MUSIC PRINTING SYMBOL EDITOR

March 1, 1985

the current System Symbol Library, you will lose them as you install
the enhanced file. To be safe, we suggest that before you begin
using the Symbol Editor to modify the System Symbol Library, you make
a backup copy of the .SLIB-6 file. And, as you develop your User
Library, you should make frequent backup copies of SYMLIB as well.

CONTENTS OF THIS MANUAL

The material in this manual is for informational purposes only and is subject to change without notice.

BASIC CONCEPTS

The Music Printing Symbol Editor allows you to design and modify
graphical symbols for Music Printing. While you probably do not want
to change the basic Music Printing symbols, you may want to extend
the set of accent marks or create special performance marks. Or, for
unusual modern or historical notation styles, you may wish to define
a complete set of symbols.

To run the Music Printing Symbol Editor, you need the same hardware
as is required for Music Printing.

For software you will be using three files, in addition to the Music
Printing system file (.SPLT-6). These are the Symbol Editor (SYMED),
the file containing the basic symbols used by Music Printing
(.SLIB-6), and a file containing your own symbols (SYMLIB). This
file will be created for you as you use the Symbol Editor. The other
files will be installed for you on the Winchester when you run the
Release J Installation Program. (SYMED will be placed in the
top-level catalog; .SLIB-6 will be placed with the system software in
the .SYSTEM subcatalog.)

Symbol Libraries

There are now two symbol libraries: the System Symbol Library
(.SLIB 6) and the User Symbol Library (SYMLIB). Each library has
room for 128 symbols. In the Symbol Editor and Music Printing
itself, you can move back and forth between the two libraries
accessing different sets of symbols. In both programs, one library
can be accessed at a time and is called the current library.

The System Symbol Library contains the basic preset symbols.* These
symbols are accessed automatically by Music Printing to form the
clefs, notes, and so forth. You may add them to your notation while
you are using the Music Printing Editor if you have accessed the
System Symbol Library. You may also recall symbols from the System
Symbol Library at the Symbol Editor and then modify them as desired.

Normally, you will store modified system symbols or completely new
ones in the special User Symbol Library. This will allow you to keep
the preset and modified symbols separate.

You can add to or replace the symbols in the System Symbol Library as
well. However, if you replace an original system symbol with one of
your own, you will no longer have access to the original. For
example, you could change the G clef and then store it in the System
Symbol Library in place of the preset G clef. Then, Music Printing
will automatically print your modified G clef rather than the preset.
This may or may not be what you really want to do. Note also that
New England Digital will from time to time release enhanced versions
of the System Symbol Library. If you have your own symbols stored in

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* See the Appendix for a printout of the System Symbol Library.

the current System Symbol Library, you will lose them as you install
the enhanced file. To be safe, we suggest that before you begin
using the Symbol Editor to modify the System Symbol Library, you make
a backup copy of the .SLIB-6 file. And, as you develop your User
Library, you should make frequent backup copies of SYMLIB as well.

THE DISPLAY SCREEN

To activate the Symbol Editor, type

```
ENTER :
OLD SYMED
RUN
```

The Symbol Editor main display screen will now appear:
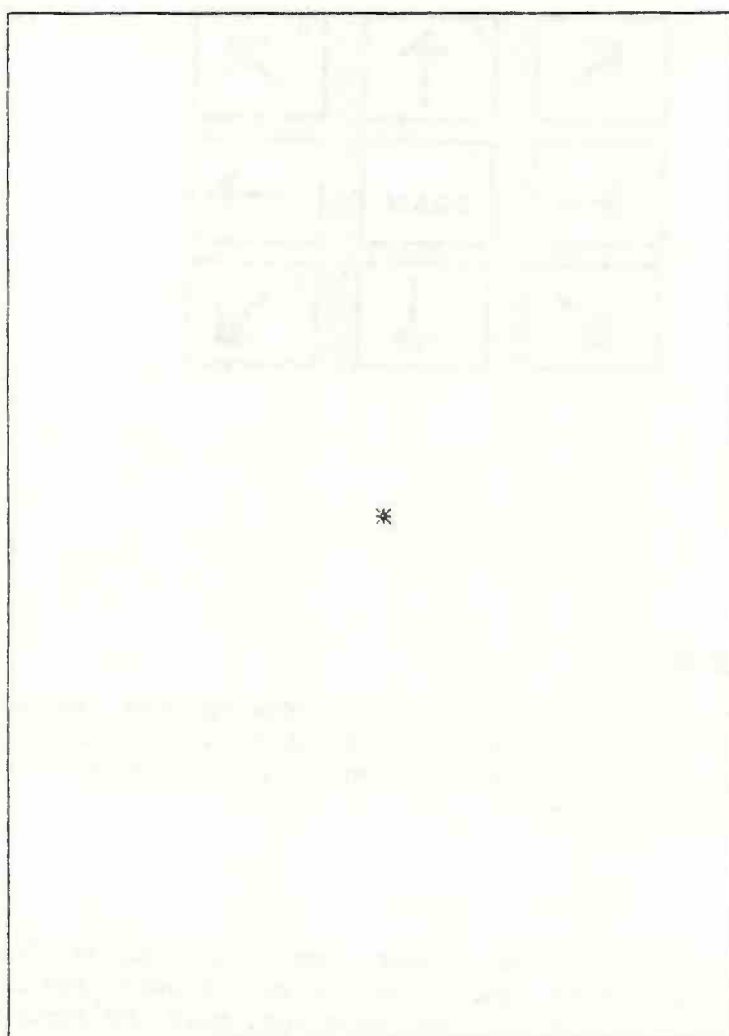
SYMBOL EDITOR
February 21, 1985

Name:	
Code:	1
X-Center:	16
Y-Center:	23
Advance:	0
Invert:	No
Library:	User
Draw Mode:	Mark
Effect:	Draw
Grid:	Off

Status: Unmodified

The display screen has three main areas: the drawing area, the actual-size area, and the menu. There are two cursors: the drawing cursor (a +), initially located on top of the symbol centerpoint (an X), in the center of the drawing area; and the menu cursor, initially located on the Name item on the menu.

The Drawing Area

The large square on the left of the screen is where you draw or edit a symbol by turning on and off 1/8-inch squares. Each square represents a single pixel, or dot, in the symbol. You move the drawing cursor around the drawing area with the keypad keys 1-9. In the default drawing mode, you will not draw any pixels as you move the cursor. Press KP 5 to draw a single pixel at the current drawing cursor location.
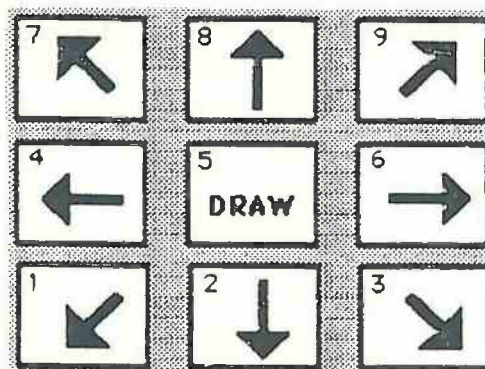
The Actual-Size Area

As you draw or recall a symbol into the drawing area, you will see it in the right-hand box as it will appear in Music Printing notation. The actual-size symbol will be constantly updated as you modify the symbol in the drawing area.

The Menu

The menu to the right of the drawing area is used to set the attributes of the current symbol and the edit drawing modes you want to use. To change any of the menu settings, move the menu cursor to the item with the arrow keys. Then either type in a new value and press RETURN or toggle between options with the spacebar. In addition, several of the items may be changed when the menu cursor is located anywhere on the menu simply by pressing a particular key. Finally, on the code item, simply pressing RETURN assigns a new code (see below).

Now we will go down the menu and describe each item.

Name:

Each symbol has a name consisting of from one to four
characters. Duplicate symbol names cannot exist within the
same library. You use the symbol name in Music Printing at
the Keypad Menu to add the symbol to a symbol bank and in the
Editor to add a symbol with the TAB procedure or keypad.

The Name item is used to assign a name to a symbol or to
recall a symbol by name.

To assign a name to a symbol, move the menu cursor to the
Name item and type in a new name of up to four characters.
Then press the down arrow (NOT RETURN!) and the symbol name
will be drawn to the right of the actual-size area. You may
also assign a name as you enter the symbol into the current
library; see "Entering and Recalling Symbols."

To recall a symbol by name, move the menu cursor to the Name
item and type a name of a symbol in the current library and
press RETURN. Again, see "Entering and Recalling Symbols."

Code:

While you, the user, identify your symbols by name, the Music
Printing program stores and retrieves all symbols by symbol
code, or number from 1 to 128. (There may be 128 symbols in
each library.) Once a code has been assigned to a symbol, it
cannot be used for another symbol.

The Code item is used to assign a code to a symbol or to
recall a symbol by code.

To assign a code to a symbol, move the menu cursor to the
Code item and press RETURN. The Symbol Editor will assign
the first available free number in the current library. You
can also deliberately select your own code by typing an
unused number and pressing the up or down arrow.

To recall a symbol by code, move the menu cursor to item,
type a number and press RETURN. If there is no symbol
assigned to that number, nothing will happen. For more on
this topic, see "Entering and Recalling Symbols."

X-Center and Y-Center:

The centerpoint of the symbol represents the point in the
symbol that will be aligned with the edit menu cursor when
you add a symbol to the notation in the Music Printing
Editor. The centerpoint is determined by X- and Y-center
settings. The X-center sets the vertical axis and the
Y-center sets the horizontal axis.

Move the menu cursor to either X-Center or Y-Center items and
type in the desired value.

If you change the X-Center, the small marks on the top and
bottom of the actual-size area will be moved to reflect the
new vertical axis.

You can also set the centerpoint in a more visual way by
moving the drawing cursor to the desired point in the drawing
area and then pressing KP comma. Both X-Center and Y-Center
settings will be changed to reflect the new position, as will
the marks on the top and bottom of the actual-size area.

Advance:

This item determines how far the Music Printing edit cursor
will be placed after the symbol has been drawn on the
notation. The edit cursor will be "advanced" the specified
number of pixels to the right of the symbol after the symbol
is plotted.

Move the menu cursor to the Advance item and type in the
desired value.

To preview the effect of this setting, you may press KP
minus. This draws the symbol at the advance position to the
right of the symbol in the actual-size area. Press KP minus
again to erase the advanced symbol.

Invert:

This item turns on or off the "invertable" option. Symbols
with the invertable option set to "Yes" can be drawn either
right side up or upside down in the Music Printing Editor.
One invertable system symbol is the fermatta. When you add
any invertable symbol in the Music Printing Editor, then the
query line will ask you to specify a direction for the
symbol. You then press the up arrow to draw the symbol right
side up, or press the down arrow to draw the symbol upside
down.

Move the menu cursor to the Invert item and press the
spacebar to toggle between "Yes" for invertable and "No" for
not invertable.

The Symbol Editor will not invert the symbol for you on the
screen, only when printing it as part of an edited file.

Library:

This item lets you select either the System Symbol Library or
the User Symbol Library for the current library. It may then
be used to recall or enter symbols.

Move the menu cursor to the Library item and press the
spacebar to toggle between libraries. For more on this, see
"Entering and Recalling Symbols."

Draw Mode:

This item controls the type of drawing the drawing cursor
will do: mark, line, or fill. With "Mark," you can move the
drawing cursor around without making any marks and press KP 5
to draw a single pixel at the current cursor location. With
"Line," you will draw a pixel with each move of the drawing
cursor, thus creating lines on the screen. With "Fill,"
moving the drawing cursor will create a fill box; pressing KP
5 will fill it in.

Press ENTER at any time to toggle between Draw modes. Or,
press KP period at any time to reset to "Mark." Or, move the
menu cursor to the Draw Mode item and press the spacebar to
toggle between modes.

Effect:

This item also affects the drawing. It determines whether
your pixels will be drawn or erased. With "Draw," each time
you "Mark", "Line," or "Fill" you will be drawing pixels in
all the appropriate areas. With "Erase," you will be erasing
pixels in all the draw modes. With "Complement," you will
complement pixels. That is, as you draw across a pixel that
is currently erased, it will be drawn. If it is currently
drawn, it will be erased.

Press KP 0 at any time to toggle between Effect modes. Or,
press KP period at any time to reset to "Draw." Or, move the
menu cursor to the Effect item and press the spacebar to
toggle between modes.

Grid:

The optional gridding can be used to see how the drawing area
is divided into pixels.

Move the menu cursor to the Grid item and press the spacebar
to turn it on and off.

Status Line

As soon as you have edited the symbol in any way or changed
any of the symbol attribute items on the menu, the status
line will indicate that the current symbol has been modified.
The status line will say "modified" until you enter the
symbol into the current library at which point the status
line will say "unmodified".

Message and Query Line

Below the status line is a message and query line which will
ask you questions and give you messages from time to time.

ENTERING AND RECALLING SYMBOLS

This section shows you how to enter and recall symbols and manage your symbol libraries.

Once you create a symbol, you enter it into the current library in computer memory. Then, in a separate action, you update the symbol library on the disk with the contents of the current library. There are three commands with which you may update the disk libraries: Replace Library, Change Library, and Exit. The first time you update the User Symbol Libary with any of these three methods the file SYMLIB will be created for you on your disk. After that, each time you update the User Symbol Library you will replace SYMLIB. You will replace .SLIB-6 (the system symbol set) each time you update the System Symbol Library.

You may also recall symbols from the current library, view the catalog of the current library, change libraries (from User to System and vice versa), delete or rename symbols in the current library, print a single symbol or an entire library, and exit from the Symbol Editor.

Note that with all these commands you can use the DELETE key to abort the command.

Change Library   Move to Library item, press spacebar

To switch between libraries, move the menu cursor to the Library item and press the spacebar.

If you have modified the current library by entering, modifying, or deleting a symbol, the query line will first ask you if you want to update the corresponding symbol library on the disk. Type Y for "Yes" or N for "No". Note: If you type N for No, you will lose all modifications to the current library since the last disk update. Press DELETE instead of Y or N to cancel the command.

Enter Symbol   PF2

To enter the current symbol into the current library, press PF2. A prompt will appear on the query line asking for a symbol name. You may press RETURN to respond with the name that appears on the screen, or you may type in a name and then press RETURN. If this is a new symbol with a new name and free code, the symbol will be immediately entered into the current library. If you are replacing a symbol with the same name and code, you will be asked to "confirm" by pressing RETURN. The symbol will then be entered. You may cancel by pressing DELETE.

There are two situations where you will not be able to enter a symbol:

a. If there is already a symbol entered in the library which has the same code as your current symbol and you type in a different name, then you will get a message that that symbol code already exists. Simply change the code as described previously and re-enter your symbol.

b. If there is already a symbol in the library which has a different code from your current symbol but has the same name that you type in, you will get a message "cannot duplicate symbol names." Re-enter the symbol and type in a different name.

The symbol will only be entered into the current symbol library in computer memory. It will not be entered into the symbol library on the disk until you use the Change Library, Replace Library, or Exit commands.

You can recall symbols from either library by selecting the desired library first.

<u>Recall Symbol</u>   Type name, press RETURN
                                                    Type code, press RETURN

To recall a symbol from the current library, move the menu cursor to the Name item, type in the symbol name, and press RETURN. Or, move the menu cursor to the Code item, type in the symbol code, press RETURN. A "Please Wait..." message will appear on the message line while the symbol is being drawn. If there is no symbol corresponding to the specified symbol name, you will be told so. If there is no symbol corresponding to the specified symbol code, nothing will happen.

If you have modified the current symbol, and you try to recall another symbol, the Symbol Editor will ask you if you want to enter the current symbol. Type "Y" for Yes or "N" for No. Or, press DELETE to cancel the command.

You can recall symbols from either library by selecting the desired library first.

<u>Delete Symbol</u>   PF3

To delete a symbol from the current library, press PF3. A prompt will ask for the name of the symbol to delete. You may press RETURN to respond with the symbol name listed on the menu or you may type in a name and press RETURN. Then, the symbol will be deleted from the current library. The display screen will remain unchanged, unless you have deleted the symbol with the same name and code as the current symbol. Then the status line will indicate that the symbol is "modified" because it is different from the corresponding symbol in the library.

Press DELETE instead of RETURN to cancel the command.

Clear Symbol   PF1

To erase the current symbol from the drawing area, press PF1.
If the current symbol has been modified, the query line will
ask you if you want to enter the current symbol before
erasing it. Type N if you don't want to enter it. Type Y if
you do want to enter the current symbol. The query line will
then ask you for the symbol name. Press RETURN to use the
current name or type in a name and press RETURN. The symbol
will then be entered in the current library and the drawing
area will be cleared.

Press DELETE instead of RETURN to cancel the command.

Rename Symbol   BACKSPACE

To rename a symbol in the current library, press BACKSPACE.
The query line will ask for the old symbol name. You can
press RETURN to use the current symbol name and rename the
symbol corresponding to the current symbol. Or type in the
name of any symbol and press RETURN. Then, a second prompt
will appear. Type in the new name and press RETURN. If you
have renamed a symbol which had the same name as the current
symbol, the status line will now say "modified" because the
current symbol has not be renamed. If you have renamed a
symbol with a different name from the current symbol, the
status line will remain "unmodified."

NOTE: You cannot duplicate symbol names.

Display Quick Catalog   PF4

To view a catalog of symbol names and codes in the current
library, press PF4.

If you have more than one screenfull of symbols, the query
line will ask you if you want to look at the remaining list
of symbols. Press RETURN to see the remaining symbols;
otherwise, press any other key to return to the main display
screen.

Display Symbol Catalog   TAB

To view a catalog of the actual symbols, along with their
names and codes, in the current library, press TAB. You may
interrupt this display at any time by pressing the spacebar.
You will then be returned to the main display screen.

Press RETURN to see additional screens. On the last screen
of the symbol catalog, you can press any key to return to the
main display screen.

Print Symbol or Catalog   LINEFEED

To print a hardcopy of the current symbol or of the current
library catalog, press LINEFEED. When you press LINEFEED,
the query line will ask you if you want to print the symbol
or the library.

If you want to print the current symbol, press S. If you
want to print all the symbols in the current library, press
L. If you want to cancel the printing request, press any
other key.

Replace Symbol Library   CTRL-R

To replace the disk library with the current library, press
CTRL-R. If you have modified the current symbol, you will be
asked if you wish to enter it into the current library before
updating. The disk library that will be updated will be the
library currently selected on the menu.

It would be wise to use this command periodically. Otherwise
you may lose the symbols you have added to your current
library.

Exit from Symbol Editor   BREAK

To return to the Monitor, press BREAK. If your current
symbol has been modified, the query line will first ask you
if you want to enter the symbol. If the current library has
been modified, the query line will then ask you if you want
to update the disk library with the current library.

Press DELETE to cancel the command.

CAUTION: Use the BREAK key only to exit the Symbol Editor.
If you press BREAK accidentally while the terminal screen is
filling with a graphic display, the screen may freeze. If
this happens, unfreeze the screen by pressing CTRL-Q once or
NO SCROLL twice.

USING NEW SYMBOLS

Once you are back at the Monitor, you can recall a sequence and type PLOT to activate Music Printing.

Next go to the Keypad Menu by pressing KP 3. You will now see the Keypad Menu displaying 48 symbols from the System Symbol Library. (In Music Printing, the default current library is the System Symbol Library, whereas in the Symbol Editor, the opposite is true.) As always, you can change the symbols in these banks by typing in any names from the System Symbol Library.

Now press LINEFEED to change the display to the User Symbol Library. The top of the screen will say "User Symbol Library" and there will be six empty banks into which you may type any symbol names from your User Symbol Library. You can only add symbols from the User Symbol Library to the User Symbol banks. Whatever symbols you type in will be saved with the sequence along with any other editing information.

Now go to the Music Printing Editor, so that you can try adding your new symbol. You will see next to the Symbol Bank

1 Sys

which means that symbol bank 1 and the System Symbol Library are active. Press LINEFEED and

1 Usr

will appear. Any symbols you added to bank 1 will be displayed in the box. You can now use the appropriate keypad keys to add the symbols. Or you can use the TAB procedure to add other user symbols.

Note that the centerpoints you assigned to the symbols will be aligned with the edit cursor position. After each symbol is drawn the edit cursor will be positioned at the point determined by the cursor advance.

If you want to return to the System Symbol Library, either at the Editor or at the Keypad Menu, press LINEFEED.

Now that you see how the two programs work together you will want to return to the Symbol Editor and start designing your own distinctive symbol set.

ORGANIZING THE USER LIBRARY

As symbols are added and deleted from your user library, it may at some point become desirable to organize your library, that is, put symbols in numerical order, or some other order that is useful to you. Symbols can be moved around in the library, but how to do this may not be immediately clear to the user. Problems occur because at no time can you duplicate names or code numbers.

To move a symbol, you must first recall it to the screen. Give the symbol a new name and an unused code number. Then use the PF2 key to enter the symbol into the new location. After deleting the symbol from the old location, you can use the rename command to give the symbol its original name.

Sometimes this process must be used repeatedly to move the symbols into the desired locations. For instance, if you have symbols scattered about in locations 1 through 15, it may be necessary to move them all to locations 16 through 30, and then replace them one at a time in the desired order. Note that moving symbols around becomes more difficult as the library fills up, and when the library is completely full it is impossible to move symbols without first deleting at least one of them.

The status line will indicate whether or not the current symbol has been modified.

All error messages will appear in reverse video at the bottom of the screen. A "please wait" message will appear while a symbol is being drawn.

Cannot duplicate symbol names

This message means that you must type in a different symbol name since the one you specified already exists in the current library.

Symbol code already exists

This message means that you must specify a different symbol code on the menu. If you move the cursor to the Code item and press RETURN, a free symbol code will be assigned to the current symbol.

The Symbol Library is full

This message means that you already have 128 symbols in the current library. You have reached the maximum number of symbols. You may delete symbol(s) you don't need to make more room for additional symbols.

Not enough disk space to save Symbol Library

The message means there is not enough room in the current catalog to store the current library. You must make more room by unsaving files or making a larger subcatalog.

The User Symbol Library expands as you add symbols to it. Its maximum size will be 50 sectors, so you may wish to set up your subcatalog big enough to hold such a file.

<Symbol name> is not in Symbol Library

This message means you have specified a name that does not exist. Try pressing PF4 for a catalog of the symbol names.

Symbol name cannot be null

This message means that you have tried to enter a symbol without giving it a name.

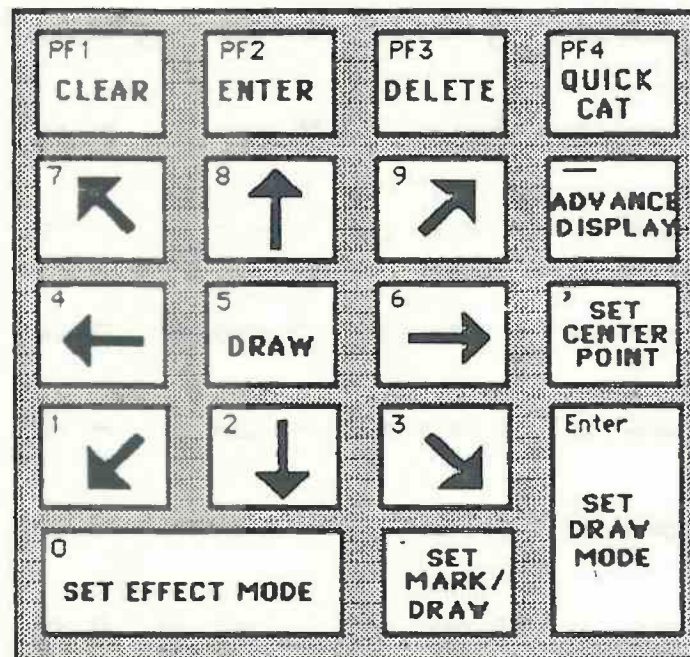# Catalog of System Symbol Library

	GCLF	2		CCLF	3		FCLF	6		DSHR	9		SHRP	10
	NATR	11		FLAT	12		DFLT	13		TENU	17		MARC	18
	SFOR	19		STAC	20		FERM	21		DBOW	22		UBOW	23
	HARM	24		SPIZ	25		SLSH	26		MORD	27		SMRD	28
	GRUP	29		DIAM	30		MFRM	31		SFRM	32		RRTK	33
	DOT	34		GRAC	35		TNOT	36		COM	51		SGNO	65
	CODA	66		PED	67		STAR	68		MREP	69		BREP	70
	BEND	74		BMID	75		F	81		M	82		P	83
	S	84		Z	85		TR	86		8VA	87		OO	88
	CAE	89		AE	90		BIGB	92		TRIL	93		LTRL	94
	R	95		T	96		MAJ	97		CFLT	98		CNAT	99
	DIM	100		HDIM	101		DSH	102		CDSH	103		WNOT	105
	HNOT	106		QNOT	107		WRST	113		QRST	114		GWNT	121
	GHNT	122		GQNT	123		2PIX	127		BKSP	128			

PF1 CLEAR	PF2 ENTER	PF3 DELETE	PF4 QUICK CAT
7 ↖	8 ↑	9 ↗	— ADVANCE DISPLAY
4 ←	5 DRAW	6 →	' SET CENTER POINT
1 ↙	2 ↓	3 ↘	Enter SET DRAW MODE
0 SET EFFECT MODE		. SET MARK/ DRAW	

TAB
SYMBOL CAT

BP
RENAME

BREAK
EXIT

SPACEBAR

TOGGLE ITEMS   INTERRUPT CAT

LF
PRINT