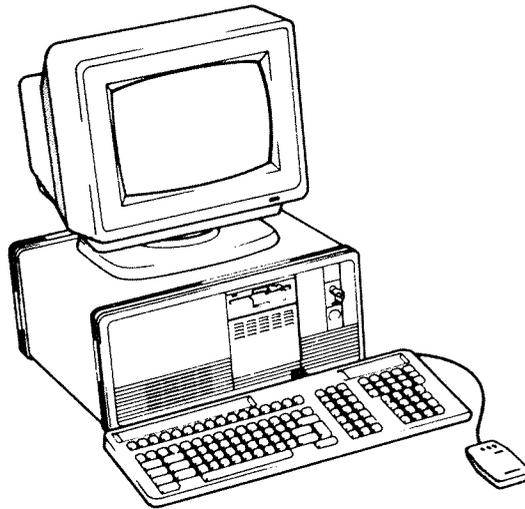


BUTTERFLY WORKSTATION



OWS SUPERVISOR GUIDE

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PREFACE

- The product ND-Butterfly OWS is a range of office workstations based on the Ericsson 286 PC, (compatible with IBM's PC/AT). This manual covers models:
- OWS-10 product number: ND 150001
OWS-11 product number: ND 150002
OWS-12 product number: ND 150003
- How to use this guide
- You will need different parts of this guide at different times. It starts by giving an overview of the floppy disks and documentation provided with the workstations, and the Supervisor Pack that this manual accompanies.
- It then shows which floppy disks you will need in different situations, and with which models.
- If you change your configuration, e.g. you add extra memory, you will need to run the Setup program. Read chapter 2.
- If you think that your workstation is not running correctly, you should run the Maintenance program. Chapter 3 tells you how to do this.
- Chapter 4 only concerns OWS-12s. It tells you what to do if your hard disk becomes unusable. (On OWS-10 and OWS-11, you must contact Norsk Data for replacement floppy disks.)
- Finally, chapter 5 tells you how to reinstall MS-Windows on an OWS-12.
- Expected knowledge
- This manual assumes that you have used one of Norsk Data's Office Workstations, and that you have read the Workstation User Guide.

Related manuals	Workstation User Guide	ND-63.268
	NOTIS-WSWP User Guide	ND-63.046
	MS-DOS Reference Manual	ND-60.271
	PC Technical Reference Manual	ND-06.028
	Microsoft Windows Operating Environment Set	

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1 THE SUPERVISOR PACK

The Supervisor Pack supplements the floppy disks and documentation that come with every workstation. It includes programs that you will only need if you change the configuration of a workstation or if you think that one of the workstations you are responsible for is not functioning correctly.

Therefore, you do not need a Supervisor Pack for each workstation. Rather keep this one safely for the few occasions when it is needed.

The Supervisor Pack contains:

- a floppy disk called Maintenance Programs for OWS 10/11/12 and the Program Description (PD) sheet (Reg. no 230007A) that accompanies it
- two floppy disks, the OWS 10/11/12 Windows Set-up Disk and the OWS 10/11/12 Build Disk. Both have the Reg. no 230008A. They can be distinguished by the suffix 01D and 02D respectively. A PD sheet comes with the two disks and is called OWS 10/11/12 Windows Set-up and Build Disks
- the MS-Windows pack, containing documentation and 5 disks
- this manual.

1.1. Disks in the Supervisor Pack

Maintenance
Programs for OWS
10/11/12

This is the only floppy disk in this pack that you will need on an OWS-10 or OWS-11. Programs on it also apply to the OWS-12.

There are two programs:

- the Setup Program, used if you change any system parameters. See chapter 2.
- the Diagnostics Program, used to diagnose faults when a workstation is not working properly. See chapter 3.

OWS 10/11/12
Windows Set-up &
Build Disks

These two floppies are Norsk Data's special version of MS-Windows. They replace the first two disks in the standard MS-Windows set of five.

MS-Windows

Five floppies and the documentation that are delivered with MS-Windows. You should replace the first two floppies called the Setup and Build Disks with the two OWS 10/11/12 Windows Set-up and Build Disks provided in the Supervisor Pack.

On delivery, MS-Windows is already on the hard disk of an OWS-12 and on the System and Applications Disks used with an OWS-10 and OWS-11.

Note

Use these floppies only if you need to reinstall MS-Windows on an OWS-12 because you have changed the configuration, e.g. you want to use a different mouse. Follow the instructions in chapter 5.

1.2. Disks that come with every workstation

This section describes the floppy disks that are delivered with every workstation. If there are only OWS-12s in your office, think of these disks as part of the Supervisor Pack because they are only used to restore a corrupt hard disk (see chapter 4). The five diskettes are:

- Document Server
- PC-FT Document Server for OWS 10/11/12. The server must be loaded on to the Departmental computer by the System Supervisor before workstation users can use files stored there. If this has not been done already, follow the instructions on the PD sheet of the same name which accompanies the floppy disk.
- ND-DTM installation disks
- two disks which are also used for day-to-day running of an OWS-10 or OWS-11. The two disks you receive depend on whether you have an OWS-11 (and OWS-12) or an OWS-10.

The pair for the OWS-11 and OWS-12 are called the Desk Top Manager for OWS 11/12 System Disk and the Desk Top Manager for OWS 11/12 Applications Disk. The program description (PD) sheet that accompanies these two floppies is called ND-Desk Top Manager for OWS 11/12 (Reg. no 230006A). The titles for the OWS-10 have the same name, only the model number is changed.

On an OWS-10 or OWS-11, insert the System Disk in drive A. Put the Applications disk in drive B when you want to use one of the Utilities, e.g. the clock or calculator.

As well as the Desk Top Manager (DTM), the wordprocessing program, NOTIS-WSWP, used on OWS-10, OWS-11 and OWS-12 is contained on these disks.

- MS-DOS 3.10
- two floppies which contain Ericsson's DOS 3.10 operating system.

On delivery, MS-DOS is already on the hard disk of an OWS-12, and on the System Disk used on an OWS-10 or OWS-11. Only use these two floppies if you need to reinstall MS-DOS on an OWS-12. See chapter 4.

(Do not try to reinstall MS-DOS on to a corrupted System Disk - ask Norsk Data for a new one.)

1.3. When to use the disks

- Daily use No disks are needed for daily use on an OWS-12. You just power up the system.
- On OWS-10 and OWS-11, use the System Disk in drive A, and the Applications Disk or a data disk in drive B when necessary. (A data disk is one on which you keep your own files.)
- If you think On any model, run the Diagnostics Program from the something is wrong OWS 10/11/12 Maintenance disk.
- If you change the On any model, run the Setup Program on the OWS configuration 10/11/12 Maintenance disk.
- However, if you change the mouse, you only need to reinstall MS-Windows. You can only do this on an OWS-12.
- If your hard disk On an OWS-12, if your hard disk becomes unusable, is corrupt you will need to reinstall the software. In the worst case this would involve:
- reformatting the disk, using the MS-DOS disks
 - reinstalling the MS-DOS operating system
 - reinstalling the Desk Top Manager (DTM).
- See chapter 4.

2 SETUP PROGRAM

The OWS 10/11/12 Maintenance Disk contains the Setup Program. This program is the Ericsson Information Systems "Setup program".

It presents a menu showing various PC system setup parameters. The workstations are supplied with default parameters already set-up. These parameters are stored in battery-backed memory, in the System Unit.

After a system repair or modification, it may be that some of these parameters would need to be re-entered or changed. Use the Setup Program to do this.

Select an option by highlighting it with the arrow keys.

The current parameter is displayed. To display the other parameters you can set for this option, press the ENTER key repeatedly (on Butterfly keyboards this is the RET or ↵ key) until the value you want is highlighted.

Type any other parameters into their menu as required.

When you have finished, select "Store and exit". You are returned to the OWS 10/11/12 Diagnostic Program Main Menu.

2.2. Setup parameter settings

The default parameters already set up for an OWS-12 are shown in bold type in the following description.

Set Time

Specify time

Press Enter. Then type the time in the format HH:MM:SS and press enter. Enter the hours in the 24-hour format. Unlike other options changes to the time and date are effective immediately.

Set Date

Specify date

Press Enter. Then type in the date in the format MM-DD-YYYY. Only the hyphen (-) character can be used.

Diskette drive A

360kB - **1.2Mb** - No drive

Disk drive A is a 1.2Mb (high capacity) drive.

Diskette drive B

360kB - 1.2Mb - **No drive**

Disk drive B is a 1.2Mb (high capacity) drive.

Hard Disk C and D

E7 for CDC, **E9** for NEC
No drive

OWS-12 is supplied with type E7 (CDC) or type E9 (NEC) fixed disk drives. If you have an OWS-10 or OWS-11, select No drive.

Base Memory Size

512Kb - 640kb

The standard PC memory on an OWS-10, OWS-11 or OWS-12 is 512kb.

Expansion Memory Size

Specify size - **0kb**

No memory expansion boards have been fitted. If memory is fitted, the start and stop values of the memory have to be specified. Note: The system does not conform to the LIM expanded memory specification.

Keyboard type	Standard OWS-10, OWS-11 and OWS-12 use a version of the standard NOTIS keyboard, sometimes called the Butterfly keyboard. Keep the default value.
Start-up NumLock	On - Off Keep the default value, Off.
Video Mode	Color 40 column - Color 80 Column Monochrome - No video Color 80 column is the standard setting for both colour and monochrome Display Units. Color 40 column or monochrome should only be set if you are using applications software that uses the mode. No video applies if no monitor is used.
Math Coprocessor	Available - Not available If you wish to install a math coprocessor on the system, set this parameter to available.
Serial Port address	03F8H - 02F8H - Disabled If split speed was to be used with the serial port on the system board, this address parameter must be the same as the address of the port, 03F8H or 02F8H. The address is 03F8H, unless it has been changed by moving a strap on the system board. When split speed is not used, this parameter is ignored.
Enhancement Switch	On - Off The enhancement switch is reserved for future use. Keep the default value off.

Boot Select

Standard - Drive B enabled
- Diskette disabled

Standard: If a bootable disk is inserted in drive A, then after the start-up tests have completed or the system has been reset, the operating system is booted from the disk in drive A. Otherwise, the system boots from the hard disk C.

Drive B enabled: If you have a second floppy drive, the disk in this drive can be used to boot the system, provided that there is no bootable disk inserted in drive A.

Diskette disabled: This means that the operating system cannot be booted from floppy disk, only from hard disk. This allows a non-system disk to be permanently inserted in drive A.

Sound Level

Off - Low - Normal - **High**

This option allows you to adjust the sound level of the system unit's loudspeaker.

Password

This allows you to specify a "PC" password or change an existing PC password. On delivery, there is no PC password on workstations.

You may specify a PC password if you wish to restrict user access to only authorised people. It can be any string of up to 10 characters. If a password is specified, it must then be entered correctly by all users each time the workstation is switched on. Otherwise the system cannot be used.

If you set up a PC password, write it down and keep it in a safe place.

Store and Exit

When you have finished using the Setup program, select this option and press \leftarrow to store the parameters you have set and exit from the program.

If you do not want to store the changes you have made, press the ESC key. (However, changes made to the date and time are updated.)

In both cases the OWS 10/11/12 Diagnostic Program Main Menu is displayed.

2.3. To restart the workstation

When the OWS 10/11/12 Diagnostic Program Main Menu is displayed, select option 3, Exit.

Take out the OWS 10/11/12 Maintenance Disk.

On an OWS-12 then press the CTRL, ALT and DEL keys together. The workstation will be restarted and the DTM displayed.

On an OWS-10 or OWS-11, insert the System Disk in drive A. Then press the CTRL, ALT and DEL keys together. The workstation will be restarted and the DTM displayed.

3 DIAGNOSTIC TESTS

A comprehensive set of diagnostic test programs is available to check the operation of your workstation. These are standard Ericsson programs, but the keyboard and display tests have been modified to run on the OWS workstations.

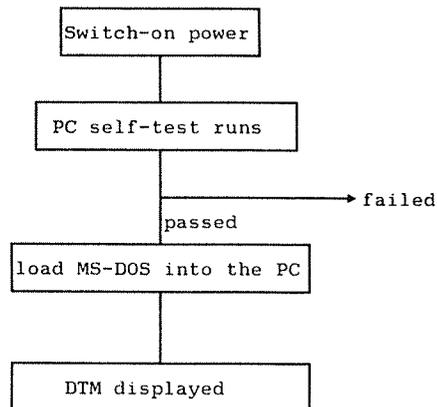
This chapter describes what these diagnostic test programs do, and how to use them in solving problems. There are two types of test:

- the start-up tests that run every time you restart the workstation (see section 3.1).
- the Diagnostics tests that you should run if you think that your workstation is not functioning correctly (see section 3.2).

3.1. Start-up self-tests

A set of self-tests run automatically each time the workstation is switched on or restarted.

The following sequence describes what happens and what you see during a start-up sequence.



The start-up process is fully automatic. When the self-tests have completed successfully, you see the message:

```
POWER ON TEST  
512 kB OK (Base Memory)
```

You also hear a beep on the PC's built-in loudspeaker.

Then, the AUTOEXEC.BAT control file is run which sets up the operating environment for the current session.

Problems

If the start-up process stops at any point in the sequence, a message indicates where the problem lies. If the tests fail completely, so that the system cannot start, ring your local Norsk Data Service Centre.

3.2. Running the Diagnostics Program

The Diagnostics tests are provided on floppy disk.

To load the program, insert the OWS/10/11/12 Maintenance Disk into floppy drive A. Then press the CTRL, ALT and DEL keys together. The workstation is restarted and the Diagnostic Program Main Menu displayed.

OWS 10/11/12	Diagnostic Program	Version A00
Main Menu		
1 Diagnostics 2 Setup Utility 3 Exit		
Select option using ↑ ↓ and RETURN or by number or by name and RETURN		
EXIT to terminate program HELP for help		

Select option 1, Diagnostics. The Main Maintenance Menu is then displayed. This takes some time.

M A I N M A I N T E N A N C E M E N U	
System configuration	Error log menu
System test menu	Setup menu
Memory test menu	Program configuration mode
Color graphic video menu	
Diskette drive menu	External command
Hard disk menu	
Exit	
Use arrows to select option	<Enter> = Execute
<H> = Help	<digit> = Number of tests
<Esc> = Back to previous menu	<C> = Continuous testing

Selecting options Select an option by highlighting it with the arrow keys, then press the \leftarrow key. (This is the equivalent of the Enter key.) Each option in the Main Menu has its own menu.

Note

Some of these diagnostic tests are intended for service engineers' use - do not use them without supervision.

HELP To find out more about what an option does, move the cursor to that option and then type H. Information on that option and any other options on the screen, is displayed in a "help" window. Help is also available in the submenus.

Tests already defined A sequence of tests appropriate to OWS-10 and OWS-11 has already been defined and stored in the file OWS10-11.TST on the OWS 10/11/12 Maintenance Disk. Similarly, a sequence of tests for an OWS-12 has been stored in the file OWS12.TST. To run either sequence, select "Program configuration mode" followed by "Run configuration". Then enter the appropriate file name. The default (which you get if you simply press \leftarrow) is OWS-12.TST.

3.2.1. System tests

This tests:

- the main system board in the PC.
- the keyboard.

This checks the operation of the keyboard and the functions of the keys. It displays a picture of each key position, and invites you to press each key in turn to check that it inputs correctly to the system.

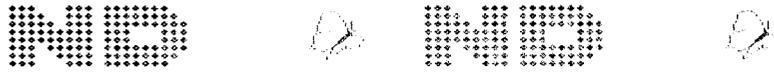
- the printer port.

This test checks the parallel port on the system board, and if a printer is connected, it outputs a sample printout. The pattern of characters produced in this test printout is included here, to enable you to compare it with your test sample.

If a test printout appears to be faulty, the fault may be in the printer, in its connecting cable, or on the system board. If your printer has a self-test switch, run the self-test to check whether the printer is functioning correctly. Refer to the printer manual for details of its self-test facility.

- the serial port.

This checks the asynchronous communications line. To run this test, you must first fit a Test Terminator plug to the serial port. This plug loops the serial output back into the serial input, so enabling the PC to send characters and check that it then receives back the same characters. The test plug is part of a Norsk Data service engineer's kit.



P R I N T E R T E S T

This line is written using the normal character set and size.

If this line is not printed with compressed characters, there is something wrong with your printer.

The text now alternates between SUPERSCRIPT and SUBSCRIPT.

All characters written on this line should be underlined.

These lines contains double-width characters (elongated mode).

Here is a sample of bold printing using normal character size.

=====

Finally, all standard ASCII characters are printed below using BOLD and ELONGATED mode.

!"#\$%&'()*+,-./0123456789:;<=>?

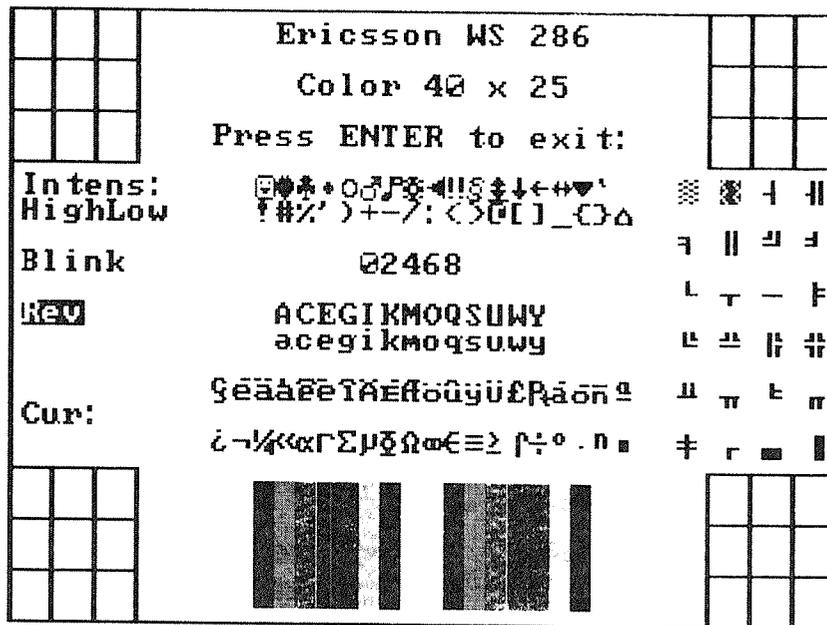
@ABCDEFGHIJKLMNOQRSTUVWXYZ[\]^_

***abcdefghijklmnopqrstuvwxy{!}~**

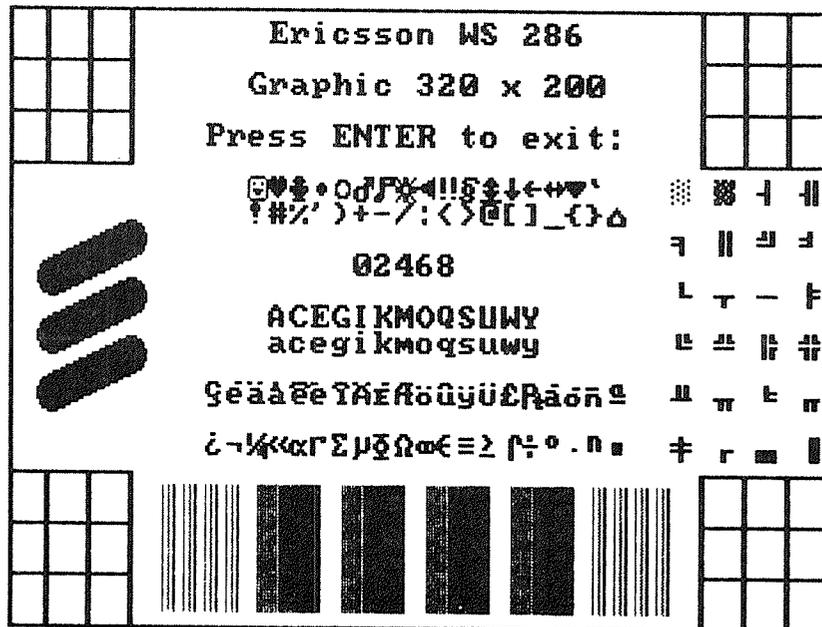


Printer test sample printout

Display test -
40-characters
x 25-columns



Display test -
Graphic
320 x 200 pixels



3.2.4. Floppy drive test

CAUTION

Tests involving writing to a floppy disk will destroy existing data.

This test checks the floppy disk control and read/write logic of the Disk controller, and the operation of the Disk Drive. Three types of test may be selected:

- sequential read, or read/write
- random read, or read/write
- measurement (for service engineer's use only).

Having made a selection, a second menu is displayed, asking you to confirm or change the test parameters. Note in particular that "Run " test specifies the number of test cycles to be done - this may be between 1 and 999, or C for continuous.

You need formatted floppy disks to run the read or read/write tests. Floppy disks used in read/write tests must be reformatted before being reused for normal data storage.

3.2.5. Hard disk test

CAUTION

Tests involving write operations to disk may destroy existing data.

To retain the integrity of your system, this test should only be run under the direction of a qualified service engineer.

This test checks the hard disk parts of the Disk Controller, and the operation of the Winchester Disk Drive.

The Hard Disk menu offers six types of test. Having made a selection, a second menu is displayed, asking you to confirm or change the test parameters. These include the name of the Drive (C), the cylinder and sector address range to be tested, the test pattern to be used in "write" tests (this is entered as four hexadecimal characters), and the number of retries to be made if an operation fails. Note that "Run " test specifies the number of test cycles to be done - between 1 and 999, or C for continuous.

The six tests are:

- sequential read

Each test cycle reads each cylinder in the range you specify, starting from the lowest cylinder up to the highest cylinder and then back again.

- sequential read/write

This test writes to the lowest cylinder, then writes the lowest cylinder + 1, then reads from the lowest cylinder, then writes to the lowest cylinder + 2, then reads from the lowest cylinder + 1, and so on to the highest cylinder. It then works its way back again, writing to the highest cylinder - 1, reading the highest cylinder, writing to the highest cylinder - 2, reading the highest cylinder - 1, and so on, back to the lowest cylinder. The test repeats for the specified number of cycles.

-
- random read,

Each test cycle reads randomly chosen sectors on 100 randomly chosen tracks, within the cylinder/sector address range specified.

- random read/write

Each test cycle performs a write then read operation on randomly chosen sectors on 100 randomly chosen tracks. The write followed by read operations proceed in the manner described for sequential write/read testing, so that the disk heads have to move to a new cylinder address between each write and read operation

- verify

This test performs the DOS command "verify track", between the lowest and highest entered cylinder addresses. It is equivalent to a read operation, except that no data is transferred into memory.

- max cylinder read/write.

This test writes the specified pattern to the last cylinder, then reads it back. Since the last cylinder is not used by DOS, this is the only "write" test which does not affect any DOS information that may already exist on the disk.

3.2.6. Program configuration mode

This option is used to run a sequence of tests that is already set up. For the default tests, select the submenu option "Run configuration" and enter OWS10-11.TST if you have an OWS-10 or OWS-11, or enter OWS12.TST if you have an OWS-12.

Program configuration mode is also used to define new combinations of tests. (This facility is intended for use by Service Engineers.)

3.2.7. Error log

The Error Log records error messages for each error condition that is detected. You can view, print, clear or send the Error Log file to disk: the options available are presented in the Error Log menu.

3.2.8. Setup menu

This option affects the way some tests work. See the Help screen.

3.2.9. External command

This option lets you enter an MS-DOS command.

3.3. To restart the workstation

When you have finished using the Diagnostics Program, select the Exit option. You are returned to the OWS 10/11/12 Diagnostics Program Main Menu. Select option 3, Exit.

Take out the OWS 10/11/12 Maintenance Disk.

On an OWS-12 then press the CTRL, ALT and DEL keys together. The workstation will be restarted and the DTM displayed.

On an OWS-10 or OWS-11, insert the System Disk in drive A. Then press the CTRL, ALT and DEL keys together. The workstation will be restarted and the DTM displayed.

4 RECOVERY OF AN OWS-12 SYSTEM

This chapter only concerns OWS-12s. It tells you what to do if you cannot use the workstation and none of the steps in Appendix C of the Workstation User Guide help you.

If you can, run the Diagnostics Program described in chapter 3, in order to find out what is wrong with the workstation. If keyboard, monitor and disk drive tests pass, it is likely that the programs have become corrupted.

The two Desk Top Manager System and Applications Disks contain all the files you need.

Note

If you have problems with an OWS-10 or OWS-11, you must ask Norsk Data for replacement floppy disks. You cannot correct faults on the System and Applications Disks.

4.1. Installing the DTM

If you had problems with the DTM (Desk Top Manager) and/or NOTIS-WSWP start by trying to reinstall them. Follow the instructions in the PD sheet: ND-Desk Top Manager for OWS 11/12. Then try using the workstation.

This procedure also copies the parts of MS-Windows used by the OWS workstations.

4.2. Installing MS-DOS

If you had problems in starting the workstation, the start-up tests fail or the steps in section 4.1 don't help, reinstall MS-DOS following the instructions in this section. Then repeat section 4.1.

If you have problems in copying MS-DOS from the floppy disks, there is a more serious fault with the hard disk. Go on to section 4.3.

What you do

Use the two MS-DOS disks from the Supervisor Pack. Insert the DOS diskette #1 in drive A. Then press the CTRL, ALT and DEL keys together.

The workstation is restarted and the installation program displays a menu from which a national language can be entered. This determines the format in which the date and time are displayed and entered.

Enter the prompts and replace DOS diskette #1 with DOS diskette #2 when requested. (This may be labelled DOS Supplemental Programs.)

Amongst the questions you are asked, is the language. Enter the number equivalent to the keyboard nationality. (English keyboards have a £ sign.)

This procedure does not change the configuration files PRESTART.SYS and CONFIG.SYS or the AUTOEXEC.BAT file.

When the installation procedure has completed, repeat the instructions in section 4.1.

4.3. Reformatting the hard disk

If the steps in 4.1 and 4.2 have not restored the workstation, reformat the hard disk. Then reinstall MS-DOS (section 4.2), and the DTM (section 4.1).

1. Insert the DOS diskette #1 into drive A.

2. Type:

```
FORMAT C: ↵
```

3. You are warned that formatting the hard disk will destroy all the information stored on it and asked if you want to proceed.

Enter Y.

4. Formatting takes some time. When it is complete, information about the space on the disk is displayed.

5. You are asked if you want to format another disk. Enter N.

6. The A> prompt is displayed. Now follow the steps in 4.2 and then in 4.1.

5 REINSTALLING MS-WINDOWS

This chapter only concerns OWS-12s. (You cannot change the way MS-Windows is set up on the System Disk used on OWS-10s and OWS-11s.)

You do not need to reinstall MS-Windows if the programs have been corrupted. Following the instructions in section 4.1 reinstalls the parts of MS-Windows used by OWS-12.

Therefore, you only need to follow this chapter if you are changing anything in your configuration that affects MS-Windows. In practice, this means changing to another mouse, because making other changes will probably mean that the DTM cannot function.

Note

Having re-installed MS-Windows e.g. for a new mouse, if you subsequently re-install the Desk Top Manager from floppy disk, you will then revert to the original MS-Windows configuration. You must re-install MS-Windows again.

5.1. What to do

You need the following floppy disks:

- OWS 10/11/12 Windows Set-up Disk
- OWS 10/11/12 Windows Build Disk
- MS-Windows Utilities Disk
- MS-Windows Desktop Applications Disk
- MS-Windows Fonts Disk.

To install MS-Windows:

1. Restart the workstation either by switching on or by pressing the CTRL, ALT and DEL keys together.
2. Load the OWS 10/11/12 Windows Set-up Disk in drive A.
3. Type: *A:Setup* ↵.
4. The installation program is started. Answer the questions displayed.
5. When you are asked for the language, enter the number that is equivalent to your keyboard nationality.
6. When you are asked for the graphics card, select number 6, EGA (with more than 64k).
7. When asked which mouse you use, select the appropriate number from the list. Choose 9 if you have the standard Butterfly keyboard mouse supplied by ND.
8. When requested to insert the Build Disk, use the OWS 10/11/12 Windows Build Disk.
9. Insert the remaining disks when requested.

When you have finished, remove the last disk from drive A and restart the workstation. The DTM should be displayed in the normal way.

Put the disks away in case you need them at a later date.

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