

U s e r ' s G u i d e

# Elite 5250



Natural Touch of 5250 Communication



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## Trademark Acknowledgment

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# Preface

This manual introduces you to both the 5250 Elite hardware and software and helps you get the maximum benefit from this product.

Step-by-step instructions are provided for both hardware and software installation, emulation configuration, on-line operation, and advanced features. If you are an experienced user, use the Quick Reference section to install this product.

Listed below is an overview for each chapter in this manual.

## **Chapter 1 General Introduction**

Briefly introduces the features of the emulation card and contains a list of the items contained in the product packaging.

## **Chapter 2 Hardware Installation**

Provides step-by-step instructions to install the emulation card into the PC and to connect to the host.

## **Chapter 3 Configuring Your System for Emulation**

Lets you select display and printer sessions, addresses and emulation's.

## **Chapter 4 Running 5250 Elite**

Describes the operation and features of the display and printer sessions.

## **Chapter 5 Display Session**

Describes the on-line indicators and session concepts.

### **Appendices**

Provides information about character sets, and the keyboard layouts of different languages.

### **Federal Communication Commission (FCC) Requirements**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) the device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**NOTE:** This equipment has been tested and found to comply with the limits for a CLASS A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

## Quick Reference

This document is specially prepared for inexperienced users to quickly utilize the emulation adapter without having to read the whole manual.

**Win5250/Elite-I is a software which can run with IBM Enhanced 5250 Card or IBM Register Compatible Card (for example, M5250I Card). Otherwise, Win5250/Elite is a software which can run with M5250, M5250E7, or M5250I7 Cards. Since you can emulate M5250 I7 as IBM Enhanced 5250 Card, you can use Win5250/Elite-I software to run with M5250 I7. If you use Win5250/Elite-I to run with M5250 I7 card, you have to change the I/O address to SW2. However, it is more convenient to use Win5250/Elite to run with M5250, M5250 I7, or M5250 E7 because running Win5250/Elite software won't take up the memory of PC and IRQ. Besides, users also don't have to load Windows Virtual Device Driver to run Win5250/Elite software. In the latter part of this manual, we will use 5250 Elite to generally refer these two softwares.**

## X-1 Hardware Setup

### 1. Win5250/Elite-I (For M5250I Card)

Select an I/O address for the M5250I adapter in your PC (SW1, total 8 bits) and refer to Chapter 2 to setup the I/O, IRQ, and Memory Setup.

**NOTE:** Be sure to reboot the Windows again when you change the setting of I/O, IRQ, or Memory Setup

## 2. Win5250/Elite (For M5250, M5250E7, M5250I7)

Select an I/O address for 5250 adapter in your pc (SW1, total 2 bits).

# X-2. Configuring Session

## 1. Configuring Session Address and Device Type

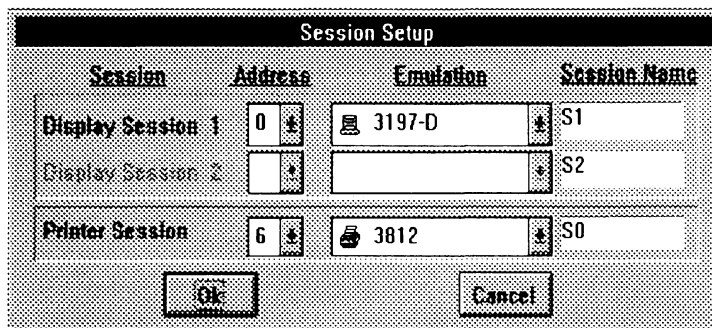
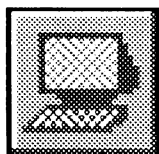


Figure X-1

Users can use Win5250/Elite-I to emulate 2 sessions and use Win5250/Elite to emulate 7 sessions.



When you use 5250 Elite to emulate the sessions, you should open these sessions again. You could open the sessions by selecting System in the menu bar or click on the left icon.





special printing commands for the following printed data until the next set of leading and end codes are detected.

## 4. Running 5250 Elite Emulation Program

### 4.1 Hotspots

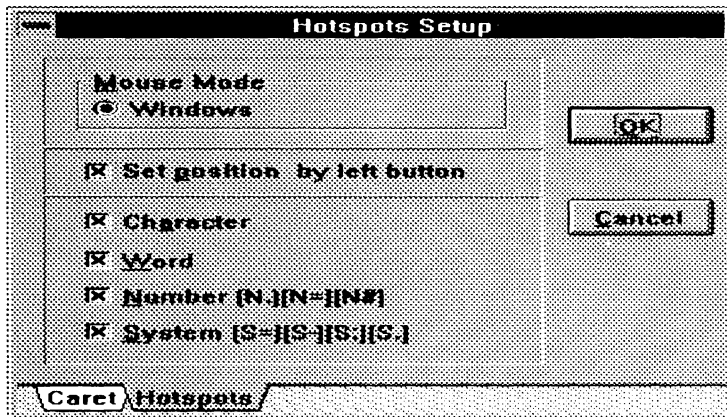
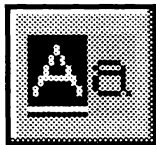


Figure X-2

The “Hotspots” option will duplicate to the current position, a complete word (characters) if the “*Word*” option is selected, or individual characters if the “*Character*” option is selected. It also enacts host commands if the “*Number*” of “Function keys” is marked. You could use the mouse left button to set the cursor position and use mouse right button to perform the function of “Hotspots”.

### 4.2 Display Attribute



You can change the existing host attribute display colors by changing the attribute code. You could select the *Control Panel* in menu bar or click on left icon to activate this function.

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# Chapter 1.

## General Introduction

The 5250 Elite Emulations are specially designed for configuring an IBM-compatible personal computer, such as an IBM 80386/80486, Pentium-based machine, and its printer as a workstation and/or printer of an AS/400 or System/3X.

Provided with the 5250 Elite are diskettes containing all the programs needed to configure your PC as IBM 5250 series (3197-C, 3197-D, 3476) display station and your locally attached printer as an IBM 5256, 5224/25, 5219, 4214, or 3812 printer. Each emulated display station or printer is assigned as a session. You can configure Win5250/Elite-I for a maximum of two display sessions and Win5250/Elite for a maximum of seven display sessions.

Win5250/Elite-I (for M5250I Card) will take the memory of PC and IRQ. Users need to load Windows VXD (Virtual Device Driver) to use Win5250/Elite-I. VXD will be loaded when users boot Windows. Users also need to reboot Windows again when the hardware setting of Win5250/Elite-I is changed. The title of VXD used by Win5250/Elite-I is V5250D.386. V5250D.386 will be installed automatically when you install Win5250/Elite-I program.

On the contrary, Win5250/Elite (for M5250, M5250E7, 5250I7) software won't take up the memory of PC and IRQ, neither do Windows VXD is required.

## 1.1 Unpacking Your Package

Check to see if you have all the items listed here. If not, please contact your distributor immediately.

- \* 5250 Adapter (Optional)
- \* Y-Cable (Optional)
- \* One Piece of Keyboard Template (in manual)
- \* One Software Diskette

## 1.2 Planning Your Workstation Sessions

- \* Up to seven workstations can be connected on one port.
- \* The cable through feature enables a number of workstations to be connected to one port of AS/400-S/3X (when using twinax) even if one of the connected workstations is not in operation.
- \* The maximum aggregate twinax cable distance between the host and the last workstation or PC on the twinaxial cable is 1525 meters (5000 feet).
- \* If you are using twisted pair, please refer to your hub manufacturer specifications. Please be sure the specifications are for the local workstation controller you are using.



## Chapter 2

# Hardware Installation

This chapter describes the basic procedure of installing the emulation adapter into your personal computer. This manual was written for a standard IBM-compatible PC, if your system is another type (vertical, slim-size, book size, PS/2-type, etc.), you should refer to your system's operation manual for the procedures of opening your system and installing an expansion card.

### 2.1 System Requirements

Before installing your emulation card, check to see if your system meets these requirements:

1. Equipped with at least one 3.5" floppy diskette drive.
2. Monochrome or color display and the appropriate display adapter.
3. Using MS-WINDOWS 3.1, 3.11 or WINDOWS 95.
4. If a printer emulation is to be used, the system should be connected with one of the following printers:
  - \* IBM PC Graphics Printer
  - \* Proprinter or its compatible
  - \* EPSON FX or LQ printer or compatible (including DFX5000/8000)
  - \* HP LaserJet Series II or compatible
  - \* Okidata 190 Series, 321, 390, Series or compatible (in IBM mode)
  - \* ASCII parallel printer

## 2.2 I/O Address Settings and Shared Memory Conflict Resolution

### 2.2.1 Win5250/Elite-I I/O Address Setting (for M5250I Card)

Normally, the Win5250/Elite-I program used the shared memory block whose location is AC00-ADFF, BC00-BDFF, CC00-CDFF or DC00-DDFF, EC00-EDFF. And the location of the Upper Memory Block (UMB) in DOS are normally defined in A000:0000 to E000:FFFF. To prevent memory conflict, please add  
device=c:\DOS\EMM386.EXE X=dc00-ddff or  
Device=C:\Windows\EMM386.EXE X=dc00-ddff in  
config.sys file if shared memory block located in DC00-DDFF. Conventions used by SW1 are as follows:

“1”=ON      “0”=OFF

Default I/O Setting is set at 271X

(Low 10 bits is 31X)

where X is the Value A, C, or E

I/O Address	Lower 10 Bits of PC Address	Switch Setting 12345678	I/O Address	Lower 10 Bits of PC Address	Switch Setting 12345678
240X	00X	00001000	260X	20X	00001100
241X	01X	10001000	261X	21X	10001100
242X	02X	01001000	262X	22X	01001100
243X	03X	11001000	263X	23X	11001100
244X	04X	00101000	264X	24X	00101100
245X	05X	10101000	265X	25X	10101100
246X	06X	01101000	266X	26X	01101100
247X	07X	11101000	267X	27X	11101100
248X	08X	00011000	268X	28X	00011100
249X	09X	10011000	269X	29X	10011100
24AX	0AX	01011000	26AX	2AX	01011100
24BX	0BX	11011000	26BX	2BX	11011100
24CX	0CX	00111000	26CX	2CX	00111100
24DX	0DX	10111000	26DX	2DX	10111100
24EX	0EX	01111000	26EX	2EX	01111100
24FX	0FX	11111000	26FX	2FX	11111100
250X	10X	00000000	270X	30X	00000100
251X	11X	10000000	271X(default)	31X	10000100
252X	12X	01000000	272X	32X	01000100
253X	13X	11000000	273X	33X	11000100
254X	14X	00100000	274X	34X	00100100
255X	15X	10100000	275X	35X	10100100
256X	16X	01100000	276X	36X	01100100
257X	17X	11100000	277X	37X	11100100
258X	18X	00010000	278X	38X	00010100
259X	19X	10010000	279X	39X	10010100
25AX	1AX	01010000	27AX	3AX	01010100
25BX	1BX	11010000	27BX	3BX	11010100
25CX	1CX	00110000	27CX	3CX	00110100
25DX	1DX	10110000	27DX	3DX	10110100
25EX	1EX	01110000	27EX	3EX	01110100
25FX	1FX	11110000	27FX	3FX	11110100

The default address of Win5250/Elite-I is at 271AH. That is, you have to set your 1.6 pins' default on, and other pins' default off.

The default I/O setting 2718H will conflict with Ethernet cards if its I/O setting resides in 300h and 32 bytes of I/O spaces are used.

## 2.2.2 Win5250/Elite I/O Address Setting (for M5250, M5250E7, M5250I7)

A two position switch (SW1) is for setting the I/O address for the M5250, M5250I7, M5250E7 emulator.

Normally you do not need to modify this setting. If another device on your PC is using the default address of 390h, you will need to change the I/O address switch before you install the card.

S1	S2	I/O Address
Off	Off	The I/O address is 390H to 39FH. This is the default setting.
On	Off	The I/O address is 340H to 34FH.
Off	On	The I/O address is 300H to 30FH.
On	On	The I/O address is 280H to 28FH.

## 2.3 Installing the Emulation Card

**NOTE:** Be sure to disconnect the power source to the PC and all peripheral devices before starting.

1. Turn off the power on the PC, monitor, and other peripheral devices.
2. Disconnect all external cables from the rear of the system. (Before disconnecting, note where each cable is connected to so that you can reattach them later.)
3. Remove two or more screws fastening the system cover on the rear panel with a screwdriver.
4. Carefully remove the cover.

5. Select a vacant expansion slot on the main-board for installing the emulation card. Be sure to use an ISA slot.
6. Release the screw that fastens the metal cover of the selected expansion slot and save the screw for later use.
7. Align the edge connector of the emulation card with the expansion slot.
8. Press the edge connector of the card all the way into the expansion slot.
9. Refasten the screw stated in Step 6 to secure the card's metal cover onto the slot bracket.
10. Replace the system cover and re-attach all cables.

## **2.4 Connecting the Workstations**

This product was designed to be used with traditional Twinax cable or unshielded twisted pair (UTP). Active hubs are strongly recommended when this product is being used with an AS/400 and twisted pair.

The following steps help you to connect your workstation to the host system.

1. Obtain the twinaxial Y-Cable assembly provided with the emulation card.
2. Attach the D-type 15-pin female connector of the twinax Y-Cable assembly to the D-type 15-pin male connector on the card.
3. Tighten the two thumb screws securing the D-type connector to the card.

4. Plug the twinaxial cable or balun into one side of the Y-cable at the other end of the twinaxial cable assembly. The Y-Cable is universal IN or OUT.
5. Connect the other end of the Y-Cable to the second twinax cable if required.

**Note: Never connect two baluns to one Y-Cable.**

## Chapter 3

# Configuring Your System for Emulation

### 3.1 Preparing to run the Configuration Program

It is recommended that you make a backup copy of the enclosed diskette or copy all the files on the diskette to your hard disk drive, and store the diskette in a safe place.

### 3.2 Installing 5250 Elite Software

Installing 5250 Elite software is the same as installing any other Windows application. Install 5250 Elite as follows:

1. Start Windows
2. Insert the installation diskette into the floppy drive.
3. From the Windows Program Manager File Menu, select **RUN**.
4. At the command line, type: **x:install**  
where **x** is the floppy drive that contains the installation diskette.
5. The screen will display the Win5250/Elite-I or Win5250/Elite setup window.

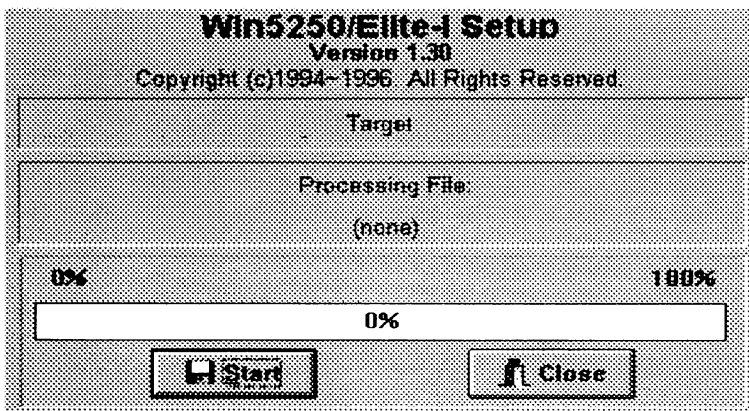


Figure 3-1

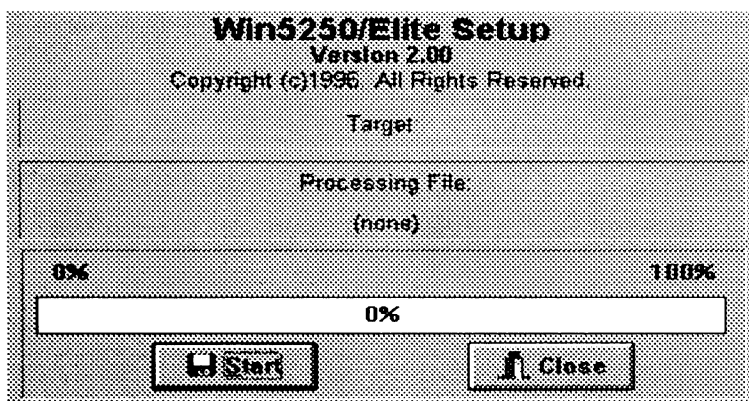


Figure 3-2

6. Select **START** to enter the target directory.
7. Click on **OK** to make sure you have chosen the target directory and install 5250 Elite software.
8. You will receive an information message as shown on figure 3-3. Click **OK** and a copy of WIN.INI be copied as WIN.CFG to the 5250 Elite directory. 5250 Elite will integrate two files: **INFOPRO.FON** and **MSYMBOL.FON** to the new WIN.INI. Inforpo and Msymbol fonts are added for use with 5250 Elite.



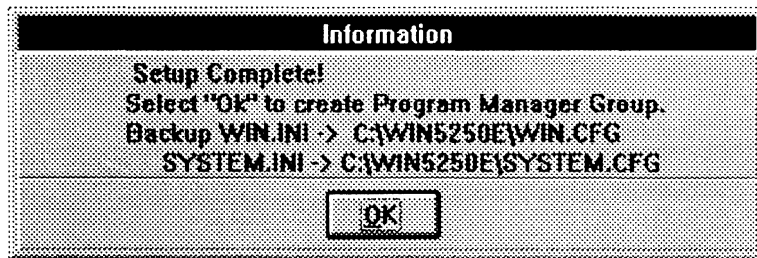


Figure 3-3

9. Click on **OK** to backup the WIN.INI and follow the instruction to create Program Manager Group and restart Windows.

### 3.3 Configuring 5250 Elite

Double click on the *CONFIG* icon in the 5250 Elite group. The screen displays as shown in Figure 3-4 or Figure 3-5.

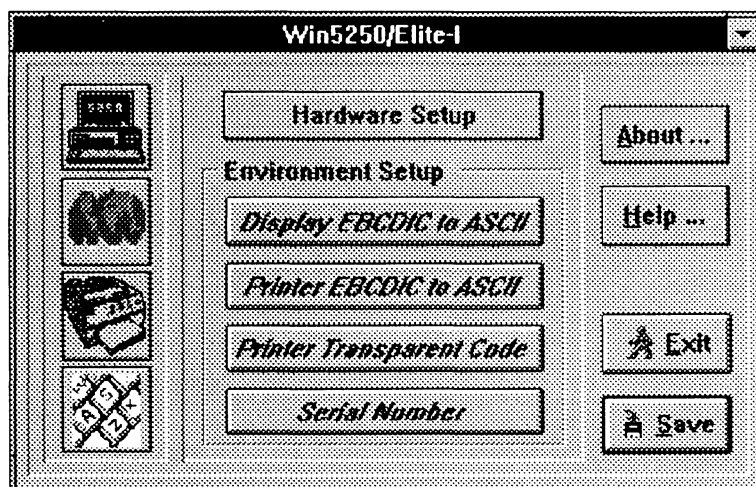


Figure 3-4

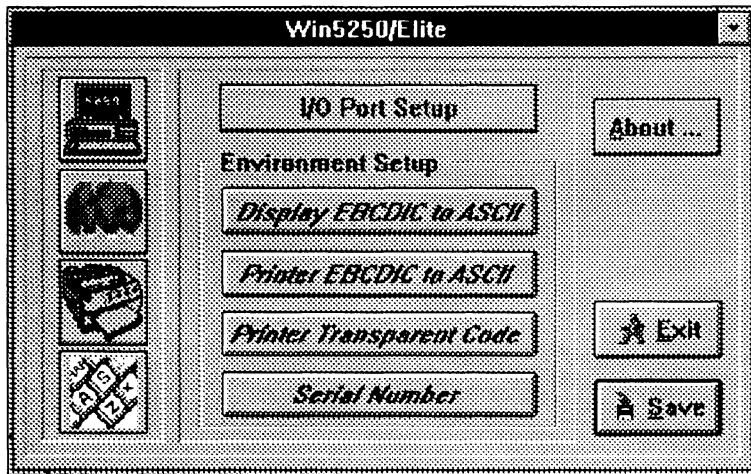


Figure 3-5

### 3.3.1 Hardware Setup

#### 3.3.1.1 Win5250/Elite-I (For M5250I Card)

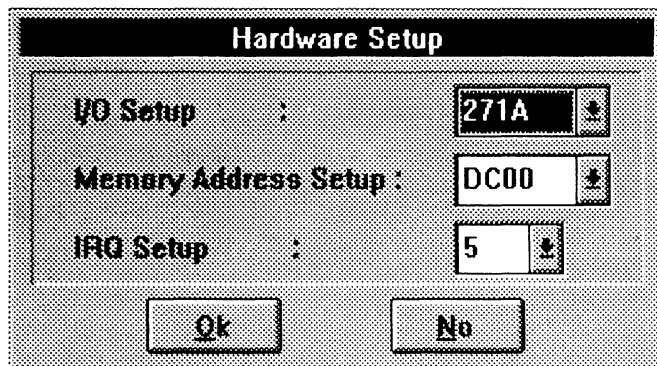


Figure 3-6

The I/O address is used to change the system resource and avoid conflicts with other adapters. The default address is 271AH for the I/O port. Verify the switch settings on the emulation board and match the address. For detail information, please refer to *2-2 I-O Address Setting in Chapter 2*.

Virtual Device Driver-V5250D.386 will be added to SYSTEM.INI when you install Win5250/Elite-I. Besides, the hardware data you write in when configuring Win5250/Elite-I will also be added to EliteVXD in SYSTEM.INI.

In addition to the I/O resource, emulation of WIN5250/ELITE-I will take the memory of PC and IRQ.

**In case you change the hardware setting, be sure to reboot the Windows again.**

### 3.3.1.2 Win5250/Elite (For M5250, M5250E7, M5250I7)

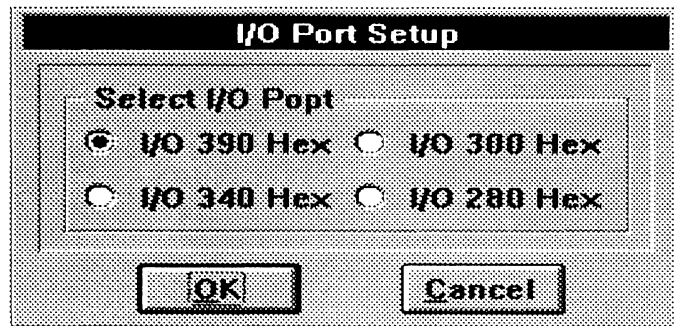
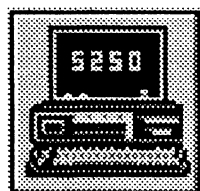


Figure 3-7

The default I/O address for Win5250/Elite is 390H. Win5250/Elite does not use any system resources including Upper Memory or IRQ with the exception of I/O address.

## 3.3.2 Configuring Address and Device Type



Click on the left icon marked “5250” to setup shared addressing, configure the session address and define the device type. The screen will display as shown in figure 3-8 or figure 3-9.

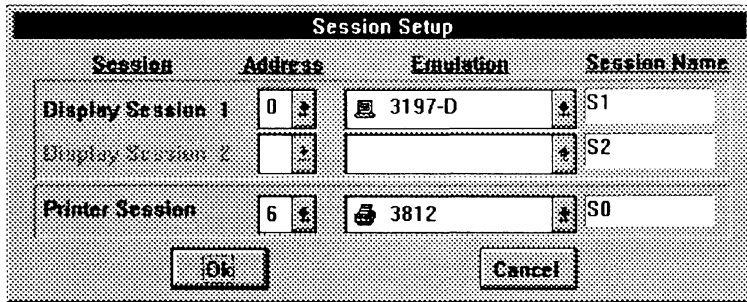


Figure 3-8

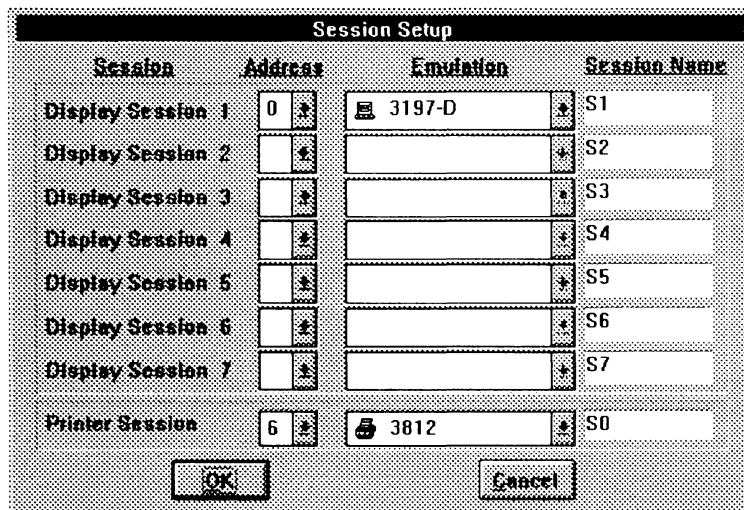
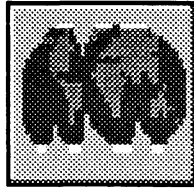


Figure 3-9

Please select the *session address*, then define the *device type* using the direction buttons in the dialog box. This function specifies how many sessions will be active, and the device type of each emulation.

There are only 2 sessions provided in Win5250/Elite-I and 7 sessions for Win5250/Elite. You should open the chosen sessions again when running Win5250/Elite-I. Please refer to *4-2-2 Session Setup in Chapter 4*.

### 3.3.3 Language



Click icon above to select a language for the display and printer sessions. The default language is US English. The screen will be shown as figure 3-10.

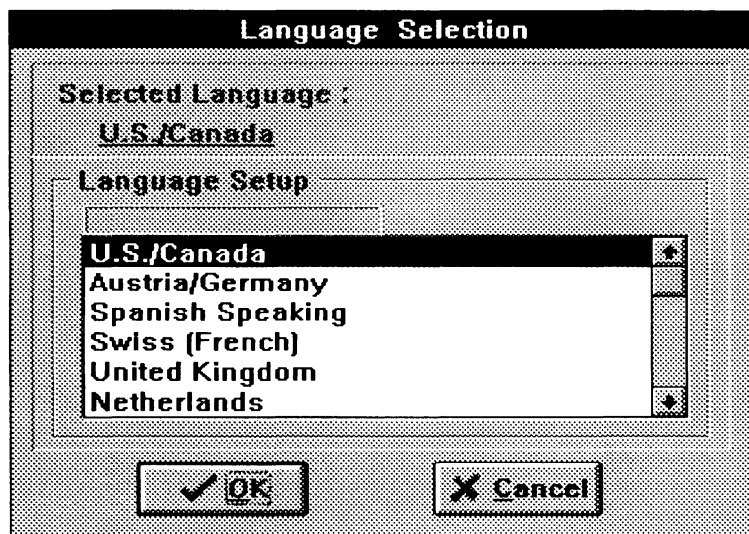
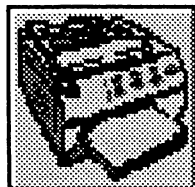


Figure 3-10

There are 18 languages to select from. Click on the direction buttons in the dialog box to select the desired language.

### 3.3.4 Printer



The printer session allows you setup a locally attached PC printer to emulate a host addressed printer.

Click on the printer icon to configure your printer session. The screen will show as figure 3-11.

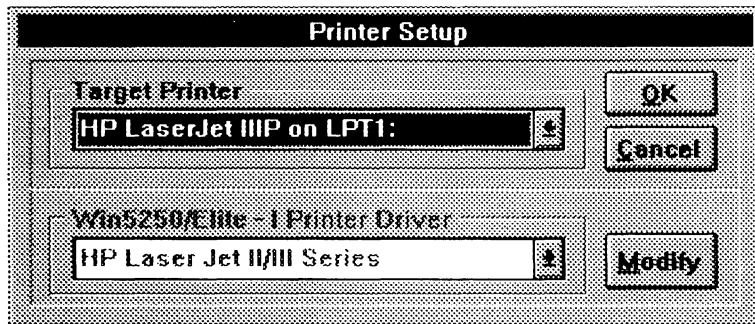


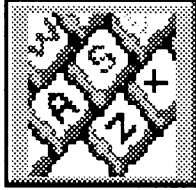
Figure 3-11

1. Select the Windows target printer. This is the Windows printer driver which is already installed on your PC.
2. Choose the printer driver which matches the target printer.
3. If you cannot find a printer driver which directly matches your target printer, please use the following table to select the correct windows driver for your application.

PC Printer (or PC printer emulation)	INFOPRO Printer Driver	Windows Target Printer	Suggested Host Emulation
IBM PRO/Graphics Printer (any PROPrinter Emulation)	IBM 4201 PROPrinters or XL	ANY IBM PRO/Graphics Driver	5224
Any HP LASERJET (PCL4 or 5 emulation)	HP LASER JET II/III Series	HP LASERJET SERIES II	3812
Epson FX (FX emulation)	EPSON FX Series	Any FX compatible driver	5224
Epson LQ (ESC/P emulation)	EPSON LQ Series	Any LQ compatible driver	4214
Other Printer	OTHER PRINTER - See next step	Appropriate printer driver	

4. If your printer cannot emulate an IBM Pro/Graphics, Epson FS/LQ or HP Laserjet, you will need to enter the commands into the printer table. Select OTHER PRINTER, then click on MODIFY. Refer to your printer manual to find the appropriate printer commands for this table.

### 3.3.5 Keyboard Re-mapping



Click on the keyboard icon to re-map the keyboard. Follow the procedure below to re-map one or more keys on your keyboard.

1. Click on the key you wish to re-map.
2. Click on the **NORMAL**, **SHIFT** or **ALT** condition of the key you want to re-map. The current mapping of that key is shown.
3. Select the function you want assigned to that key from the **FUNCTION KEY** list.
4. Click on the arrow button to the right of the **FUNCTION KEY** list. This will change the assignment of that key.
5. Click on **SAVE** to save the re-mapped keys.
6. If you want to restore the default mapping of the keyboard, select the key again, and click **RESTORE**.

## 3.4 Environment Setup

### 3.4.1 Display EBCDIC to ASCII Table

This table controls the EBCDIC to ASCII conversion shown on the display session. You normally do not need to modify this table.

To modify the table, click on the ASCII value you want to change. You simply overwrite the default value by typing the new value. To exit this screen, click on **OK**.

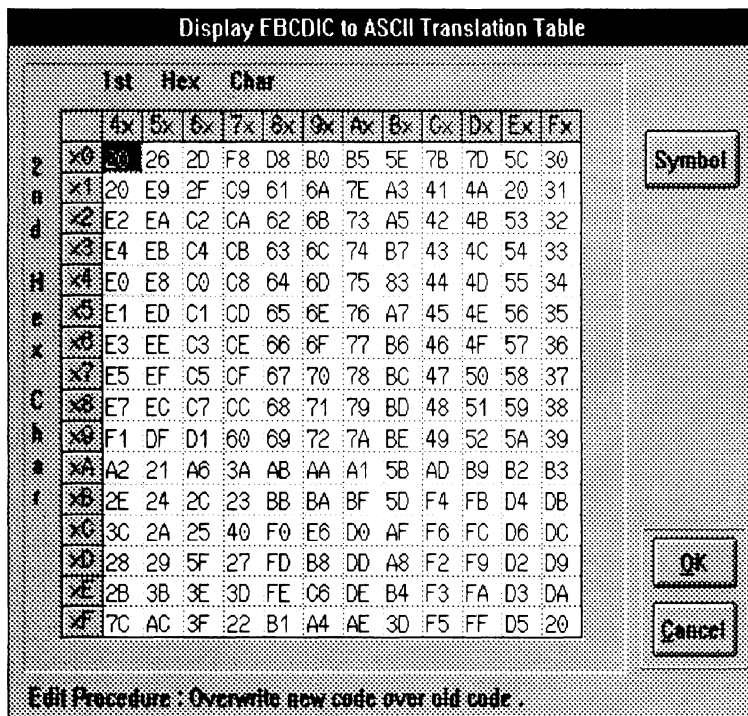


Figure 3-12

### 3.4.2 Printer EBCDIC to ASCII Table

This table controls the EBCDIC to ASCII conversion for your printer session. You normally do not need to modify this table.

If a character is printing on your printer with the wrong ASCII value, use the printer manual to determine the ASCII HEX value of this character and that of the value you want in its place. Find the incorrect value in the table, click on the value and type in the correct value. To exit this screen, click *OK*.



Printer EBCDIC to ASCII Translation Table													
		1st Hex Char											
		4x	5x	6x	7x	8x	9x	Ax	Bx	Cx	Dx	Ex	Fx
z	x0	26	2D	ED	ED	F8	E6	9B	7B	7D	5C	30	
	x1	20	82	2F	90	61	6A	7E	9C	41	4A	20	31
n	x2	83	88	83	88	62	6B	73	9D	42	4B	53	32
	x3	84	89	8E	89	63	6C	74	9E	43	4C	54	33
H	x4	85	8A	85	8A	64	6D	75	9F	44	4D	55	34
	x5	A0	A1	A0	A1	65	6E	76	20	45	4E	56	35
t	x6	A6	8C	A6	8C	66	6F	77	20	46	4F	57	36
	x7	86	8B	8F	8B	67	70	78	AC	47	50	58	37
C	x8	87	8D	80	8D	68	71	79	AB	48	51	59	38
	x9	A4	E1	A5	60	69	72	7A	DB	49	52	5A	39
h	xA	9B	21	7C	3A	AE	A6	AD	AA	2D	F2	FD	DB
	xB	2E	24	2C	23	AF	A7	A8	B3	93	96	93	96
a	xC	3C	2A	25	40	EB	91	DB	DB	94	81	99	9A
	xD	28	29	5F	27	F3	20	20	DB	95	97	95	97
r	xE	2B	3B	3E	3D	DB	92	DB	27	A2	A3	A2	A3
	xF	B3	AA	3F	22	F1	20	DB	CD	A7	98	A7	20

OK

Cancel

Edit Procedure : Overwrite new code over old code .

Figure 3-13

### 3.4.3 Printer Transparent Code

The function sets the leading and ending codes for printer transparent data. When the leading and ending codes are detected, the characters between them are not printed, instead, they are interpreted as special printer control codes. Move cursor to the code which you want to change and type in the new code over the old code.

### 3.4.4 About

This screen shows the name, copyright, version and release year of this product. To exit, click *OK*.

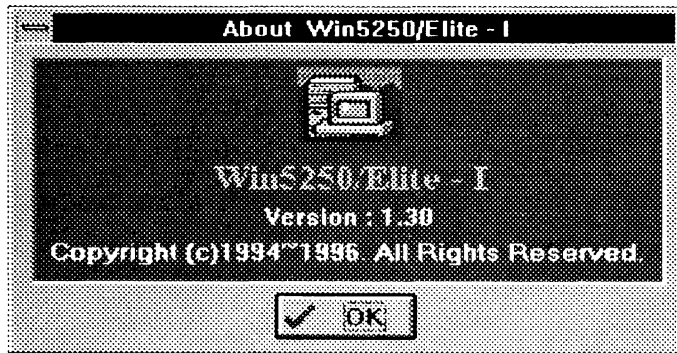


Figure 3-14



Figure 3-15

### 3.5 Serial Number

The serial number is only required if you use this feature on your host. 3476 emulations support this feature.

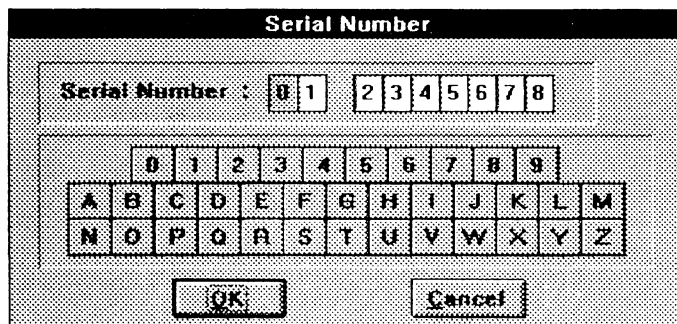


Figure 3-16

To change the serial number, move the cursor to the desired position and select the value you need in this position. To exit this screen, click *OK*.

**Note:** Because there is a default number, you do not generally need to set this.

## 3.6 Save

After configuring 5250 Elite, please be sure to click on the *SAVE* icon to save your changes. You will be returned to the Windows Program Manager.



## Chapter 4

### Running 5250 Elite

5250 Elite works on personal computers running Microsoft Windows 3.1, 3.11 or Windows 95.

Double click on the *Elite5250I (M5250 Card)* or *Win5250/Elite (M5250, M5250I, M5250I7, M5250E7 Card)* icon in the 5250 Elite group. The screen will display as shown in figure 4-1 or figure 4-2.



Figure 4-1



Figure 4-2

## 4.1 5250 Elite Menu Bar and Tool Bar

Use the 5250 Elite menu bar to access the 5250 Elite menus. These menus allow you to perform various tasks related to the active session. *There are six items on the menu bar; System, Edit, Macro, Control Panel, Window, and Help.* You could also use tool bar to facilitate tasks using your mouse to click on the buttons listed in the tool bar.

## 4.2 System

Select *System* from the menu bar and you can control sessions, define function keys, the KeyPAD, and re-map the keyboard.

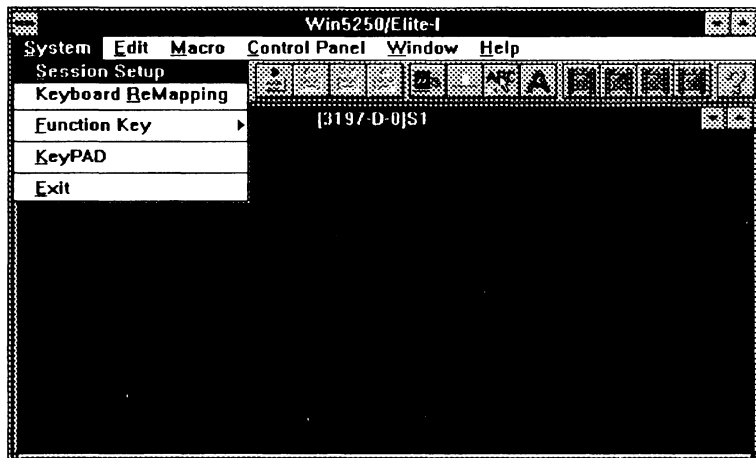


Figure 4-3

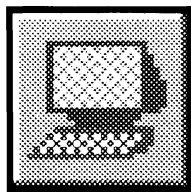


Figure 4-4

## 4.2.1 Keyboard Re-mapping

Refer to Keyboard Setup in chapter 3 to re-map your keyboard. *You don't have to re-map your keyboard. Keyboard re-mapping is only required when a pre-defined key sequence does not meet your needs or you have a preference.*

## 4.2.2 Session Setup



Choose *Session Setup* to control which session should be open and which session should be closed. *Normally you open the sessions you configured in Chapter 3.*

## 4.2.3 Function Key

The Function Key menu option lets you perform host functions or execute command keys with your mouse. You can perform most functions or commands directly from the keyboard. Refer to the keyboard template in the Win5250/Elite manual for the

default keyboard map and your IBM host system documentation for a description of the host function or command key properties.

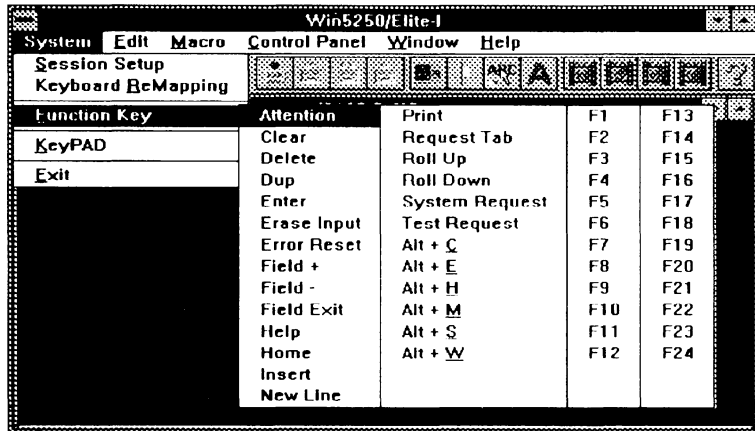


Figure 4-5

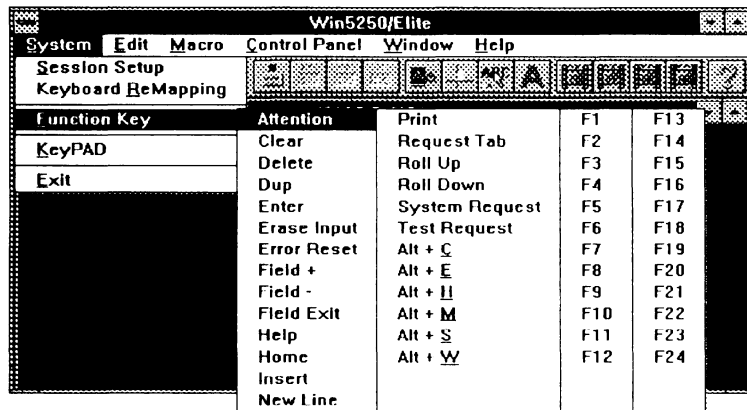
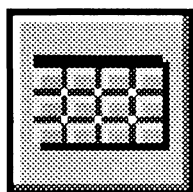


Figure 4-6

## 4.2.4 KeyPAD



The KeyPAD option allows you to access frequently used keyboard functions or macros from a convenient pop-up KeyPAD.



KeyPAD		
Test.mcd	Sys Request	Home
Insert	Roll Up	Test Request
Clear	Help	Dup
Delete	Roll Down	Field Exit
Error Reset	Erase Input	Field +
Field -	New Line	Enter

Figure 4-7

## 4.2.5 Editing KeyPAD

KeyPAD		
Move	Sys Request	Home
Size	Roll Up	Test Request
Minimize	Help	Dup
Maximize	Roll Down	Field Exit
Close Alt+F4	Erase Input	Field +
Switch To... Ctrl+Esc	New Line	Enter
Edit KeyPAD		
Hide Title		
✓ Save status		

Figure 4-8

1. Click on the system menu bar.
2. Select KeyPAD, and screen will display as show in figure 4-7.
3. Click on KeyPAD title bar, and screen will display as show in figure 4-8.
4. Select *Edit KeyPAD*, and the screen will display as shown in figure 4-9.
5. Enter the *KeyPAD Size* you wish to use.

6. Select the *Key Type* you would like to use. There are two kinds of key types you can use; System function keys or Macro keys based on user defined macros.
7. Use the mouse to click on the button you want to modify.
8. Use the direction button to select the function you will set for this button.
9. Click on *OK* to save the edited KeyPAD.

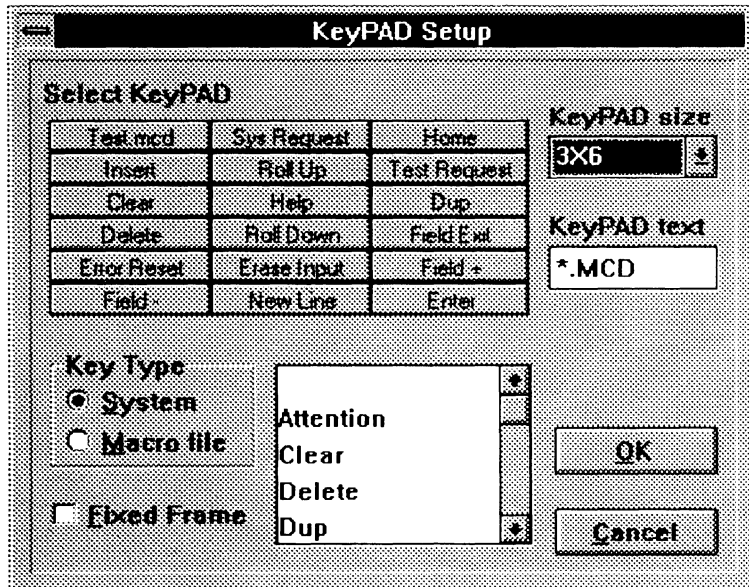
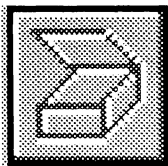


Figure 4-9

## 4.3 Edit

### 4.3.1 Copy

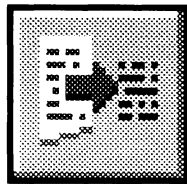


To copy text from the host screen to the Windows Clipboard in ASCII format, highlight the desired text area and choose *Copy* from the *Edit* menu.

Please refer to the Microsoft Windows User's guide for details about working with information in the Clipboard.

You can use this function to copy data from a host screen so you can paste data into other Windows programs. You can also copy data from one session or screen into another from within 5250 Elite.

### 4.3.2 Paste



The *Paste* option can place information that has been copied to the Clipboard in ASCII format into the active session window. The

copied text will be placed starting from the current cursor position.

### 4.3.3 DDE Link

DDE Link enables you to perform tasks on Windows Excel using system data. You could use the Excel program to calculate this data or draw statistical charts.

To use DDE Link, please do the following:

1. Open *Excel* and 5250 Elite and size both programs so they can be seen on your screen at the same time.
2. By dragging the mouse cursor across the required area to highlight the terminal data to be transferred to Excel.

3. Select *Edit* from the terminal menu bar and choose *DDE Link*. Notice that the data range of invoked DDE Edit screen is automatically entered based on the highlight area. Another option of “check string” allows you to ensure that only the correct screens send data to your linked application.
4. Choose the *Edit* from *Excel* menu bar and choose paste.
5. Click on the position you want the data placed in Excel.
6. Please refer to your *Excel User's Guide* for further information on performing *DDE* links.

### **4.3.4 Select All**

*Select All* is used to select all data so you can copy the entire screen into the Windows clipboard.

### **4.3.5 View Clipboard**

You can select *View Clipboard* to see what data is currently in the Windows Clipboard. This is data which can be pasted to this or other Windows applications.

## **4.4 Macro**

Macros are used to record frequently used keystrokes. This feature can greatly increase your efficiency. For example, if you have a program you use on the host which requires you to go through many screens to get to your application, you can record all those keystrokes in a macro to speed up the process.

Note: We do not recommend you record your password into a macro. This is a security violation in most companies.

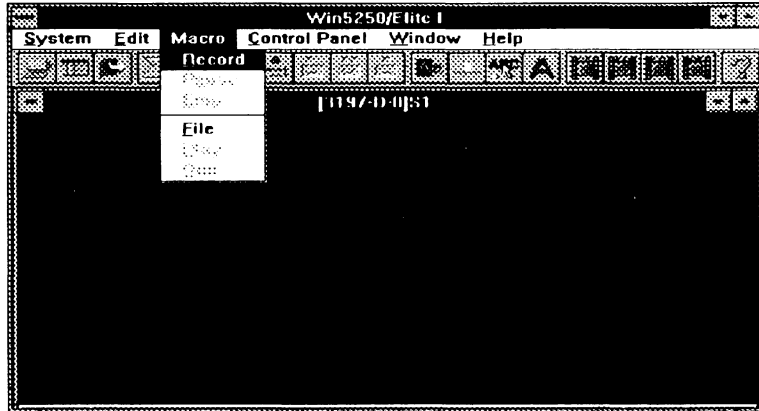
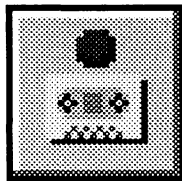


Figure 4-10



Figure 4-11

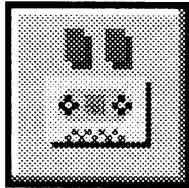
### 4.4.1 Record



To record a macro, make sure your cursor is in the correct position and you will be able to get from the beginning to the end of the task

during this process. Select *Record*, then start typing the characters, command keys, action keys, etc. and when you are finished, select *Stop*.

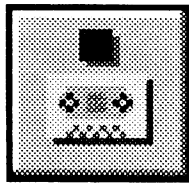
### 4.4.2 Pause



*Pause* is used to allow user input during a play-back sequence.

While recording a macro, select *Pause* to allow user input and select *Pause* again to resume recording the macro.

### 4.4.3 Stop



*Stop* ends the *Record* sequence.

After you select *Stop*, you will be prompted to enter a file name or cancel the record process. Please see figure 4-12.

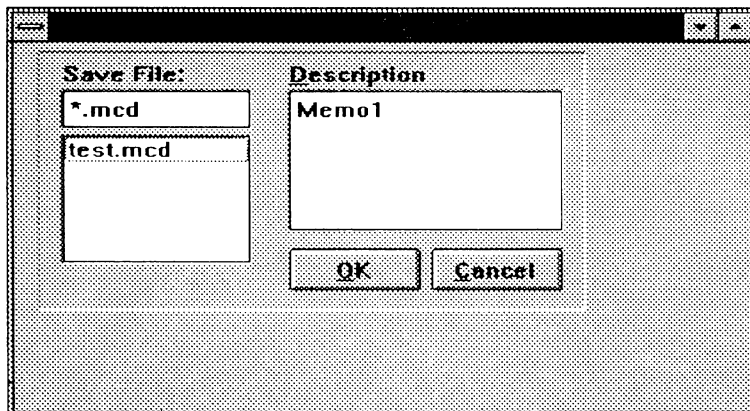


Figure4-12

Enter the file name you want the macro saved as, and be sure to include the description of the macro for future reference.

#### 4.4.4 File

*File* lists all recorded macros and their descriptions on your PC.

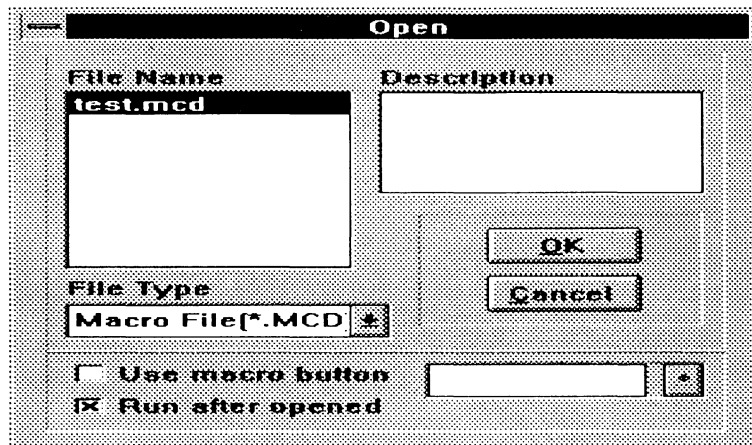
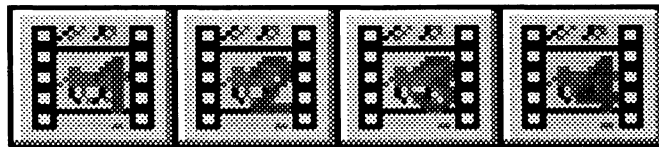


Figure 4-13

This option allows you to open a pre-recorded macro for use when you hit the *Play* button. Please note that the default is to run the macro after you open the file so be sure that you are ready to play the macro you are selecting. If you are not ready, click "*Run after opened*" so the macro is ready to be played, but will not play immediately.



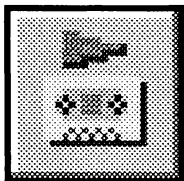
The above icons are provided so you can dynamically assign any macro to the icons. This is a very powerful feature which allows

you to have ready access to four buttons on your screen assigned to macros. The ***Play*** button repeats the last macro selected or played.

To assign a macro to the button, simply click on the macro button and you will be prompted to select which macro to assign to this button. Please be sure you are ready to play the macro when you select it. If you are not ready, click "***Run after opened***" so the macro is ready to be played but will not play immediately.

To change the assignment of the macro button, click using the right button and you will be prompted to change the selection.

### 4.4.5 Play



***Play*** is only active after you have selected a macro from the file menu.

This option plays back the pre-recorded key sequences in the macro file previously selected.

When a macro is running, you will see "Macro Running" at the top line of the session status line.

### 4.4.6 Quit

Quit is used to terminate a macro which is playing. This option is only available if a macro is currently being played back.



## 4.5 Control Panel

The *Control Panel* allows you to modify the way your screen looks and the how you can use your mouse.

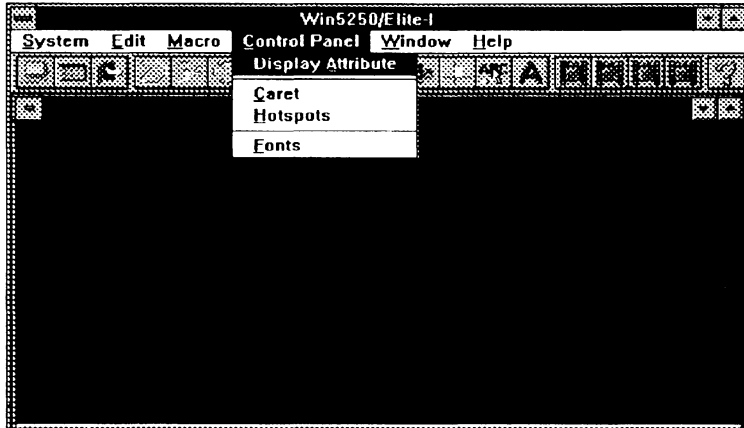
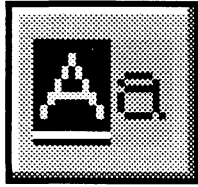


Figure 4-14



Figure 4-15

## 4.5.1 Display Attribute



Display attributes are the colors, underline, column separators and other features which determine how your screen looks. The programmers who designed the screens you are using decided to use certain colors and attributes on the screens they made. You can modify the look of those attributes based on your own preference.

A key factor to being successful in modifying the attributes is to know which attribute you wish to change. It is strongly recommended that you determine what the attribute number is before you modify this table. A tool to make this determination is available from within this screen. Simply bring up the *Display Attribute* screen, select "*Display Attribute Code*" then *OK*. A small two digit number will be shown in front of each field and other screen entity. Find the attribute assigned to the item you want to change and follow the procedure below.

1. Click on the button to the left of the attribute you wish to modify.
2. Choose a color by clicking on the color palette with the mouse. Press the mouse left button to change the foreground color and press the mouse right button to change the background color.
3. *Display Type* controls that attribute has column separators, underline or blinks.
4. *Alternative Attribute* is only usable with applications which take advantage of the Extended Character Buffer. (Not required for most applications).

5. Clicking on *Save* permanently saves the change. *OK* makes the change only for this session.

Once you have saved the change but want to restore the host display colors to standard color attributes, click on *Load*, *Default*, *Save*, then *OK* and the display colors will return to standard color attributes.

Note: The Alternate Attribute is only available for screens with the ECB3 attribute in 3488 emulation.

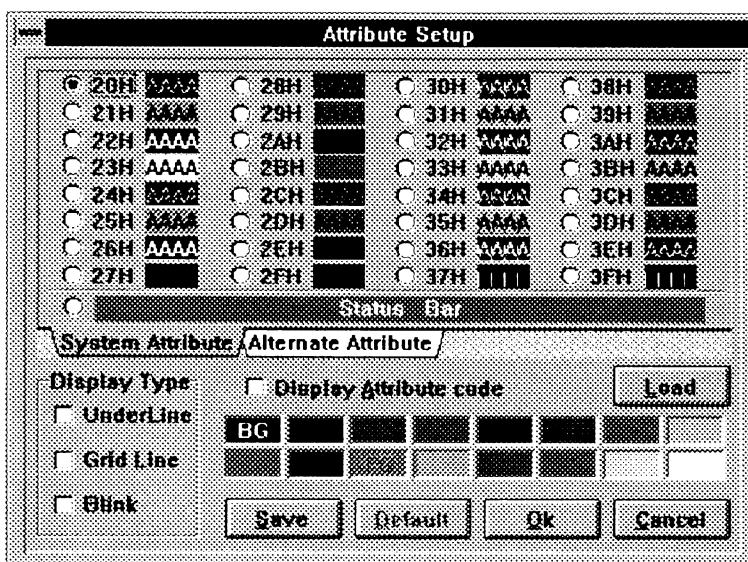
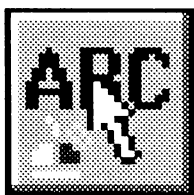


Figure 4-16

## 4.5.2 Caret



*Caret* controls the cursor type and whether there is a ruler line on the cursor.

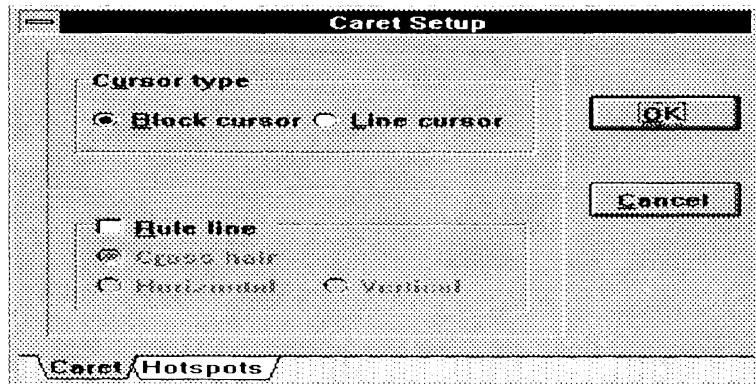
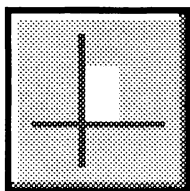


Figure 4-17

*Cursor type* defaults to *Block Cursor* because it makes the cursor easy to identify on the screen.

If you select *Rule line* you can select one of three rule lines: cross hair, vertical and horizontal.

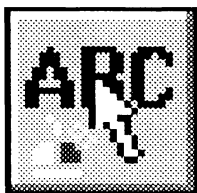
#### 4.5.2.1 Rule Line



The *Rule Line* is used to determine the cursor position relative to other characters displayed on the screen.

Click on this icon to turn the *Rule line* on or off.

#### 4.5.3 Hotspots



The *Hotspots Setup* panel allows you to control how the host reacts to mouse action, positioning of the cursor and which functions will be executed when the right button is clicked.

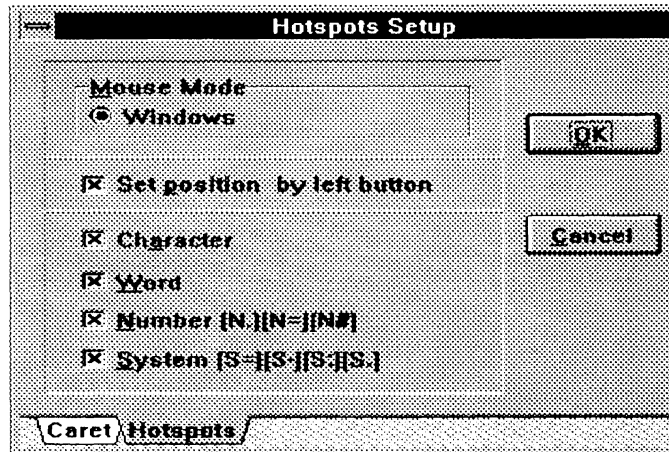
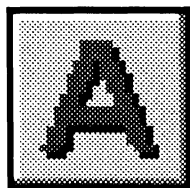


Figure 4-18

The *Windows* mode allows you to place your cursor by clicking on your primary button, select menu options by clicking **with the right button** on the menu item number or command and execute function keys by clicking **with the right button** on the function keys listed on the screen.

The “*Word*” option causes a selected command to be typed on the command line for you when it is selected. The “*Character*” option causes a selected character to be executed when it is selected. The “*Number*” option causes a selected menu number to be executed when it is selected. The “*System*” causes function keys to be hit when selected.

#### 4.5.4 Fonts



This option allows you to select the font which you prefer to use. All fonts loaded in your PC will not show on this screen. Only Mono-Space fonts such as “Courier New” are acceptable for use with an emulation product.

When you change the font or the font size, it only affects the current session, other sessions are not affected.

When *Auto Sizing* is selected, the font will shrink or grow to ensure the entire screen is available in the window. Not all font types support this function.

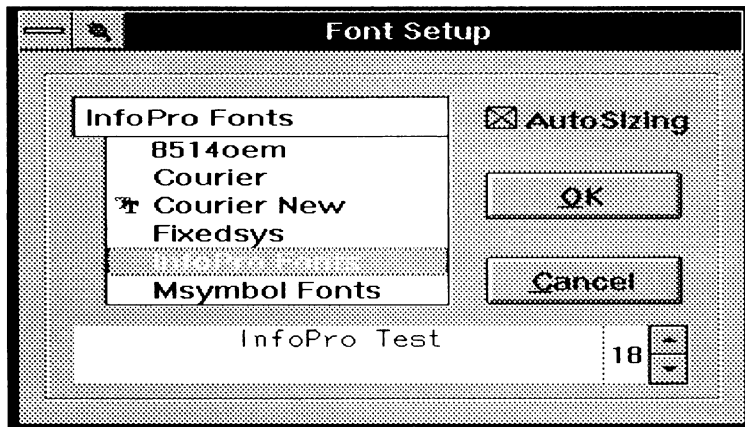


Figure4-19

## 4.6 Window

This menu option allows you to control how the sessions are arranged on your screen, refresh the video and select a session directly from a menu.



Figure 4-20

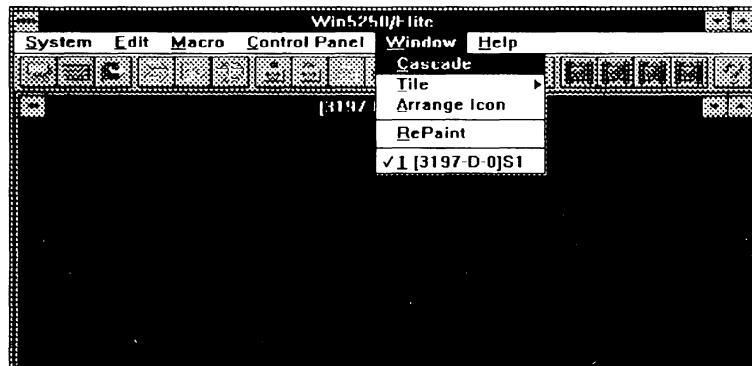


Figure 4-21

### 4.6.1 Cascade

Cascade arranges each of the open session windows in an overlapping, or cascading fashion. The entire top session window displays along with the title bars to the remaining session windows. This is a Windows standard. Please refer to the Microsoft Windows User's Guide for more information.

### 4.6.2 Tile

Tile arranges all of the open session windows so that each of them will occupy an equivalent amount of space without overlapping in the main window. This is a Windows standard. Please refer to the Microsoft Window User's Guide for more information.

### 4.6.3 Arrange Button

Arrange Button organizes the minimized session buttons in the main window. This is a Windows standard. Please refer to the Microsoft Windows User's Guide for more information.

## 4.6.4 Repaint

If Windows does not display your screen correctly, such as no characters appear on the screen (typically caused by improper video refresh), use *Repaint* to reset the screen to a normal state.

## 4.7 Printer Session

The printer session allows you to control and find the status of the locally attached PC printer which is emulating a host printer.

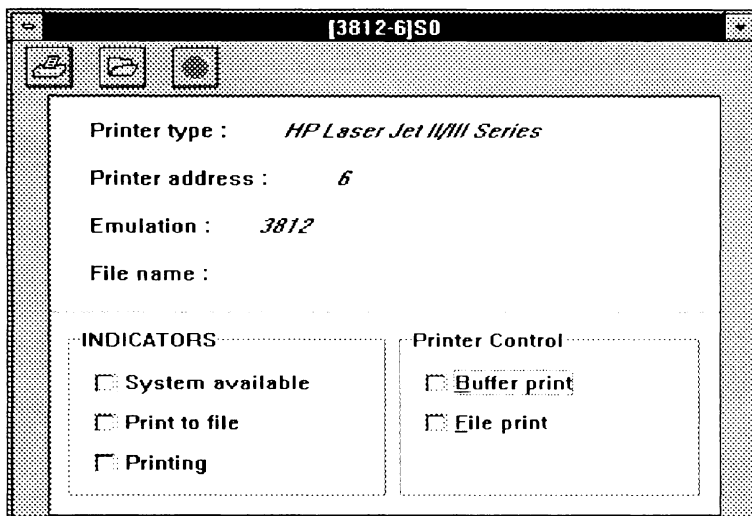
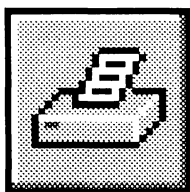


Figure 4-22

### 4.7.1 Target Printer



This is the printer which is defined in your Windows configuration. All host jobs will be sent to this printer.

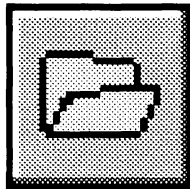


You can use this feature to redirect your host print data to a different printer attached to your PC (or attached via a network).

*Make sure the Target Printer matches the Win5250/Elite Printer Driver. This setting is normally set during the configuration process.*

*If the drivers do not match, unpredictable results may occur and data may be lost.*

## 4.7.2 File Manager



You can re-direct you host printer data to a print file by using this option. This feature is useful as a simple file transfer feature. If you have a report which you need to use on your PC, you can send the report to this host defined printer, and the spool file will be saved as a PC file.

To use this feature, select the *Print-to-File* icon, specify the file name you want the file saved to and release the print job from the host.

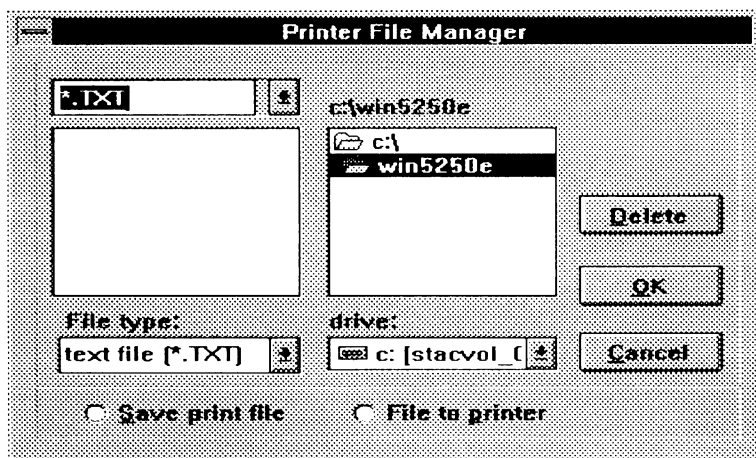
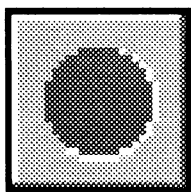


Figure4-23

### 4.7.3 Cancel



If there is a job printing from the host to your locally attached printer, you can select this option to tell the host to stop printing this file to your printer.

### 4.7.4 System Available

When the “*System Available*” indicator is marked, the host is communicating with the printer. If this indicator is off, make sure your PC printer is on-line and you can print to it using PC programs. Also check you host configuration and make sure the correct address and emulation type are configured and all printer error messages have been answered.

### **4.7.5 Print to File**

When the “*Print to File*” indicator is marked, the file is sent to the specified file on the PC.

### **4.7.6 Printing**

When the “*Printing*” indicator is marked, print data is being received from the host and being sent to the printer or Windows print manager.

### **4.7.7 Printer Control**

You can turn on the “*Buffer Printer*” indicator to print out your system data directly to the printer without an EBCDIC to ASCII conversion.

**NOTE:** This is only used for diagnostic purposes.



# **Chapter 5**

## **Display Session**

### **5.1 5250 Elite Display Session Features**

Each display session window represents a host terminal session. When 5250 Elite is started, the display session window shows the host screens currently in use by the emulator. This could be the host sign-on screen, or other system screen.

5250 Elite session windows conform to Windows standards. You can click on the title bar and drag the window to a new position, and you can re-size, scroll, minimize, and maximize the windows. As with other Windows applications, 5250 Elite allows only one active window at a time. If you have multiple sessions connected, and multiple sessions displayed, you can only work with the session in the active window. However, the sessions in the inactive windows are updated when the new host data is received.

### **5.2 Status Bar**

#### **5.2.1 The Status Bar Display at the Top of Each Display Session Window**

The status bar display at the top of each display session window will show the session number, station address, and device model for each session.

## 5.2.2 The Status Bar Display at the Bottom of Each Display Session Window

Bottom status bar is divided into four areas:

### The First Area

The first area identifies the cursor position, column and row.

### The Second Area

The second area consists of five status indicators and four special indicators (not always displayed). Each of them shows information about your current session and the status of the host system.

#### Status Indicators:

- The host system is available.
- X Keyboard input is inhibited.
- ^ The keyboard is in insert mode.
- ⤴ The SHIFT key is down or CAPS LOCK key is on.
- A message is waiting on the host system for the active session.

#### Special Indicators:

- “d” The terminal is in diacritic mode. Hit the space bar to see the character.
- “G” The terminal is in special character Shift mode.
- “>>” You can continue to key even if the keyboard is input inhibited. (This is supported by OS/400 Release 2 or later on 34XX emulation)
- “+” When the extended keyboard layout is selected this indicator will appear. (This is supported by OS/400 Release 2 or later on 34XX emulation)

**The Third Area**

The third area shows the present time.

**The Fourth Area**

The fourth area shows the product name.





# Appendix A.

## Character Sets

This appendix provides several tables of character sets used in the IBM host systems and personal computers.

### A.1 5250 EBCDIC Multinational Character Set

The System/3X provides the character set shown below. Codes normally displayed as blanks will have the hex code displayed in Test mode. Nulls (hex 00) display as dots in Test mode.

**Multinational Character Set Table**  
(containing the characters of the ASCII character set)

		First Hexadecimal Character															
		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Second Hexadecimal Character	0						&	-	ø	Ø	°	μ	¢	{	}	\	0
	1						é	/	É	a	j	~	£	A	J		1
	2					â	ê	Â	Ê	b	k	s	¥	B	K	S	2
	3					ä	ë	Ä	Ë	c	l	t	₣	C	L	T	3
	4					å	è	Å	È	d	m	u	f	D	M	U	4
	5					á	í	Á	Í	e	n	v	§	E	N	V	5
	6					ã	î	Ã	Î	f	o	w	₣	F	O	W	6
	7					ä	ï	Ä	Ï	g	p	x	¼	G	P	X	7
	8					ç	ì	Ç	Ì	h	q	y	½	H	Q	Y	8
	9					ñ	β	Ñ	`	i	r	z	¾	I	R	Z	9
	A					[	]	!	:	<<	á	í	¬	-	≥	²	³
	B					.	\$	,	#	>>	ó	ú	l	ô	û	Ô	Û
	C					<	*	%	@	đ	æ	D	≠	ö	ü	Ö	Ü
	D					(	)	-	'	≤	ı	↑	¨	ò	ù	Ò	Ù
	E					+	;	>	=	þ	Æ	þ	'	ó	ú	Ö	Ü
	F					!	^	?	"	±	⊗	®	=	õ	ÿ	Ö	

**NOTE**

1. These positions are valid codes reserved by IBM. Blank positions are invalid, and might or might not print a character.
2. These display codes are unique to the S/3X and do not necessarily conform to EBCDIC standards.
3. Characters at hex codes 00 (null), 41 (required space), E1 (numeric space), and 40 (space) are displayed as blanks.

## A.2 5250 Multinational Character Set Modifications

For the language versions shown below, characters are identical to the multinational character set except as noted. The characters listed in the following table should replace those of the same hex codes in the EBCDIC Multination Character Set Table.

### 5250 Multinational Character Set Modifications (for 5251)

Hex: 4A 4C 4E 5A 5B 5F 6A 79 7B 7C A1 C0 D0 E0

U.S. & Canada	¢		!	⌋														
Multinational																		
Austria/Germany	Ä		Ü		ö		§	ß	ä	ü	Ö							
Belgium					ù		à	·	é	è	ç							
Canada (French)	à		'	,	ù			·	é	è	ç							
Denmark/Norway	#		⌘	Å	ø		Æ	Ø	ü	æ	å							
Finland/Sweden	§		⌘	Å	ö	é	Ä	Ö	ü	ä	å	É						
France	°		§		ù		ℒ	à	·	é	è	ç						
Italy	°		é		ò	ù	ℒ	§	ì	à	è	ç						
Japan (English)	ℒ		!	¥	⌋				-									§
Portugal					õ		Ã	Õ	ç	ã	'	Ç						
Spain				Pts	⌋	ñ	Ñ	'	·									
Spanish-Speaking					⌋	ñ	Ñ		·									
United Kingdom	§		!	ℒ	⌋				-									
Swiss German	Ä		Ü		:		#	§	ß	ä	ü	ö						
Swiss French	°		§		:		#	à		é	è	ç						

The characters shown in the following figure were newly defined for models later than 5251.

Language Group	Hex Code	Character
Austra/Germany	43	{
	59	-
	63	[
	B5	@
	CC	
	DC	}
	EC	\
	FC	]
Belgium	44	@
	48	\
	51	{
	54	}
	BD	—
	DD	
Denmark/Norway	47	}
	67	\$
	70	
	80	@
	9C	{
	9E	[
	9F	]
	DC	—
Finland/Sweden	43	{
	47	}
	51	'
	63	#
	67	\$
	71	\
	9F	]
	B5	[
	CC	
	DC	~
	EC	@
France	44	@
	48	\
	51	{
	54	}
	79	μ
	90	[

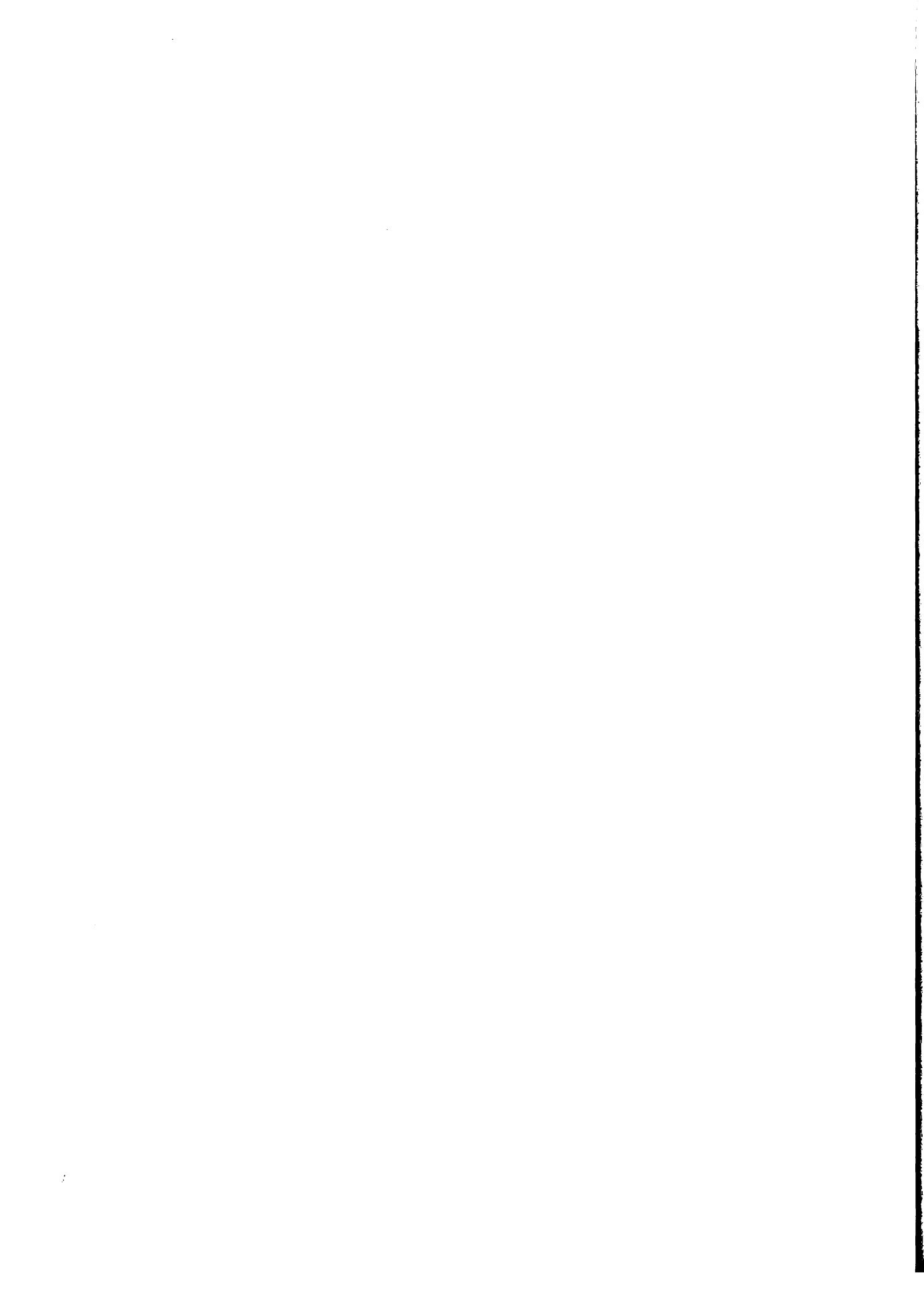
Language Group	Hex Code	Character
France	A0	'
	B1	#
	B5	]
	BD	~
Italy	44	{
	48	\
	51	]
	54	}
	58	—
	90	[
	B1	#
	B5	@
	CD	
	DD	,
Portugal	46	{
	48	~
	66	#
	68	\
	BE	}
	CF	
	EF	@
Spanish Speaking	49	
	69	#
	BA	^
	BB	!
	BD	—
United Kingdom	B1	[
	BA	^
	BB	]
	BC	~
U.S./Canada	B0	^
	BA	[
	BB	]

### A.3 PC ASCII Character Set Table

The PC uses the character set shown in the following table.

PC ASCII Character Set Table

		First Hexadecimal Character															
		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Second Hexadecimal Character	0	BLANK (NULL)	▶	BLANK (SPACE)	0	@	P	‘	p	ç	È	á	☒	☒	☒	∞	≡
	1	☺	◀	!	1	A	Q	a	q	ü	æ	í	☒	☒	☒	β	±
	2	☹	↑	"	2	B	R	b	r	é	FE	ó	☒	☒	☒	γ	≥
	3	♥	!!	#	3	C	S	c	s	à	ô	ú	☒	☒	☒	π	≤
	4	♦	¶	\$	4	D	T	d	t	ä	ö	ñ	☒	☒	☒	Σ	f
	5	♣	§	%	5	E	U	e	u	â	õ	Ñ	☒	☒	☒	σ	∫
	6	♠	■	&	6	F	V	f	v	á	û	à	☒	☒	☒	μ	÷
	7	•	↓	'	7	G	W	g	w	ç	ù	o	☒	☒	☒	τ	≈
	8	●	↑	(	8	H	X	h	x	ê	ÿ	ï	☒	☒	☒	Φ	°
	9	○	↓	)	9	I	Y	i	y	ë	Ö	∟	☒	☒	☒	⊖	•
	A	◐	→	*	:	J	Z	j	z	è	Ü	∟	☒	☒	☒	Ω	•
	B	♂	←	+	;	K	I	k	{	ï	ç	½	☒	☒	☒	δ	√
	C	♀	└	,	<	L	\	l		ï	£	¼	☒	☒	☒	∞	η
	D	♪	↔	-	=	M	J	m		ï	ÿ	ı	☒	☒	☒	∅	²
	E	♫	▲	.	>	N	^	n	~	À	Pts	«	☒	☒	☒	€	■
	F	☼	▼	/	?	O	_	o	Δ	Á	f	»	☒	☒	☒	∩	BLANK FF

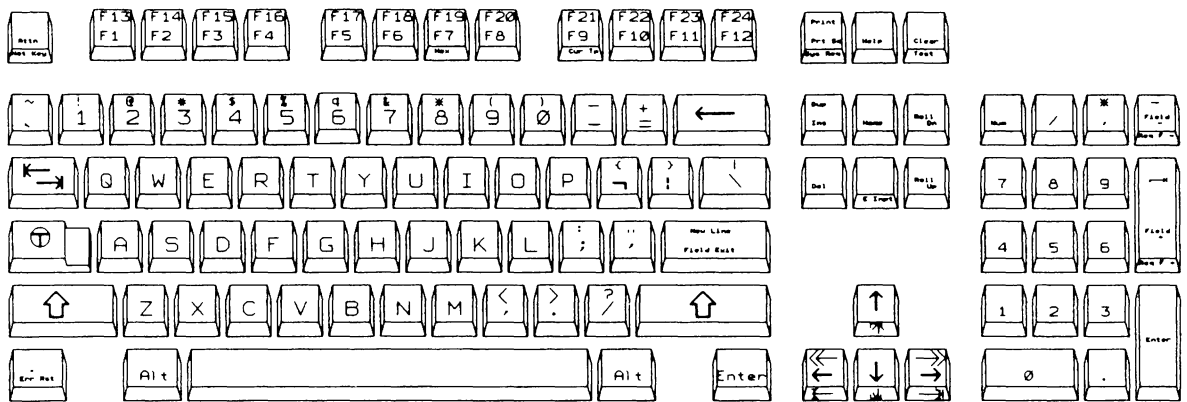


# Appendix B.

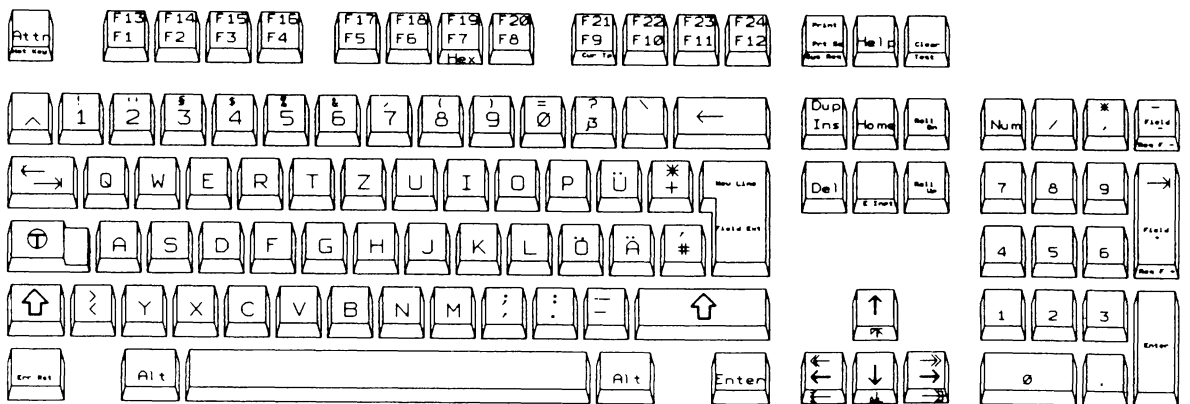
## Keyboard Layouts

The following illustrations shows the 101-key keyboard layout in sixteen language versions.

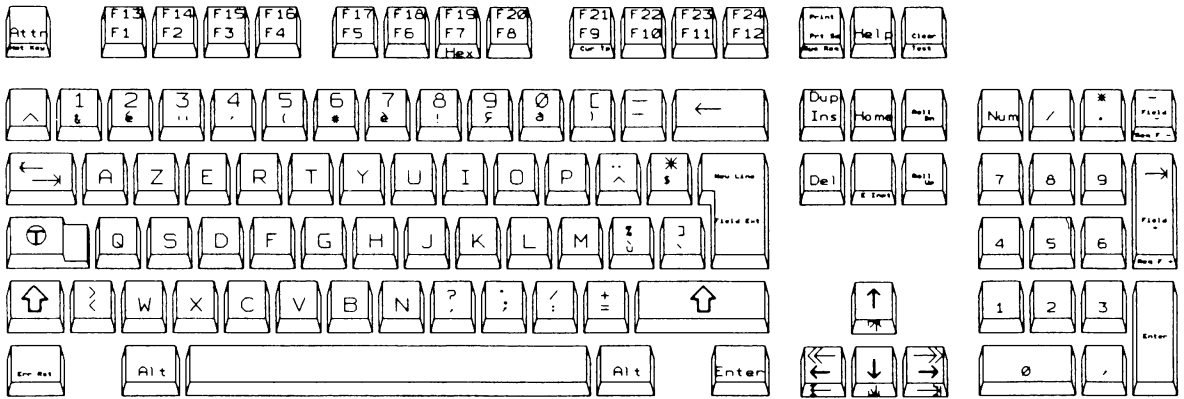
### U.S. English 101-key Keyboard Layout



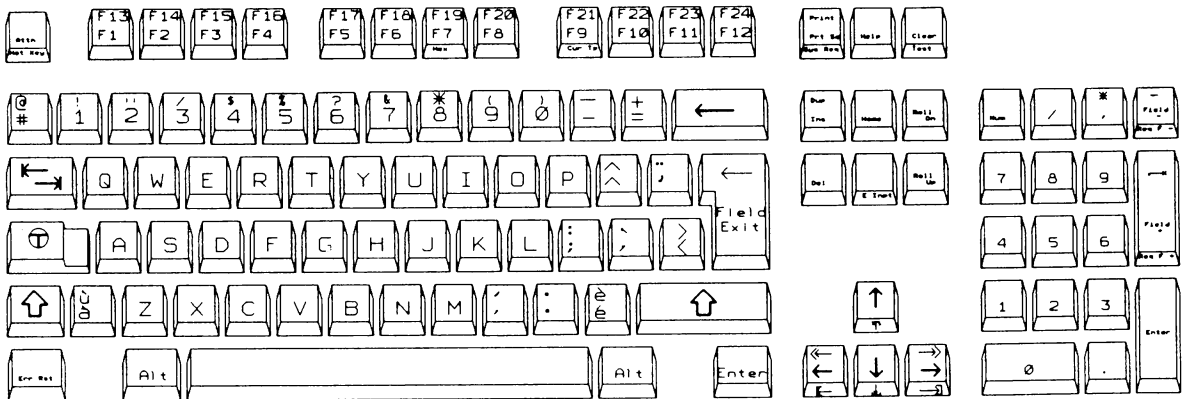
### Austrian/German 102-key Keyboard Layout



### Belgian 102-key Keyboard Layout

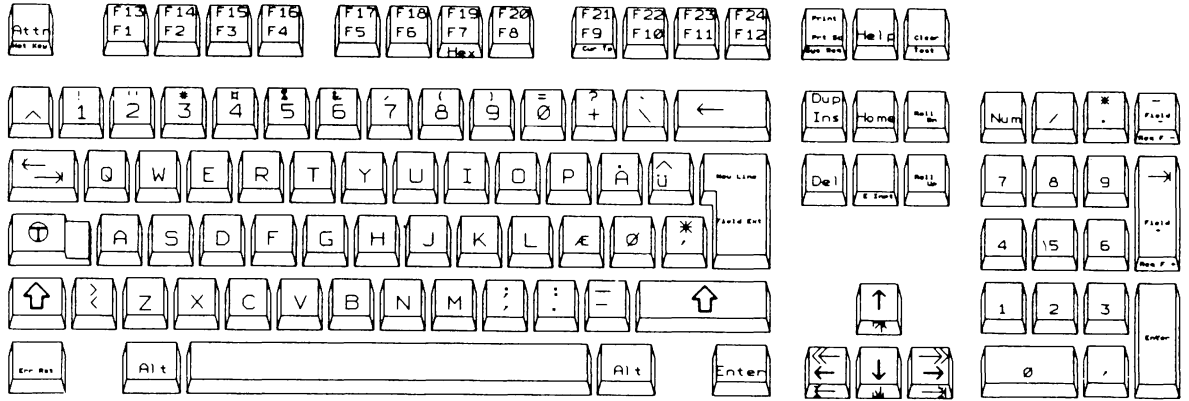


### Canadian French 102-key Keyboard Layout

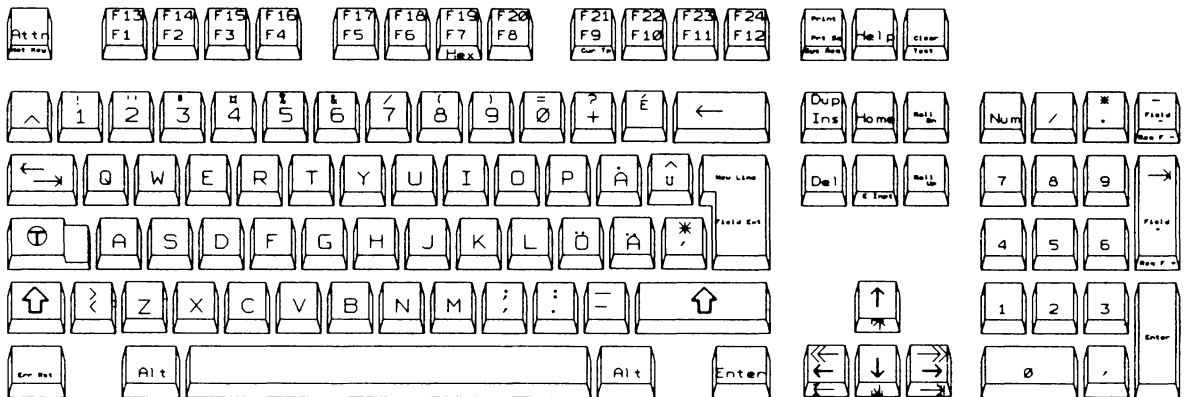




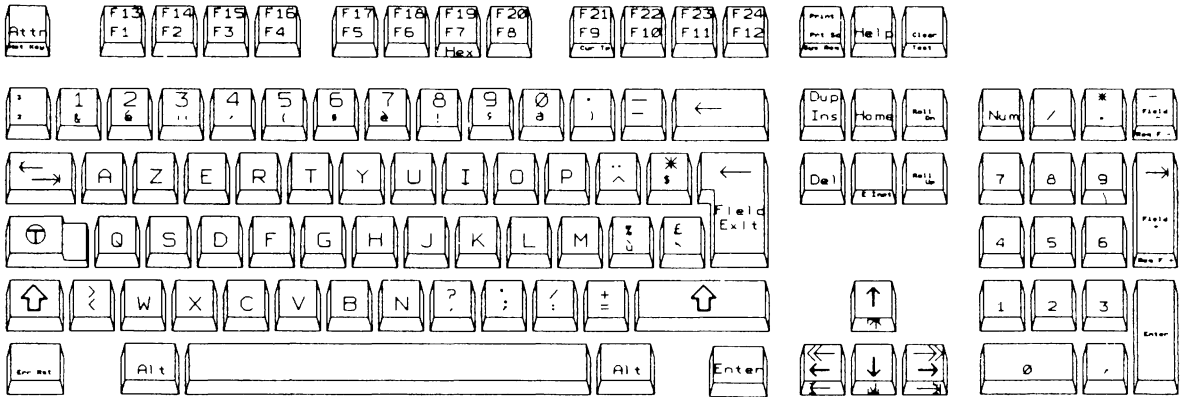
Danish 102-key Keyboard Layout



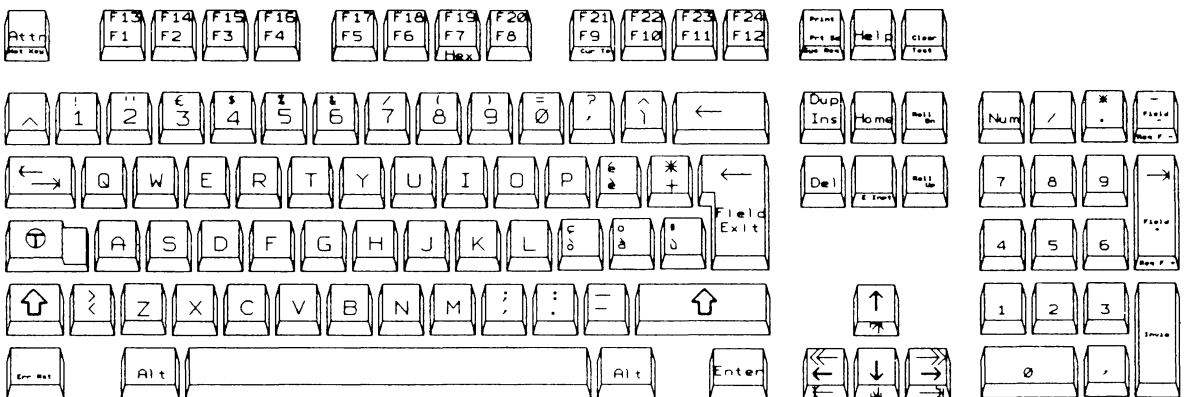
Finnish/Swedish 102-key Keyboard Layout



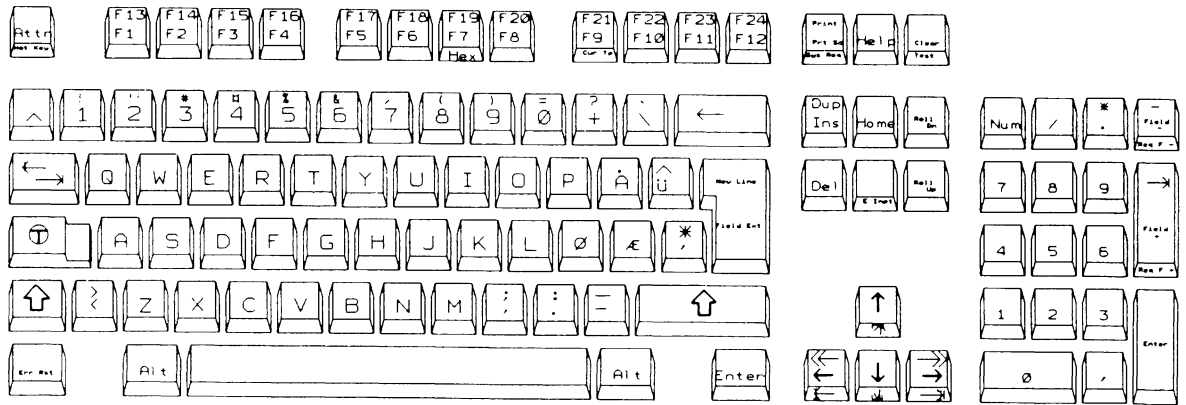
**French (AZERTY) 102-key Keyboard Layout**



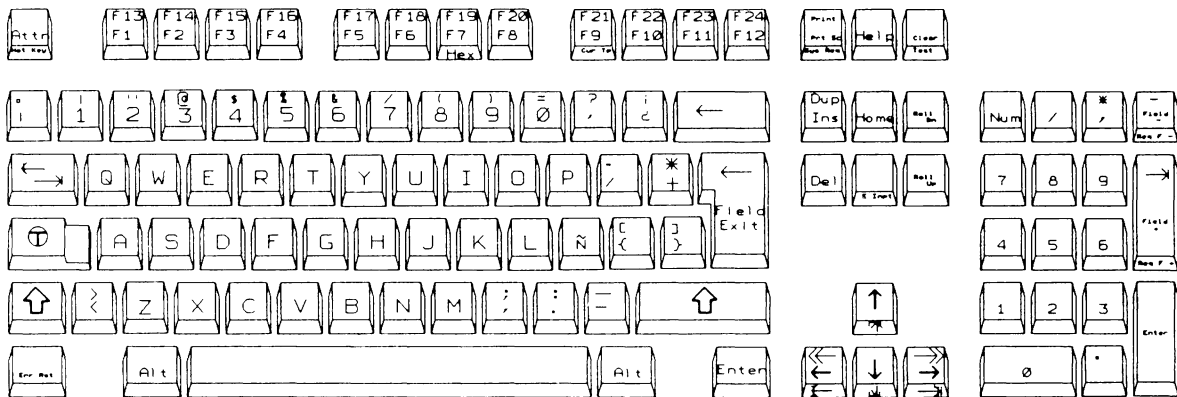
**Italian 102-key Keyboard Layout**



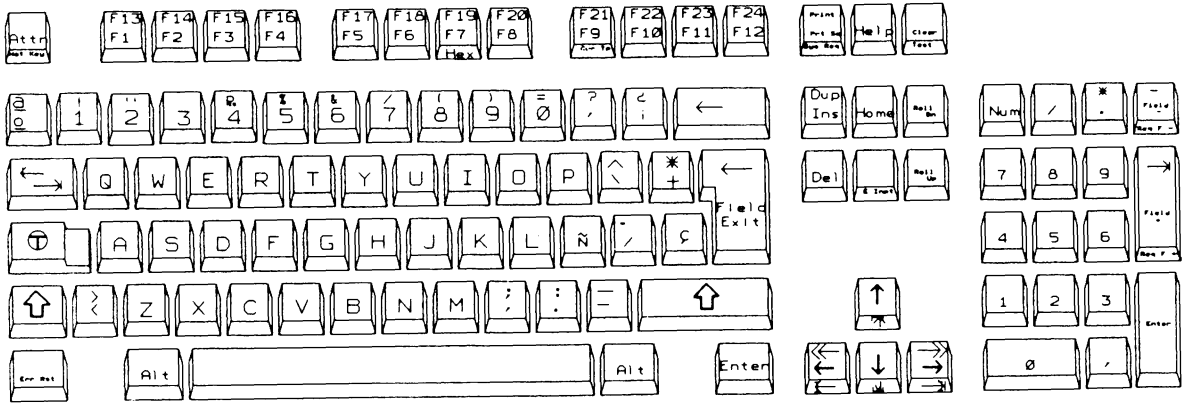
Norwegian 102-key Keyboard Layout



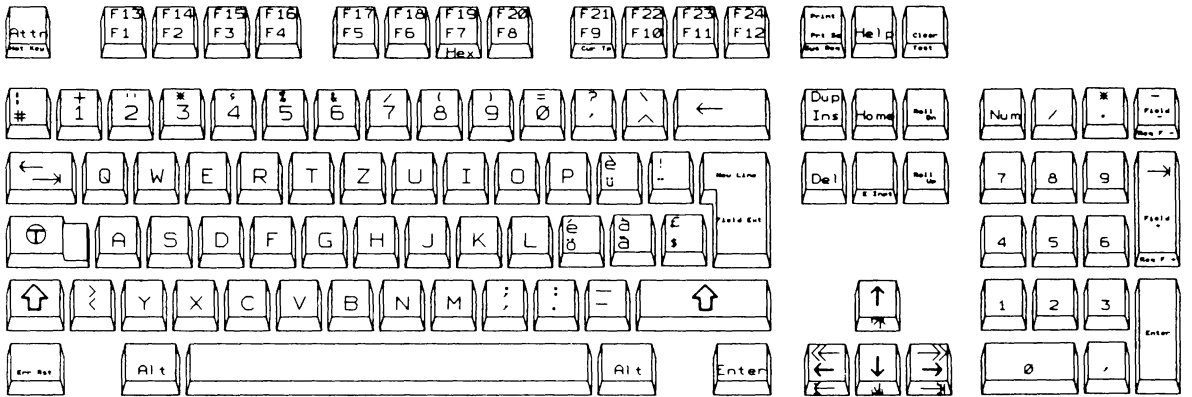
Speaking-Spanish 102-key Keyboard Layout



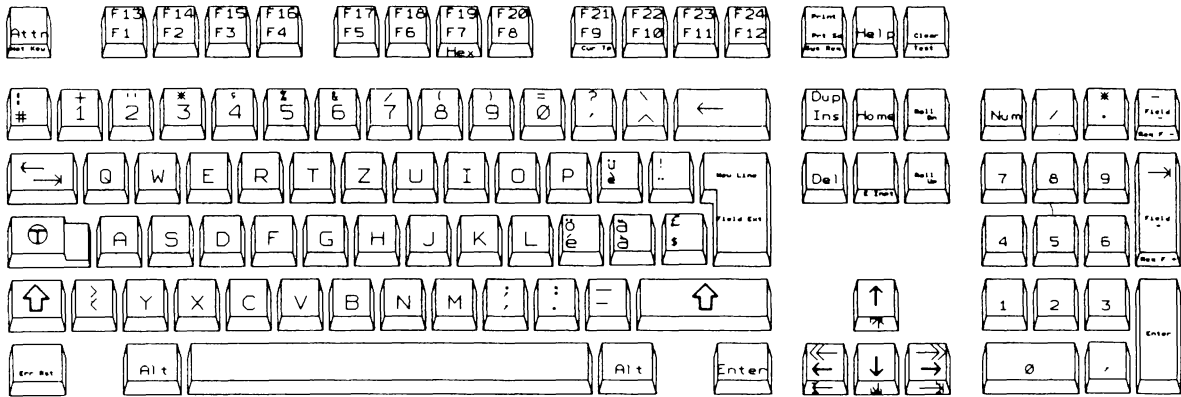
**Spanish 102-key Keyboard Layout**



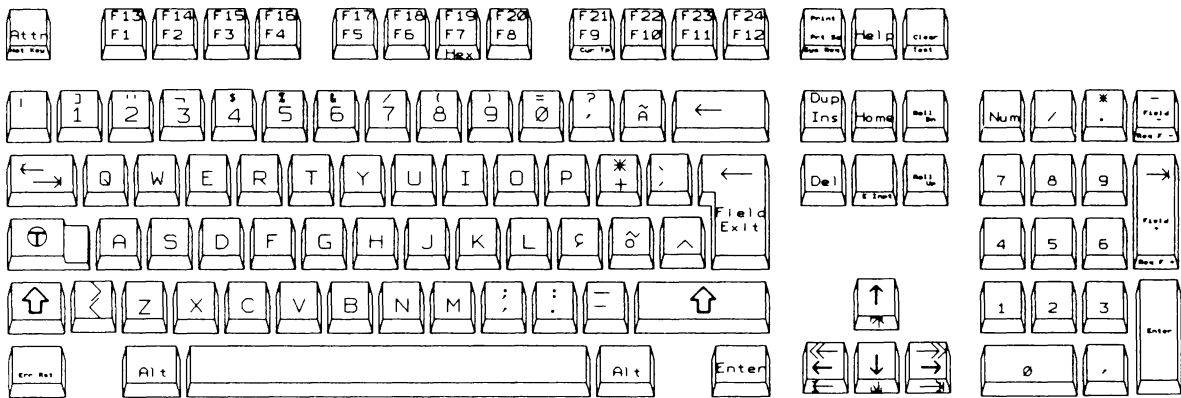
**Swiss-Bilingual-German 102-key Keyboard Layout**



**Swiss-Bilingual-French 102-key Keyboard Layout**

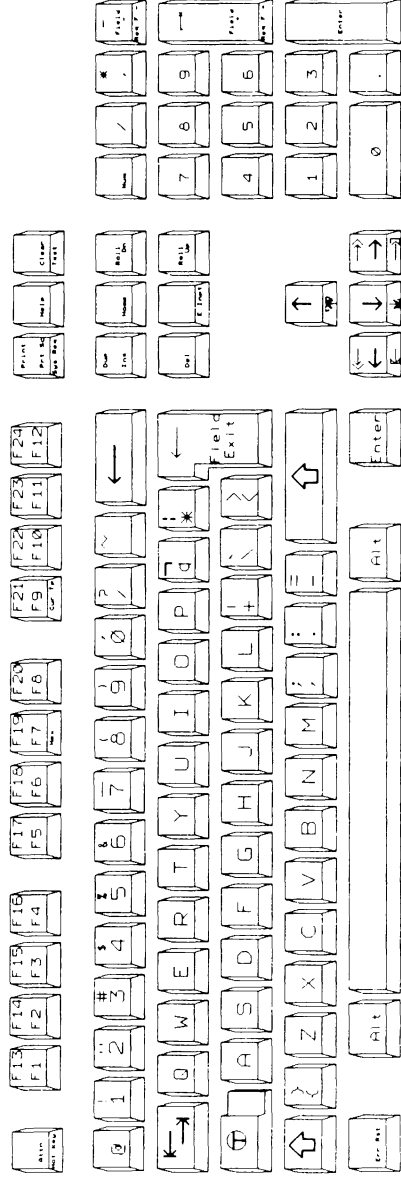


**Portuguese 102-key Keyboard Layout**



Appendix B

Dutch 102-key Keyboard Layout



U.K. English 102-key Keyboard Layout

