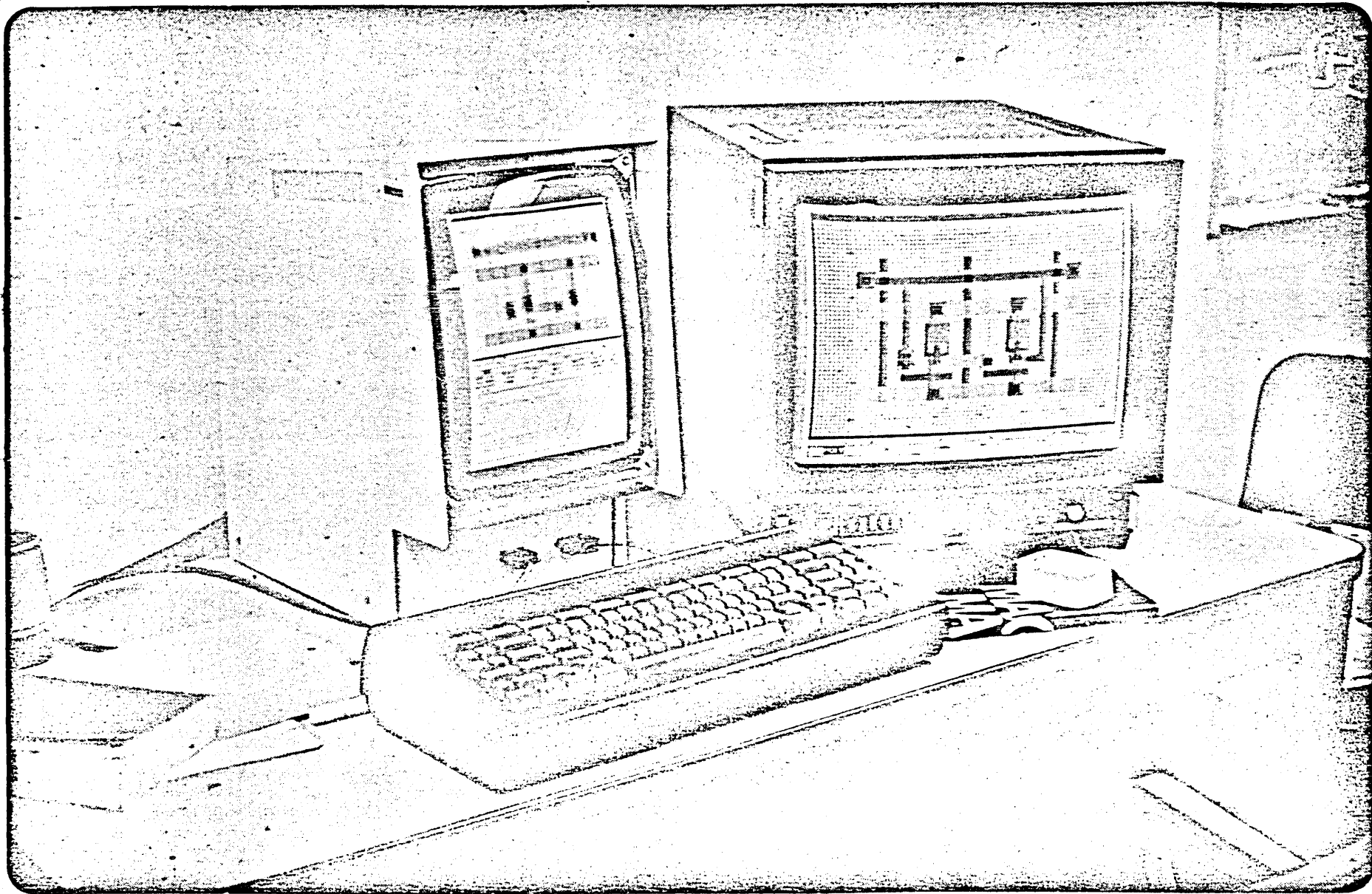
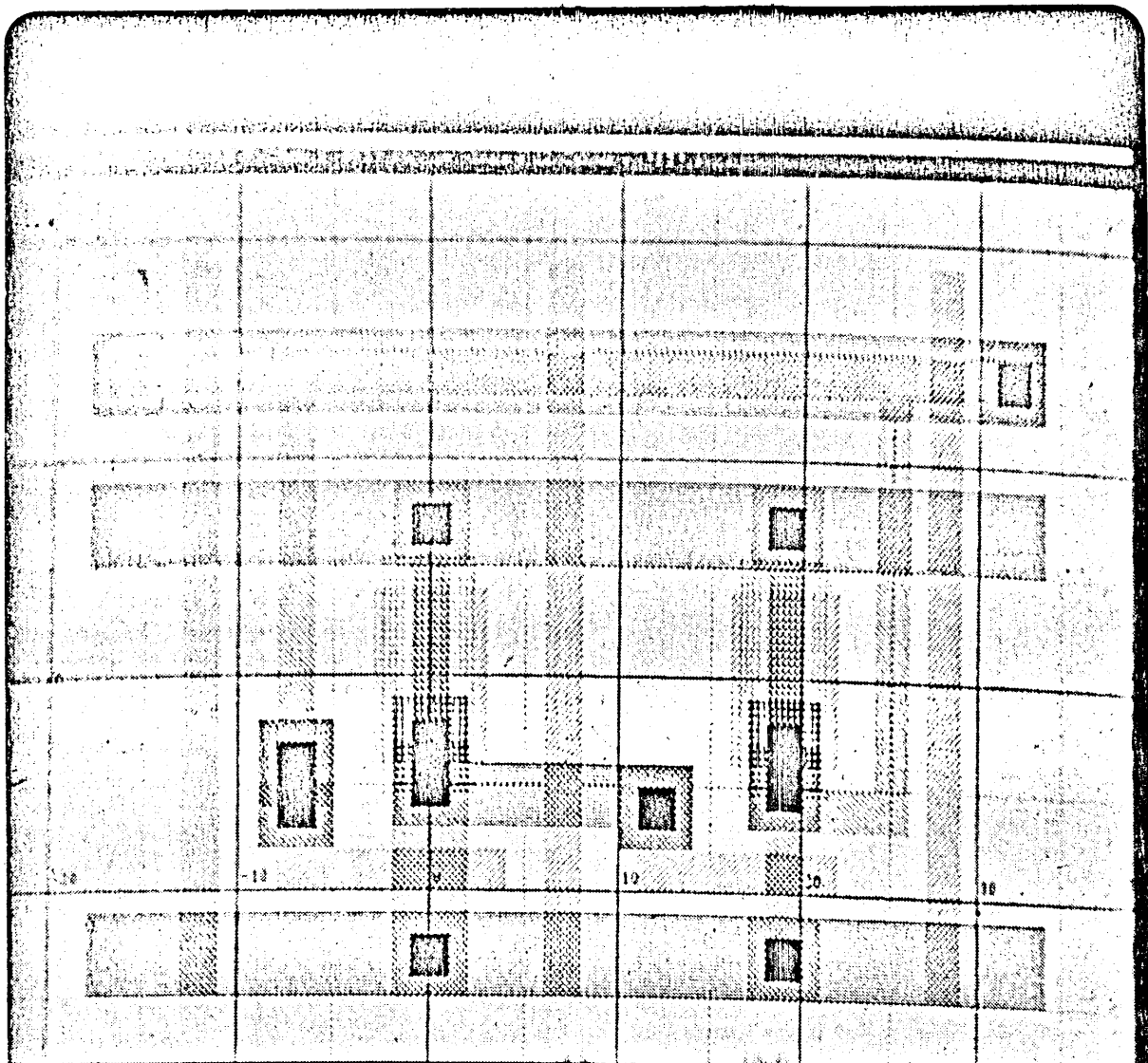


MIT Lisp Machine Keyboard.



MIT Lisp Machine Console

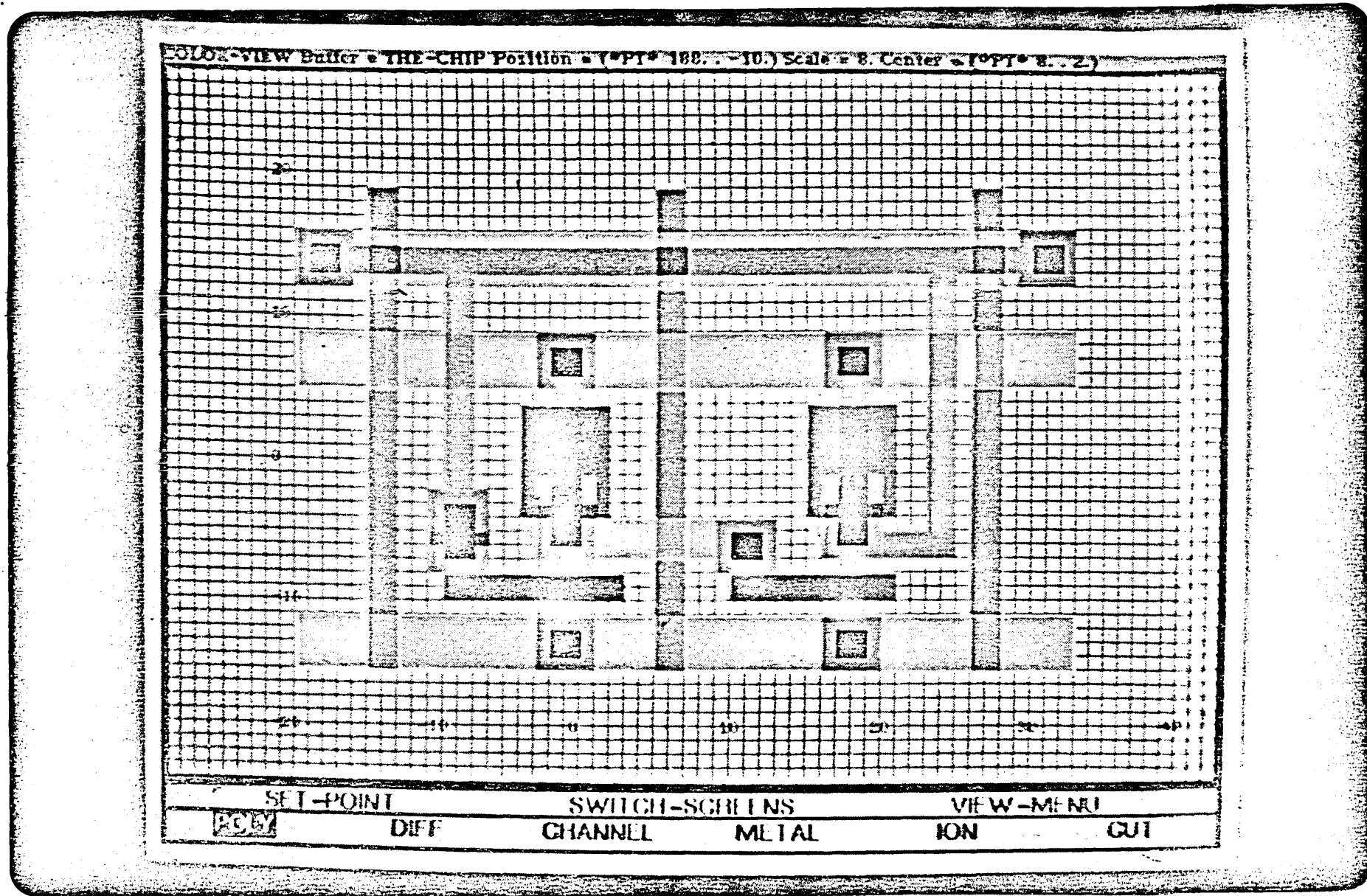


| SET-UP | | SWITCH-SCREENS | | | VIEW-MENU | |
|-------------|-----------|----------------|---------|----------|------------|---------|
| POLY | | BW-VIEW | | | THE-COP | |
| FILE | DIFF | CHANNEL | METAL | ION | CUT | |
| NEW-PROJECT | UN-SELECT | ADD-SELECT | SELECT | UNDELETE | DELETE | LAYOUTS |
| FILE-NAME | XFORM | COPY | MOVE | STRETCH | PARAMETERS | REFRAME |
| STARTDATE | WIRE | BOX | OUT-CUT | CUT | REFRESH | CLEAR |
| STOP | | | | | | |

(in 'batch')
 received the second of October, 1980; 6:20:26 pm
 the 2a mail.

 post:

 [press key Hardcopy wants the ITY]
 [press key Hardcopy wants typein]



MIT Lisp Machine Color Display (576x480)

Henry Baker

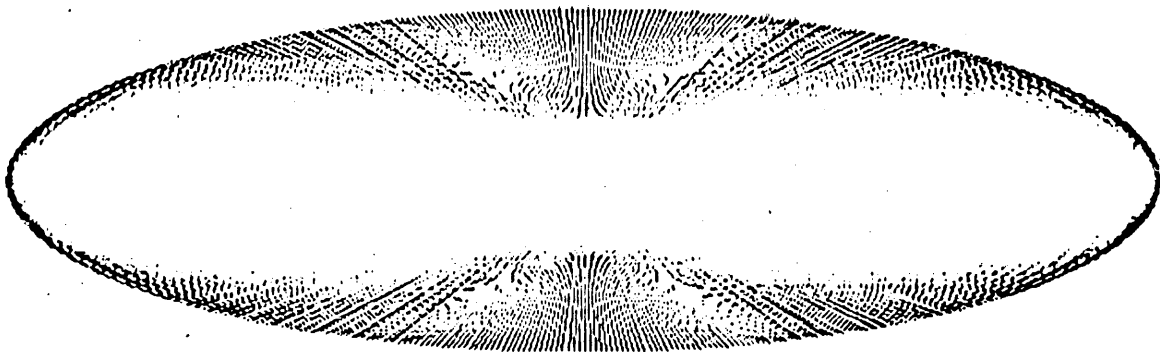
The Lisp Machine

Symbolics, Inc.
605 Hightree Rd.
Santa Monica, CA
90402
(213)459-6040

The Lisp Machine is a personal computer system which was designed and constructed at the MIT Artificial Intelligence Lab. It was designed to provide a high performance and economical implementation of the Lisp programming language. There are currently ~~seven~~¹⁴ Lisp Machines in use by researchers in the AI Lab and the Laboratory for Computer Science.

These are some of the features of the Lisp Machine and some things which make it different from other computers:

- o 24-bit virtual address space
- o Large writable micro-control store
- o 700 by 900 pixel graphics monitor
- o An instruction set designed specifically for Lisp
- o An operating system, including a text editor, debugger, window and file system, written entirely in Lisp



Lisp Machine Macsyma

(C1) (x+1)⁶;

(D1) $(X + 1)^6$

(C2) expand(%);

(D2) $X^6 + 6X^5 + 15X^4 + 20X^3 + 15X^2 + 6X + 1$

(C3) diff(%,x);

(D3) $6X^5 + 30X^4 + 60X^3 + 60X^2 + 30X + 6$

(C4) factor(%);

(D4) $6(X + 1)^5$

(C5) 1/(x²+1);

(D5) $\frac{1}{X^2 + 1}$

(C6) integrate(%,x);

(D6) ATAN(X)

(C7) 1/(x²-1);

(D7) $\frac{1}{X^2 - 1}$

(C8) integrate(%,x);

--More Display?--

Lisp Machine Macsyma

(C11) 1/(x^3+1);

(D11)
$$\frac{1}{X^3 + 1}$$

(C12) integrate(d11,x);

(D12)
$$-\frac{\text{LOG}(X^2 - X + 1)}{6} + \frac{\text{ATAN}\left(\frac{2X - 1}{\text{SQRT}(3)}\right)}{\text{SQRT}(3)} + \frac{\text{LOG}(X + 1)}{3}$$

(C13) diff(d12,x);

(D13)
$$\frac{2}{3 \left(\frac{(2X - 1)^2}{3} + 1\right)} - \frac{2X - 1}{6(X^2 - X + 1)} + \frac{1}{3(X + 1)}$$

(C14) ratsimp(d13);

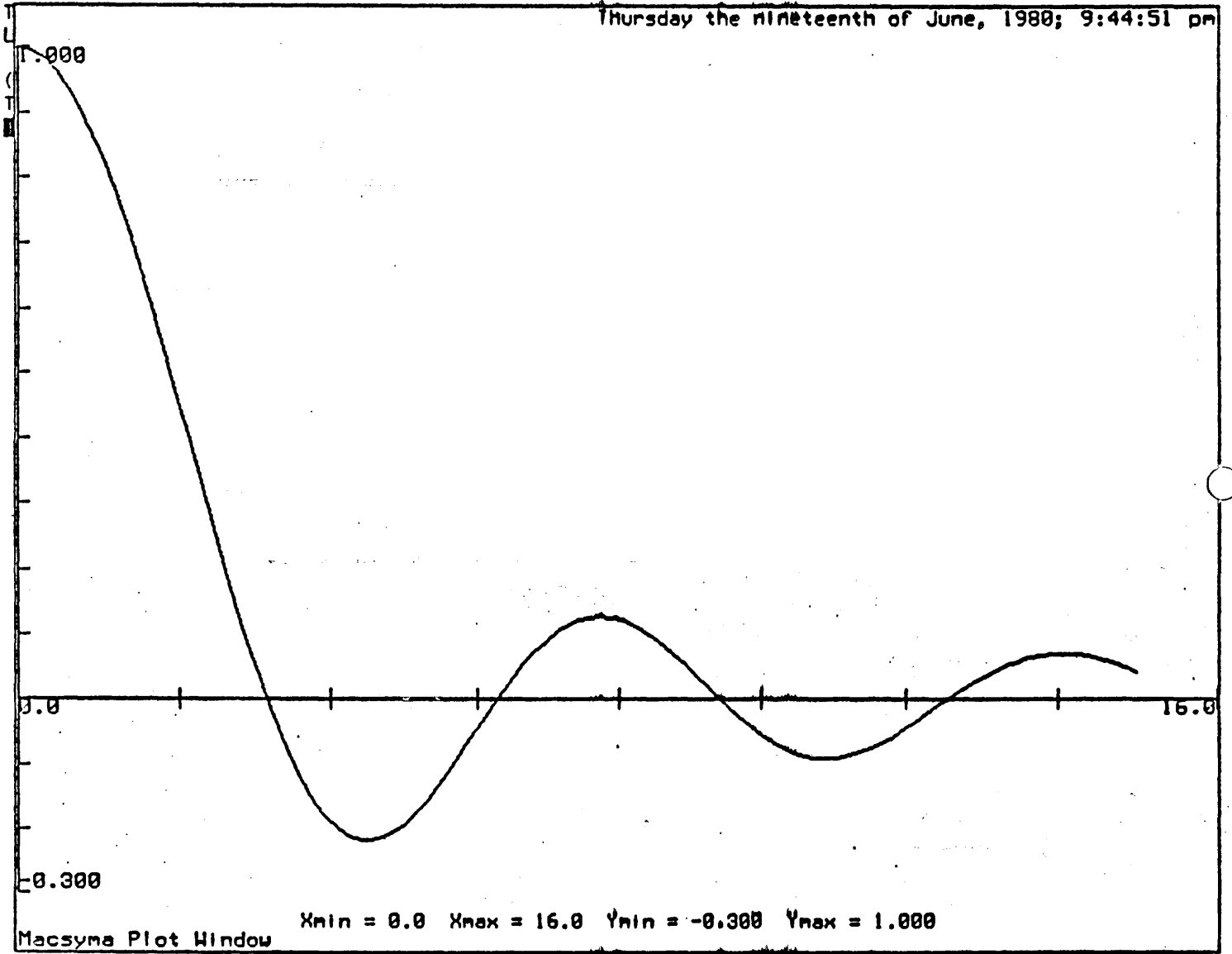
(D14)
$$\frac{1}{X^3 + 1}$$

(C15) d12,x=2,numer;

(D15) 0.7877018573

(C16) █

Thursday the nineteenth of June, 1980; 9:44:51 pm



```
(C3) plot(sin(x)/x,x,0.01,15);
```

DONE

```
(C4) █ X
```

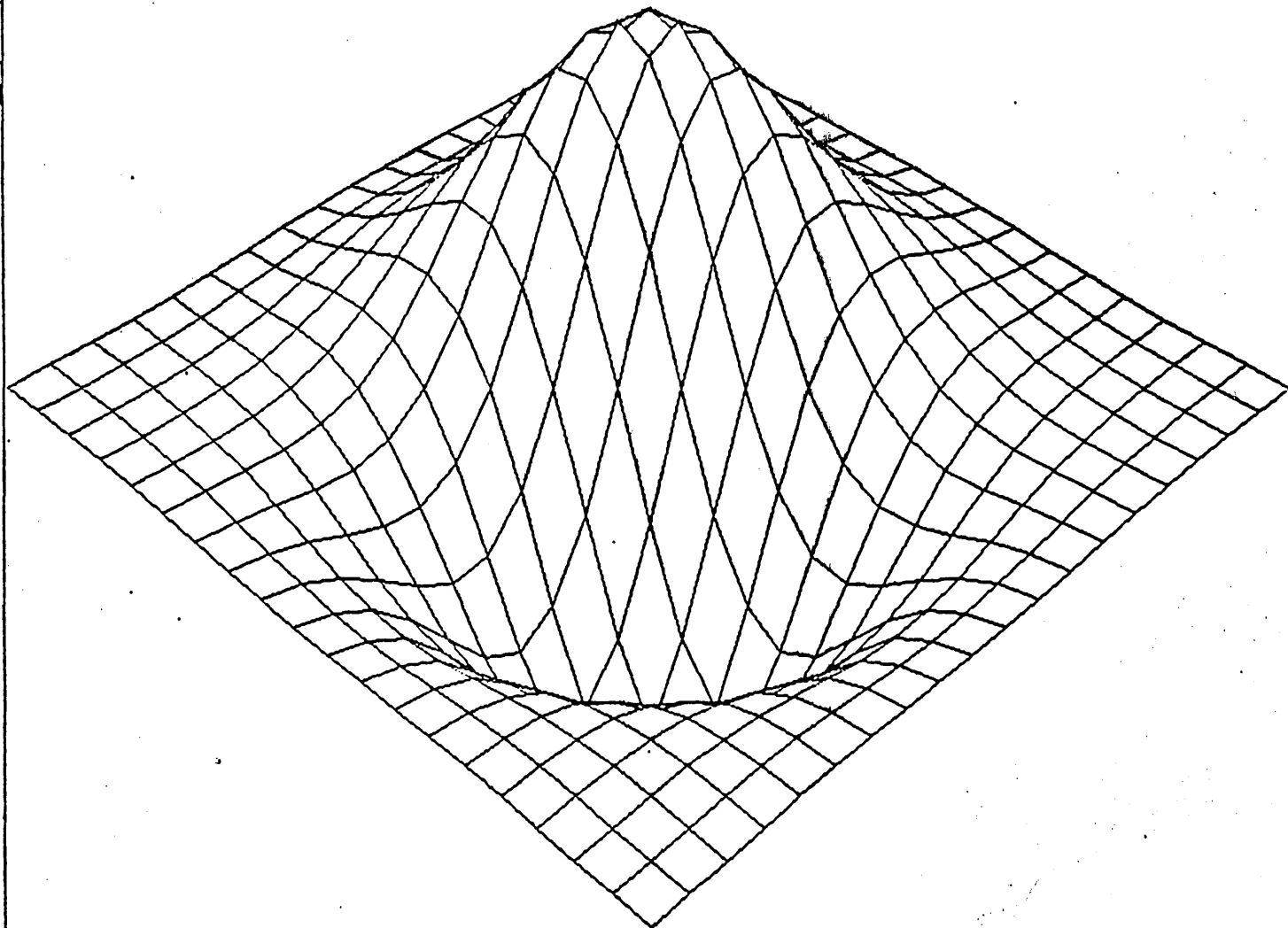
Initial Macsyma Listener

06/19/80 21:45:32 JLK

MACSYMA:

TVI

Thursday the nineteenth of June, 1980; 9:49:25 pm



Macsyma Plot Window

```
viewpt1;
(D6) [14.0, 14.0, 3.58304036]

(C7) viewpt:[-10,-10,4];
(D7) [- 10, - 10, 4]

(C8) replot(true);

>>ERROR: The argument ARRAY was X-3D, which is not an array
While in the function ADJUST-ARRAY-SIZE + HIDE-DRIVE + GRAPH

ADJUST-ARRAY-SIZE:
  Arg 0 (ARRAY): X-3D
  Arg 1 (NEW-INDEX-LENGTH): 1
```

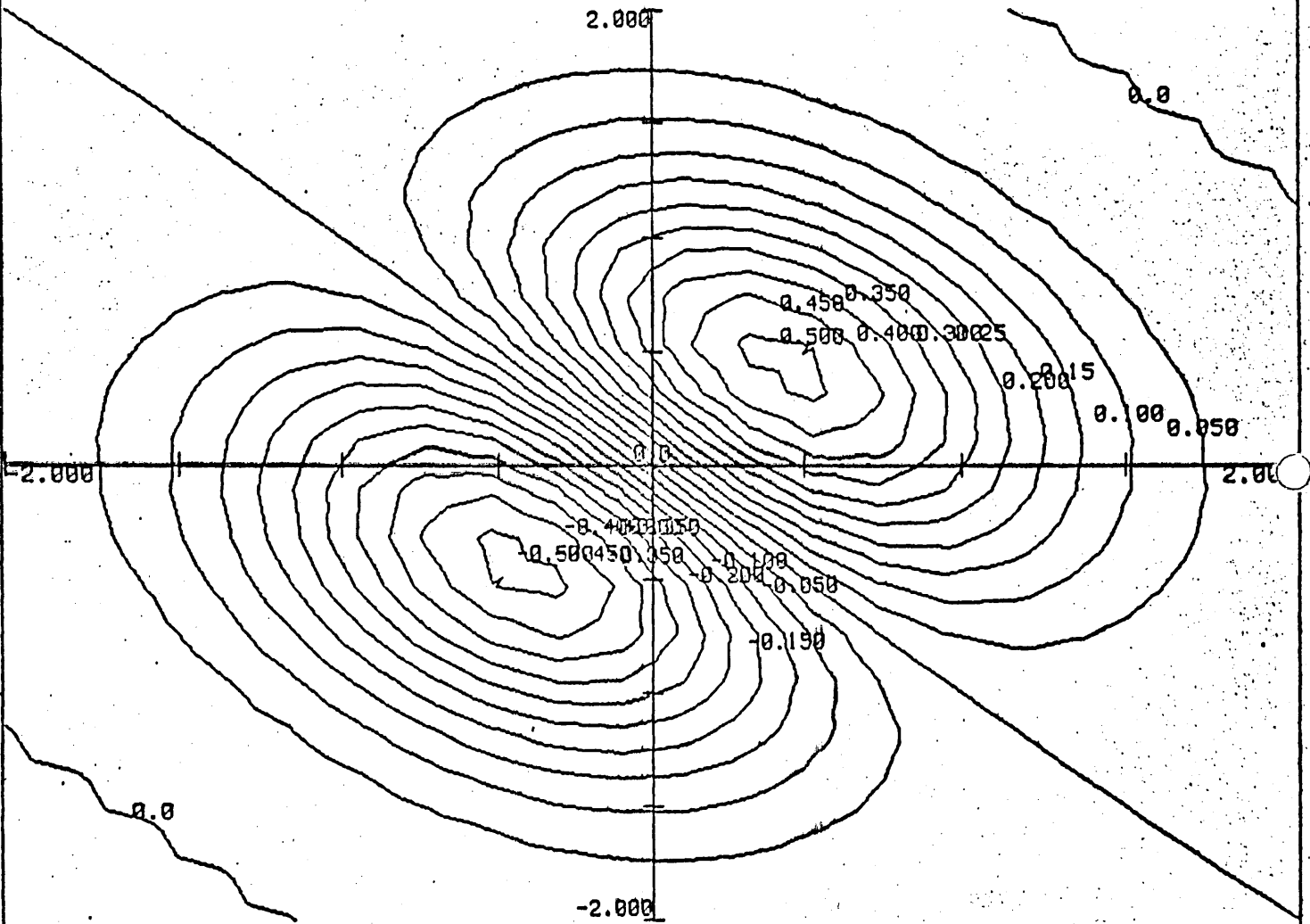
Initial Macsyma Listener

06/19/80 21:50:25 JLK

MACSYMA:

TVI

Thursday the nineteenth of June, 1980; 9:50:53 pm



Xmin = -2.000 Xmax = 2.000 Ymin = -2.000 Ymax = 2.000

Macsyms Plot Window

Continue Replot Hardcopy Save Name

(C9) replot(true, contour);

(D9) { DONE

(C10)

--Continued--

Initial Macsyms Listener

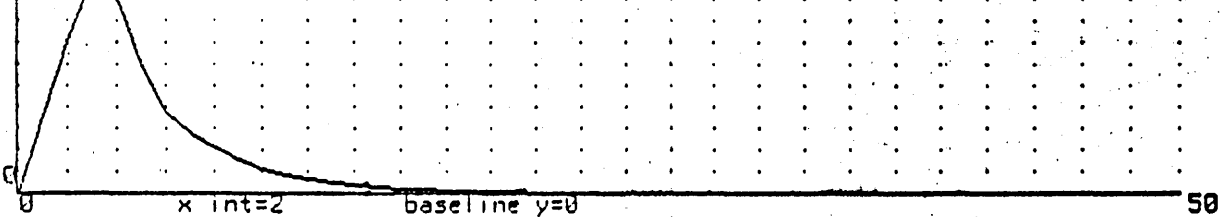
06/19/80 21:53:09 JLK

MACSYMA:

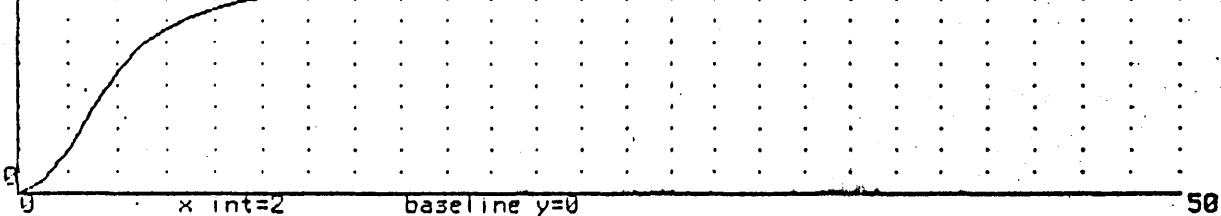
191

(diszdistr 'c715-zcxs)

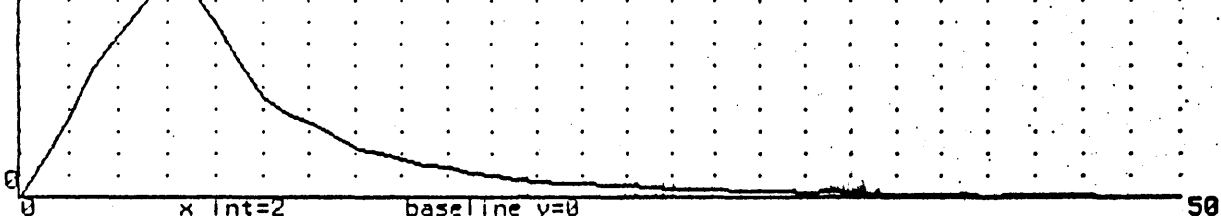
8015 zero-crossing interval density of C715-ZCXS



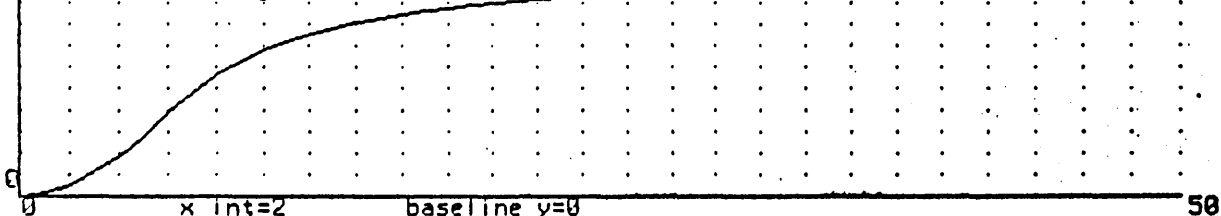
41200 zero-crossing interval distribution of C715-ZCXS



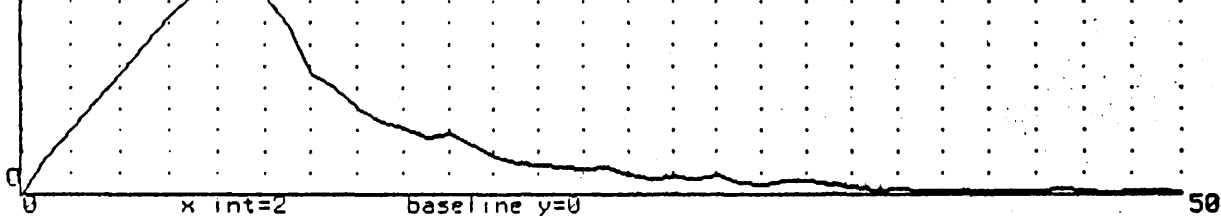
1947 zero-crossing interval density of C154-ZCXS



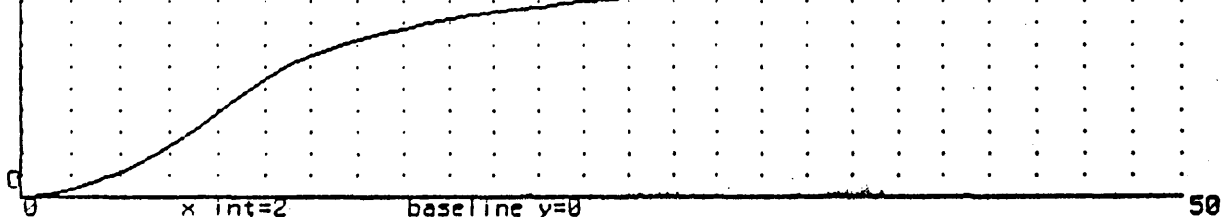
18840 zero-crossing interval distribution of C154-ZCXS



1155 zero-crossing interval density of C2-ZCXS



14474 zero-crossing interval distribution of C2-ZCXS



#<ART-Q-310 12704025>

;;; zero-crossing distn's of pic18 convolved with sigma=.715, 1.54, and 2

Output of hardware "convolution box".

tv:window

More above

#' (METHOD TV:SELECT-MIXIN ALIAS-FOR-SELECTED-WINDOWS)
TV:BORDERS-MIXIN-BORDER-MARGIN-WIDTH-METHOD
#' (METHOD TV:BORDERS-MIXIN BORDER-MARGIN-WIDTH)
TV:WINDOW
#<FLAVOR TV:WINDOW internal-info 320672>
#<DTP-SELECT-METHOD 2725646>

Exit
Return
Modify
DeCache
Clear
Set \

Bottom of History

Top of object

TV:WINDOW

Value is unbound

Function is unbound

Property list: (SI:FLAVOR #<FLAVOR TV:WINDOW internal-info 320672> SOURCE-FILE-NAME FILES:|AI:

Package: #<Package TELEVISION>

Bottom of object

More above

#<FLAVOR TV:WINDOW internal-info 320672>

NAMED-STRUCTURE-SYMBOL: SI:FLAVOR
SI:FLAVOR-INSTANCE-SIZE: 55
SI:FLAVOR-BINDINGS: (#<DTP-LOCATIVE 5460620> #<DTP-LOCATIVE 5460702> #<DTP-
SI:FLAVOR-SELECT-METHOD: #<DTP-SELECT-METHOD 2725646>
SI:FLAVOR-NAME: TV:WINDOW
SI:FLAVOR-LOCAL-INSTANCE-VARIABLES: NIL

More below

More above

#<DTP-SELECT-METHOD 2725646>

ACTIVATE: TV:WINDOW-COMBINED-ACTIVATE-METHOD
ALIAS-FOR-SELECTED-WINDOWS: TV:SELECT-MIXIN-ALIAS-FOR-SELECTED-WINDOWS-METHOD
APREST: TV:SELECT-MIXIN-ARREST-METHOD
BASELINE: TV:STREAM-MIXIN-BASELINE-METHOD
BEEP: TV:SHEET-BEEP-METHOD
BORDER-MARGIN-WIDTH: TV:BORDERS-MIXIN-BORDER-MARGIN-WIDTH-METHOD
BORDERS: TV:BORDERS-MIXIN-BORDERS-METHOD
BREAK: TV:SELECT-MIXIN-BREAK-METHOD
BURY: TV:WINDOW-COMBINED-BURY-METHOD
CALL: TV:SELECT-MIXIN-CALL-METHOD
CENTER-AROUND: TV:ESSENTIAL-SET-EDGES-CENTER-AROUND-METHOD
CHANGE-OF-SIZE-OR-MARGINS: TV:SHEET-CHANGE-OF-SIZE-OR-MARGINS-METHOD
CHARACTER-WIDTH: TV:STREAM-MIXIN-CHARACTER-WIDTH-METHOD
CLEAR-CHAR: TV:STREAM-MIXIN-CLEAR-CHAR-METHOD
CLEAR-EOF: TV:STREAM-MIXIN-CLEAR-EOF-METHOD
CLEAR-EOL: TV:STREAM-MIXIN-CLEAR-EOL-METHOD
CLEAR-INPUT: TV:STREAM-MIXIN-CLEAR-INPUT-METHOD
CLEAR-SCREEN: TV:SHEET-CLEAR-SCREEN-METHOD
COMPUTE-MOTION: TV:STREAM-MIXIN-COMPUTE-MOTION-METHOD
DEACTIVATE: TV:WINDOW-COMBINED-DEACTIVATE-METHOD
DEEXPOSE: TV:WINDOW-COMBINED-DEEXPOSE-METHOD
DEEXPOSED-TYPEOUT-ACTION: TV:SHEET-DEEXPOSED-TYPEOUT-ACTION-METHOD
DELETE-CHAR: TV:STREAM-MIXIN-DELETE-CHAR-METHOD
DELETE-LINE: TV:STREAM-MIXIN-DELETE-LINE-METHOD
DESCRIBE: SI:VANILLA-FLAVOR-DESCRIBE-METHOD
DESELECT: TV:WINDOW-COMBINED-DESELECT-METHOD
DOCUMENT: TV:ESSENTIAL-MOUSE-DOCUMENT-METHOD
DRAW-LABEL: TV:LABEL-MIXIN-DRAW-LABEL-METHOD
DRAW-LINES: TV:STREAM-MIXIN-DRAW-LINES-METHOD

More below

More above

```

20 MOVE D-PDL '1
21 / ARG|0 ;NUMBER
22 MOVE D-RETURN PDL-POP
23 MOVE D-PDL LOCAL|0 ;NUMBERS
24 MOVE D-PDL ARG|0 ;NUMBER
25 POP LOCAL|2 ;ANS
26 POP LOCAL|1 ;NUMBERS
27 BR 35
30 MOVE D-PDL LOCAL|2 ;ANS
31 CAR D-PDL LOCAL|1 ;NUMBERS
32 / PDL-POP
=> 33 POP LOCAL|2 ;ANS
34 SETE-CDR LOCAL|1 ;NUMBERS
35 MOVE D-IGNORE LOCAL|1 ;NUMBERS
36 BR-NOT-NIL 30

```

More below

#<Stack-Frame / PC=33>

Args:
Arg 0 (SI:NUMBER): 1
Rest arg (SI:NUMBERS): (0)

Locals:
Local 1 (SI:NUMBERS): (0)
Local 2 (SI:ANS): 1

Bottom of stack

```

(SI:PROCESS-TOP-LEVEL NIL)
(NZWEI:ZMACS-WINDOW-TOP-LEVEL)
(#<ZMACS-TOP-LEVEL-EDITOR 11441756> :EDIT)
((:METHOD NZWEI:EDITOR :EDIT) :EDIT)
(NZWEI:PROCESS-COMMAND-CHAR 1033)
(NZWEI:COMMAND-EXECUTE NZWEI:COM-EVALUATE-MINI-BUFFER 1033 NIL NIL ...)
(NZWEI:COM-EVALUATE-MINI-BUFFER)
(NZWEI:EVALUATE-MINI-BUFFER)
(SI:*EVAL (// 1 0))
(// 1 0)

```

Top of stack

| | | | | |
|----------------|---------|----------------|---------|-----|
| What Error | Arglist | Retry | Set arg | T |
| Quit one level | Inspect | Return a value | Search | NIL |
| Exit | Edit | Continue | Throw | |

>>>>TRAP 7403 (DIVIDE-BY-ZERO)
There was an attempt to divide a number by zero in *QUO.

Font: NIL

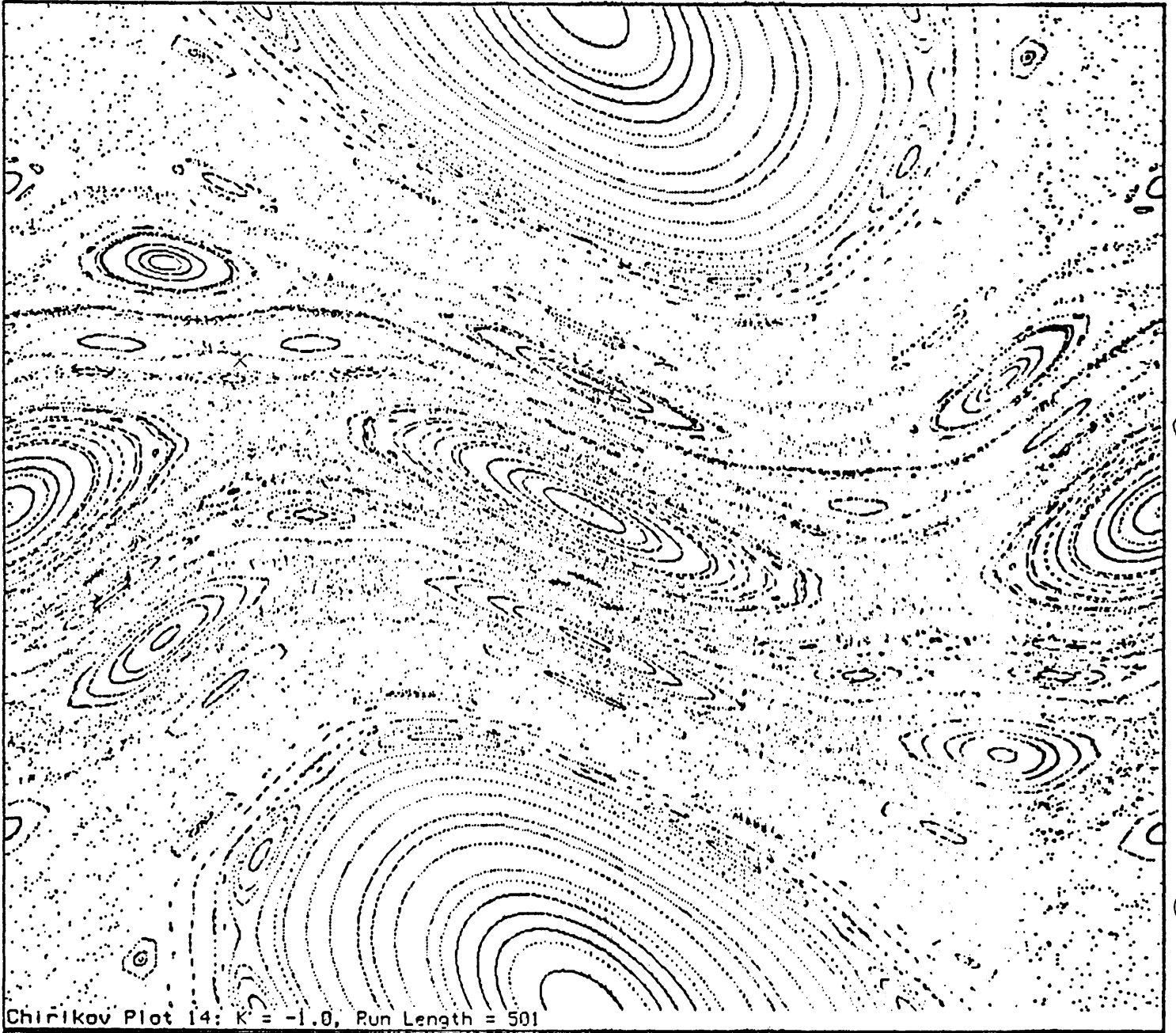
Erase Home Save Draw line

Select end points with mouse

This is band 1 of Pack T300 A, with microcode 669, system 29.95 NWS
LISP Machine One

```
(cc)
Getting fresh state from machine.
**?? stkp STKP?? ?? ?? ?? ?? :stkp
1747552 1003[3006]
-3:stkp
104202 #<DTP-FEF-POINTER QLEVAL 1575774>[0] QUOTE-BASE T
104173 #<DTP-FEF-POINTER LAP-QUOTE-ADR 1575465>[71] (FUNCTION FERROR)
104164 #<DTP-FEF-POINTER LAP-WORD-EVAL 1575711>[123] ((QUOTE-VECTOR (FUNCTION FERROR)))
104152 #<DTP-FEF-POINTER QLP2-U 1574405>[135] (CALL D-RETURN (QUOTE-VECTOR (FUNCTION FERROR)))
usp/ 20 @u/ QMLP + 40000
1@U/ (QICDR 2)
2@U/ QMD
3@U/ (OCDR3 2)
4@U/ (PGF-L2R 1)
5@U/ SPHT1
6@U/ SPHT1
7@U/ SPHT1
10@U/ (AWAIT-DISK 2)
11@U/ INTRX2
12@U/ INTRX2
13@U/ (PGF-R 3)
14@U/ (PGF-MAP-MISS 3)
15@U/ SPHT1
16@U/ SPHT1
17@U/ SPHT1
20@U/ QMLP + 40000
21@U/ (QMEX1 4)
22@U/ OCAR
23@U/ (BEG06 1)
24@U/ (BEG06 1)
25@U/ (BEG06 1)
```

```
*****
PC=3034 OBUS=1040000177 (QMEX1 4)
IR=(JUMP-IF-BIT-CLEAR (BYTE-FIELD 1 12) M-FLAGS ILL0P)
ERROR-STATUS NO-OP IR48 ANY-ERR XBUS-NXM-ERR XBUS-PARITY-ERR
```



Chirikov Plot 14: $K = -1.0$, Run Length = 501

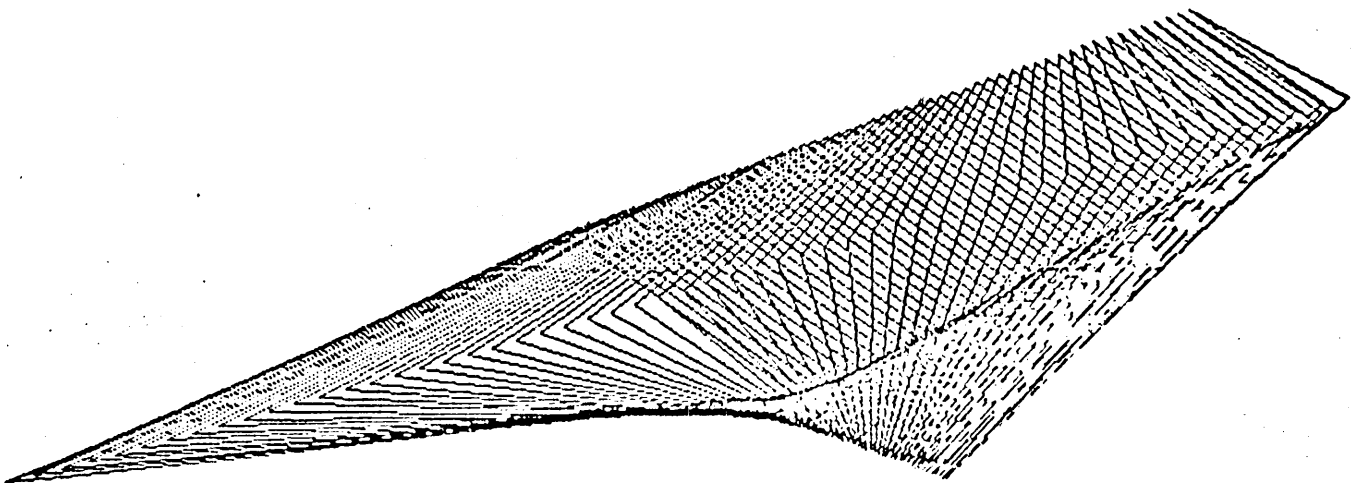
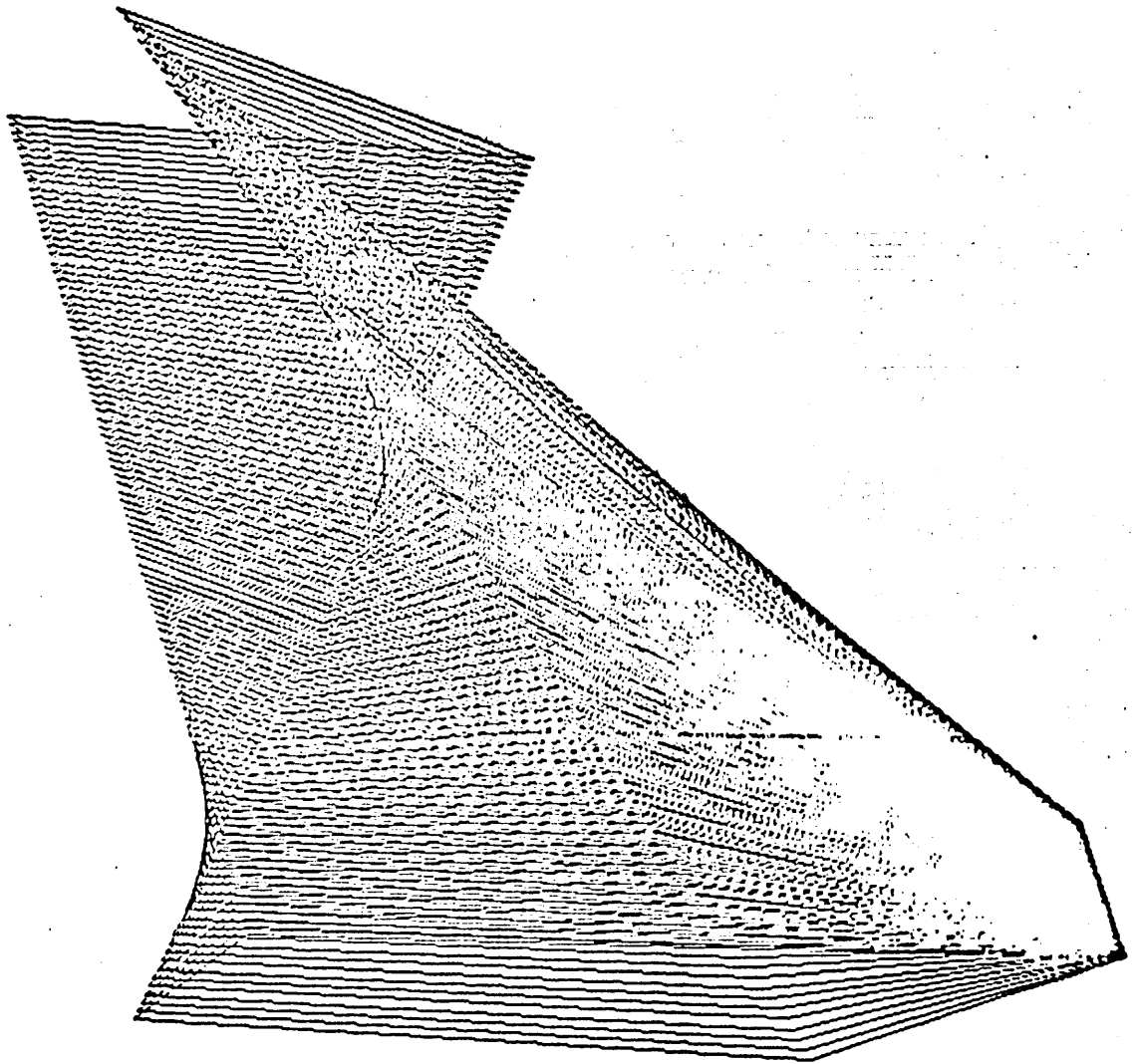
NIL

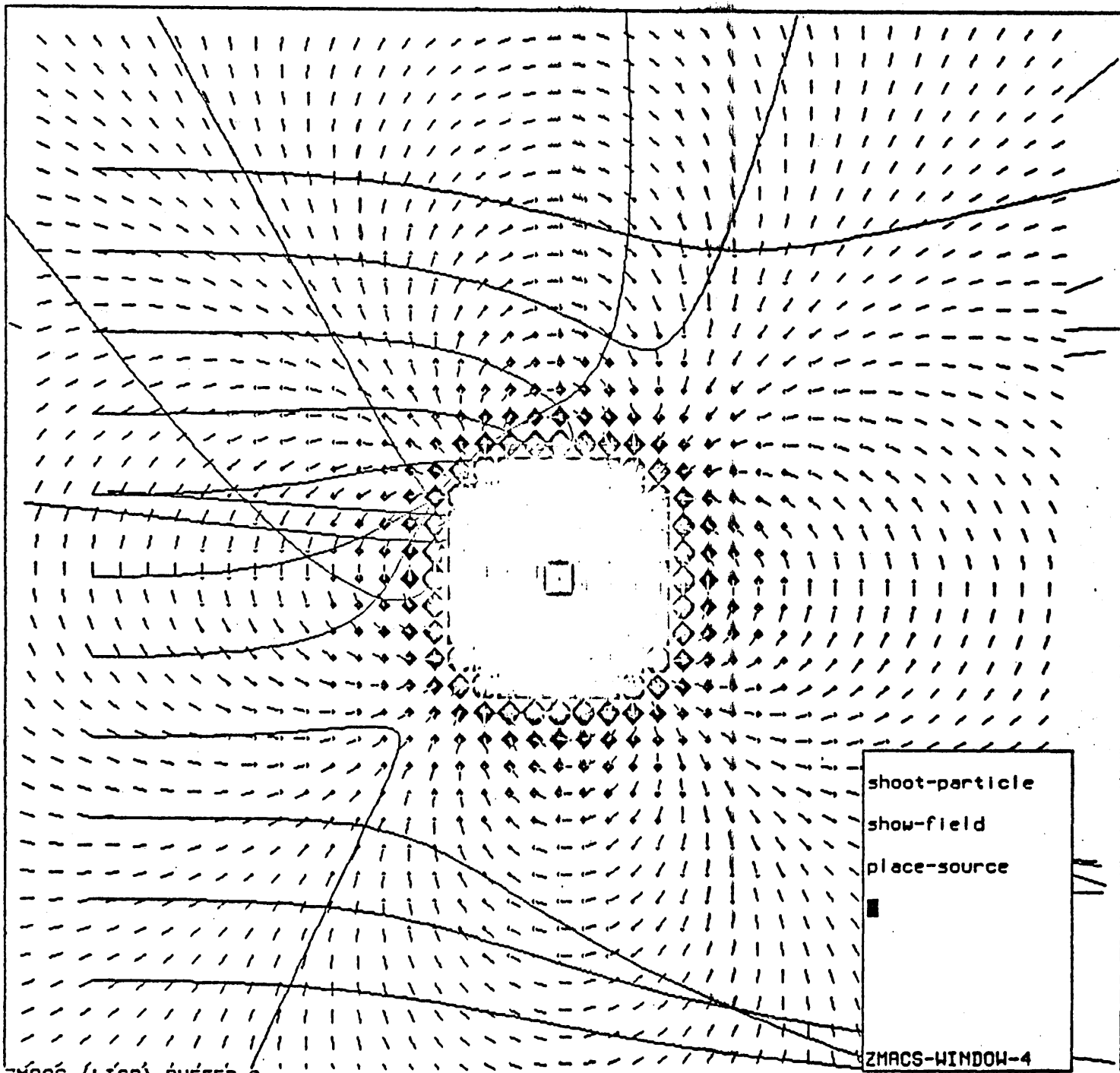
SCORE-G0003

```

;excerpt from Chopin Nocturne Op. 15, No. 3
(display-music '(
  ((treble 2 flat 3 4)
  2 c]ae@ 4 aec          2 fda[ 4 bgd          ae@c g a          2 fda[ 4 ge@c
  2 afc 4 c]gc          2 c]ae@ 4 d]af          2 d]bg 4 e]@c]g          2 f]c]at
SCOREX > MUSIC; AI:
ZWEI ZMACS (LISP) SCOREX > MUSIC; AI:
4 f[ f[ e[@          a[ a[ d[          g[ g[ c[          f[ f[[ e[[@
d[[ e[[@ a[[          2 d[[ 4 a[[          d[[ a[[ d[[          2 g[[ 4 d[[
g[[ a[[ d[          2 c[ 4 f[          g[[ a[[ g[[          2 c[ 4 f[ )
JLK          MUZACS:          TYI

```





ZMACS (LISP) BUFFER-2

shoot-particle
 show-field
 place-source

ZMACS-WINDOW-4

```

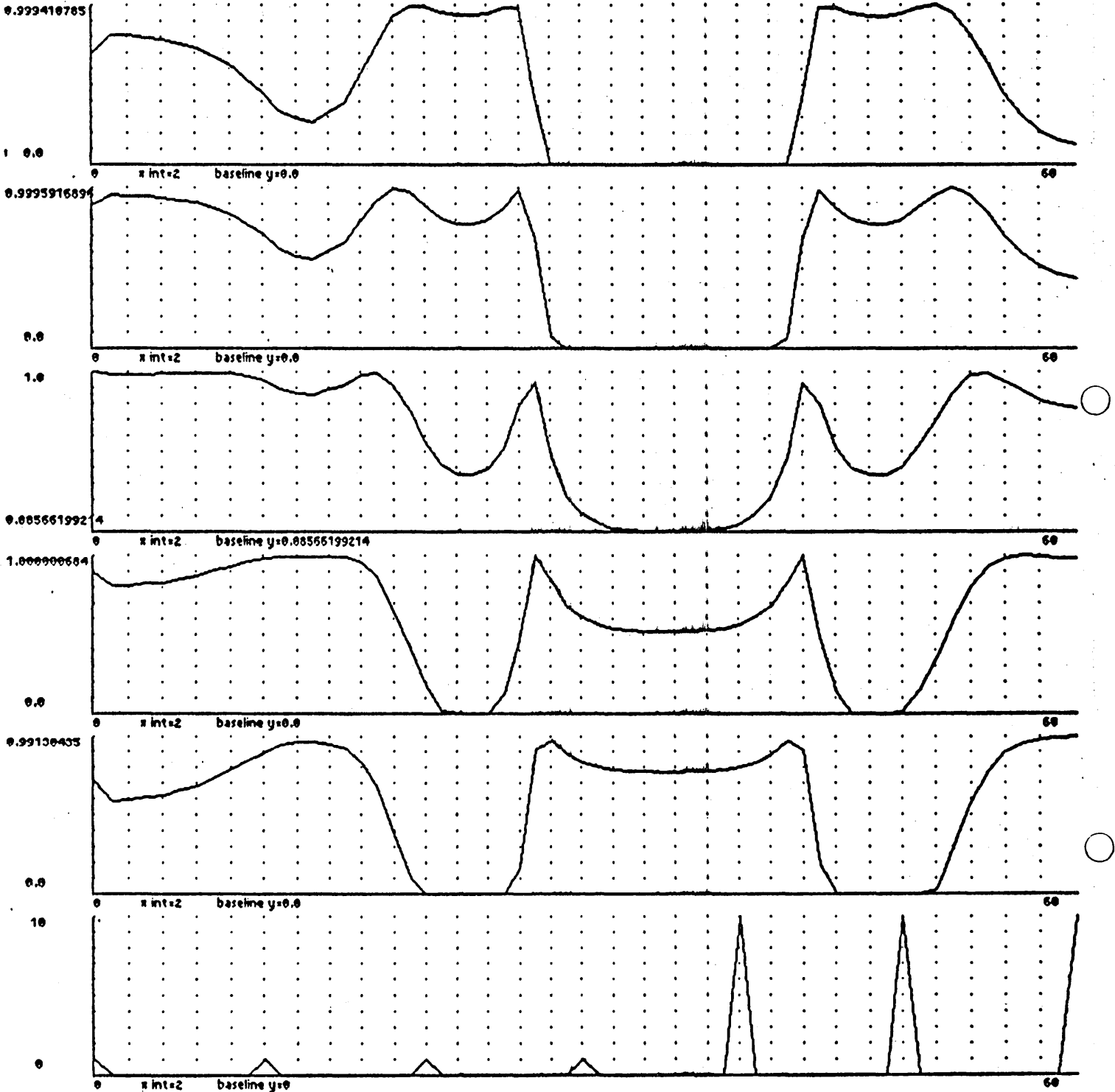
done
(scan '(-15.0 10.0) '(-15.0 -10.0) '(0.2 0) tes2)
done
(scan '(-18.0 15.0) '(-18.0 15.0) '(0.1 0) tes2)
*
(scan '(-18.0 15.0) '(-18.0 -15.0) '(0.1 0) tes2)
done
  
```

06/19/80 09:36:02 Keyboard

USER:

RUN

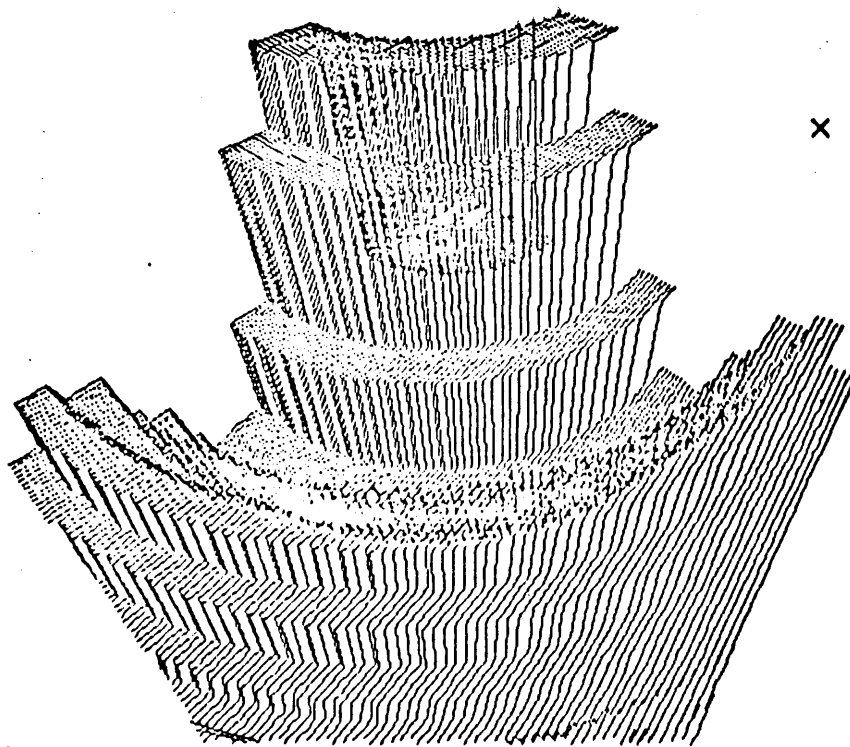
(graph ndepth)



#<ART-Q-61. 1935616.>

-1.
(graph intensity)

Type any character to continue:



PICTURE-WINDOW-1

```
(do ((x 0 (1+ x)))
    ((> x x-limit) )
  (do ((y 0 (1+ y)))
      ((> y y-limit) )
    (as-2 (fix (* 120. (// (sin (// (+ (^ x 2) (^ y 2)) 1000.)
                          (+ 1 (// (+ (^ x 2) (^ y 2)) 1000.)))))) two-D-array x y))))))

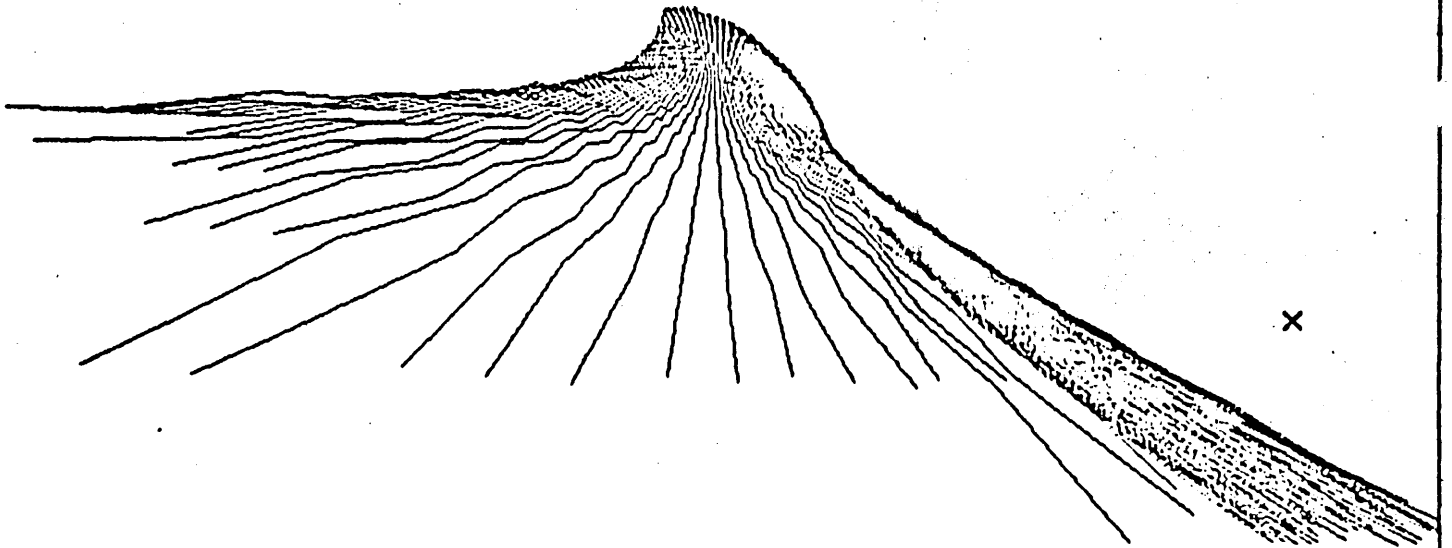
(setq picture-menu
  (tv:window-create 'tv:momentary-menu
    ':item-list '(big-sphere dunce-cap inclined-plane randomness ripples saddle
                  small-sphere surface-twister help)
    ':font-map (list fonts:bigfnt)))

(defun picture-window-input-function(&aux (input (tyl)))
  (selectq input
    ((321. 353.) (*throw 'top-level nil))
    ((134. 63.)
     (<- our-window ':clear-screen)
     (<- our-window ':home-cursor)
     (princ picture-help-list)(tyl)
     (<- our-window ':clear-screen))
```

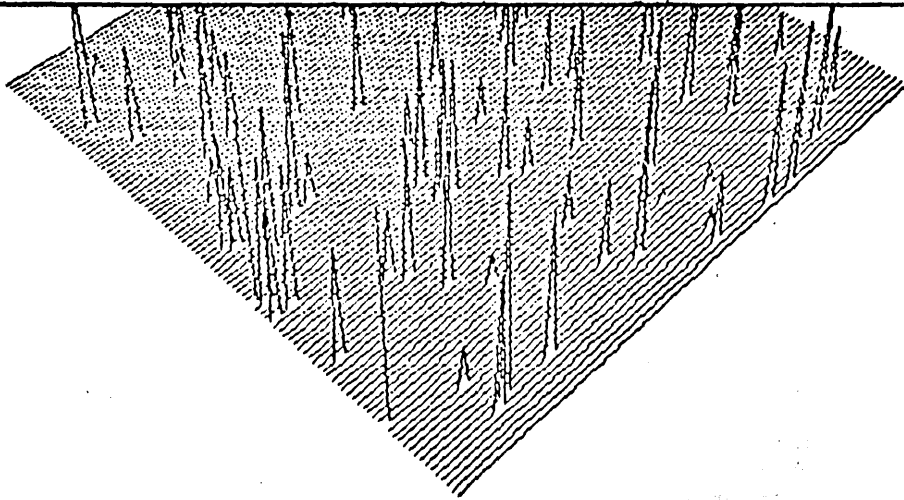
XRAND > XCONOS; AI:

ZMACS (LISP) XRAND > XCONOS; AI:

Type any character to continue:



PICTURE-WINDOW-1



| | | |
|------|----------------------------|-----------------|
| | Split screen element: | |
| LISP | Supdup | Telnet |
| | Lisp | Edit |
| | Peek | |
| EDIT | Existing Lisp | Existing Window |
| | <input type="checkbox"/> X | Quit |

| Process Name | State |
|----------------|---------|
| TOP-PROCESS | TYI |
| Mouse | FLUSHED |
| Chaos | |
| Screen | |
| Mouse | |
| ZMACS- | |
| SUPDUP | |
| SUPDUP | |
| Keyboard | |
| System | |
| PEEK-1 | |
| Clock | |
| BLINKER | |
| Active | |
| LISP-LIS | |
| ZMACS-WINDOW-4 | |

This is some text which has been typed into this editor buffer.

An alternative font is times roman 8 pt or

perhaps an italic typefont is more desirable in this case,

and, for emphasis, there is times roman bold

- Arglist
- Edit Definition
- List Callers
- List Functions
- List Buffers
- Kill Or Save Buffers
- Split Screen
- General Editor**
- Indent Region
- Change Default Font
- Change Font Region
- Uppercase Region
- Lowercase Region
- Mouse Indent Rigidly
- Mouse Indent Under

Connect to host: ee

MIT-EECS, TOPS-20 Monitor 4(1)-1

There are 2+2 jobs and the load av. is 0.66

@

Autologout

Logout Job 10, TTY 114,

at 1-Jul-80 17:44:54, Used 0:00:00 in 0:05:01

MORE

TELNET -- ee

ZMACS (Text Electric Shift-lock) BUFFER-2 Font: A (CPTFONT)
 Font ID: A (CPTFONT)

LISP-LISTENER-2

```

;;;Windows that hack the network -
(DEFFLAVOR BUFFERED-OUTPUT-MIXIN (
  (:REQUIRED-METHODS :BUFFERED-TYO)
(DEFMETHOD (BUFFERED-OUTPUT-MIXIN :
  (DO () ((ARRAY-PUSH OUTPUT-BUFFER
    (FUNICALL-SELF ':FORCE-OUTPUT)))
(DEFMETHOD (BUFFERED-OUTPUT-MIXIN :
  (TV:SHEET-STRING-OUT SELF OUTPUT-
  (STORE-ARRAY-LEADER 0 OUTPUT-BUFF
(DEFFLAVOR BASIC-HVT
  (ESCAPE-CHAR
  (ESCAPE-CHAR-1 #\BREAK)
  (CONNECTION NIL)
  (CONNECT-TO NIL)
  STREAM
  (TERMINAL-STREAM NIL)
  (TYPEOUT-PROCESS NIL)
  (TYPEIN-PROCESS NIL)
  (OUTPUT-LOCK NIL)
  (RETURN-TO-CALLER NIL)

```

```

Arglist
Edit Definition
List Callers
List Functions
List Buffers
Kill Or Save Buffers
Split Screen
Change Default Font
Change Font Region
Uppercase Region
Lowercase Region
Mouse Indent Rigidly
Mouse Indent Under

```

```

PDUP -x-
AY NIL 'ART-STRING 200 NIL '(0)))

```

```

;Escape character in nvt character set
;Same in Lisp machine character set
;The connection itself
;Host to connect to (for TYPEIN-TOP-LEVEL)
;A stream to the above
;Stream for output. If NIL, (which is the usual case)
; output to SELF.
;Network + screen
;Keyboard + network
;Some typeout occurs in TYPEIN-PROCESS
;Set to T when :TYPEIN-TOP-LEVEL should return

```

```

SUPDUP > LMWIN; AI:
ZMADS (LISP) SUPDUP > LMWIN; AI:

```

```

Create
Select
Inspect
Trace
Split Screen
Layouts
Print Screen
Other

```

LISP-LISTENER-2

;;;Windows that hack the network *- Mode:LISP; Package:SUPDUP *-

```

(DEFFLAVOR BUFFERED-OUTPUT-MIXIN ((OUTPUT-BUFFER (MAKE-ARRAY NIL 'ART-STRING 200 NIL '(0))))
  (
    (:REQUIRED-METHODS :BUFFERED-TYO))

```

```

(DEFMETHOD (BUFFERED-OUTPUT-MIXIN :BUFFERED-TYO) (CH)
  (DO () ((ARRAY-PUSH OUTPUT-BUFFER CH))
    (FUNCALL-SELF ':FORCE-OUTPUT)))

```

```

(DEFMETHOD (BUFFERED-OUTPUT-MIXIN :FORCE-OUTPUT) ()
  (TV:SHEET-STRING-OUT SELF OUTPUT-BUFFER)
  (STORE-ARRAY-LEADER 0 OUTPUT-BUFFER 0))

```

```

(DEFFLAVOR BASIC-MVT
  (ESCAPE-CHAR                ;Escape character in nvt character set
   (ESCAPE-CHAR-1 #\BREAK)    ;Same in Lisp machine character set
   (CONNECTION NIL)           ;The connection itself
   (CONNECT-TO NIL)           ;Host to connect to (for TYPEIN-TOP-LEVEL)
   STREAM                      ;A stream to the above
   (TERMINAL-STREAM NIL)      ;Stream for output. If NIL, (which is the usual case)
                                ; output to SELF.
   (TYPEOUT-PROCESS NIL)      ;Network + screen
   (TYPEIN-PROCESS NIL)       ;Keyboard + network
   (OUTPUT-LOCK NIL)          ;Some typeout occurs in TYPEIN-PROCESS
   (RETURN-TO-CALLER NIL)     ;Set to T when :TYPEIN-TOP-LEVEL should return

```

SUPDUP > LMWIN; AI:

ZMACS (LISP) SUPDUP > LMWIN; AI:

```

Bury
Expose
Kill
Quit
Undo
Move window
Reshape
Move single
Expand window
Expand all

```

LISP-LISTENER-2

```
;;;Windows that hack the network -*- Mode:LISP; Package:SUPDUP -*-
```

```
(DEFFLAVOR BUFFERED-OUTPUT-MIXIN ((OUTPUT-BUFFER (MAKE-ARRAY NIL 'ART-STRING 200 NIL '(0))))
  (:REQUIRED-METHODS :BUFFERED-TYO))
```

```
(DEFMETHOD (BUFFERED-OUTPUT-MIXIN :BUFFERED-TYO) (CH)
```

```
  (DO () ((ARRAY-PUSH OUTPUT-BUFFER CH)
    (FUNCALL-SELF ':FORCE-OUTPUT)))
```

```
(DEFMETHOD (BUFFERED-OUTPUT-MIXIN :FORCE-OUTPUT) ()
```

```
  (TV:SHEET-STRING-OUT SELF OUTPUT-BUFFER)
  (STORE-ARRAY-LEADER 0 OUTPUT-BUFFER 0))
```

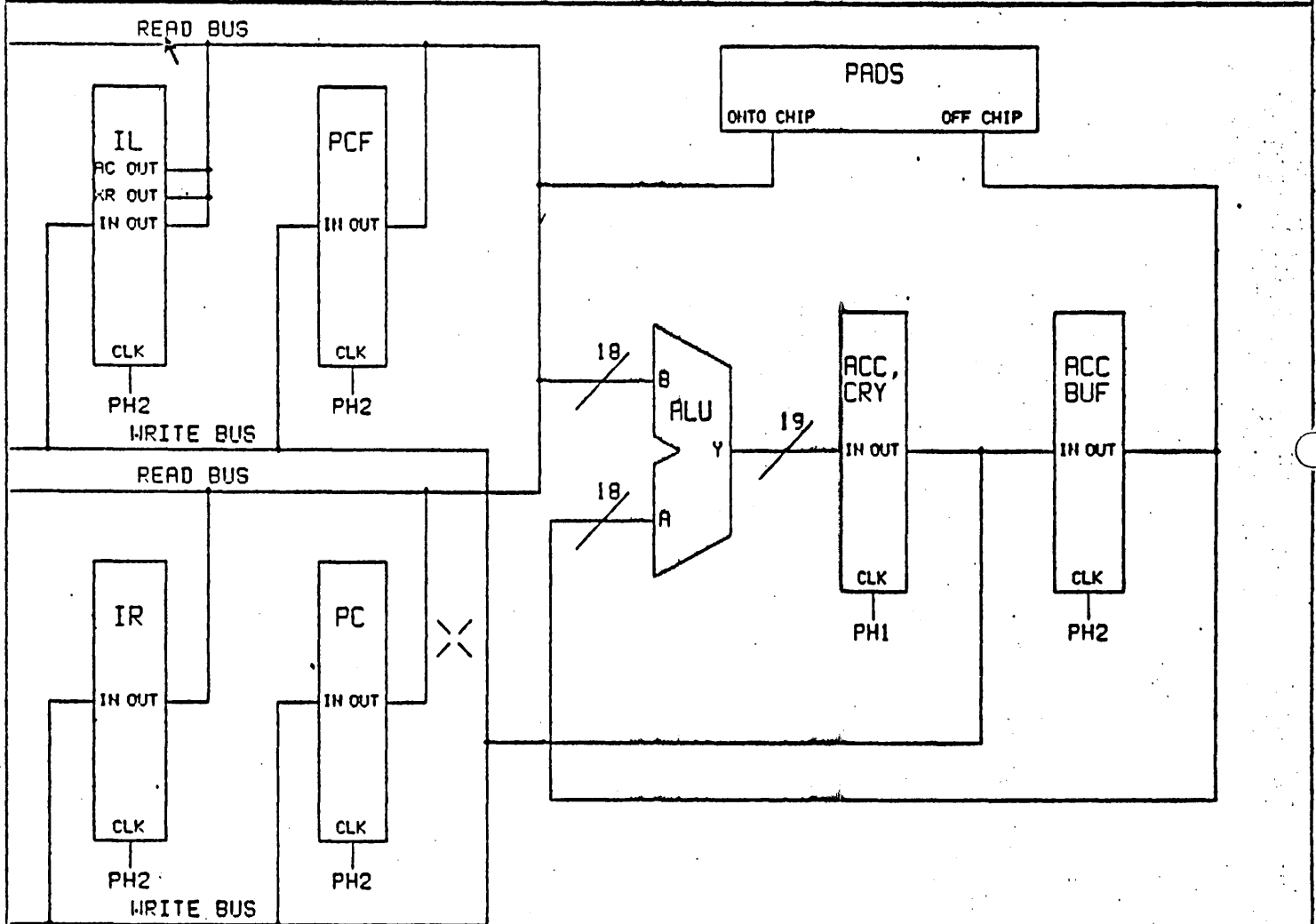
```
(DEFFLAVOR BASIC-MVT
```

```
  (ESCAPE-CHAR ;Escape character in Mvt character set
  (ESCAPE-CHAR-1 #\BREAK) ;Same in Lisp machine character set
  (CONNECTION NIL) ;The connection itself
  (CONNECT-TO NIL) ;Host to connect to (for TYPEIN-TOP-LEVEL)
  STREAM ;A stream to the above
  (TERMINAL-STREAM NIL) ;Stream for output. If NIL, (which is the usual case)
  ; output to SELF.
  (TIMEOUT-PROCESS NIL) ;Network → screen
  (TYPEIN-PROCESS NIL) ;Keyboard → network
  (OUTPUT-LOCK NIL) ;Some timeout occurs in TYPEIN-PROCESS
  (RETURN-TO-CALLER NIL) ;Set to T when :TYPEIN-TOP-LEVEL should return
```

```
SUPDUP > LMWIN; AI:
```

```
ZMACS (LISP) SUPDUP > LMWIN; AI:
```

Libraries Other View Criticize
 Modules Previous View Labelled-Text Mode
 Views Scale Box Mode
 (Other Commands) Hardcopy



ALU Functions
 C: (0, 1, ACC.Carry)
 A+C, B+C, B sh left, B sh right
 A+B+C, A-B-1+C, -B-1+C
 A xor B, A and B, A lor B ;?

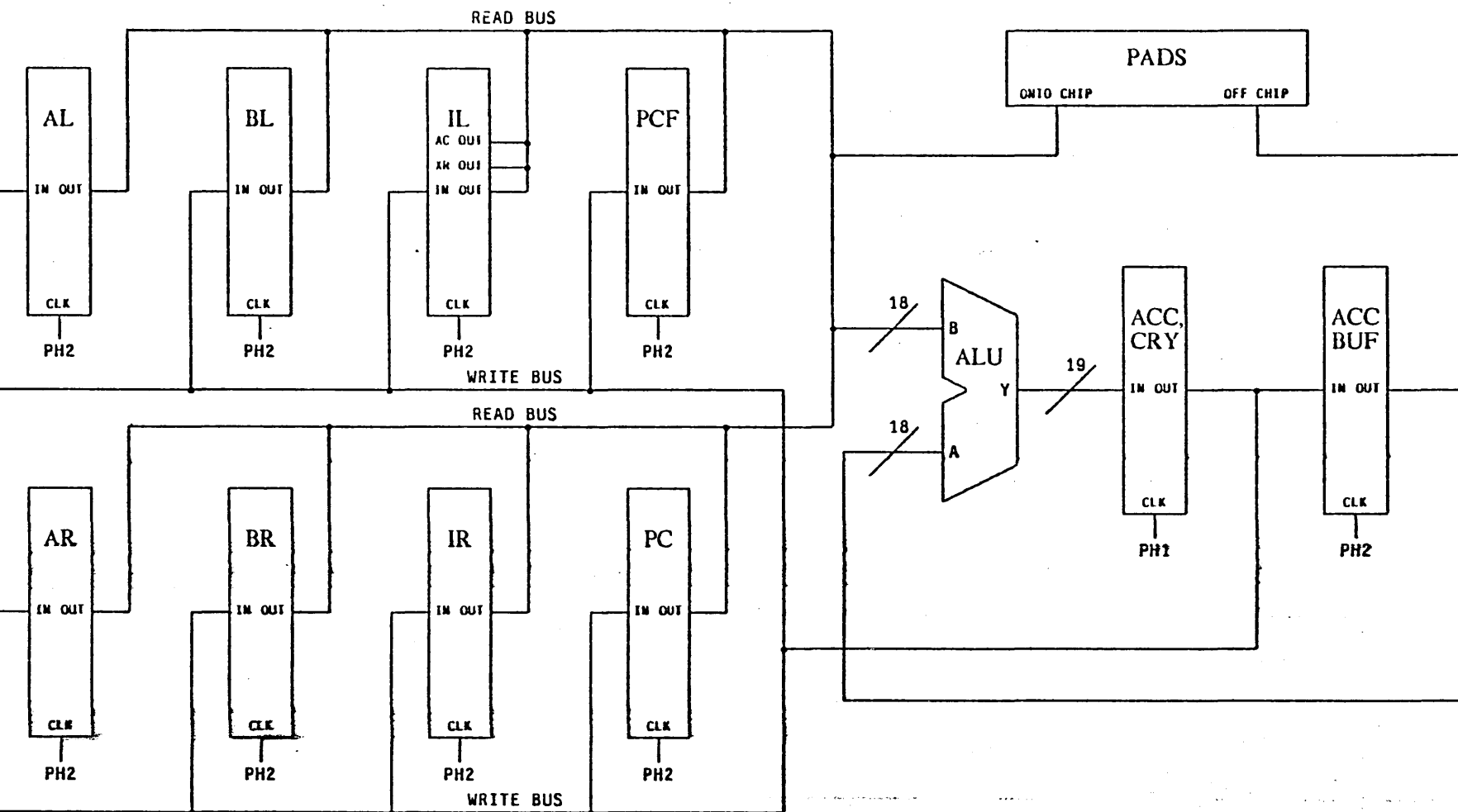
TIMING
 PH1 - Read register, do ALU
 PH2 - write register, next state

Body mode, Scale=1, (128,0), BLOCK-SCHEMATIC view of DATA PATHS? module of PDP-10 CHIP library

Edit Definition Edit Body List properties

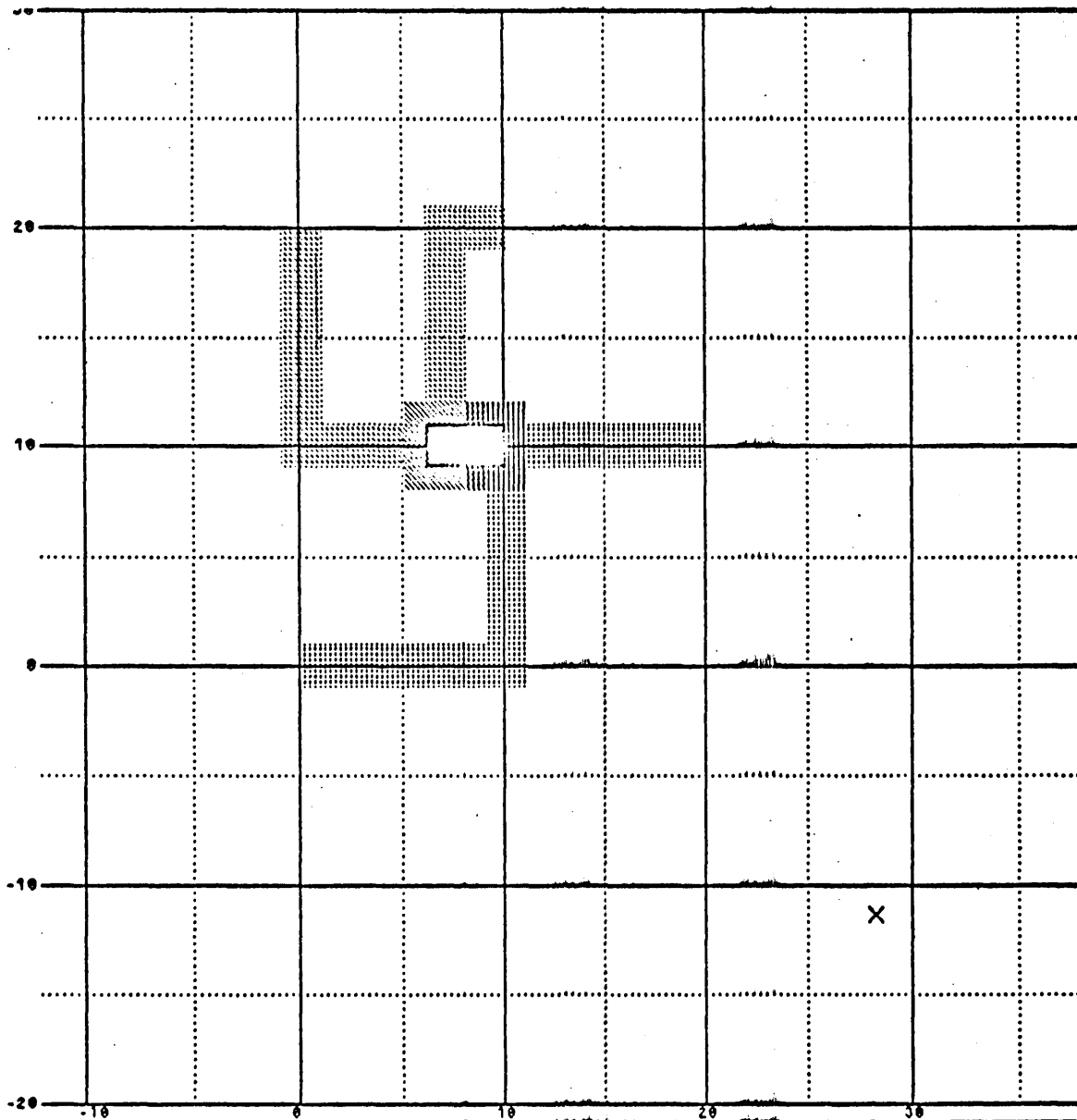
Mouse: Move body Cursor to mouse

Loading file AI: MOONDR; TEN DRAW into package DRAW
Body mode.



| ALU Functions |
|---------------------------------|
| C: {0,1,ACC.Carry} |
| A+C, B+C, B sh left, B sh right |
| A+B+C, A-B-1+C, -B-1+C |
| A xor B, A and B, A for B :? |

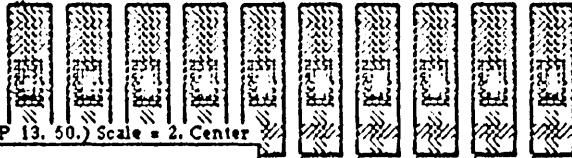
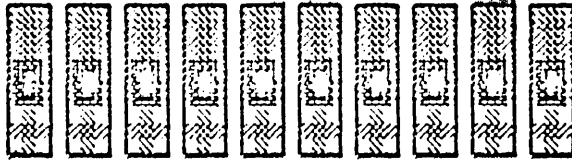
| TIMING |
|----------------------------------|
| PH1 - Read register, do ALU |
| PH2 - write register, next state |



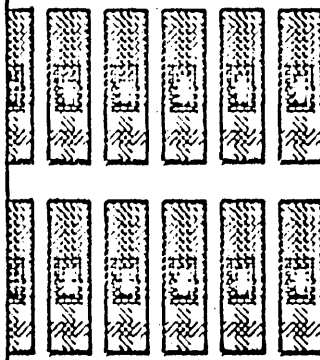
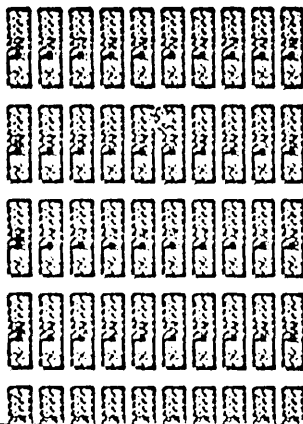
```
(:sprinter w2)
(ASSIGN-TO-MY W2
  (RUN (FROM (PT 0 0))
    (RUN-LAYER 'POLY)
    (JOG-X (PT 10 10))
    (SAVE-CP CP)
    (*X 10)
    (FROM (THE 'CP *THE-WIRE*))
    (RUN-LAYER 'DIFF)
    (JOG-X (PT 0 20))
    (FROM (THE 'CP *THE-WIRE*))
    (RUN-LAYER 'DIFF)
    (RUN-WIDTH 2)
    (JOG-Y (PT 10 20))))
```

T

VIEW-1 Buffer = THE-CHIP Position = (C-P 50. -24.) Scale = 4. Center = (C-P 10. -4.)



bw-view Buffer = THE-CHIP Position = (C-P 13. 50.) Scale = 2. Center



Current layer = POLY Selected View = bw-view
 Selected-instance = #<REPLICATION-ARRAY 3071066.>

Current Buffer = THE-CHIP

| POLY | DIFFUSION | METAL | IMPLANT | CONTACT-CUT | CHANNEL | |
|------------|------------|-------------|-------------|-------------|---------|-------------|
| NAME-POINT | UNGROUP | GROUP | UN-SELECT | SELECT | DELETE | EVAL-BUFFER |
| EDIT-TYPE | BEGIN-TYPE | KILL-BUFFER | GOTO-BUFFER | XFRM | COPY | MOVE |
| STRETCH | PARAMETERS | REPLICATE | ROLE-NAME | INSTANTIATE | WIRE | BOX |
| BUT-CUT | CUT | LABEL | SET-VIEW | NEW-VIEW | REFRESH | CLEAN |
| STOP | | | | | | |

Set the value of which of these parameters ?

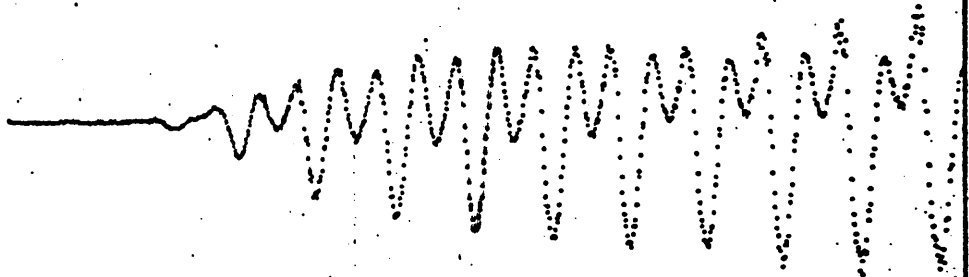
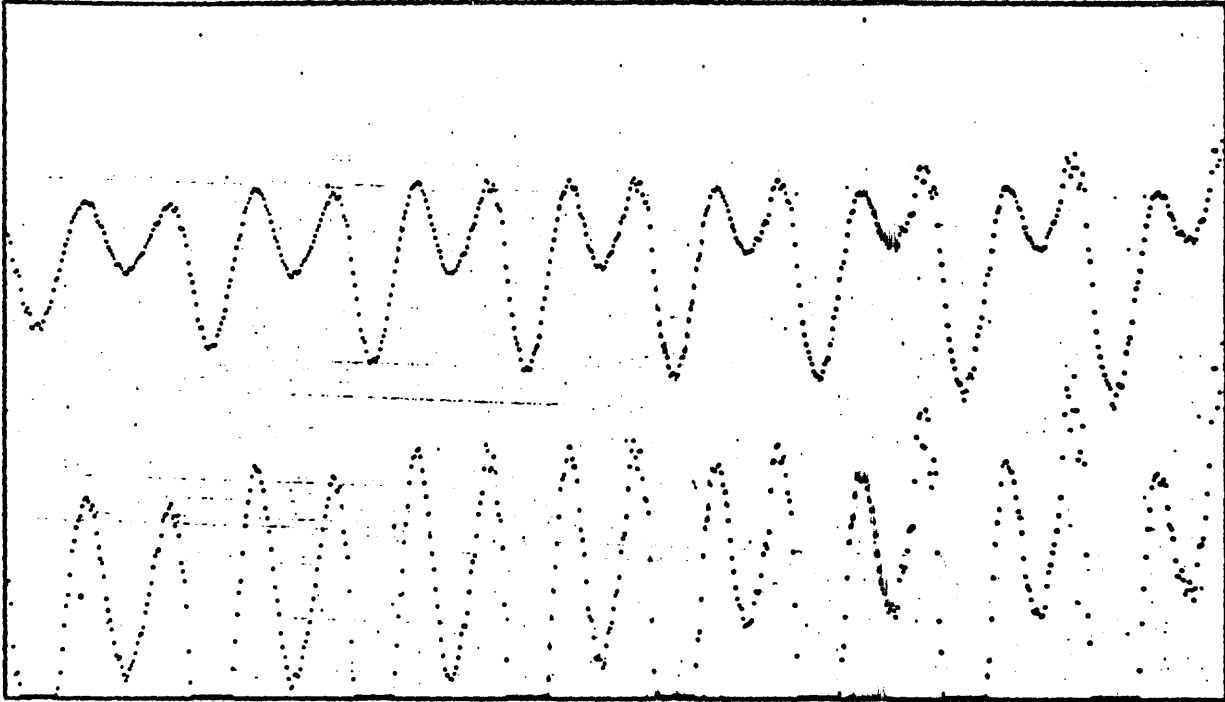
| | | | | | |
|------------------|-----|-------|------|-------|-----|
| STOP | | Y-DIM | 19.0 | X-DIM | 6.0 |
| RATIO | 4.0 | PUZ | 4.0 | PDZ | 1.0 |
| EW | 2.0 | EL | 2.0 | DW | 2.0 |
| DL | 8.0 | | | | |

DAED-INTERACTION-PANE-1

53:02 Keyboard

USER:

RUN



x

The NAMES are:

| | | | |
|----------------------|-----------------------|---------------|-------|
| ASSIGNMENT | THOMAS | | DATE |
| | GREEN | | |
| | SMITH | | |
| | ANDERSON | | |
| | JONES | | DESIG |
| | JOHNSON | | |
| | STEVENSON | | |
| PRESENT DUTY STATION | PROPOSED DUTY STATION | | |
| | | | |
| RELIEF FOR | | RELIEF RANK | |
| | | | |
| AVAILABLE | ETA | PRD | |
| | | | |
| REMARKS | | | |
| | | | |
| APPROVED/DISAPPROVED | | DECISION DATE | |
| | | | |

Tinker EDIT menu

CALL a function
Fill in an ARGUMENT
EVALUATE something
~~NEW EXAMPLE for function~~
TYPEIN and EVAL
TYPEIN, but DON'T EVAL
Make a CONDITIONAL
Edit TEXT
Edit DEFINITION
Step BACK
UNFOLD something
COPY something
DELETE something
Escape to LISP
RETURN a value

Defining (HISTORY):

Example: (3 2 1), Code: (REVERSE (LIST 1 2 3))
Example: B, Code: (2ND (QUOTE (A B C)))
Example: Y, Code: (2ND (QUOTE (X Y Z)))
Example: NIL, Code: (SEARCH (QUOTE HENRY) NIL)
Code: (SEARCH (QUOTE HENRY) (QUOTE (HENRY CARL)))

Type some code:
(SEARCH 'HENRY '(HENRY CARL))

History

ZWEI ZMACS (LISP Electric Shift-lock) History Font: A (TR128)
Control-Meta-. is not a defined key.