

SYSTEM
OPERATIONS
GUIDE

*Note:
this describes
the UNIX system,
but is ~~in~~ informative
to dead.*

SUBJECT

Operating instructions for the system.

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PREFACE

The purpose of this guide is to give a simple but exhaustive presentation of the system and to familiarize the reader with the necessary operations for its use.

More detailed information on the terminals and printers is given in their relative operating guides.

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SECTION I

INTRODUCTION

The system is a small but powerful computer designed to make your daily work easier and faster.

It consists of:

- o A main unit
- o A variable number of peripherals.

The main unit consists of:

- o A central unit
- o Two optional expansion units

1. The central unit contains:

- o An electronic case containing a maximum of 14 boards
- o A main disk unit
- o Two additional disk units
- o A diskette unit
- o A magnetic tape unit (optional)
- o The control panel

2. The first optional expansion unit contains:

o An electronic case containing a maximum of 13 boards

o Additional disk units

3. The second optional expansion unit contains:

- o Multibus (x)
- o A VME board case

(x Multibus is a trademark of the INTEL Corporation.

The peripheral devices consist of workstations and printers. The workstations are used to communicate with the system by sending and receiving information. The printers transfer the results of computations onto paper.

The following description of the system covers its external appearance and physical structure. Generally, the term "Hardware" is used when referring to this part of the system.

The term "Software", on the other hand, refers to the logical structure of the system; that is, the set of instructions which allow the system to work.

There are two fundamental types of instructions: those of the "operating system" and those of the "applications".

SECTION II

DESCRIPTION OF THE SYSTEM

OPERATOR_PANEL

The operator panel is located in the upper part of the central unit.

The panel allows the user to perform certain operations and check that they have been executed correctly. The table on the following page shows the components of the panel and their functions.

Panel Component**Function****POWER ON**
(button)

Starts or interrupts the system's power-on phase.

RESET
(button)

Reboots the system.

STANDBY
(button)

Starts the process of closing down the system.

(digital display unit)

Indicates the system status.

CHECK HW
(red indicator light)

Indicates the need for a hardware check.

CHECK SW
(red indicator light)

Indicates the need for a software check.

STANDBY
(red indicator light)

Indicates the powering-off of the system with the STANDBY button.

AC PRESENT
(green indicator light)

Indicates that the system is on.

DC ON
(green indicator light)

Indicates that the power supply to the system is functioning correctly.

BATTERY ON
(green indicator light)

Indicates that the emergency battery is in use.

DISK UNIT

The system can accommodate six WREN II type disk units with 96 Mb (unformatted), three of which (are system unit and two additional units) are located in the central unit. The other three (additional units) are located in the second cabinet.

The system disk, containing the operating system, is located in the central unit and is active as soon as the POWER ON button is pressed subsequent to turning on the system.

The additional disks are used to improve system performance and may be installed at a later date.

DISKETTE UNIT

The diskette unit is installed in the upper part of the central unit underneath the control panel. The diskettes are 5 1/4 inch, double-sided/double-density and have a capacity of 1.6 Mb (unformatted).

The unit has a horizontal opening for the insertion of the diskettes and is protected by a small shutter.

Below and to the left of this opening, there is an indicator, and above it to the right, there is a small lever. The indicator lights up when a read or write operation is performed on the diskette. The lever locks the insert/extract mechanism of the disk unit, controlling insertion/removal of the diskette.

TAPE_CARTRIDGE_UNIT

The tape unit used on the system is designed for cartridges.

It is located in the upper part of the unit and has an opening for the insertion of the cartridge, protected by a security lever. Above on the left, there is an indicator that lights up when an operation is executed on the cartridge.

WORKSTATIONS

Each workstation consists of a screen and a keyboard.

The system uses the screen to supply information and to request the entering of data.

The keyboard is used by the operator to enter data and commands. Every character which is entered will be displayed on the screen.

Most characters are the same as those on a normal typewriter. In addition, there are special keys called "function keys", which are used to perform predefined system commands.

For a list of the keyboards available and a description of their functions, consult the corresponding operations guide.

The workstations which can be connected to the system are listed below, together with a brief description of their main characteristics.

WIPZ251

Transmission	Asynchronous
Screen Format	12"
Operating Mode	Character Mode
Screen	Phosphorous green
Lines/Characters	25/80
Keyboard	General Purpose
Interface	RS232/RS422

VIPZ355

Transmission	Asynchronous
Screen Format	12"
Operating Mode	Character Mode
Screen	Phosphorous Green
Lines/Characters	25/80
Keyboard	Multifunction
Interface	RS422

VIPZ863

Transmission	Asynchronous
Screen Format	12"
Operating Mode	Form Mode
Screen	Phosphorous Green
Lines/Characters	25/80
Keyboard	Multifunction
Interface	RS422

TEKTRONIX

Transmission	Asynchronous
Screen Format	13"
Operating Mode	Graphic Mode
Screen	16 Colors Phosphorous
Lines/Characters	25/80
Keyboard	General Purpose
Interface	RS232

VIU0010

Transmission	Asynchronous
Screen Format	12"
Operating Mode	Character Mode
Screen	Phosphorous Green
Lines/Characters	24/80
Keyboard	General Purpose
Interface	RS232/RS422

VIU0040

Transmission	Asynchronous
Screen Format	15"
Operating Mode	Character Mode/Form Mode
Screen	Phosphorous Green
Lines/Characters	24/80
Keyboard	Multifunction
Interface	RS232/RS422

PRINTERS

Printers are the machines used to produce the computed results on paper.

The specifications and functions of the printers that can be used with the system are supplied in the corresponding operation guides.

The printers which can be connected to the system are: L 12/32 CQ I, L 38, 34 CQ, 36 CQ and 4/66, for which the main specifications are listed below.

L-12732-CQ-I

Interface	Centronics 8 bit parallel.
Printing method	Bidirectional with logic seeking for single sheet and fanfold paper.
Printing type	Serial dot matrix.
Printing speed	150 characters per second for non-quality printing. 42.5 characters per second for quality printing.
Number of columns	10 characters per inch:
L 12 CQ I	80
L 32 CQ I	132
Character sets	10 character sets are available.

Interface	Centronics 8 bit parallel.
Printing method	Bidirectional with logic seeking.
Printing type	Serial dot matrix.
Printing speed	400 characters per second.
Number of columns	132 at 10 characters per inch. 220 at 16.7 characters per inch.
Character sets	8 character sets are available.

Interface

Centronics 8 bit parallel.
Serial RS232/C for local and
remote connection.
Serial RS422/A for local
connection only.

Printing method

Bidirectional with logic
seeking for single sheet and
fanfold paper.

Printing type

Serial dot matrix.

Printing speed

220/240 characters per
second for non-quality
printing. 120 characters
per second for quality
printing.

Number of columns

132 at 10 characters per
inch.
158 at 12 characters per
inch.
175 at 13.3 characters per
inch.
198 at 15 characters per
inch.
220 at 16.7 characters per
inch.
226 at 17.1 characters per
inch.

Character sets

11 character sets are

Interface	Centronics 8 bit parallel. Serial RS232/C for local and remote connection. Serial RS422/A for local connection only.
Printing method	Bidirectional with logic seeking for single sheet and fanfold paper.
Printing type	Serial dot matrix.
Printing speed	200/300 characters per second for non-quality printing. 120 characters per second for quality printing.
Number of columns	132 at 10 characters per inch. 158 at 12 characters per inch. 176 at 13.3 characters per inch. 198 at 15 characters per inch. 220 at 16.7 characters per inch 226 at 17.1 characters per inch.
Character sets	9 character sets are

Indicate the name of the
person to whom the
document is to be
delivered.

Indicate the name of the
person to whom the
document is to be
delivered.

Indicate the name of the
person to whom the
document is to be
delivered.

Indicate the name of the
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person to whom the
document is to be
delivered.

Indicate the name of the
person to whom the
document is to be
delivered.

Interface	Centronics 8 bit parallel. Serial RS232 for local and remote connection. Serial RS422 for local connection only.
Printing method	Bidirectional with logic seeking for single sheet and fanfold paper.
Printing type	Serial dot matrix. Dot graphics in 7 possible colours.
Printing speed	360/480 characters per second for non-quality printing. 180 characters per second for quality printing.
Number of columns	136 at 10 characters per inch. 163 at 12 characters per inch. 240 at 15 characters per inch. 227 at 16.7 characters per inch. 233 at 17.1 characters per inch.
Character sets	8 character sets are

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SECTION III

PRINCIPAL DAILY OPERATIONS

POWERING THE SYSTEM ON AND OFF

Follow the instructions below to turn on the system:

- set the main switch at the back of the system to "I";
- press the POWER ON button on the control panel. This starts the power-on phase.

Perform the instruction in reverse to turn off the system:

- press the POWER ON button on the control panel;
- set the main switch to "O".

Having powered on the system, press the POWER ON button on the control panel to begin the initialization phase.

For the instructions on powering the peripherals on and off, refer to the appropriate operating manuals.

LOADING AND UNLOADING DISKETTES

To load the diskette:

1. Make sure the safety lever is positioned to the right.
2. Open the shutter door by pushing it upwards.
3. Take the diskette out of its envelope and hold it by the label.
4. Make sure the write protection slot is covered, if the diskette is only to be used for reading, and uncovered if it is to be used for writing.
5. Insert the diskette in the horizontal opening of the unit with the write protection slot facing left. Push it in as far as possible.
6. Close the shutter door and push the safety lever to the left to lock the door.

To unload the diskette:

1. Push the lever to the right to unlock the door.
2. Open the shutter door and extract the diskette.
3. Place the diskette in its envelope and put it in its box.

LOADING_AND_UNLOADING_TAPE_CARTRIDGES

To load the cartridge:

1. Make sure the safety lever of the tape unit is in the lower position.
2. Pull the loading guide out of the unit until it locks.
3. Take the cartridge out of its box.
4. Make sure the write protection arrow is pointing towards SAFE if you need only to read the cartridge, or in the opposite direction if you want to write on the cartridge.
5. Put the cartridge in the loading guide so that the metal side is facing downwards and the visible part of the tape is facing to the left.
6. Push the cartridge and the guide into the unit and turn the locking lever upwards.

To unload the cartridge:

1. Turn the locking lever downwards.
2. Hold the right corner of the cartridge and pull it out of the unit.
3. Place the cartridge in its box.
4. Push the loading guide back into the unit.

PROTECTION OF THE STORED DATA

All data stored on diskettes and tape cartridges can be protected by using the appropriate device on each of them to prevent accidental writing.

Protection_of_data_on_Diskettes

To avoid accidentally writing to a diskette, cover the write protection slot, located on one edge of the diskette, with a sticky label. Removing this label will make it possible to write to the diskette once more.

Protection_of_data_on_Tape_Cartridges

To avoid accidentally writing to a tape cartridge, turn the plastic arrow on the top left hand corner towards SAFE. Turning the arrow in the opposite direction, makes it possible to write to the tape cartridge once more.

MAIN OPERATIONS GUIDE

To begin a normal day's work, the following operations must be performed:

1. Power on the console workstation. The other peripherals need not necessarily be powered on yet.
2. Power the system on. Make sure that the initialization, which begins automatically, is performed as described in the appropriate section.
3. When initialization is finished, every user must identify himself before he will be able to begin normal activities.

To end a day's work, the following operations must be performed:

1. Make any necessary back-up copies.
2. Shut the system down using the procedure described in the appropriate section.
3. Power all workstations and printers off.
4. Power the system off.

Normal daily operations are:

- o Initialization
- o LOGIN
- o LOGOUT
- o Shut-down of activities.

The following are periodic operations:

- o Formatting disks and diskettes
- o Making back-up copies of the disk onto tape, diskette or disk
- o Restoring the disk from tape, diskette or disk
- o Stripping the operating system onto diskette
- o Restoring the operating system from diskette
- o Copying an IBM diskette

In the following sections, these operations are described for each operating system. Note that the operations are described for a user who is not necessarily the system administrator.

SECTION IV
SYSTEM SOFTWARE OVERVIEW

OPERATING SYSTEM

The operating system is a complex set of instructions that controls the workings of the system and the execution of programs.

These instructions, which usually reside on the system disk, must be written to the main memory every time the system is used, and must remain there until the system is powered off. The operation which writes the instructions to the main memory is called "Initialization".

The following manuals may be referred to for instructions on their use:

ADMINISTRATOR'S GUIDE

OPERATOR GUIDE

USER REFERENCE MANUAL

ADMINISTRATOR REFERENCE MANUAL

PROGRAMMER REFERENCE MANUAL

ERROR MESSAGE REFERENCE MANUAL

DOCUMENTATION DIRECTORY

USER GUIDE

PROGRAMMING GUIDE

GRAPHICS GUIDE

SUPPORT TOOLS GUIDE

SYNOPSIS FOR UNIX SYSTEM V R2.0 R2.0V4 AND R2.0V2

SYSTEM DESCRIPTION

EDITING GUIDE

VPM REFERENCE GUIDE

VISUAL EDITOR QUICK REFERENCE

APPLICATIONS

To carry out every day activities, such as word processing, accounting, and sales projections, it is necessary to have specific suites of programs which deal with particular applications. These suites of programs are therefore called "application packages", or simply "applications". They are not part of the operating system.

However, like the operating system, the programs which form an application package must be loaded into the main memory before the application can be performed.

SYSTEM..IESI

The system test is a set of programs which perform a detailed analysis of the working of the hardware components. Consult the "System Testing Guide" for the instructions.

NOTE: The following files are necessary for the correct execution of every procedure and therefore must never be deleted.

/usr/diag/diag_c

/usr/diag/diag/_empty

/usr/diag/diag_env

/usr/diag/diag_f

/usr/diag/diag_tmp

SECTION V
SYSTEM SOFTWARE

INITIALIZATION

Description

To initialize the system means to transfer the operating system from the system disk to the main memory. This allows the user to use both his own applications and the functions offered by the system.

Initialization from disk

Check that there are no diskettes in the diskette unit.

If the system is off, turn on the console and the system itself: the AC PRESENT indicator lights up. Press POWER ON on the Control Panel.

If the system is already on, check that the console is on and press RESET on the Control Panel.

The system will display some messages. Reply only to those messages which are listed below, ignoring the others.

Messages

Replies

1. Is the date correct? (y or n)

Enter y if the date is correct or n if you wish to change the date.

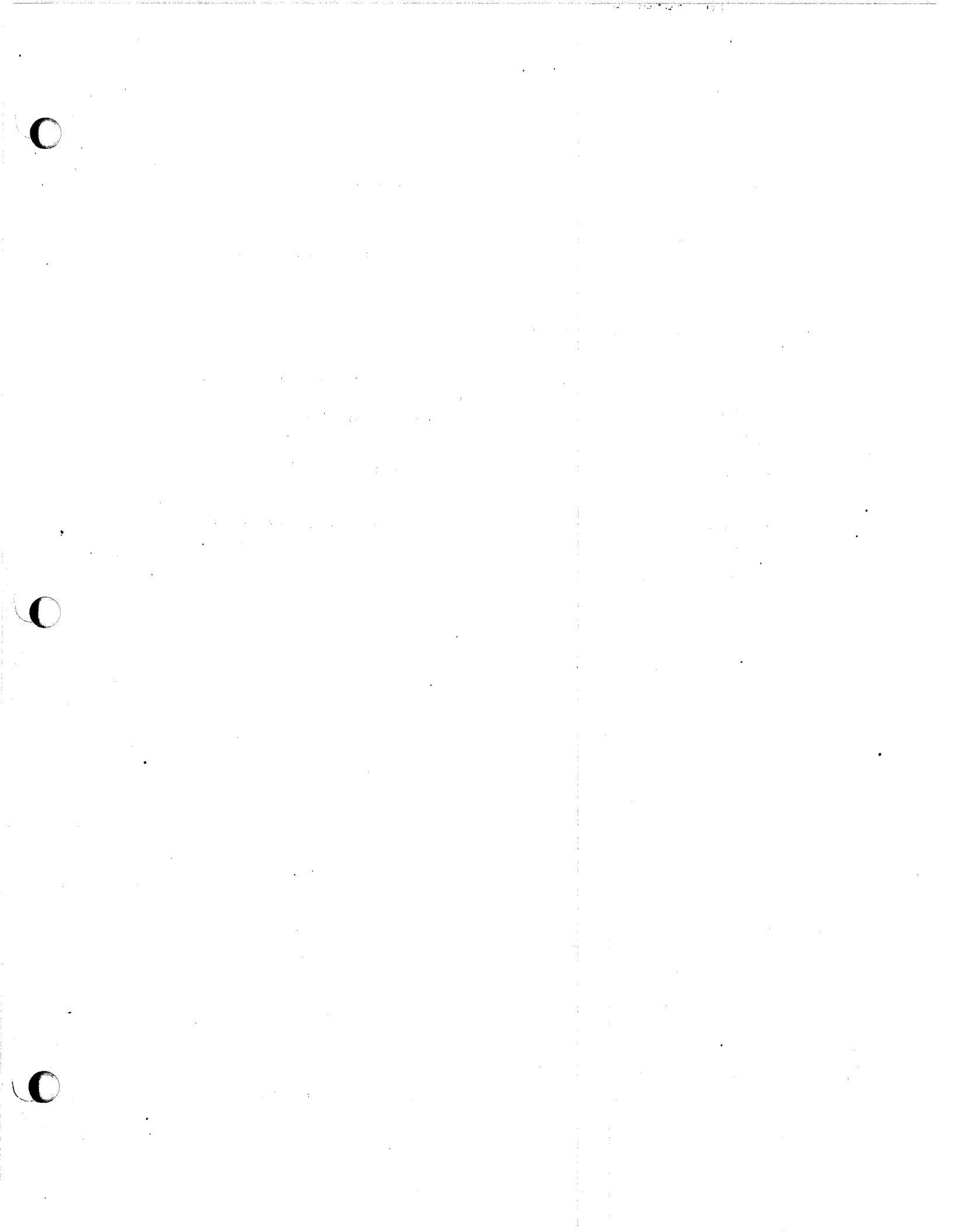
Press RETURN and go to step 3 if the reply is y, otherwise continue with the next step.

2. Enter the correct date

Enter the date in the form MMDDhhmm:

MM is the month
DD is the day
hh is the hour
mm is the minute

Press RETURN.



3. Do you want to check the file system? (y or n)

Enter y
Press RETURN

4. console login:

Refer to the appropriate
paragraph below.

Initialization from diskette

1. Mount the initializing diskette DKT 'BOOT1' that has been supplied with the system and initialize the system by pressing the RESET button on the operator panel.
2. Do not enter any more commands until the "H" message appears.

At the end of this operation the initialization is executed.

LOGIN

Description

Using this function the user identifies himself to the system in order to access it.

Use

MESSAGES

login:

password:

Replies

Reply with your identifier which has been defined by the system administrator.

Press RETURN

Reply with the password defined by the system administrator.

Press RETURN.

NOTE: The system is supplied with a user identifier, "root".

SHUTTING THE SYSTEM DOWN.

Description

To shut the system down means to end all current activities. It is the only way to inform the system that the work has finished. Once this phase is completed, the user can only reinitialize the system.

Performing_sshutdown_from_disk

The "shutdown" command shuts down the system correctly. To use this command, the console workstation must be in the root directory and the system must be in "multi-user" mode. Once you have verified these conditions, enter the following commands:

```
# cd /                               Press RETURN.  
                                     (positions the  
                                     workstation in the root  
                                     directory)
```

```
# shutdown 0                          press RETURN.
```

If the shutdown command is entered when the console workstation was not positioned in the root directory, the following message appears:

```
shutdown: you must be in the root directory  
          (/) to use shutdown
```

Messages

Replies

1. SHUTDOWN PROGRAM do you want to send your own message?
(y or n)

Indicates the beginning of the shutdown procedure. By replying y, a message is sent to all active terminals. What happens if you reply n, is explained in the note below.

2. Type your message followed by
<ctrl>d...

The system asks you to enter the message and at the end press ctrl and d simultaneously.

3. SYSTEM BEING BROUGHT DOWN NOW!!!

Busy out (push down)
the appropriate phone
lines for this system.

The shutdown procedure
continues with the
following messages.

You want to continue?
(y or n)

By replying n, the
procedure is interrupted.

By replying y, the
procedure issues the
following messages:

Process accounting stopped.

Error logging stopped.

All currently running processes will now be killed

**** SYSCON CHANGED TO /dev/console ****

Wait for init: SINGLE USER MODE before halting

At this point, the procedure is complete. Before
powering the system off, it is recommended to wait for
the initialization in "single-user" mode message to
appear.

#

sync ;sync ; sync

NOTE: By replying "n" in step 1, the user declines to
send a message to the other terminal users. The
system, however, sends the following messages to
each of the terminals.

Broadcast Message from root (console) Date

PLEASE LOG OFF NOW !!

System Maintenance about to begin.

All processes will be killed in 60 seconds

All users are therefore informed of the imminent
shutdown of the system.

Performing.....shutdown.....from.....diskette

To correctly shut down the system which was initialized from a diskette, enter the following commands:

sync;sync;sync Press RETURN

a- FORMAT

Enter a and press RETURN

The following menu appears:

FORMAT

a- FLOPPY

b- WREN 2

s- QUIT

Type Disk Selected->

a- Formatting a Diskette

To format a diskette, remove the write-protect tab and place the diskette in the drive.

Enter a and press RETURN

1. Floppy Number [1-2]->

Enter the number corresponding to the drive in which the diskette has been placed (1 for the basic drive, 2 for the additional drive) and press RETURN.

Boot device (y[es], or n[o])?

If the diskette to be formatted can be a bootstrap diskette, answer y, otherwise answer n.

*** DRIVE X WILL BE OVERWRITTEN DURING FORMATTING
PROCEED? (y[es], or n[o])

where X corresponds to the physical drive. If you wish to format the diskette, enter y.

cylinder = XX track = X
cylinder = XX track = X
...
...

DONE

Hit <return> to continue

Press RETURN.

The main menu reappears. The diskette formatting procedure is completed.

b- Formatting a Disk

This procedure must be used each time you wish to format a disc. You should bear in mind the information provided by the manufacturer regarding the location of bad sectors.

This information can be found on the label applied to the disk.

Enter b and press RETURN.

1. Disk Number [0-2]-> Enter the number corresponding to the disk (0,1,2). A table of the disk partitions

and the relative cylinders is displayed.

2. Total Number of Cylinders: 924

Slice 0	Start Cylinder	0	Number of Cylinders	200
Slice 1	Start Cylinder	200	Number of Cylinders	723
Slice 2	Start Cylinder	0	Number of Cylinders	0
Slice 3	Start Cylinder	0	Number of Cylinders	0
Slice 4	Start Cylinder	0	Number of Cylinders	0
Slice 5	Start Cylinder	0	Number of Cylinders	0
Slice 6	Start Cylinder	0	Number of Cylinders	0
Slice 7	Start Cylinder	0	Number of Cylinders	923

Slice OK (y or n)?

If you wish to alter the number of cylinders relative to a partition, answer n, otherwise answer y and skip to point 4.

Press RETURN

3. Slice 0 Start Cylinder: 0

Enter the new value and press RETURN, otherwise simply press RETURN. If the value has not been altered, the (no change) message appears.

Number of Cylinders:200

Enter the new value and press RETURN, otherwise simply press RETURN.

Carry on until you reach the final partition (SLICE 7). At the end, the table of partitions with the relative cylinders appears, containing the alterations made, followed by the question:

Slice Ok (y or n) ?

If you still wish to alter partitions, answer y, otherwise answer n and go back to point 3.

4. Boot device (y[es], or n[o])

If the disk to be formatted can also be a bootstrap disk, answer y, otherwise answer n.

Is there a bad sectors map on disk? (y[es], or n[o])

If the disk is to be formatted for the first time, the bad sectors map must still be created with the values listed on the disk label. Answer n, press RETURN and skip to point 6. If this is not the case, the map will already have been created; answer y and press RETURN.

5. Do you want to recover the bad sector map? (y[es], or n[o])

In order to redisplay the existing bad sector map (or one which has just been created), answer y and press RETURN.

Bad sectors:

cyl=XXX, trk=8, sec=7

...
...

6. Do you want to insert a bad sectors list? (y [es], or n[co])

To create or update the map of bad sectors, answer y and press RETURN. If the map is to be created, the values to enter can be found on the bad sector label on the disk.

cylinder:0/

Input the corresponding value and press RETURN.

track: 0/

Input the corresponding value and press RETURN.

b.c.a.i.:0/

Input the corresponding value and press RETURN.

Continue until the bad sectors are completed, then enter q.

7. Do you want to verify/correct the bad sector List? (y[es], or n[co])

To check the bad sectors list, enter y. Otherwise, answer n and skip to point 8. Press RETURN

The list reappears with the cylinder, track and b.c.a.i. values specified, followed by the same question.

NOTE: The b.c.a.i. displayed is not the same as the one entered. In fact, the b.c.a.i. entered is the bad byte, while the one which is displayed is actually the first byte of the bad sector. The value input must be between the value displayed and the value displayed increased by 573.

Do you want to verify/correct the bad sector List? (y[es], or n [co])

Answer n and press RETURN.



8. *** DRIVE X WILL BE OVER-WRITTEN DURING FORMATTING
PROCEED? (y[es], or n[o])

(where x is the number
corresponding to the
disk).

If you answer n, the
formatting procedure will
not commence. Skip to
point 10.

If you answer y, the main
formatting procedure will
commence. At the end,
the list of alternative
sectors and bad sectors
is displayed.

9. ALTERNATIVE

BAD

***DONE**

Hit <return> to continue

Press RETURN and skip to
point 11.

10. **CANCELLED**

** DONE **

Hit <return> to continue

The operation is aborted
and any alterations made
to the bad sector list
are not saved. Press
RETURN.

11.

a- FORMAT
b- READ VTOC
c- WRITE VTOC

q- QUIT Option Selected

b- READ VTOC

Enter b and press RETURN.

The following message appears:

READ VTOC

- a- FLOPPY
- b- WREN 2
- q- QUIT

Type Disk Selected->

a- Floppy

To display the VTOC of a diskette, place the diskette in the drive, enter a and press RETURN.

1. Floppy Number [1-2] ->

Enter the number corresponding to the drive in which the diskette was placed and press RETURN.

2. Description for unit X

magic number=fb...cf
number of cylinders = ..
removable surfaces = .
sectors per track = .
bytes per sector = ...
special flag = .
motor on delay = ..
stepping rate = ..
head settling time = ..
head load time = ..
interleave factor = .
command options = ..
seek type = .
low write current cylinder = ..
precompensation cylinder = ..

Slices (start cylinder/number of cylinders=blocks):

0/80=1440,

** DONE **

Hit <return> to continue

Press RETURN. The main menu reappears.

b- Wren..2

To display the VTOC of a disk, enter b and press RETURN.

1. Disk Number [0-2] ->

Enter the number corresponding to the disk and press RETURN.

2. Description for unit X

magic number=xxxxfxxx

number of cylinders =xxx

fixed surfaces = x

sectors per track = x

bytes per sector = xxx

alternative cylinders = x

interleave factor = x

command options = xx

seek type = x

low write current cylinder = x

precompensation cylinder = x

Slices (start cylinder/number of cylinders=blocks):

./...=..... ./...=.....

** DONE **

Hit <return> to continue

Press RETURN. The main menu reappears.

c- WRITE VTOC

Enter c and press RETURN.

The following message appears:

WRITE VTOC

- a- FLOPPY
 - b- WREN 2

 - q- QUIT
- Type Disk Selected ->

a- FLOPPY

To alter the VTOC of a diskette, place the diskette in the drive. Enter a and press RETURN.

1. Floppy Number [1-2] ->

Enter the number corresponding to the drive in which the diskette was placed and press RETURN.

2. Description for unit X

basic number=fb020cf
number of cylinders = ..
removable surfaces = .
sectors per track = .
bytes per sector = ...
special flag = .
motor on delay = ..
stepping rate = ..
head settling time = ..
head load time = ..
interleave factor = .
command options = ..
seek type = .
low write current cylinder = ..
precompensation cylinder = ..

Slices (start cylinder/number of cylinders=blocks):
0/80=1440,

Floppy Number [1-2] ->

Enter the number corresponding to the drive in which the diskette was placed and press RETURN.

Boot device (y[es], or n[o])?

If the diskette to be formatted can also be a bootstrap diskette, answer y, otherwise answer n.

Ready? (y[es], or n[o], or c[hange])

To change the values, enter c and press RETURN.

At the end, the modified VTOC of the diskette is displayed.

Ready? (y[es], or n[o], or c[hange])

If all the parameters are correct, enter y and press RETURN. Enter n to cancel all previous alterations.

**** DONE ****

Hit <return> to continue

Press RETURN. The main menu reappears.

b- Wren_2

To alter the VTOC of a disk, enter b and press RETURN.

1. Disk Number [0-2] ->

Enter the number corresponding to the disk and press RETURN.

2. Total Number of Cylinders: 924

Slice 0	Start Cylinder 0	Number of Cylinders 200
Slice 1	Start Cylinder 200	Number of Cylinders 723
Slice 2	Start Cylinder 0	Number of Cylinders 0
Slice 3	Start Cylinder 0	Number of Cylinders 0
Slice 4	Start Cylinder 0	Number of Cylinders 0
Slice 5	Start Cylinder 0	Number of Cylinders 0
Slice 6	Start Cylinder 0	Number of Cylinders 0
Slice 7	Start Cylinder 0	Number of Cylinders 923

Slice 0k (y or n) ?

If you wish to alter the number of cylinders relative to a partition, answer n, otherwise answer y and skip to point 4.

Press RETURN

3. Slice 0 Start Cylinder: 0

Enter the new value and press RETURN, otherwise simply press RETURN. If the value has not been altered, the (no change) message appears.

Number of Cylinders:200

Enter the new value and press RETURN, otherwise simply press RETURN.

Carry on until you reach the final partition (SLICE 7). At the end, the table of partitions with the relative cylinders appears, containing the alterations made, followed by the question:

Slice Ok (y or n) ?

If you still wish to alter partitions, answer y, otherwise answer n and so back to point 3.

4. Boot device (y[es], or n[o])

If the disk to be formatted can be an initializing disk, answer y, otherwise answer n.

Description for unit X

magic number=...f...b

number of cylinders = ..

fixed surfaces = .

sectors per track = .

bytes per sector = ...

alternative cylinders = .

interleave factor = .

command options = ..

seek type = .

low write current cylinder = .

precompensation cylinder = .

Slices (start cylinder/number of cylinders=blocks):

./...=....., .../...=.....

Ready? (y[es], or n[o], or c[hange])

Enter c if you still wish to alter the VTOC. Return to step 2.

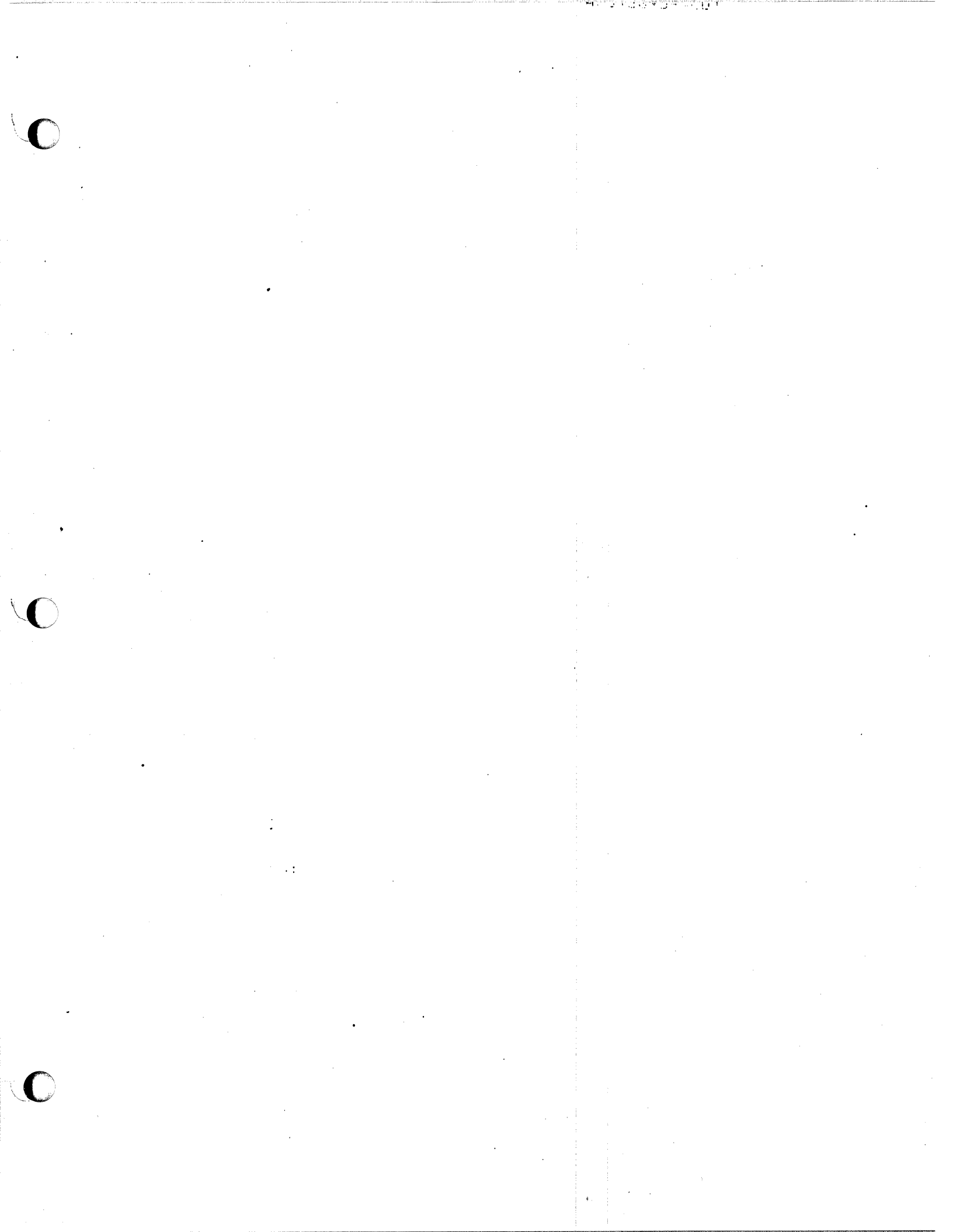
Enter n if you wish to cancel alteration to the VTOC.

Enter y to save alterations to the VTOC.

** DONE **

Hit (return) to continue

Press RETURN. The main menu reappears.



9- QUII

To exit from procedure, enter 9 and press RETURN.

The prompt (H) reappears.

SAVE_EROM_DISK_IO_DISKETTE

Description

This operation is used to copy one or more partitions from a disk to a set of diskettes.

Use the option `-s` when running the procedure (save `-s`) in order to know the number of diskettes needed to save one partition or the whole disk. In this way, saving each partition is given the number of diskette required for the save is given.

It is advisable to run this operation at the end of the installation phase, before starting any other task.

This operation may be repeated periodically, whenever the contents of the operating disk is changed, or at the end of the day. The save copy may also be executed weekly or monthly. For any decision ask the System Administrator.

It is recommended to execute the save operations using alternately two sets of diskettes, in order to have a recent version of any updated data.

Use

NOTE: In this paragraph, X indicates the number corresponding to the disk to be saved; N indicates the number of the diskettes requested to save specific partition

1. Initialize the system from disk (see "Initialization")

2. Enter the following command:

```
# save -s          press RETURN
```

When the following messages are displayed:

```
Save V 0.0: Honeywell Information System Italia 1986
```

```
which disk do you want to save (0-5)? <
```

enter the number (X) corresponding to the disk to be saved and press RETURN

3. The following messages are displayed:

Slice name = /dev/dskX0
Do you want to save partition /dev/dskX0 (y/n)?

If you want to save
partition 0 reply y and
press RETURN. Otherwise
reply n and press RETURN.

N Diskette Needed for /dev/dskX0

4. Slice name = /dev/dskX1
Do you want to save partition /dev/dskX1 (y/n)?

Reply y if you want to
save partition 1.

Continue from step 3
until the last
partition. At the end
the following message are
displayed.:

END

The total number of diskettes required perform either
a partial or total save of the disk, is obtained by
summing the numbers of diskettes required for each
partition.

Format the required number of diskettes (see
"Formatting").

6. Enter the following command:

save press RETURN

When the following
messages are displayed:

Save 00.00 Honeywell Information System Italia 1986

which disk do you want to save (0-5)> <

Enter the number (X)
corresponding to the disk
to be saved.

7. The following message are displayed:

Slice name=/dev/dskX0
Do you want to save partition /dev/dskX0 (y/n)?

If you want to save
partition 0 reply y.
Otherwise reply n and so
to step 3.

Saving /dev/dskX0: N formatted Diskettes needed
Insert a formatted diskette, done (y,n)?

Insert a formatted
diskette. Reply y and
press RETURN.

Insert a formatted diskette, done (y/n):

Replace the diskette
which has just been
written with a new one.

Reply y and press RETURN.

Continue until the whole partition 0 has been saved.
When this procedure is completed, a message is displayed
requesting the user to specify whether the next partition
is to be saved:

Slice name= /dev/dskX1
Do you want to save partition /dev/dskX1 (y/n)

8. Perform step 7 for every partition of the disk.

9. At the end the following message is displayed:

- End of save.

NOTE: If, during the execution of the procedure, the
diskette which has just been written is not
replaced, the following message is displayed:

Bad diskette! Please change diskette, done (y/n)

Replace the diskette with
a new one. Reply y and
press RETURN.

Continue the procedure as above.

RESTORING_A_DISK_FROM_DISKETTE

Description

This operation is used to copy ON DISK the content of the one or more partitions of a disk previously saved on a set of diskettes.

The diskettes must be inserted in the same order in which they have previously been inserted in the saving procedure.

Use

NOTE: In this paragraph, X indicates the number corresponding to the disk to be saved; P indicates the number of the partition of the disk that must be restored.

1. Initialize the system from diskettes (see "Initialization" paragraph)

2. Format the disk (see "Format" paragraph)

3. Enter the command:

```
# restore          press RETURN
```

4. The following messages are displayed:

```
Remove the bootstrap diskette and insert  
backup diskette,done? (y/n):
```

```
Remove the bootstrap  
diskette DKT'BOOT1' from  
the drive. Insert the  
first diskette obtained  
from the save procedure.
```

```
Enter y and press RETURN.
```

```
The number (X)  
corresponding to the disk  
that must be restored is  
displayed followed by the  
number (P) of the  
partition of the disk  
that must be restored.
```

Restoring disk /dev/dskX

Restoring slice /dev/diskXP

Insert next backup diskette,done? (y/n,0=end)

Replace the diskette with the next one obtained from the save procedure.

Enter y and press RETURN.

Go on until the diskettes are finished.

If several partitions have been saved on the inserted diskettes, at the beginning of the restore procedure of each partition, the messages indicating the disk and the selected partition is displayed:

Restoring disk /dev/dskX

Restoring slice /dev/diskXP

5. When the last diskette has been completely read, the following messages are displayed:

Insert next backup diskette,done? (y/n,0=end):

Enter 0 and press RETURN.

Insert bootstrap diskette,done? (y/n):

Remove the last diskette saved with the save procedure from the diskette unit.

Insert the DKT 'BOOT1' bootstrap diskette.

Enter y and press RETURN.

6. When the following message is displayed:

End of Restore

the restore procedure of one or more disk partitions has ended.

PROCEDURE FOR PERSONALIZATION OF THE PORTS (termconf)

Description

This procedure is used to enable or disable the ports. Note that when enabling ports, it is also possible to define the type of workstation connected to that port.

The system is delivered with the following characteristics:

- o The only port enabled is port 3 (the console workstation)
- o The other ports are disabled
- o All the workstations are of the VIP72xx type.

Use

NOTE: In this section N indicates the number of the "station processor" board to which the terminal is connected; n indicates the number of tty linked to the terminal.

Messages

#

Replies

cd /etc and press RETURN
termconf and press RETURN

The following message will be displayed at the workstation:

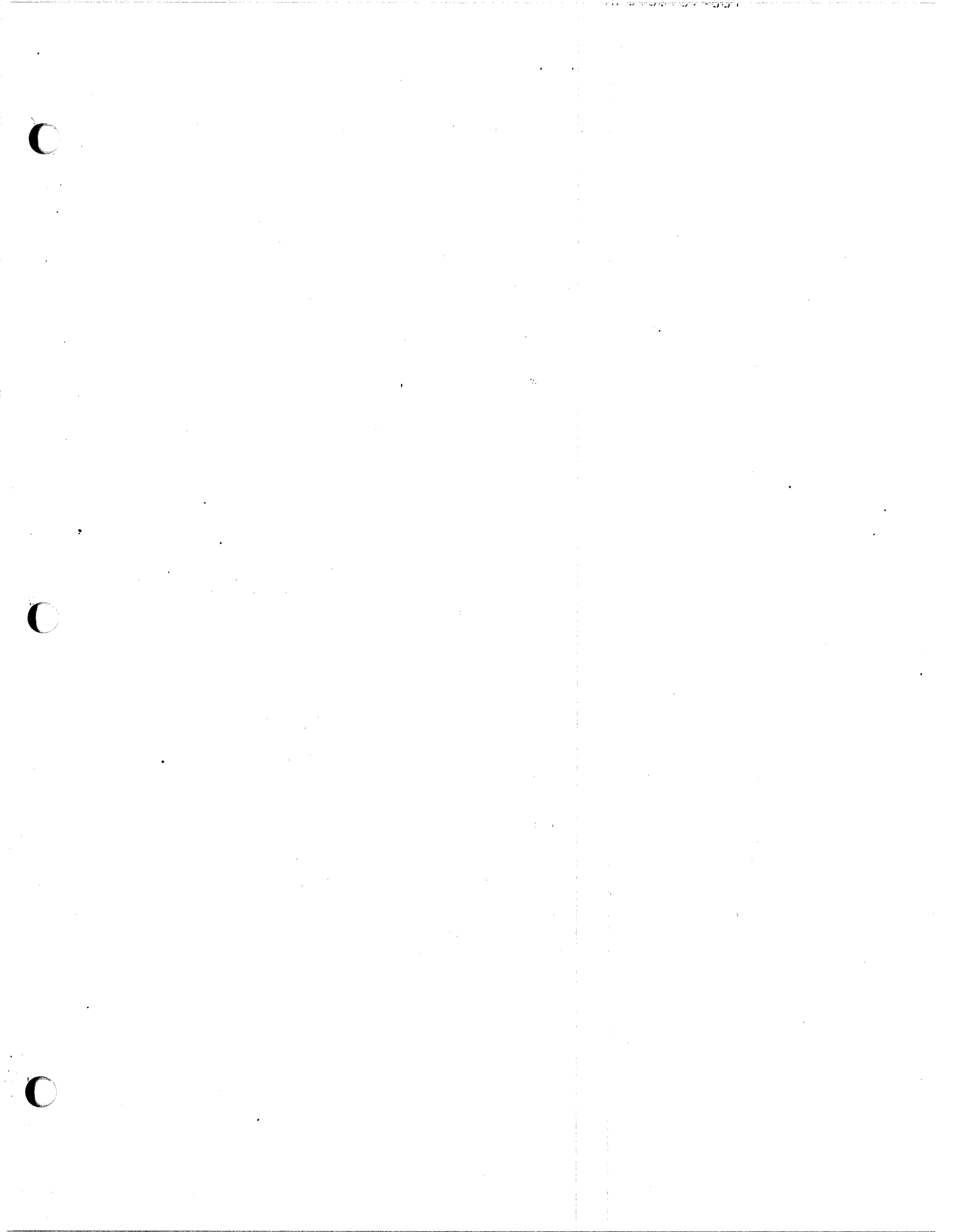
Terminal Configurator

COMMANDS

- 0- Exit program
- 1- Disable a terminal
- 2- Enable a station processor terminal
- 3- Enable a line processor terminal
- 4- Change characteristics of a terminal

Enter your choice) <

Enter 0 to exit from the procedure.
Enter 1 to disable a terminal.
Enter 2 to enable a terminal.
Enter 3 to enable a line for connection to a network.
Enter 4 to change the characteristics of a terminal (speed, character size, type).



1- Disable a terminal

To disable a terminal, enter 1 and press RETURN.

1. Disable which terminal? Enter the identifier (ttyNn) of the port to be disabled. (See the table "Port number to Device Name Lines Correspondence"). Press RETURN.

ttyNn is ON.
It will be turned OFF

where n is the number of
the tty specified.

The main selection menu will be redisplayed.

NOTE: It is not possible to disable the console. If you enter "console" in response to the question in point 1, the following message is displayed:

you can't disable console

If you want to change type of the console run changing phase.

2- Enable a station processor terminal

To enable a terminal, enter 2 and press RETURN.

1. Enable a terminal mounted on a station processor board:

Enter the name of the terminal that you want to enable terminal) <

Enter the identifier (ttyNn) of the port to be enabled. (See the table "Port number to Device Name Lines Correspondence"). Press RETURN.

2. These are the possible terminal types:

- a- VIP72xx
- b- VIP73xx
- c- VIP78xx
- d- TEKTRONIX
- e- VTU0010
- f- VTU0020
- g- VTU0040

choose one (default is type 'a'= VIP72xx)?) <

Enter the letter corresponding to the type of terminal you wish to enable and press RETURN.

If the terminal type is VIP72xx, simply press RETURN.

3. Now enter the terminal baud rate (default is 9600) <

Enter the baud rate you require (permissible values are 300, 1200, 2400, 4800, 9600, 19200, 38400) and press RETURN. If the baud rate you require is 9600, simply press RETURN.

4. Enter character size (default 7) > <

Enter the character size required (permissible values 7 or 8) and press RETURN . If the character size required is 7 simply press RETURN.

If the enabling operation is being performed for the first time, the following messages are displayed:

ttyX is not present wait for creation

Terminal N0
Terminal N1
Terminal N2
Terminal N3
Terminal N4
Terminal N5
Terminal N6
Terminal N7

ttyNX is OFF. It will be turned ON

Otherwise, only the following message is displayed:

ttyNX is OFF. It will be turned ON

At the end of the operation the initial selection menu will be redisplayed.

NOTE: The values entered for "baud rate" and "character size" must be the same as those entered in the "SET UP" of the terminal in question.

4- Change characteristics of a terminal.

To change the characteristics of a terminal (type, baud rate, character size), enter 4 and press RETURN.

1. Enter terminal you want to change characteristic terminal:

Enter the identifier (ttyNn) of the terminal to be changed. (See the table "Port number to Device Name Lines Correspondence"). Press RETURN.

you can change:

Type
Speed
Character size
All of these

Type only the first capital letter or <RET> for default

Which characteristic do you want to change (default is type)) <

Enter the first capital letter of the 4 possible options:

T to change the terminal type.
Go to point 2.

S to change the baud rate.
Go to point 3.

C to change the character size.
Go to point 4.

A to change all three characteristics.
Go to point 5.

2. These are the possible terminal types:

- a- VIP72xx
- b- VIP73xx
- c- VIP78xx
- d- TEKTRONIX
- e- VTU0010
- f- VTU0020
- g- VTU0040

Chose one (default is type 'a'= VIP72xx)? <

Enter the letter that corresponds to the type of terminal required and press RETURN. If the terminal type is VIP72xx, simply press RETURN .

The initial selection menu is redisplayed.

3. Now enter the terminal baud rate (default is 9600):

Enter the new baud rate (permissible values: 300, 1200, 2400, 4800, 9600, 19200, 38400) e press RETURN. If the baud rate required is 9600, simply press RETURN.

The initial selection menu is redisplayed.

4. Enter character size (default 7):

Enter the new character size (permissible values 7 or 8) and press RETURN. If the character size required is 7 simply press RETURN.

The initial selection menu is redisplayed.

5. These are the possible terminal types:

- a- VIP72xx
- b- VIP73xx
- c- VIP78xx
- d- TEKTRONIX
- e- VTU0010
- f- VTU0020
- g- VTU0040

chose one (default is type 'a'= VIP72xx)?) <

Enter the letter that corresponds to the type of terminal required and press RETURN. If the terminal required is a VIP72xx, simply press RETURN.

Now enter the terminal baud rate (default is 9600):

Enter the new baud rate (permissible values: 300, 1200, 2400, 4800, 9600, 19200, 38400) and press RETURN. If the baud rate required is 9600, simply press RETURN.

Enter character size (default 7):

Enter the new character size (permissible values 7 or 8) and press RETURN. If the character size required is 7, simply press RETURN.

NOTES:

- o The values entered for "baud rate" and "character size" must be the same as those entered in the "SET UP" of the terminal in question.
- o Only the "type" characteristic of the console can be changed. If "console" is entered in response to the question in point 1, the following message is displayed

For console you can only change type

These are the possible terminal types:

- a- VIP72xx
- b- VIP73xx
- c- VIP78xx
- d- TEKTRONIX
- e- VTU0010
- f- VTU0020
- g- VTU0040

Chose one (default is type 'a'= VIP72xx)?) <

0- Exit

To exit from the termconf procedure, enter 0 and press RETURN. The prompt (H) is redisplayed.

ORGANIZATION OF DISKS AND DISKETTES AND THE MEANING OF THE NAMES

The operating system handles:

- o WREN II
- o Diskettes.

Correspondence Between Names and Devices

The names of the special files corresponding to disks have the following structure:

dskXP

where:

X indicates the physical number of the unit and may have values between 0 and 5.

P indicates the logical partition and may have values between 0 and 7.

The system disk is delivered with the following structure:

Partition	Contents
0	root
1	usr
7	entire disk
	5.34

A78138959-001

PORT..NUMBER\LINE..DEVICE..NAME..CORRESPONDENCE

Station Processor Number	Port	Device
0	0	tty00
0	1	tty01
0	2	tty02
0	3	tty03
0	4	tty04
0	5	tty05
0	6	tty06
0	7	tty07
1	0	tty10
1	1	tty11
1	2	tty12
1	3	tty13
1	4	tty14
1	5	tty15
1	6	tty16
1	7	tty17
2	0	tty20
2	1	tty21
2	2	tty22
2	3	tty23
2	4	tty24
2	5	tty25
2	6	tty26
2	7	tty27
3	0	tty30
3	1	tty31
3	2	tty32
3	3	tty33
3	4	tty34
3	5	tty35
3	6	tty36
3	7	tty37
4	0	tty40
4	1	tty41
4	2	tty42
4	3	tty43
4	4	tty44
4	5	tty45
4	6	tty46
4	7	tty47