INSTRUCTIONS FOR THE

CAMI SYSTEM

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6288-01

TABLE OF CONTENTS

The CAMI Flow Chart

The CAMI Flow Chart consists of five pages of soft keys. Each page is identified by a "letter" and a name that closely relates to the functions of the soft keys on that page.

Ⓢ - START

Ⓑ Ⓒ - INSERT/CREATE

Ⓓ - DOCUMENTATION

Ⓔ - EDIT

Ⓚ - TOOL KIT

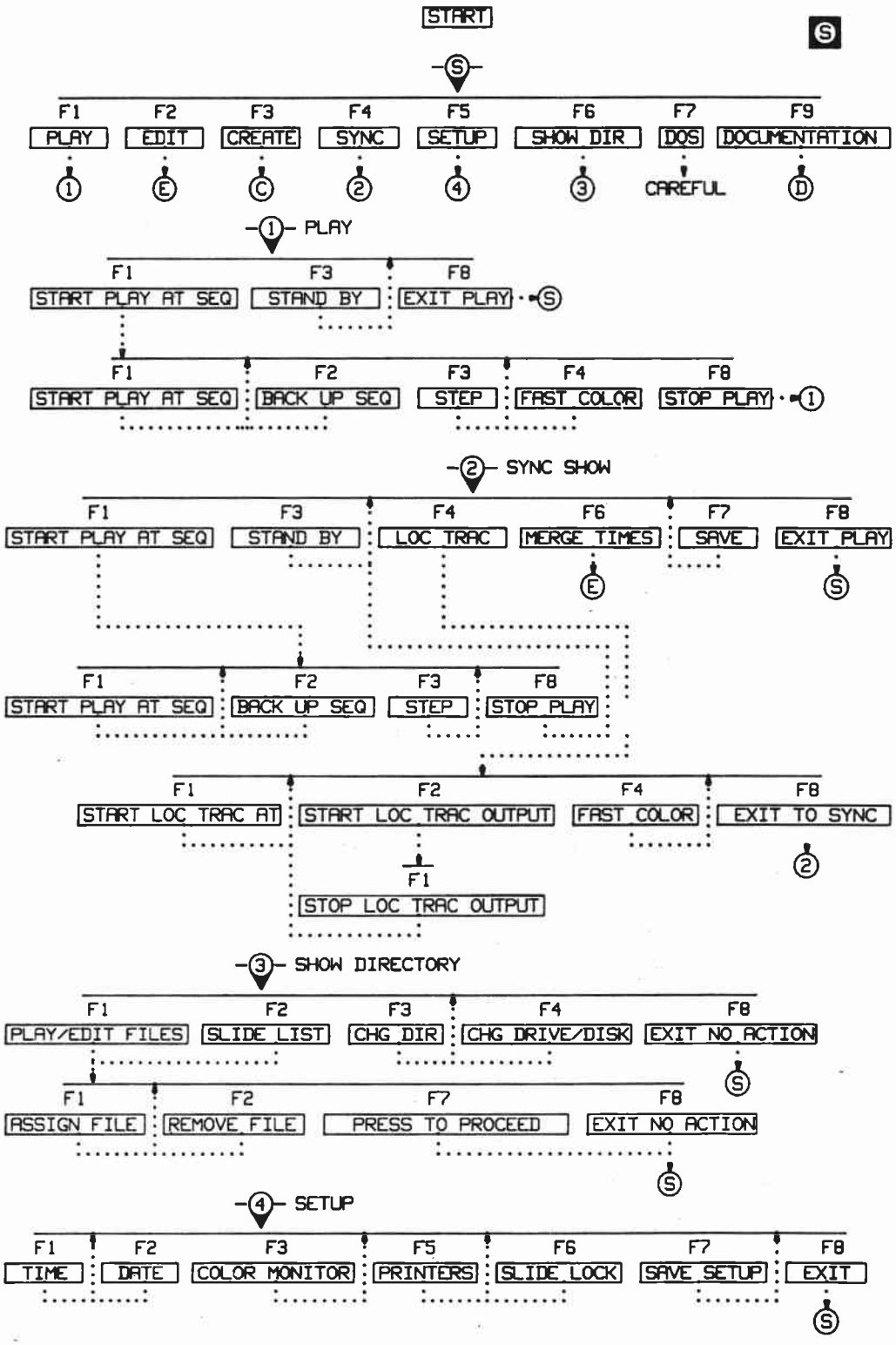
Within each page are numbers (①, ②, etc.) Numbers refer only to the soft keys on each page.

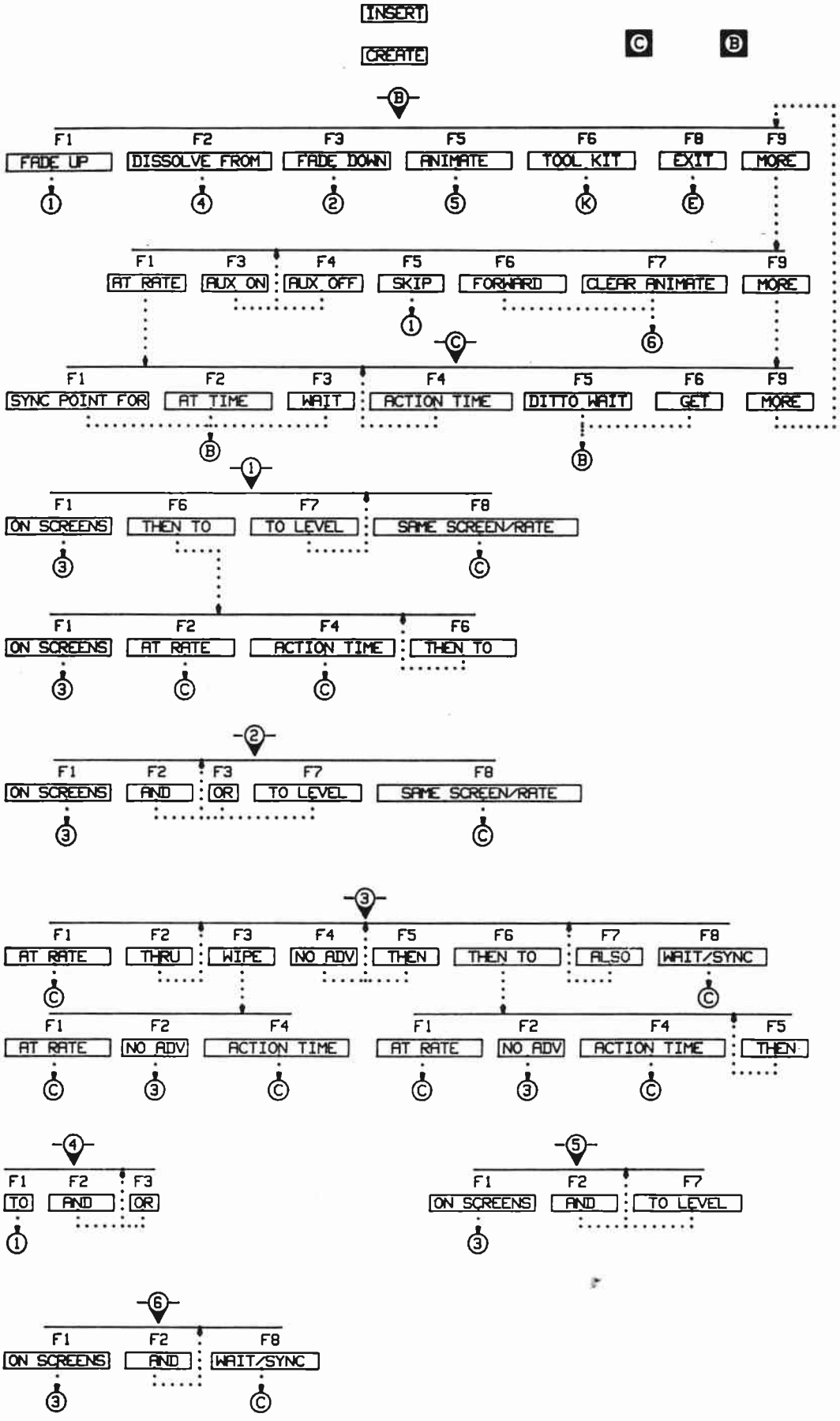
The dotted lines indicate which soft key set will next appear after a soft key has been pressed.

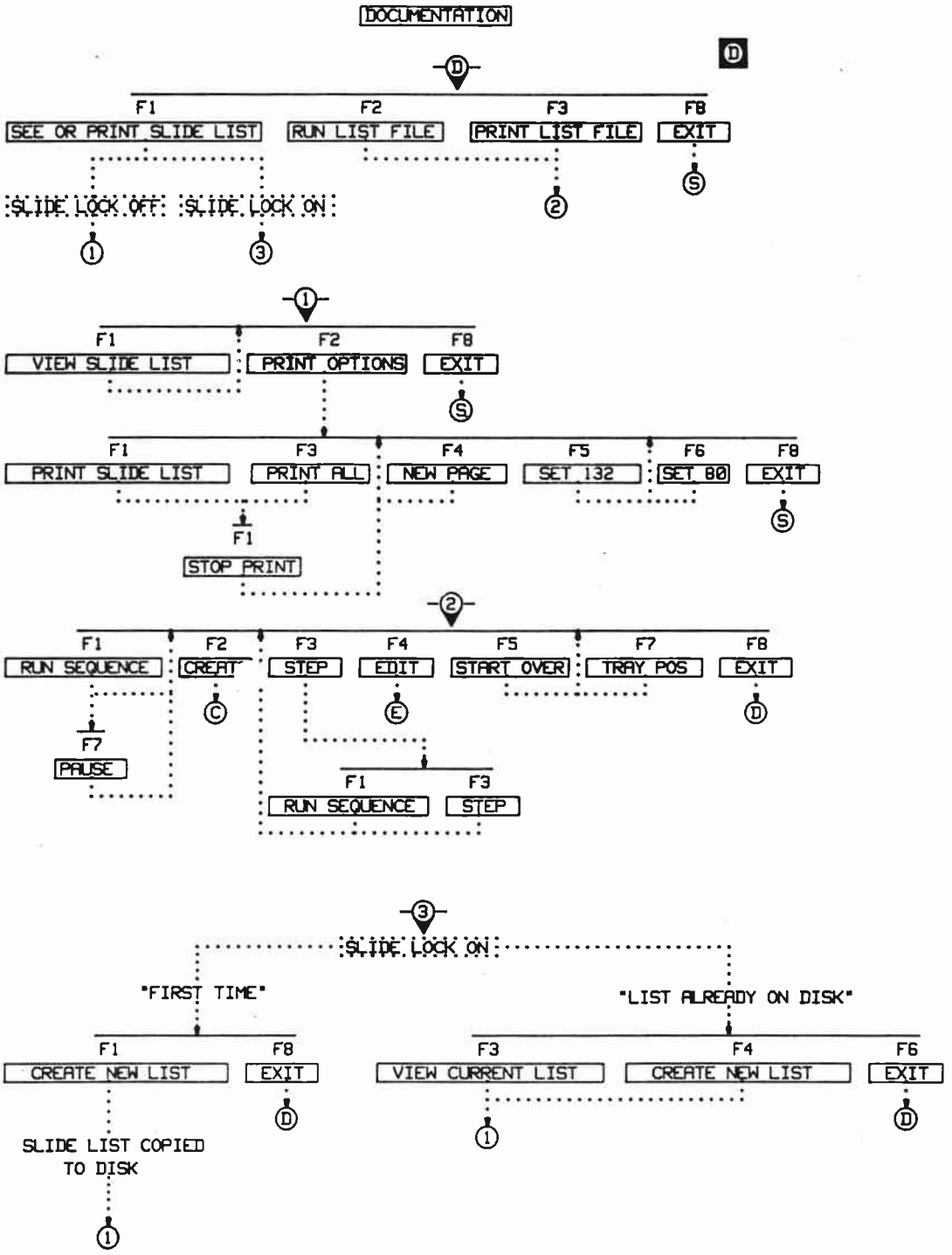
The purpose of the Flow Chart is to familiarize you with the functions and the various sets of softkeys in the CAMI software program. Referring to the Chart occasionally will help you better understand the system. It will also remind you of the functions that are available for various visual effects you may want to program.

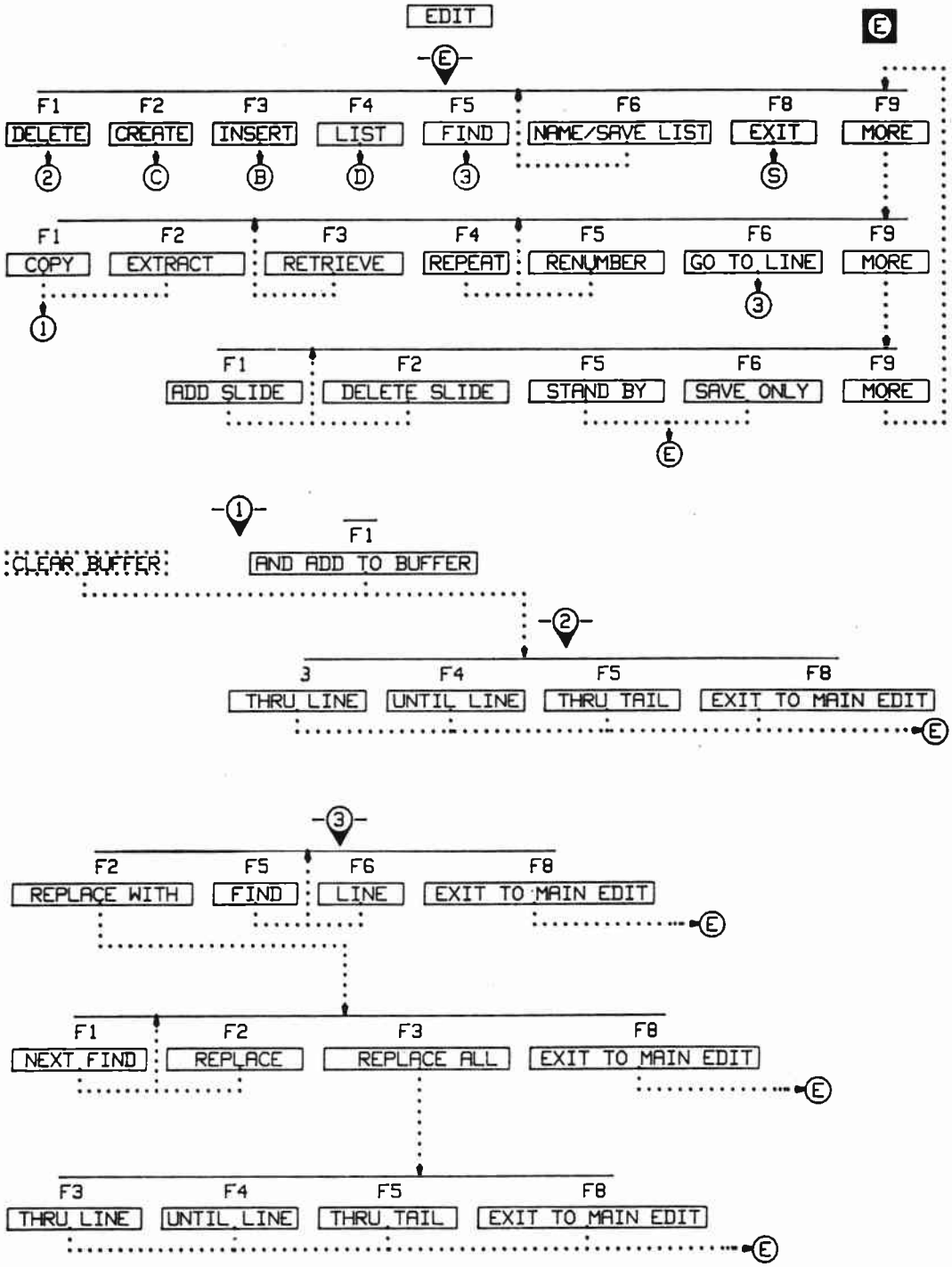
When programming a show (CREATE) the following entries are basic to the CAMI system.

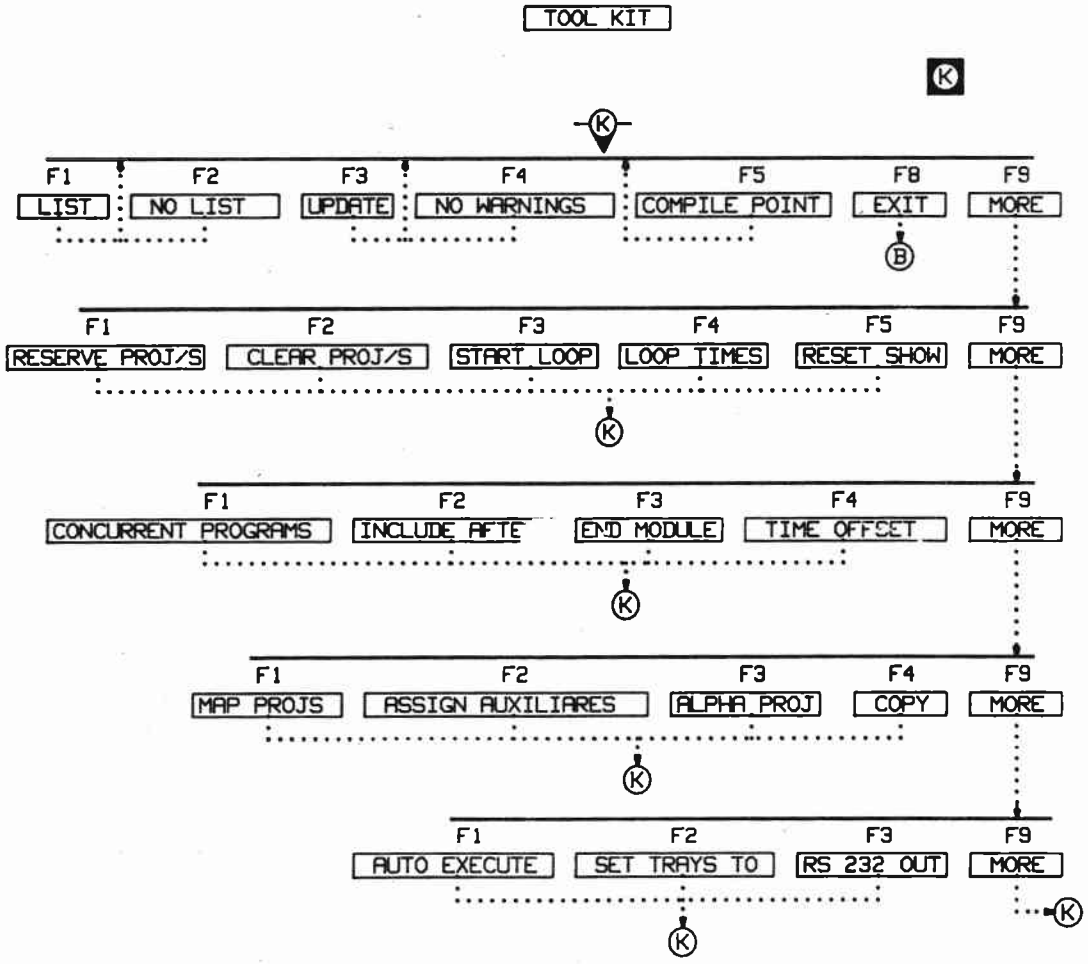
	Monitor Displays	Results
Start of show →	1 sync point for sequence 1	
Lamp command →	2 fade up SLIDE_1 and SLIDE_2	Two slides on screen A will take 2 sec. to full light intensity.
	3 on screens A	
Fade-dissolve rate →	4 at rate 2 seconds	
Wait to next action →	5 wait 4 seconds	4 sec. from the start of seq. 1 a dissolve from slide 1 to 3 will start at a 5 second rate.
	6 dissolve from SLIDE_1 to SLIDE_3	
	7 on screens A	
	8 at rate 5 seconds	
Start of a new seq →	9 sync point for sequence 2	
	10 fade down SLIDE_2	


START
S
F1 PLAY
F2 EDIT
F3 CREATE
F4 SYNC
F5 SETUP
F6 SHOW DIR
F7 DOS
F9 DOCUMENTATION
CAREFUL
1 PLAY
F1 START PLAY AT SEQ
F3 STAND BY
F8 EXIT PLAY
F1 START PLAY AT SEQ
F2 BACK UP SEQ
F3 STEP
F4 FAST COLOR
F8 STOP PLAY
2 SYNC SHOW
F1 START PLAY AT SEQ
F3 STAND BY
F4 LOC TRAC
F6 MERGE TIMES
F7 SAVE
F8 EXIT PLAY
F1 START PLAY AT SEQ
F2 BACK UP SEQ
F3 STEP
F8 STOP PLAY
F1 START LOC TRAC AT
F2 START LOC TRAC OUTPUT
F4 FAST COLOR
F8 EXIT TO SYNC
F1
STOP LOC TRAC OUTPUT
3 SHOW DIRECTORY
F1 PLAY/EDIT FILES
F2 SLIDE LIST
F3 CHG DIR
F4 CHG DRIVE/DISK
F8 EXIT NO ACTION
F1 ASSIGN FILE
F2 REMOVE FILE
F7 PRESS TO PROCEED
F8 EXIT NO ACTION
4 SETUP
F1 TIME
F2 DATE
F3 COLOR MONITOR
F5 PRINTERS
F6 SLIDE LOCK
F7 SAVE SETUP
F8 EXIT


INSERT
CREATE
F1 FADE UP
F2 DISSOLVE FROM
F3 FADE DOWN
F5 ANIMATE
F6 TOOL KIT
F8 EXIT
F9 MORE
F1 AT RATE
F3 AUX ON
F4 AUX OFF
F5 SKIP
F6 FORWARD
F7 CLEAR ANIMATE
F9 MORE
F1 SYNC POINT FOR
F2 AT TIME
F3 WAIT
F4 ACTION TIME
F5 DITTO WAIT
F6 GET
F9 MORE
F1 ON SCREENS
F6 THEN TO
F7 TO LEVEL
F8 SAME SCREEN/RATE
F1 ON SCREENS
F2 AT RATE
F4 ACTION TIME
F6 THEN TO
F1 ON SCREENS
F2 AND
F3 OR
F7 TO LEVEL
F8 SAME SCREEN/RATE
F1 AT RATE
F2 THRU
F3 WIPE
F4 NO ADV
F5 THEN
F6 THEN TO
F7 ALSO
F8 WAIT/SYNC
F1 AT RATE
F2 NO ADV
F4 ACTION TIME
F1 AT RATE
F2 NO ADV
F4 ACTION TIME
F5 THEN
F1 TO
F2 AND
F3 OR
F1 ON SCREENS
F2 AND
F7 TO LEVEL
F1 ON SCREENS
F2 AND
F8 WAIT/SYNC


DOCUMENTATION
D
F1
SEE OR PRINT SLIDE LIST
F2
RUN LIST FILE
F3
PRINT LIST FILE
F8
EXIT
S
SLIDE LOCK OFF
SLIDE LOCK ON
1
3
2
1
F1
VIEW SLIDE LIST
F2
PRINT OPTIONS
F8
EXIT
S
F1
PRINT SLIDE LIST
F3
PRINT ALL
F4
NEW PAGE
F5
SET 132
F6
SET 80
F8
EXIT
S
F1
STOP PRINT
2
F1
RUN SEQUENCE
F2
CREAT
F3
STEP
F4
EDIT
F5
START OVER
F7
TRAY POS
F8
EXIT
C
E
D
F7
PAUSE
F1
F3
RUN SEQUENCE
STEP
3
SLIDE LOCK ON
"FIRST TIME"
"LIST ALREADY ON DISK"
F1
CREATE NEW LIST
F8
EXIT
F3
VIEW CURRENT LIST
F4
CREATE NEW LIST
F6
EXIT
D
D
SLIDE LIST COPIED
TO DISK
1
1


EDIT
E
F1 DELETE
F2 CREATE
F3 INSERT
F4 LIST
F5 FIND
F6 NAME/SAVE LIST
F8 EXIT
F9 MORE
2
C
B
D
3
S
F1 COPY
F2 EXTRACT
F3 RETRIEVE
F4 REPEAT
F5 RENUMBER
F6 GO TO LINE
F9 MORE
1
3
F1 ADD SLIDE
F2 DELETE SLIDE
F5 STAND BY
F6 SAVE ONLY
F9 MORE
E
1
F1
CLEAR BUFFER
AND ADD TO BUFFER
2
3 THRU LINE
F4 UNTIL LINE
F5 THRU TAIL
F8 EXIT TO MAIN EDIT
E
3
F2 REPLACE WITH
F5 FIND
F6 LINE
F8 EXIT TO MAIN EDIT
E
F1 NEXT FIND
F2 REPLACE
F3 REPLACE ALL
F8 EXIT TO MAIN EDIT
E
F3 THRU LINE
F4 UNTIL LINE
F5 THRU TAIL
F8 EXIT TO MAIN EDIT
E


TOOL KIT
K
F1
LIST
F2
NO LIST
F3
UPDATE
F4
NO WARNINGS
F5
COMPILE POINT
F8
EXIT
F9
MORE
B
F1
RESERVE PROJ/S
F2
CLEAR PROJ/S
F3
START LOOP
F4
LOOP TIMES
F5
RESET SHOW
F9
MORE
F1
CONCURRENT PROGRAMS
F2
INCLUDE AFTE
F3
END MODULE
F4
TIME OFFSET
F9
MORE
F1
MAP PROJS
F2
ASSIGN AUXILIARES
F3
ALPHA PROJ
F4
COPY
F9
MORE
F1
AUTO EXECUTE
F2
SET TRAYS TO
F3
RS 232 OUT
F9
MORE

CAMI INTRODUCTION

CAMI stands for Computer Assisted Multi-Image.

CAMI is an IBM PC based multi-image programming system. CAMI can control 32 projectors and 24 auxiliaries.

More projectors and auxiliaries can be controlled using additional Arion hardware.

Computer Requirements

CAMI works on the IBM PC, XT, and AT. It also works on other PC compatibles such as the Compaq, Epson, Leading Edge, Columbia Scientific, and Zenith.

One disk drive is required.

A minimum of 256K of memory is needed for shows under 16 projectors. For larger shows at least 512K of memory is recommended.

Playback Equipment

Programs playback using Arion Mate-Trac dissolve controls such as the Two Plus, Four Plus, and Express Four. The Mate-Trac compatible Kodak Ektagraphic Programmable Dissolve Control can also be used.

The CAMI System

CAMI consists of an Mate-Trac circuit board, a diskette, and this manual.

The Arion Mate-Trac Circuit Board

The circuit board is CAMI's way of communicating with the outside world. This circuit board sends out both Arion Mate-Trac and Loc-Trac signals. It also receives the Loc-Trac signal from tape.

The circuit board can be plugged into any available peripheral slot on your PC or compatible.

Mate-Trac

Mate-Trac is the projector control signal sent out by CAMI to Arion or Mate-Trac compatible dissolve controls.

The Mate-Trac signal outputs from the lower OUT jack on the circuit board.

Loc-Trac

Loc-Trac is an Arion time signal that counts time in hundredth of a second steps. It is used for setting the starting time of visual sequences.

The Loc-Trac signal is sent out from the lower OUT jack on the circuit board. Loc-Trac is recorded on tape. In playback Loc-Trac is sent in to the upper IN jack of the circuit board.

Programming

Programming is interactive. This means as you program, the projectors fade up and down after each action entry.

Programming is done in simple, plain English statements:

```
at time 1:22.10 begin OPENING_MUSIC sequence_1
  fade up COMPANY_LOGO on screens A
     at rate 1 seconds
```

Complete keywords - fade up, fade down, at rate, etc. - are entered using the [F1] through [F7] softkeys. A guide to the softkeys appears at the bottom of the screen.

Programming is for slides rather than projectors. You tell CAMI the number of projectors on each screen. Then during programming you fade up and fade down slides. CAMI, after taking into account the previous fade rates, tray cycle time, and equal tray loading, assigns slides to the optimum projectors.

You can give meaningful names to slides such as COMPANY_LOGO, SALES_87 and SUNRISE.

Multiple Playback Options

Taped shows can be played back with or without your PC.

To playback a taped show with CAMI installed in your PC, send the Loc-Trac recorded alongside the soundtrack into the Mate-Trac board. CAMI will send the Mate-Trac control signal out to the dissolve controls.

To playback a taped show without your PC, make a Mate-Trac show tape. This tape has the CAMI Mate-Trac signal recorded alongside the soundtrack. The recorded Mate-Trac is sent directly to the dissolve controls, eliminating the need for your PC.

Playback mixed and live speaker support shows with or without your PC.

Using your PC, pressing the spacebar runs live sequences from memory. Sending Loc-Trac into CAMI runs the taped sequences.

Without the PC, mixed and live speaker support shows for sixteen or less projectors can be down loaded into a Design Sixteen or 828 Memory Programmer. The live sequences are run from memory, the taped sequences from Mate-Trac.

Multiple Windows

There are eight programming windows, a waste window, and a buffer window.

Programming window 1 is where new shows are created and edited.

Programming windows 2 through 8 are used for holding old programs and concurrent programs. Usable bits of old programs - like paragraphs in a word processor - can be moved from these windows to build new programs in window 1.

The waste window is where all deleted lines are stored. Lines can be retrieved from this window and returned to the programming windows.

The buffer window is where lines being moved from programming windows are temporarily stored.

Documentation

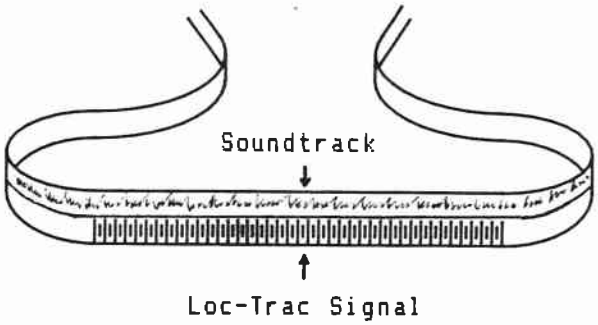
Slide assignment lists show where slides belong. Slide lists can be viewed and printed. The list file provides a detailed line-by-line, step-by-step breakdown of the program. The list file can be viewed and printed.

LOC TRAC

Loc-Trac is a time signal recorded alongside the soundtrack. It counts up time in hundredths of a second, seconds, minutes, and hours -- from 0 seconds to two hours and fifty-five minutes.

Loc-Trac is used when synchronizing slides to the sound track while making taped shows.

The Loc-Trac signal recorded on tape might look like this:



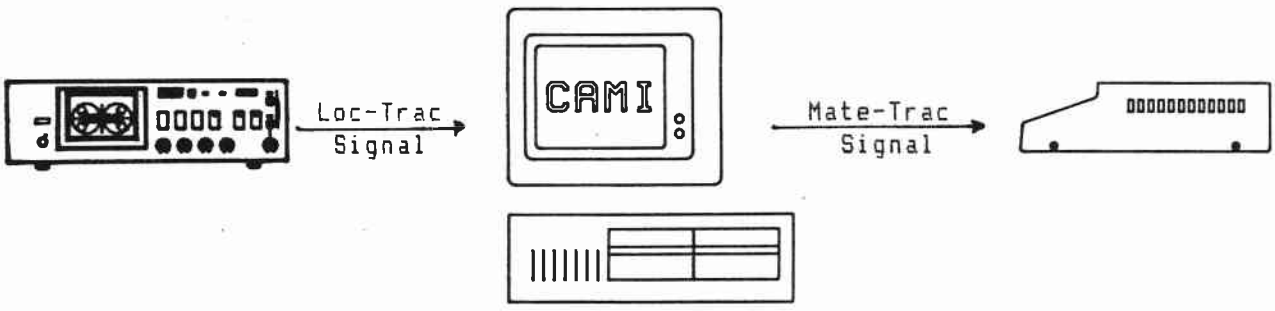
SYNCHRONIZING TO LOC-TRAC

Sequences -- visual actions -- that are to be synchronized to the Loc-Trac signal always begin with a "sync point for:"

```
sync point for OPENING_DRUMROLL sequence
   fade up COMPANY_LOGO on screens A
     at rate 2 seconds
```

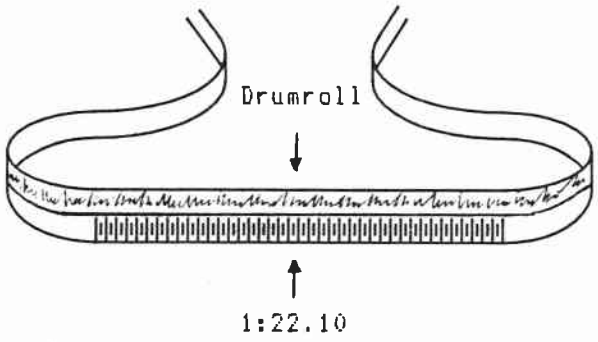
You want the COMPANY_LOGO to fade up with the opening drumroll on the soundtrack.

To synchronize, send the recorded Loc-Trac into CAMI while listening to the soundtrack:



Press the spacebar when the drumroll sounds. When the spacebar is pressed, CAMI takes a "snapshot" of the incoming Loc-Trac.

The "sync point for" changes to a specific "at time:"



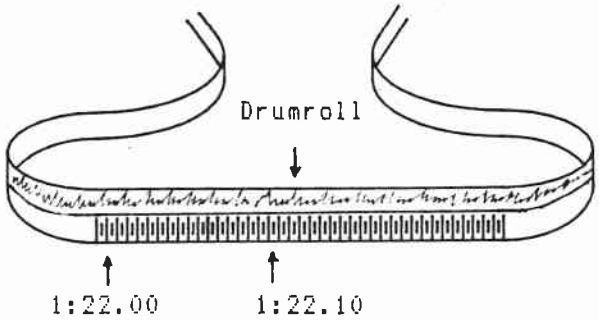

```
at time 1:22.10 begin OPENING_DRUMROLL sequence
    fade up COMPANY_LOGO on screens A
      at rate 2 seconds
```

Whenever Loc-Trac reaches 1:22.10 the OPENING_DRUMROLL sequence will start.

Fine tune sequence starting times by typing in new "at times." For example, starting the DRUMROLL sequence .10 seconds earlier:

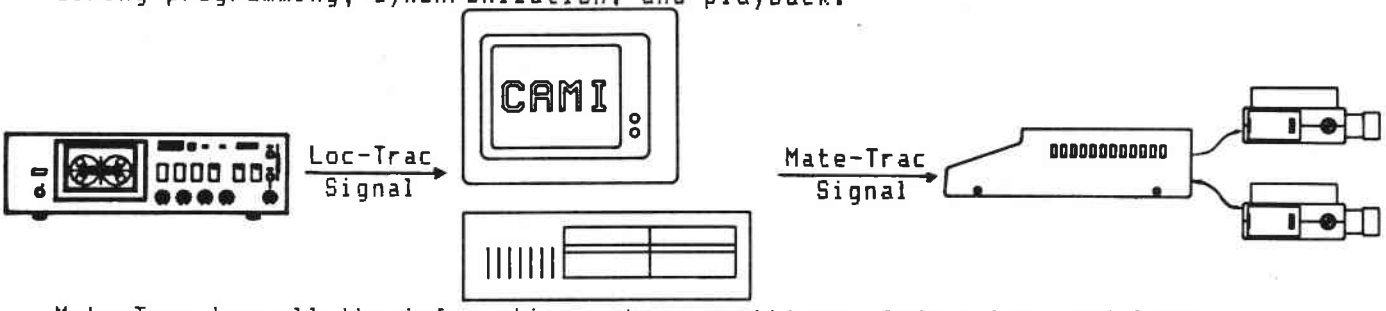
```
at time 1:22.00 begin OPENING_DRUMROLL sequence
    fade up COMPANY_LOGO on screens A
      at rate 2 seconds
```

The OPENING_DRUMROLL sequence now begins at 1:22.00 instead of 1:22.10:



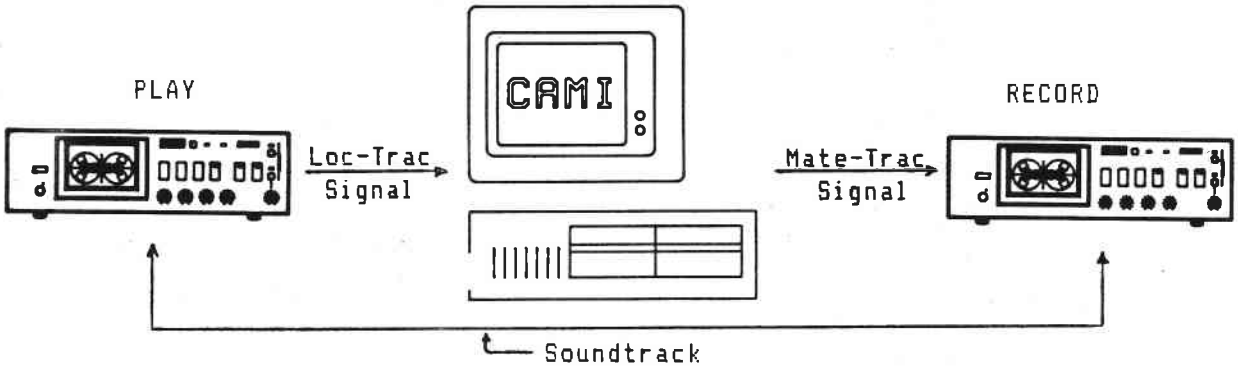
Resynchronizing does not require recording a new Loc-Trac signal. Just enter new "at times" in the CAMI program.

Mate-Trac is the projector control signal CAMI sends out to the dissolve during programming, synchronization, and playback:

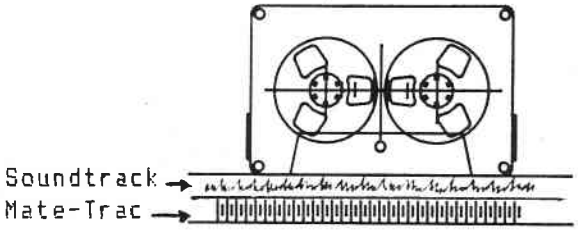


Mate-Trac has all the information - tray positions, fade rates, and lamp status - the dissolve controls need to control their projectors.

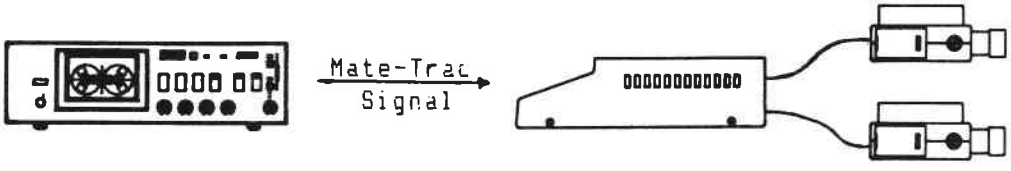
After the program has been synchronized, the Mate-Trac signal can be recorded directly alongside the soundtrack:



The Mate-Trac signal recorded alongside the soundtrack has all the information - fade rates, tray positions, and lamp status - the dissolve controls need to control their projectors:



Use the Mate-Trac show tape to playback the show without CAMI:



THE MATE-TRAC BOARD: OUT AND IN JACKS

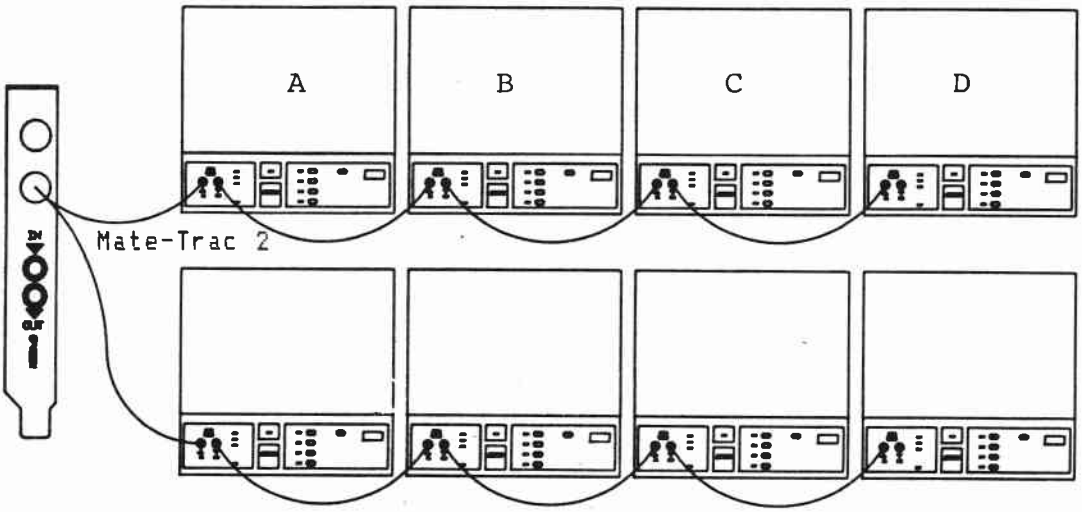
The OUT Jack

Mate-Trac and Loc-Trac output through the lower white 1/4" stereo OUT jack.

Two separate channels of Mate-Trac output through the lower white stereo OUT jack. Mate-Trac 1 outputs through the left channel. Mate-Trac 2 outputs through the right channel.

Each channel can control up to sixteen projectors through four separate dissolve controls:

Mate-Trac 1



Use Mate-Trac 1 when using four or less dissolve controls. When 1/4" mono phone plugs are used only Mate-Trac 1 is received.

When controlling more than four dissolve controls use a "Y" adaptor (Radio Shack catalog number 274-300) to split the OUT jack output into Mate-Trac 1 and 2 outputs.

Loc-Trac outputs through the OUT jack left channel.

The IN Jack.

Only Loc-Trac inputs through the 1/4" IN jack.

INSTALLING THE MATE-TRAC BOARD

1. Remove your PC system unit cover.
2. Install the Mate-Trac circuit board in any available peripheral slot. Secure the Mate-Trac board in place with the retaining screw.
3. Reattach the PC system unit cover.

MAKING A BACKUP AND A WORKING CAMI DISKETTE

The CAMI write-protected application program diskette does not have DOS.

First make a backup diskette. This is a read-write diskette that has both the CAMI application program and DOS. After making the backup diskette, put the original write-protected CAMI diskette safely away.

Then make a working diskette. This is a second read-write diskette that also has both the CAMI application program and DOS. After making the working diskette, put the backup diskette safely away.

Use the working diskette to create and playback programs. If the working diskette is damaged, use the backup diskette to make another working diskette.

These instructions are for a single A drive. You will need two additional blank read-write diskettes.

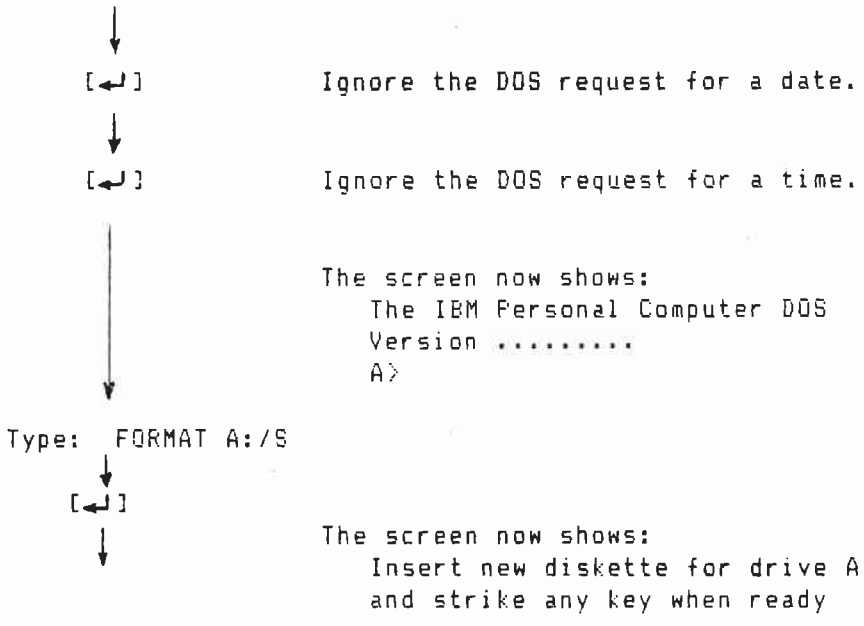
Label one blank diskette "CAMI Backup." Label the other blank diskette "CAMI Working."

Press the keys shown within [brackets].
Use the typewriter keys to enter the words that follow Type:

Please start with the IBM System Unit switched off.

NOTE: If using Compaq Desk Pro computer - use the slow speed mode (red LED).

1. Insert your 1.1 or higher DOS diskette in disk drive A. Switch the System Unit on.



2. Remove the DOS diskette from drive A. Insert the backup diskette to be formatted into drive A.

↓

[↵]

↓

The screen now shows:
Formatting .....

When formatting is finished, the screen shows
Formatting ..... Format complete
System transferred .....
Format another (Y/N)?

[N]

↓

The screen now shows:
A>

3. Remove the formatted backup diskette from disk drive A.

Insert the CAMI write-protected diskette into disk drive A.

↓

Type: COPY A:*.* B:

↓

[↵]

↓

The screen now shows:
A: COMMAND.COM
Insert diskette for drive B:
and strike any key when ready

Follow the screen prompts. When the prompt says "Insert diskette for drive B:" put the backup diskette in the disk drive.

↓

When the prompt says "Insert the diskette for drive A:," put the CAMI write-protected diskette in the disk drive.

When all files are copied, the screen shows:
... file(s) copied
A>

4. Put the write-protected CAMI diskette safely away. Remove the backup diskette from disk drive A. Insert the DOS diskette into disk drive A.

↓

Type: DISKCOPY

↓

[↵]

↓

Follow the screen prompts. When the prompt says "Insert source diskette in drive A:," put the backup diskette in the disk drive.

When the prompt says "Insert target diskette in drive A:," put the working diskette in the disk drive.

When copying is complete, the screen shows:

Copy complete

Copy another (Y/N)?

[N]

This completes making backup and working diskettes. Now put the backup diskette safely away.

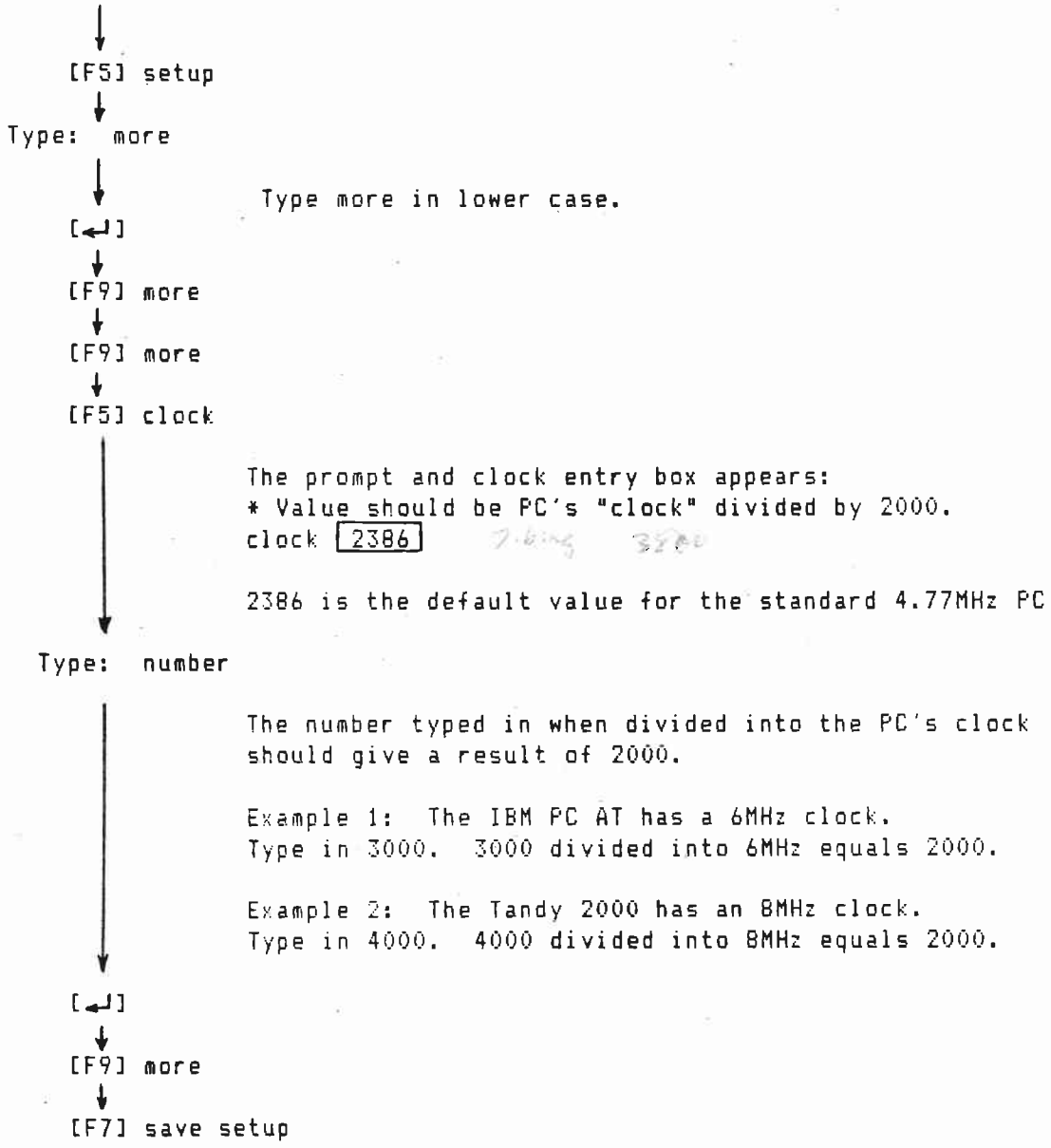
CLOCK: USING CAMI WITH THE IBM AT AND OTHER SPEED COMPUTERS

Clock lets CAMI be used with PCs that have different speeds than the standard IBM PC 4.77 MHz clock.

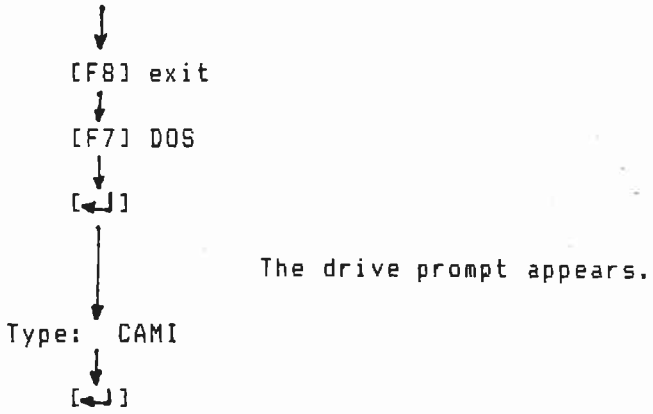
CAMI's default setting uses the standard PC's 4.77MHz clock timing pulses to regulate the Mate-Trac board.

CAMI can be programmed on other speed computers. However, unless clock is used there will be no output from the Mate-Trac board.

1. Set the clock speed.



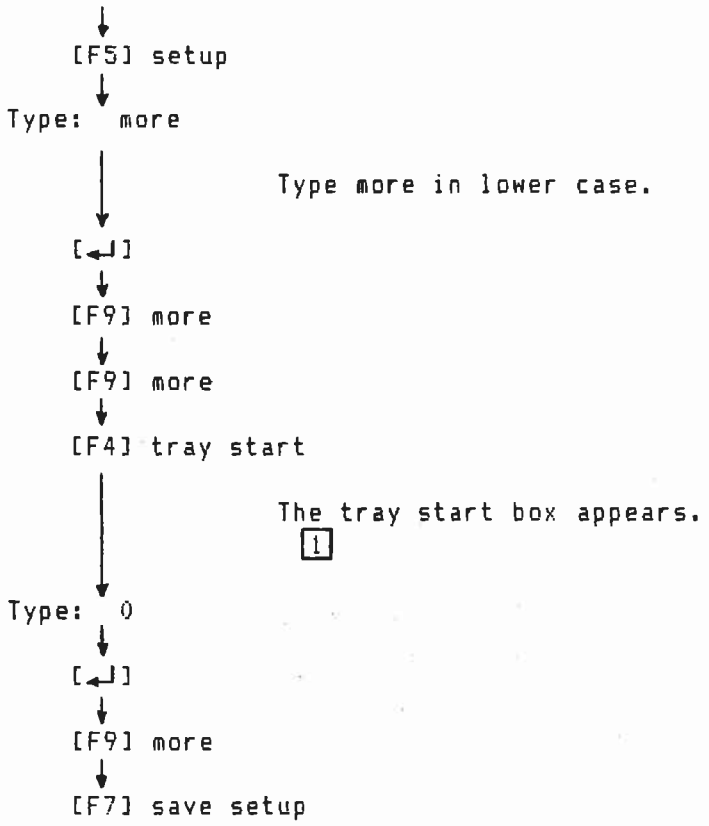
2. Exit to DOS and reboot. The Mate-Trac board is now active. The new clock setting is saved on disk. It will not have to be reentered until another computer is used.



TRAY START - Beginning Shows at the 0 Tray Position

Tray start changes where CAMI begins assigning slides from tray position 1 to tray position 0.

Use tray start if you normally begin loading slides at tray position 0.



SAVE SETUP

Save setup is a programming convenience key. It saves having to assign edit files to windows, set the slide lock condition, enter the correct monitor and printer type, etc., each time CAMI boots up.

Save setup creates an EXECDFLT.ABS file. This file holds edit file window assignments, slide lock condition, printer and monitor type, etc.

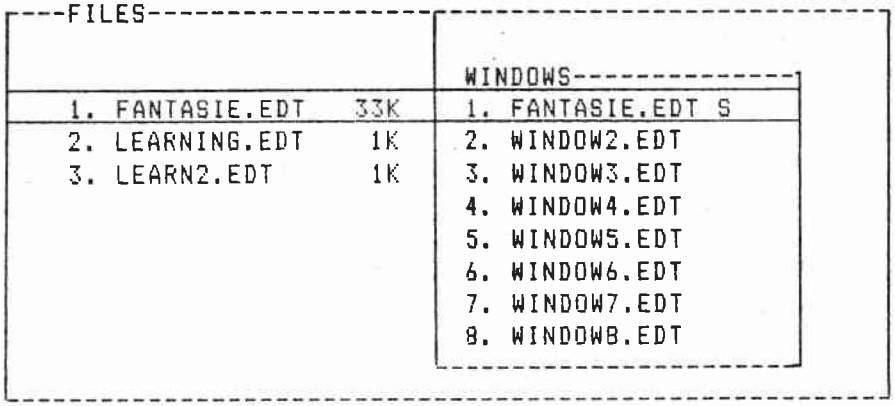
Whenever CAMI boots up, it uses the EXECDFLT.ABS to automatically move edit files into programming windows, turn on or off slide lock, set the correct monitor and printer settings, etc.

In this example the FANTASIE.EDT file assignment to window 1 will be saved. The next time CAMI is booted up, FANTASIE.EDT will be automatically moved into window 1 by pressing [F1] PLAY, [F2] EDIT,
[F3] CREATE, or [F4] SYNC.

Go to the file window. Assign FANTASIE.EDT to window 1.

↓
[F6] show dir
↓
[F1] play/edit files

The Files window, showing edit files on disk, appears.



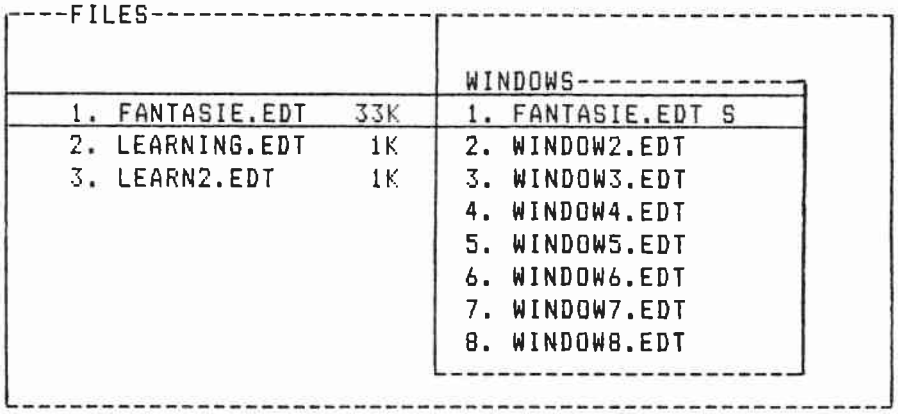
Save Setup continued

Assign the FANTASIE.EDT file to window 1.

↓

[F1] assign file

FANTASIE.EDT is assigned to window 1.



Move FANTASIE.EDT from disk into window 1.

↓

[F7] press to proceed

The drive runs briefly as FANTASIE.EDT is moved into window 1.

Create an EXECDFLT.ABS file. This file will automatically move FANTASIE.EDT into window 1 the next time CAMI boots up and the [F1] PLAY, [F2] EDIT, [F3] CREATE, or [F4] SYNC keys are pressed.

↓

[F5] setup

↓

[F7] save setup

The disk drive runs briefly. EXECDFLT.ABS is created on disk.

To erase the EXECDFLT.ABS file:

↓

[F7] DOS

↓

[↵]

↓

Type: DEL EXECDFLT.ABS

↓

[↵]

The disk drive runs briefly. EXECDFLT.ABS is erased.

PROGRAMMING 1: Learning about CAMI

PROGRAMMING teaches by example. LEARNING is a very simple, single screen, two projector, four slide show. LEARNING demonstrates basic programming concepts and will help you become comfortable with CAMI. It does not cover every aspect of CAMI.

PROGRAMMING has three lessons. Plan on going through each lesson at one sitting from beginning to end. At the end of each lesson you can turn off CAMI and come back to the next lesson later.

PROGRAMMING 1 starts by setting up equipment and entering CAMI. The edit file for LEARNING is created, played back, and saved on disk.

PROGRAMMING 2 begins by bringing LEARNING back from disk. LEARNING is then edited and played back. The LIST FILE window is used to find and correct errors. The edited version of LEARNING is then saved on disk alongside the original version of LEARNING.

PROGRAMMING 3 starts by assigning the original and edited versions of LEARNING to programming windows 1 and 2. The edited version of LEARNING is synchronized to Loc-Trac and then saved. The LIST FILE window shows slide assignments.

To create LEARNING you need:

- The CAMI Mate-Trac board installed in an IBM PC
- A CAMI working diskette
- A Mate-Trac or compatible dissolve control
- A mono audio cable with 1/4" phone plugs to connect the Mate-Trac board and dissolve control
- An audio cable to connect between the Mate-Trac board's 1/4" OUT and IN jacks and your tape recorder's sync IN and OUT jacks
- Two projectors
- Four scrap slides labeled SLIDE 1, SLIDE 2, SLIDE 3, and SLIDE 4
- A tape recorder

PROGRAMMING 1: Setup

The setup keys set the time and date, and turn on the color.

Please start with the IBM System Unit switched off.

Insert the CAMI working diskette in disk drive A.

The system boots up. The A drive prompt appears.

Ignore the date request

[↵]

Ignore the time request

[↵]

Type: CAMI

[↵]

The SIGNON (sign on) window with the CAMI logo appears. The first set of softkeys appears. These are the START softkeys.

F5
setup

F1
time

The time entry box appears:
time [2:05:23 A.M.]

Type: Current time - hours:minutes:seconds
Use A for A.M., P for P.M.

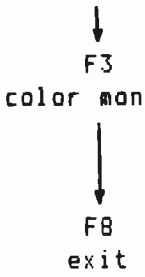
[↵]

F2
date

The date entry box appears:
[JAN 10, 1985]

Type: Current date - month (3 letters), day, year.

[↵]



Colors turn on if you have a color monitor.

The START softkeys return.

This completes Setup. Continue to Creating LEARNING.

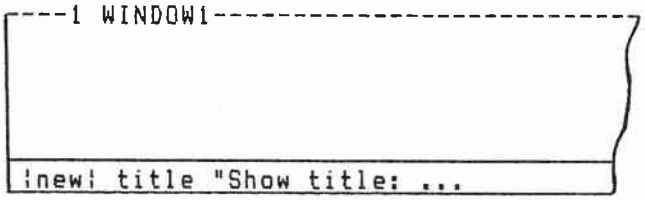
PROGRAMMING 1: Creating LEARNING

LEARNING is a single screen, 2 projector, four slide show.

LEARNING will be created in programming window 1. This is the interactive window -- new Mate-Trac signal is sent out to the dissolve controls as statements are completed.

F3
create

Programming window 1 appears:

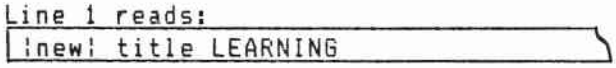


Type: LEARNING

For typing corrections use [4] and [6] to move the cursor.

[↵]

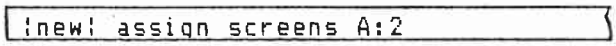
Line 1 reads:



F1
assign screens

Type: A:2

[↵]

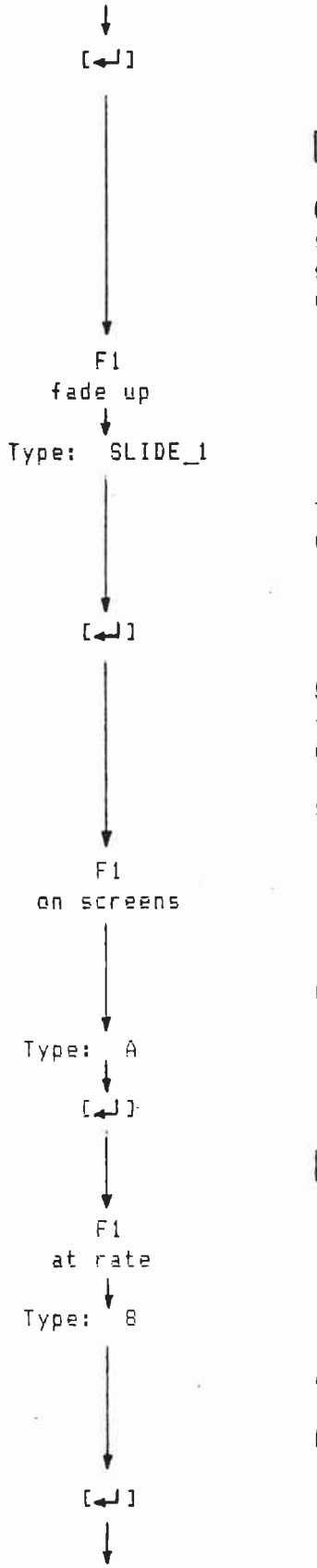


This tells CAMI that screen A has 2 projectors.

F1
sync point for

This will be the start of the first sequence of the Learning show.

Type: CAMI


[↵]
3 sync point for CAMI sequence 1
CAMI is the default name for this sequence. In a real program you can give sequence names useful to you. Names can be up to 24 characters long.
F1
fade up
Type: SLIDE_1
The [Spacebar] or the [PrtSc] key types an underscore (_).
[↵]
SLIDE_1 is the default name for the first slide. In a real program you can give slides useful names -- LOGO, FORECAST_86, etc.
Slide names can be up to 14 characters long.
F1
on screens
[Esc] key clears mistaken softkey entries on new lines.
Type: A
[↵]
!new! fade up SLIDE 1 on screens A
F1
at rate
Type: 8
64 fade rates are available: 0, .2, .5, 1.0, 1.5, 2, 3, 3.5, 4 through 16, and even rates between 18 and 98 seconds.
[↵]

PROGRAMMING 1: Setup

The setup keys set the time and date, and turn on the color.

Please start with the IBM System Unit switched off.

Insert the CAMI working diskette in disk drive A.

The system boots up. The A drive prompt appears.

Ignore the date request

[↵]

Ignore the time request

[↵]

Type: CAMI

[↵]

The SIGNON (sign on) window with the CAMI logo appears. The first set of softkeys appears. These are the START softkeys.

F5
setup

F1
time

The time entry box appears:
time [2:05:23 A.M.]

Type: Current time - hours:minutes:seconds
Use A for A.M., P for P.M.

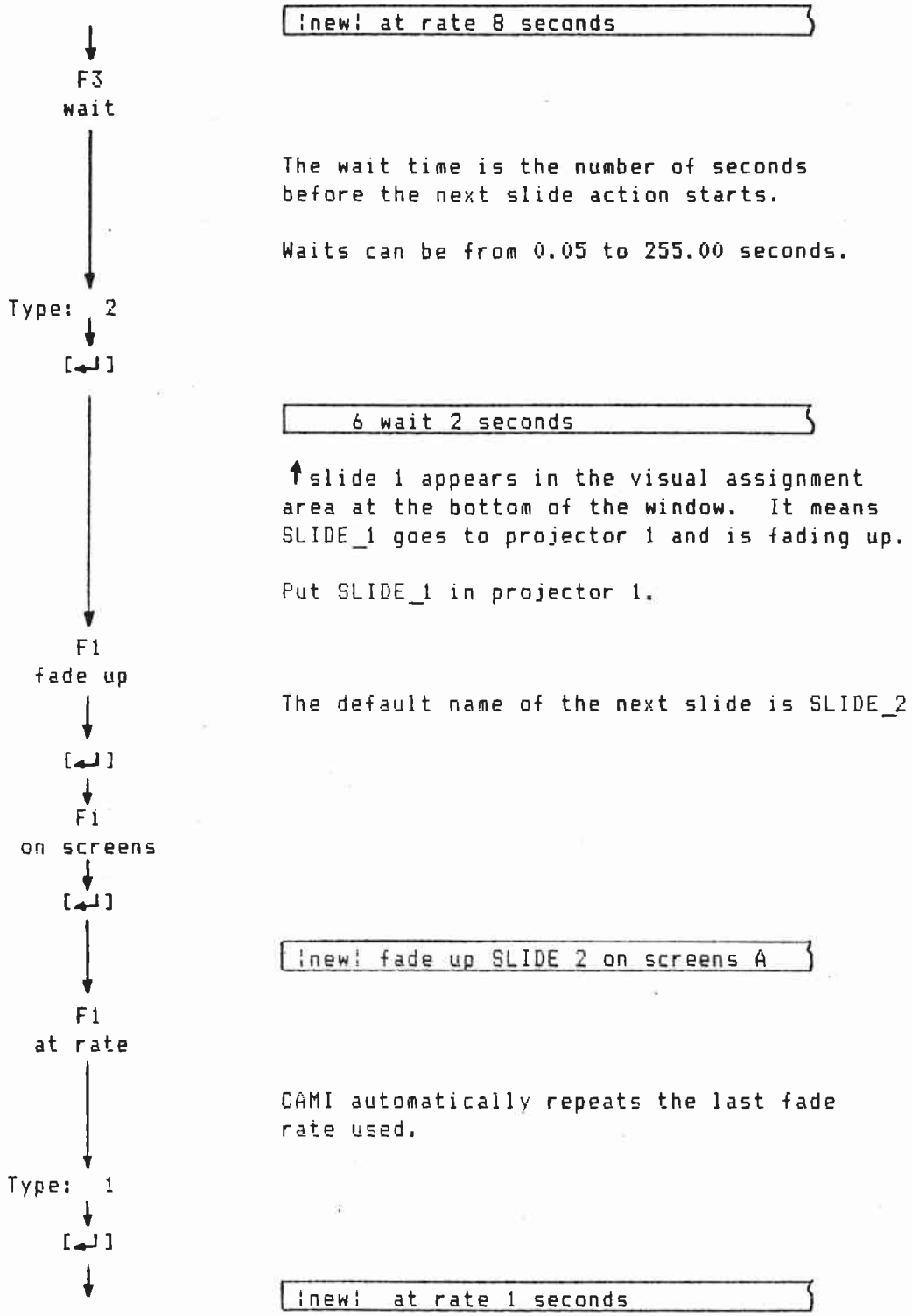
[↵]

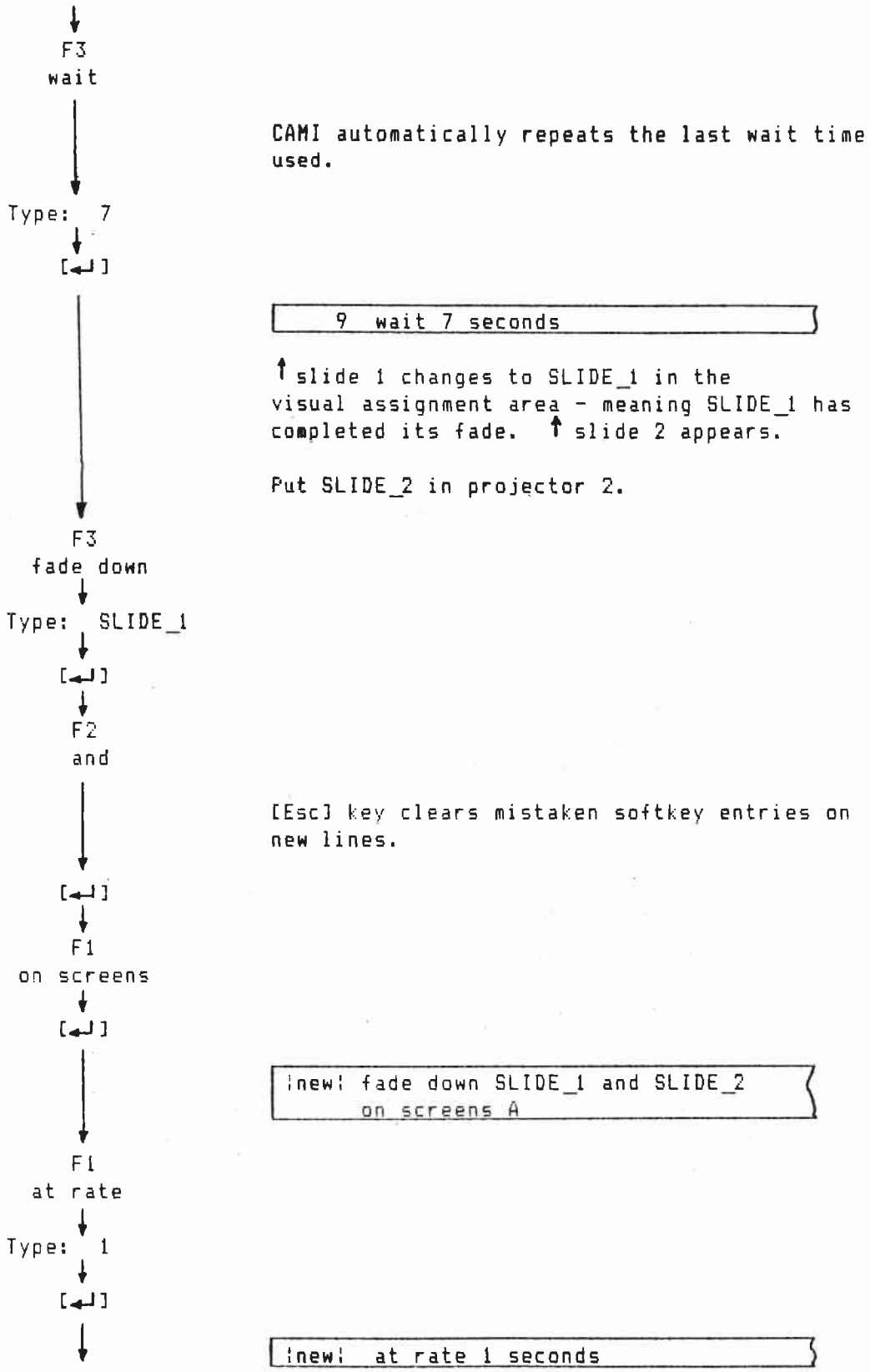
F2
date

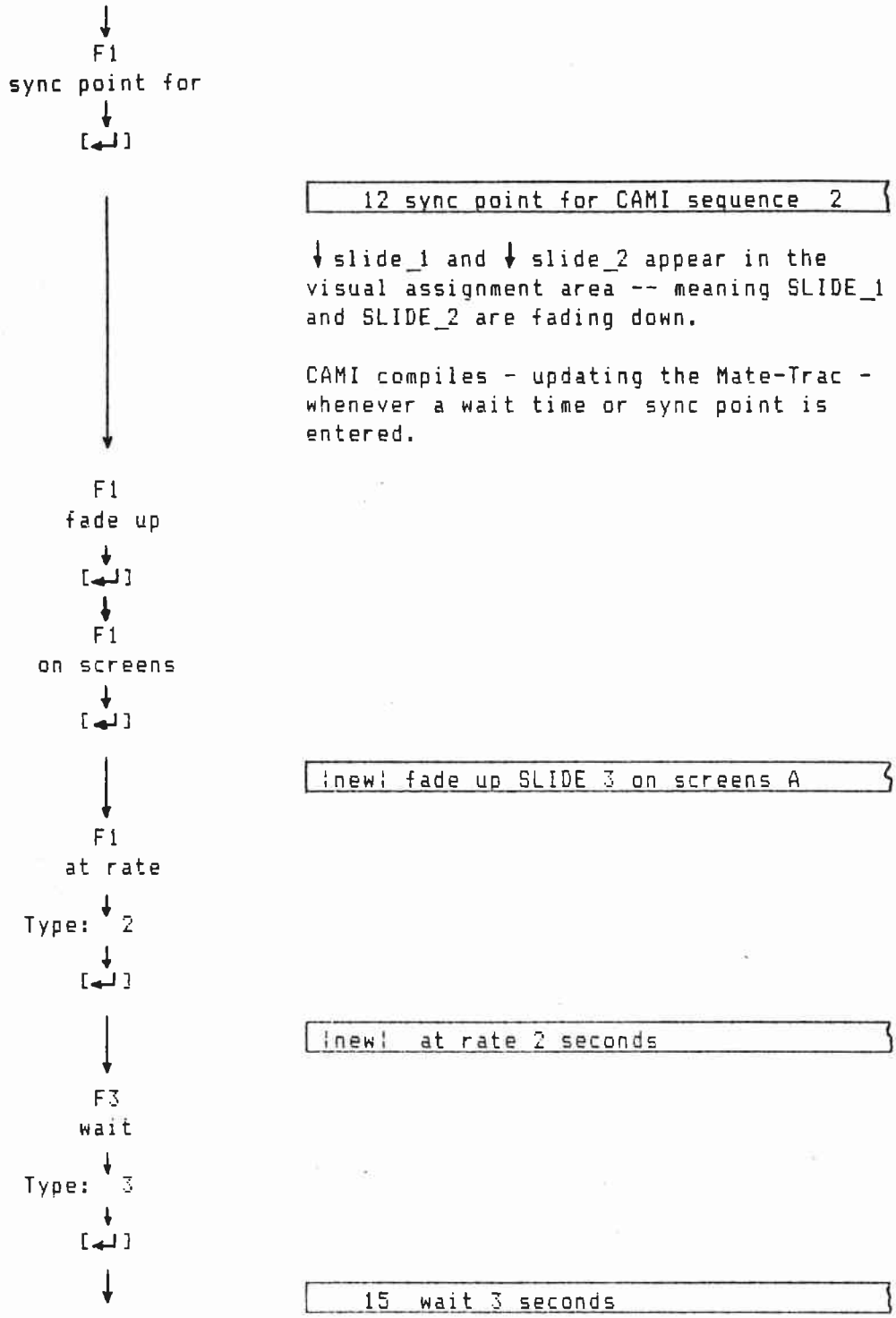
The date entry box appears:
[JAN 10, 1985]

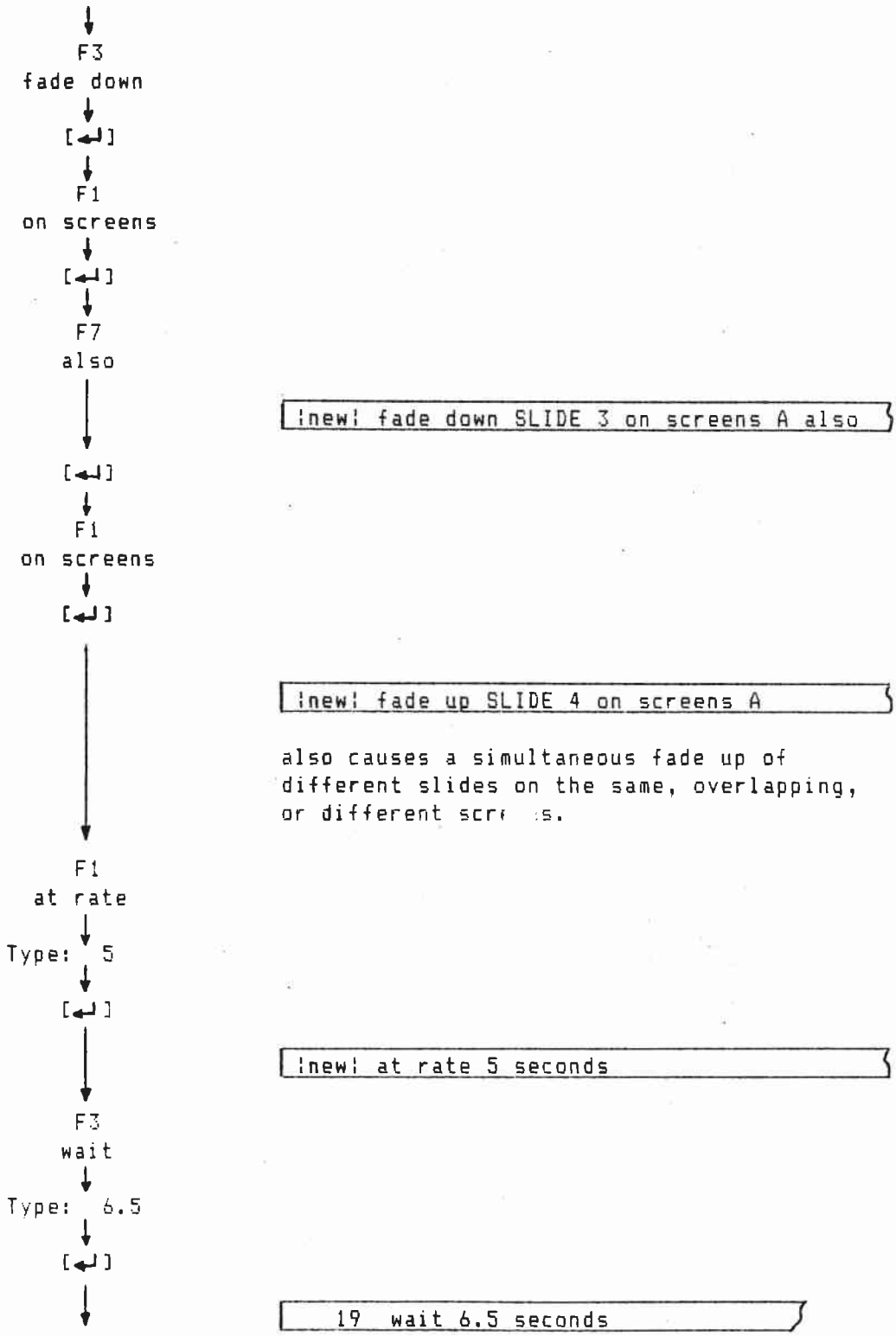
Type: Current date - month (3 letters), day, year.

[↵]

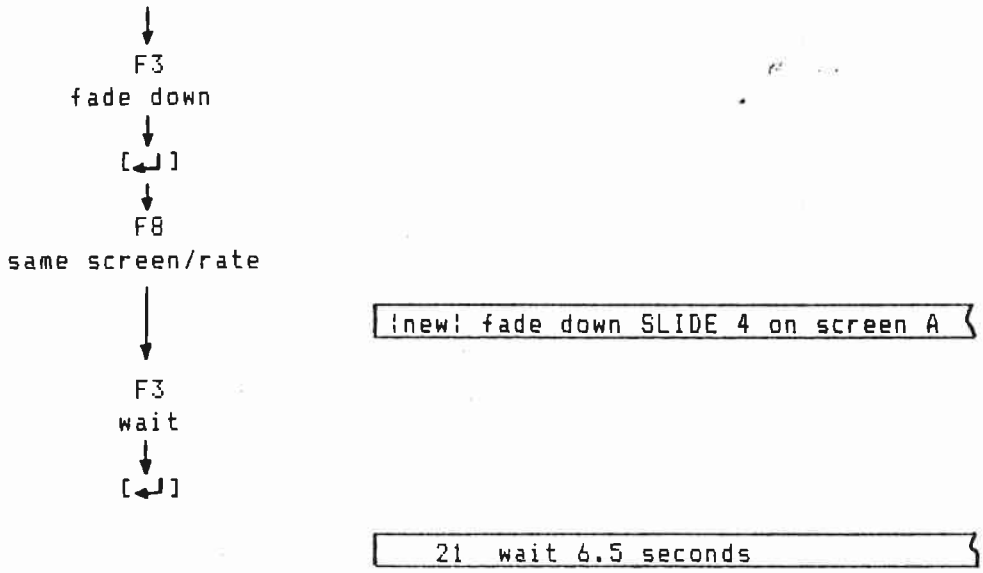

!new! at rate 8 seconds
F3
wait
The wait time is the number of seconds before the next slide action starts.
Waits can be from 0.05 to 255.00 seconds.
Type: 2
[↵]
6 wait 2 seconds
↑slide 1 appears in the visual assignment area at the bottom of the window. It means SLIDE_1 goes to projector 1 and is fading up.
Put SLIDE_1 in projector 1.
F1
fade up
The default name of the next slide is SLIDE_2
[↵]
F1
on screens
[↵]
!new! fade up SLIDE 2 on screens A
F1
at rate
CAMI automatically repeats the last fade rate used.
Type: 1
[↵]
!new! at rate 1 seconds


F3
wait
CAMI automatically repeats the last wait time used.
Type: 7
[↵]
9 wait 7 seconds
↑ slide 1 changes to SLIDE_1 in the visual assignment area - meaning SLIDE_1 has completed its fade. ↑ slide 2 appears.
Put SLIDE_2 in projector 2.
F3
fade down
Type: SLIDE_1
[↵]
F2
and
[Esc] key clears mistaken softkey entries on new lines.
[↵]
F1
on screens
[↵]
!new! fade down SLIDE_1 and SLIDE_2
on screens A
F1
at rate
Type: 1
[↵]
!new! at rate 1 seconds


F1
sync point for
[↵]
12 sync point for CAMI sequence 2
↓slide_1 and ↓slide_2 appear in the visual assignment area -- meaning SLIDE_1 and SLIDE_2 are fading down.
CAMI compiles - updating the Mate-Trac - whenever a wait time or sync point is entered.
F1
fade up
[↵]
F1
on screens
[↵]
{new} fade up SLIDE 3 on screens A
F1
at rate
Type: 2
[↵]
{new} at rate 2 seconds
F3
wait
Type: 3
[↵]
15 wait 3 seconds
Put SLIDE_3 in projector 1.



Put SLIDE_4 in projector 2.



When no fade rate appears, the last fade rate used -- 5 seconds here -- is used again.

This ends Creating LEARNING. Now go on to Saving LEARNING on Disk.

The edit file for LEARNING should look like this:

```
 1          title LEARNING
 2   assign screens A:2
 3  sync point for CAMI sequence 1
 4    fade up SLIDE_1 on screens A
 5       at rate 8 seconds
 6          wait 2 seconds
 7    fade up SLIDE_2 on screens A
 8       at rate 1 seconds
 9          wait 7 seconds
10    fade down SLIDE_1 and SLIDE_2 on screens A
11       at rate 1 seconds
12  sync point for CAMI sequence 2
13    fade up SLIDE_3 on screens A
14       at rate 2 seconds
15          wait 3 seconds
16    fade down SLIDE_3 on screens A also
17    fade up SLIDE_4 on screens A
18       at rate 5 seconds
19          wait 6.5 seconds
20    fade down SLIDE_4 on screens A
21          wait 6.5 seconds
```

PROGRAMMING 1: Saving LEARNING on Disk

Save the LEARNING edit file on disk.

F8
exit

CAMI goes from Create to Edit.

F6
name/save file

The file name entry box appears:
A:WINDOW1.EDT

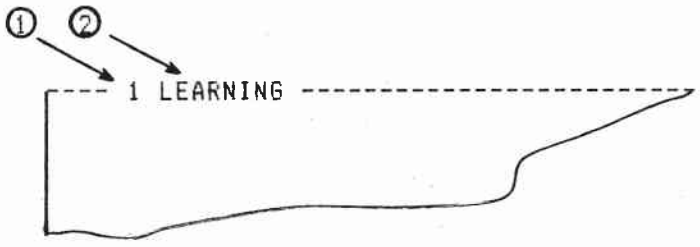
Unless a new name is entered, LEARNING will be saved on disk under the file name WINDOW1.EDT

Type: LEARNING

Unless a different drive or extension is typed in, edit files are saved on drive A with .EDT extensions.

[↵]

LEARNING is saved on disk drive A under the file name LEARNING.EDT.



1. Window number.
2. File name.

This completes Saving Learning on Disk. Now continue to Playing Back LEARNING.

PROGRAMMING 1: Playing Back LEARNING

Playback LEARNING in real time.

↓

F8
exit

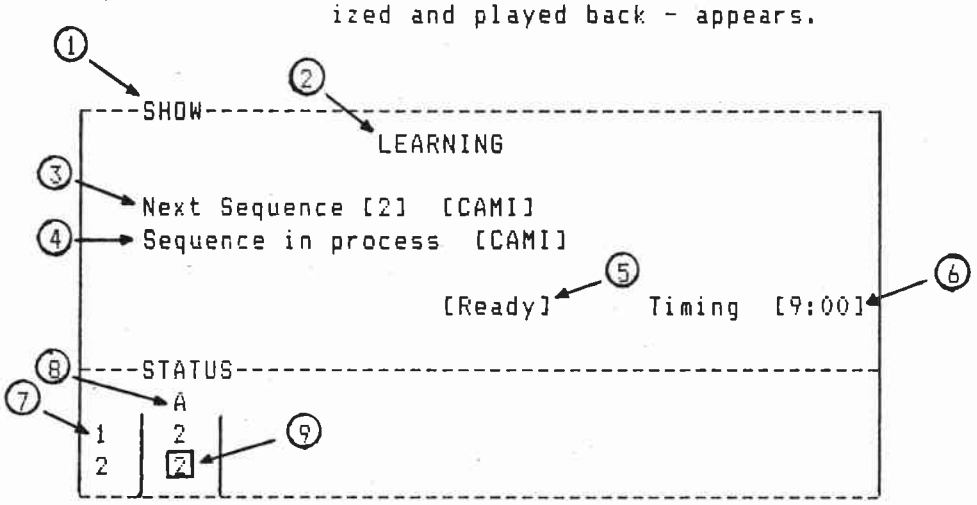
↓

The START softkeys return.

F4
SYNC

↓

The SHOW window - where shows are synchronized and played back - appears.



1. Window name.
2. Show title.
3. Number and name of next sequence to run.
4. Name of the sequence now running.
5. Appears when the next sequence is ready to run.
6. Totals wait time.
7. Projector numbers.
8. Screen name.
9. Tray position and lamp status.

↓

F1
start play at seq

↓

Type: 1

↓

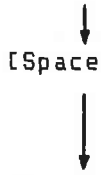
[F1] start play can find sequences by either number or name.

[↵]

↓

Sequence 1 is ready to playback.

PROGRAMMING 1: Playing Back LEARNING continued



Sequence 1 plays back.

Sequence 2 plays back.

The next sequence box shows:
End of Program!

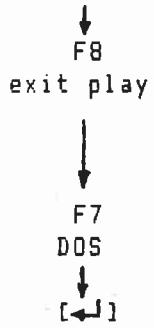
This ends Playing Back LEARNING. Continue to Leaving CAMI.

PROGRAMMING 1: Leaving CAMI

Caution: Make sure you save files before leaving CAMI.

The simplest way to leave CAMI is to switch the System Unit off.

The other way - used here - is to exit to DOS. Once in DOS, other programs can be run without a complete reboot.



The START keys return.

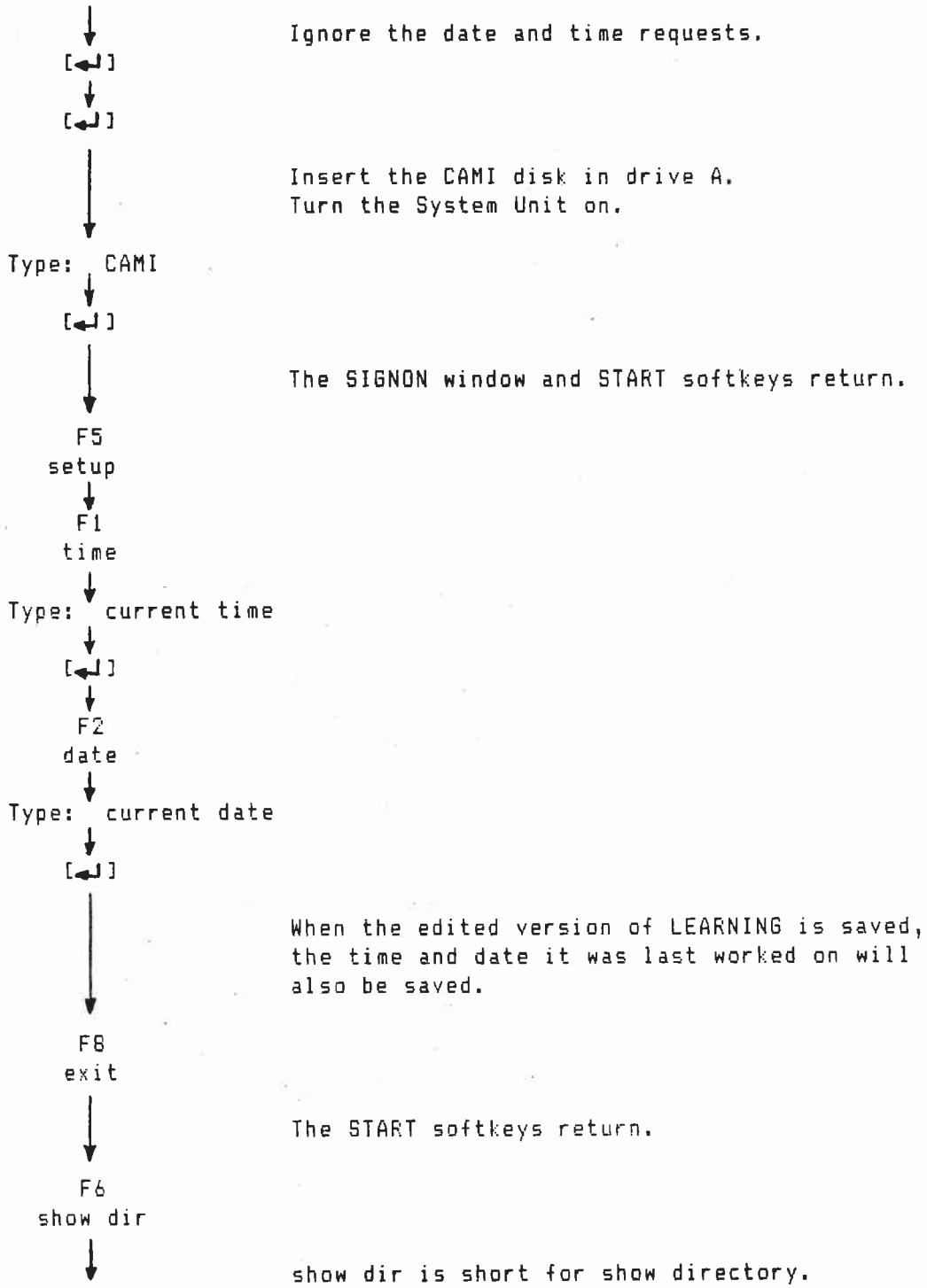
DOS returns. The A drive prompt reappears.

Congratulations, you've finished PROGRAMMING 1.

When you are ready, start PROGRAMMING 2: Returning LEARNING to window 1.

PROGRAMMING 2: Returning LEARNING To Window 1

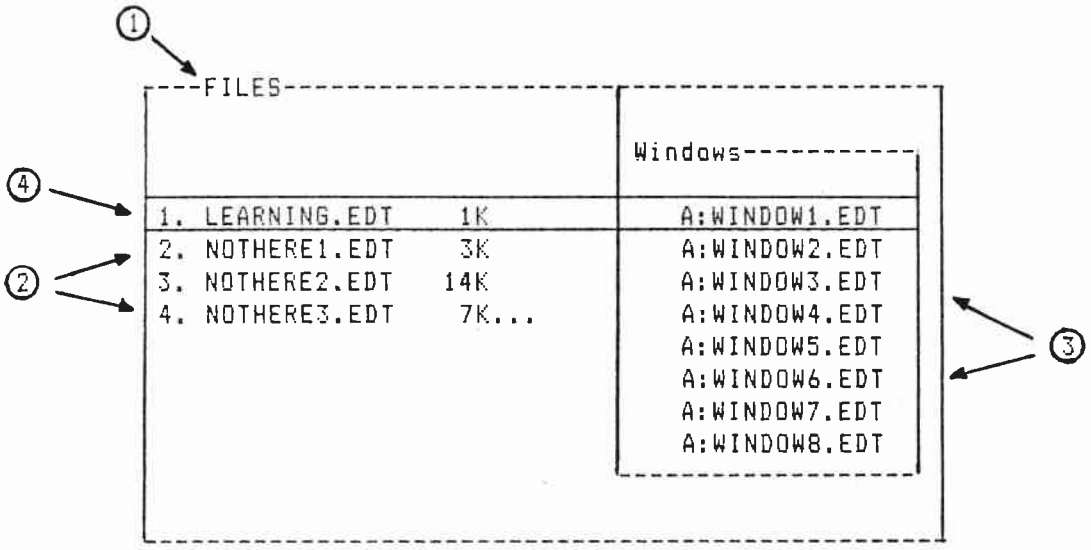
Use the show directory to assign the LEARNING file into window 1.



PROGRAMMING 2: Returning LEARNING to Window 1 continued

F1
play/edit files

The FILES window - where files on disk are assigned to programming windows - appears.



1. Window name.
2. Files on disk.
3. Programming windows.
4. Assign/remove (highlighted) line.

If necessary, use [↑] up or [↓] down to move LEARNING.EDT into the assign/remove line.

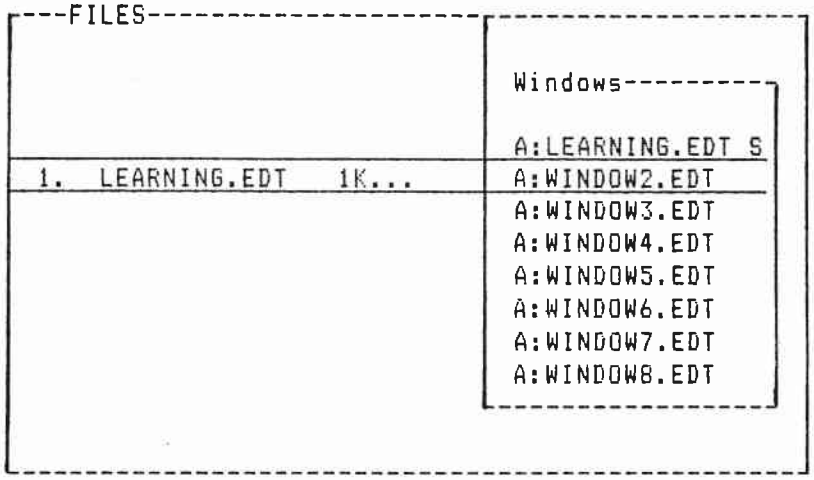
[Scroll Lock] with [↑] up and [↓] down move the (highlighted) assign/remove line. Use when assigning files to windows 2 through 8.

F1
assign file

The LEARNING.EDT file is assigned to window 1. The S following LEARNING.EDT means the file has been selected.

PROGRAMMING 2: Returning LEARNING to Window 1 continued

The assign/remove line moves down to window 2:



F7
press to proceed

LEARNING.EDT file moves from disk into window 1.

The START keys return.

This ends Returning LEARNING to Window 1. Now continue to Editing Learning.

PROGRAMMING 2: Editing LEARNING

Use the typewriter keys to make a change in line 4.

[F1] delete will remove lines 5, 6, and 7.

[F3] insert will put in a new line 17.

An obvious timing error will be put in line 17 - not giving SLIDE_4 enough time to fade up before it starts to fade down. The LISTFILE window will be used to find and correct this problem.

LEARNING now looks like this:

```
----LEARNING----------------------
 1         title LEARNING
 2   assign screens A:2
 3 sync point for CAMI sequence 1
*4   fade up SLIDE_1 on screens A
#5      at rate 8 seconds
#6         wait 2 seconds
 7   fade up SLIDE_2 on screens A
 8      at rate 1 seconds
 9         wait 7 seconds
10   fade down SLIDE_1 and SLIDE_2
       on screens A
11      at rate 1 seconds
12 sync point for CAMI sequence 2
13   fade up SLIDE_3 on screens A
14      at rate 2 seconds
15         wait 3 seconds
16   fade down SLIDE_3 on screens A
       also
17   fade up SLIDE_4 on screens A
18      at rate 5 seconds
19         wait 6.5 seconds
20   fade down SLIDE_4 on screens A
21         wait 6.5 seconds
-----------------------------------
```

After editing but before compiling, LEARNING will look like this:

```
----LEARN2------------------------
 1         title LEARNING
 2   assign screens A:2
 3 sync point for CAMI sequence 1
 4   fade up SLIDE_1 on screen A also
 5   fade up SLIDE_2 on screens A
 6      at rate 1 seconds
 7         wait 7 seconds
 8   fade down SLIDE_1 and SLIDE_2
     on screens A
 9      at rate 1 seconds
10 sync point for CAMI sequence 2
11   fade up SLIDE_3 on screens A
12      at rate 2 seconds
13         wait 3 seconds
14   fade down SLIDE_3 on screens A
       also
15   fade up SLIDE_4 on screens A
16      at rate 5 seconds
Inew I     wait 3 seconds
17   fade down SLIDE_4 on screens A
18         wait 6.5 seconds
-----------------------------------
```

* = Lines edited using the typewriter keys.
\# = Lines deleted using [F1] delete
Inew I = Lines inserted using [F3] insert

F2
edit

Window 1 with the name of the program - LEARNING - in the upper left returns.

[↑]

Scroll line 4 into the highlighted line:

```
4  fade up SLIDE 1 on screens A
```

[End]

[6→]

The cursor moves one beyond the end of the line:

```
4  fade up SLIDE 1 on screens A -
                              ↑
```

[Caps Lock]

also must be lower case

Type: also

Line 4 now looks like this:

```
4  fade up SLIDE 1 also
```

[↑]

Scroll line 5 into the highlighted line:

```
5  at rate 8 seconds
```

F1
delete

When the enter key is pressed, the highlighted line will be deleted.

[↵]

Line 5 deletes.

Line 6 moves into the highlighted line:

```
6  wait 2 seconds
```

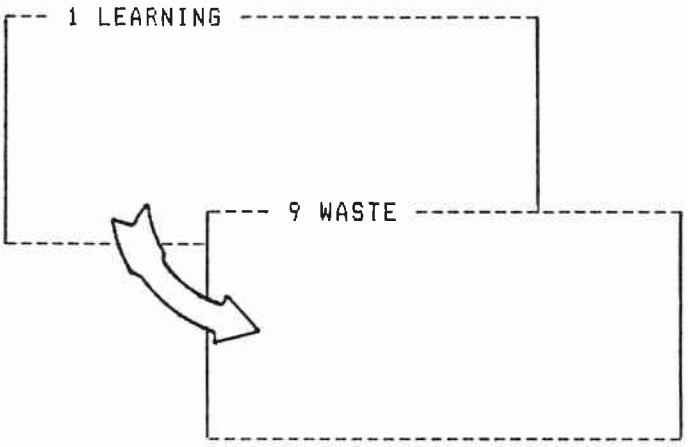
[↵]

Line 6 deletes.

Line 7 moves into the highlighted line:

```
7  fade up SLIDE_2 on screens A
```

Lines 5 and 6 move into the WASTE window:

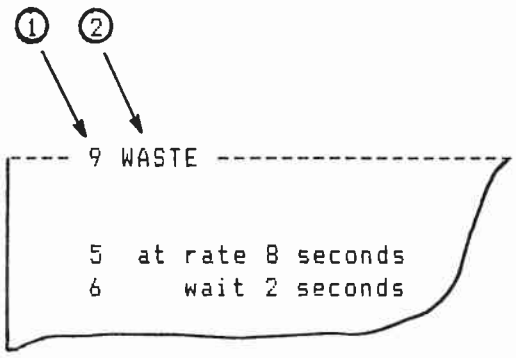


F8
exit to main edit

The main edit keys return.

[↑](shift) + [F9]

The WASTE window appears:



1. Window number.
2. Window name.

[↑](shift) + [F1]

Window 1 returns.

[↑]

Scroll line 18 up into the highlighted line:

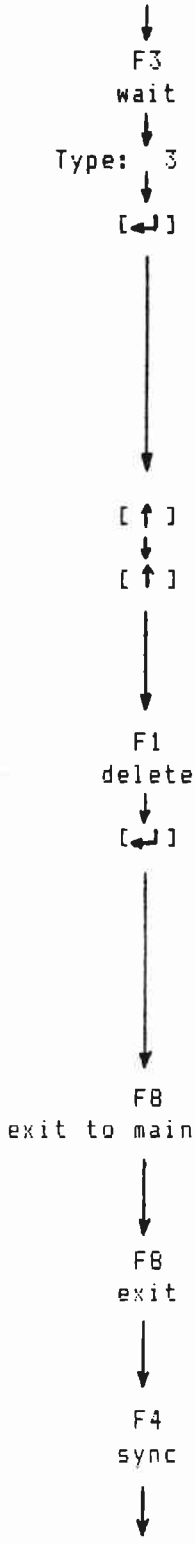
```
18  at rate 5 seconds
```

F3
insert

CAMI goes from Edit to Insert. The Create softkeys return.

Below line 18 a new line opens:

```
18  at rate 5 seconds
|new|
19  wait 6.5 seconds
```



The line now reads:

```
!new!  wait 3 seconds
```

Inserting is like creating except CAMI does not compile.

[F8]exit, [↑](scroll up), and [↓](scroll down) all return to Edit.

Scroll line 19 into the highlighted line.

```
   19  wait 6.5 seconds
```

Line 19 deletes.

Line 20 moves into the highlighted line:

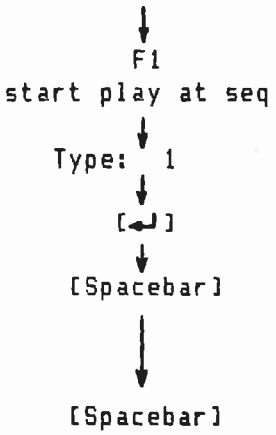
```
   20  fade down SLIDE_4 on screens A
```

The main edit keys return.

The START keys return.

The SHOW window returns.

PROGRAMMING 2: Editing LEARNING continued



Sequence 1 plays back without problems.

Sequence 2 plays back. SLIDE_4 abruptly fades down before completing its fade up.

This ends Editing LEARNING. Now go on to Problem Solving With the LIST FILE to find out SLIDE_4's problem.

Use the LIST FILE window to find the problems with SLIDE_4.

The LIST FILE shows a detailed, expanded version of the edit file.

F8
exit play

The START keys return.

F9
documentation

F2
run list file

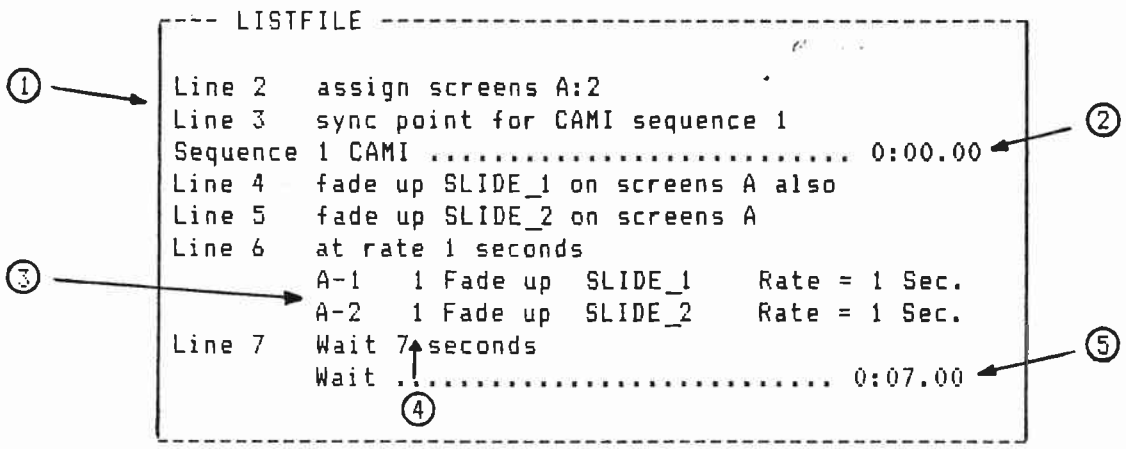
This LIST FILE window appears.

1. Window name.
2. List file display area.
3. Slide assignments and tray positions.

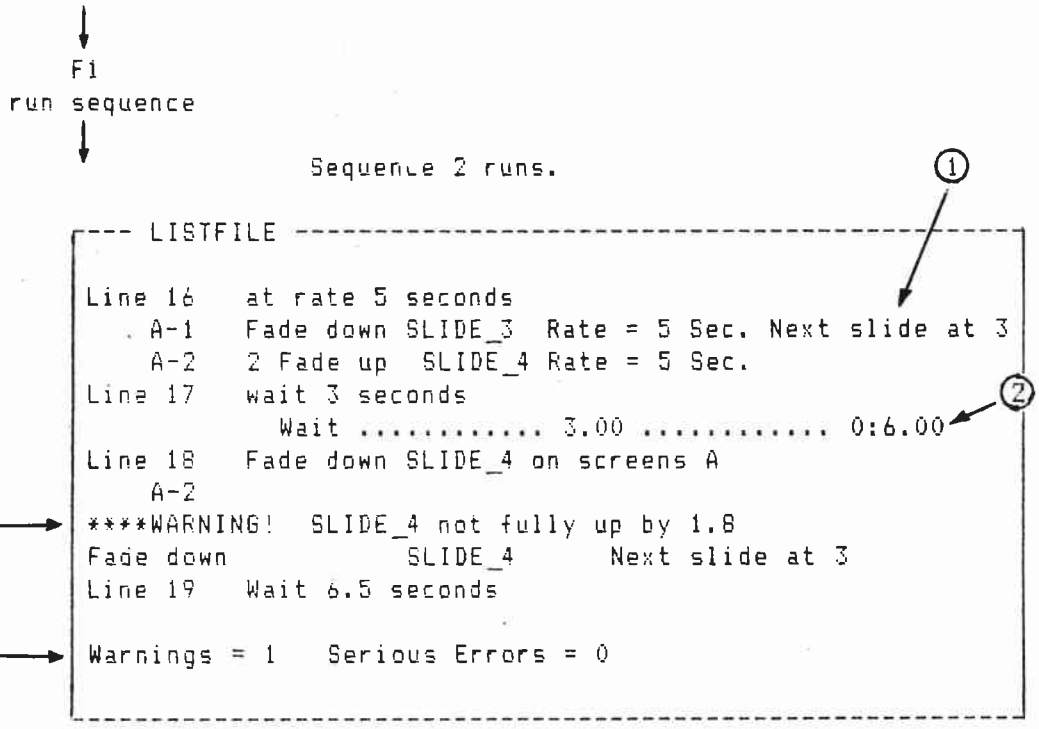
F1
run sequence

Sequence 1 runs. The detailed version of this sequence scrolls up the screen.

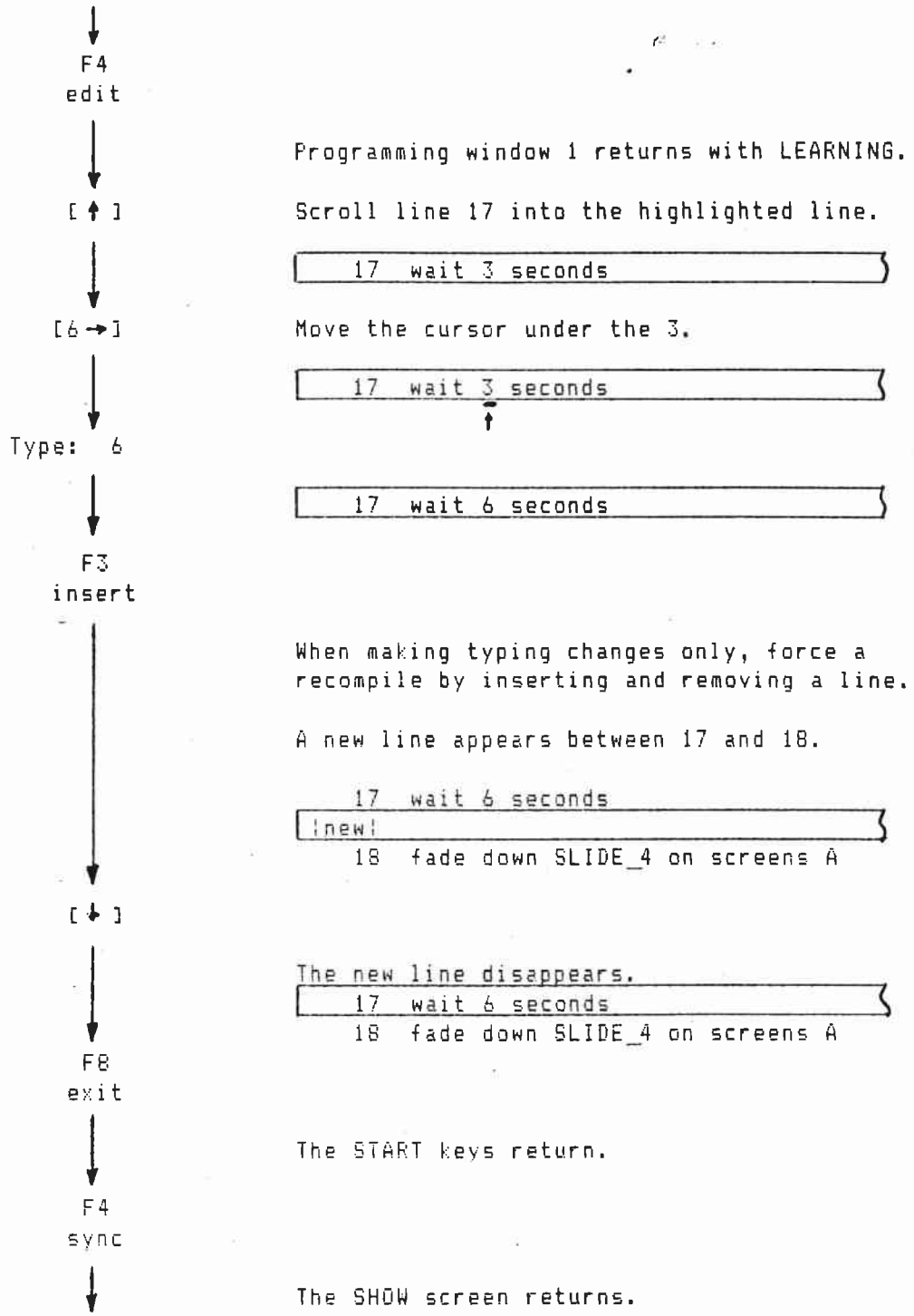
[↑] and [↓] move the LIST FILE up and down.

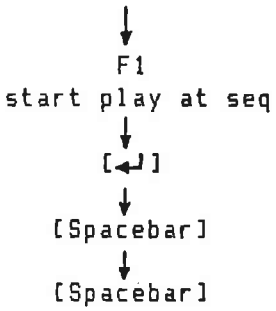


1. Original program lines.
2. The sequence starting time. When synchronized to Loc-Trac the 0:00.00 will be replaced by a Loc-Trac starting time -- 0:59.39 for example.
3. Screen and projector assignments. SLIDE_1 goes to the A screen number 1 projector; SLIDE_2 to the A screen number 2 projector.
4. Tray positions for SLIDE_1 and SLIDE_2.
5. Total wait time so far. Sequence 1's Loc-Trac starting time will be added to this time. If Sequence 1 starts at 0:59.39 this time will be 0:66.39 (0:59.39 + 0:7.00 = 0:66.39.)



1. Tray position 3 is the next tray position for A screen projector 1.
2. Total of wait times in Sequence 2.
3. SLIDE_4 fades up at a 5 second rate in line 14. After a 3 second wait (line 17) it fades down. SLIDE_4 needed another 1.8 seconds to reach 96% brightness.
4. Total warnings and errors.


F4
edit
Programming window 1 returns with LEARNING.
[↑]
Scroll line 17 into the highlighted line.
17 wait 3 seconds
[6 →]
Move the cursor under the 3.
17 wait 3 seconds
Type: 6
17 wait 6 seconds
F3
insert
When making typing changes only, force a recompile by inserting and removing a line.
A new line appears between 17 and 18.
17 wait 6 seconds
!new!
18 fade down SLIDE_4 on screens A
[↓]
The new line disappears.
17 wait 6 seconds
18 fade down SLIDE_4 on screens A
F8
exit
The START keys return.
F4
sync
The SHOW screen returns.



Sequence 2 plays back. SLIDE_4 fades smoothly up and down.

This ends Solving Timing and Tray Assignment Problems. Now continue on to Saving the Edited Version of LEARNING.

PROGRAMMING 2: Saving the Edited Version of LEARNING

The original version of LEARNING is on disk under the file name LEARNING.EDT.

If a new file name is not given to the edited version of LEARNING, the edited version of LEARNING will write over the original version of LEARNING.

So change the file name of edited version from LEARNING to LEARN2. Then save it on disk.

The START keys return.

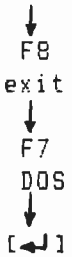
Programming window 1 returns.

The name/save box appears:
A: LEARNING.EDT

The edited version of LEARNING is saved on disk under the file name LEARN2.

Congratulations, you've finished PROGRAMMING 2. When you are ready, begin PROGRAMMING 3: Putting LEARN2 and LEARNING in Windows 1 and 2.

Switch the system unit off or exit to DOS:

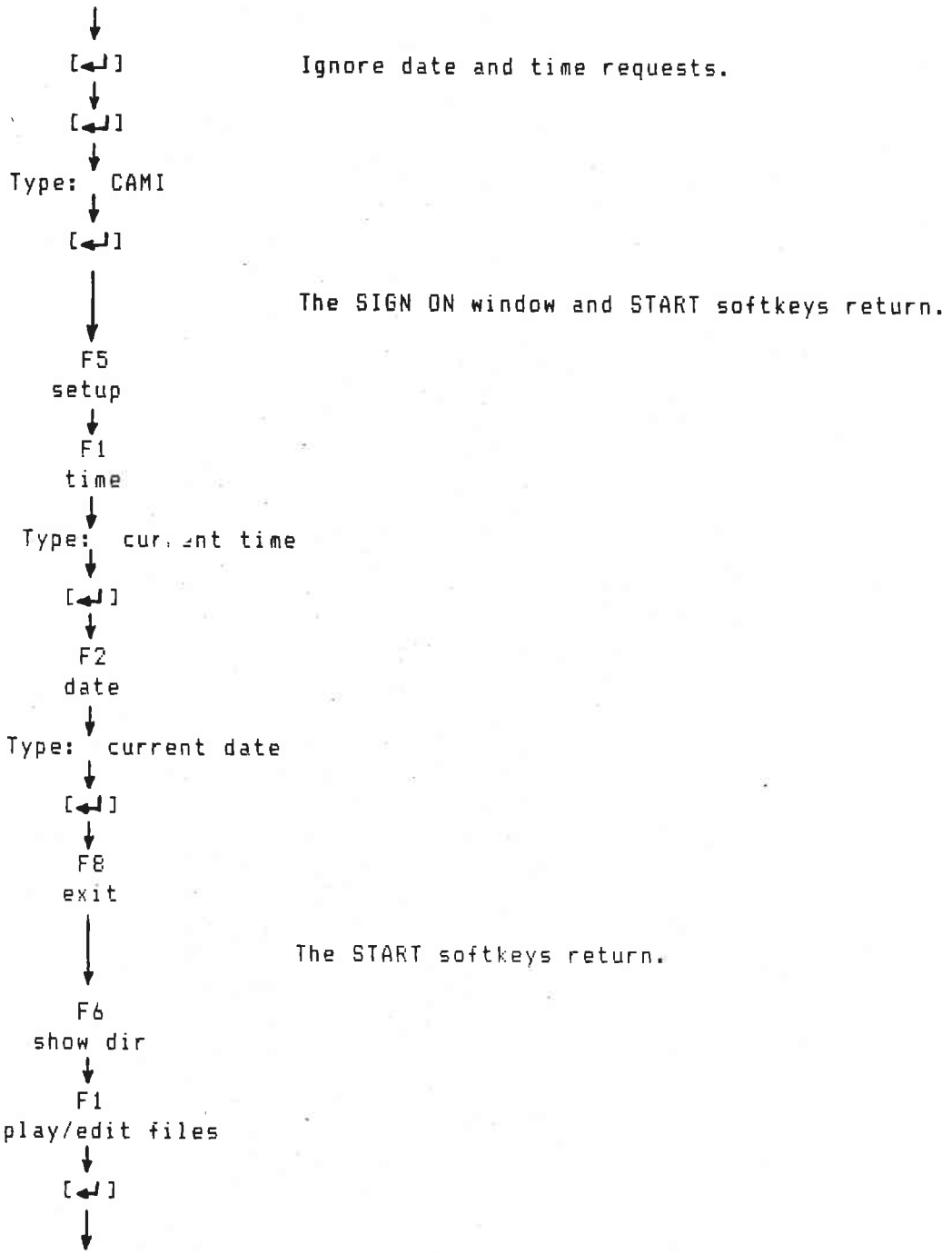


PROGRAMMING 3: Putting LEARN2 and LEARNING in Windows 1 and 2

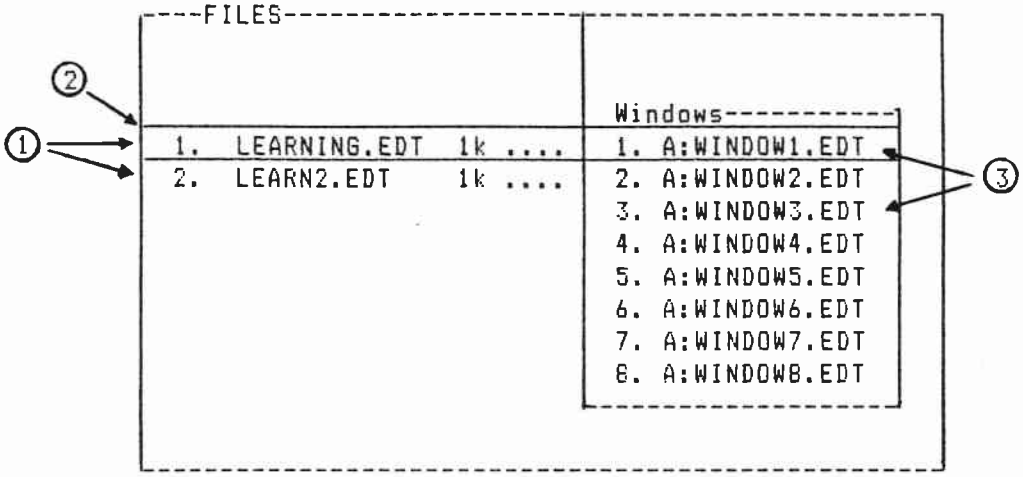
LEARN2 - the edited version of learning - will be moved into window 1.

LEARNING - the original version - will be moved into window 2.

Window 1 is used for creating, editing, and synchronizing shows. Windows 2 through 8 are used to hold various shows. New shows in window 1 can be built out of bits and pieces of shows in windows 2 through 8.



The FILES window appears.



1. Files on disk.
2. Assign/remove highlighted line.
3. Programming windows.

[Scroll Lock] with [↑] up or [↓] down move the assign/remove line to any programming window.

[↑]
[↓]

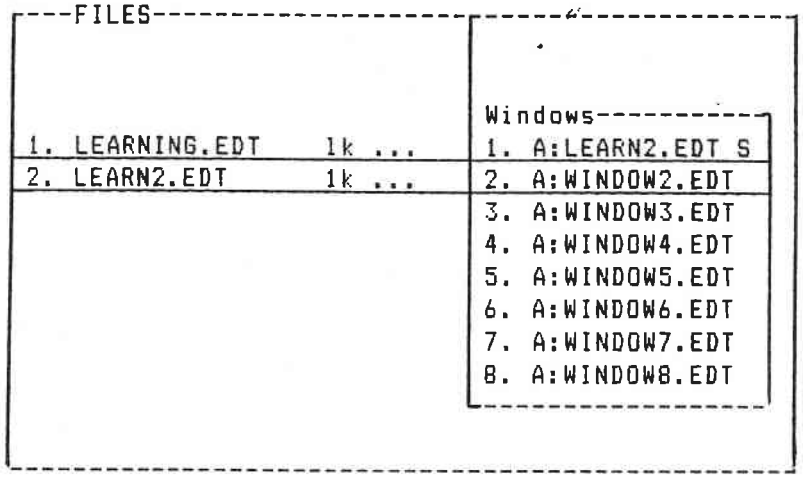
Scroll LEARN2.EDT into the assign/remove line.

1. LEARNING.EDT 1k ...
2. LEARN2.EDT 1k ... 1. A:WINDOW1.EDT

F1
assign file

LEARN2.EDT is assigned to window 1. The assign/remove line moves down to window 2.

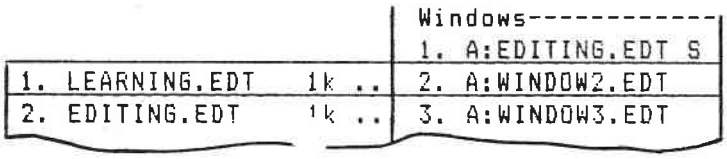
PROGRAMMING 3: Putting LEARN2 and LEARNING in Windows 1 and 2 continued



The S following LEARN2 means the file has been selected.

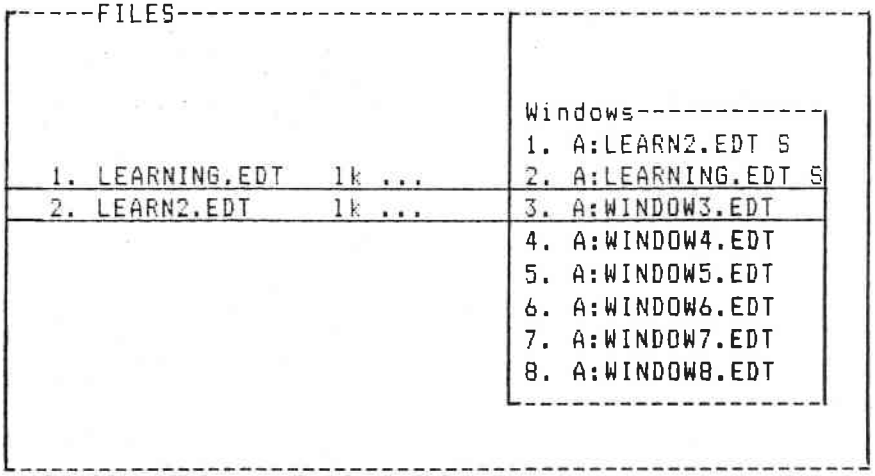
[↑]
[↓]

Scroll LEARNING.EDT into the assign/ remove line.



F1
assign file

LEARNING.EDT is assigned to window 2.
The assign/remove line moves down to window 3



PROGRAMMING 3: Putting LEARN2 and LEARNING in Windows 1 and 2 continued

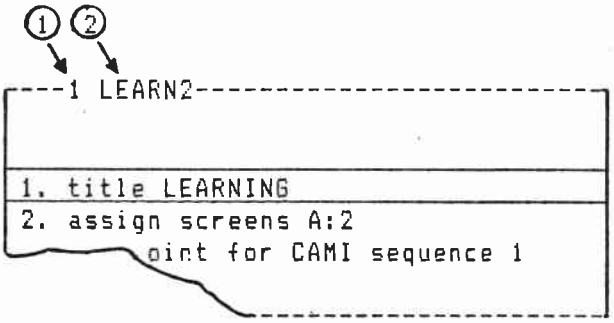
F7
press to proceed

LEARN2 and LEARNING move into windows 1 and 2.

The START keys return.

F2
edit

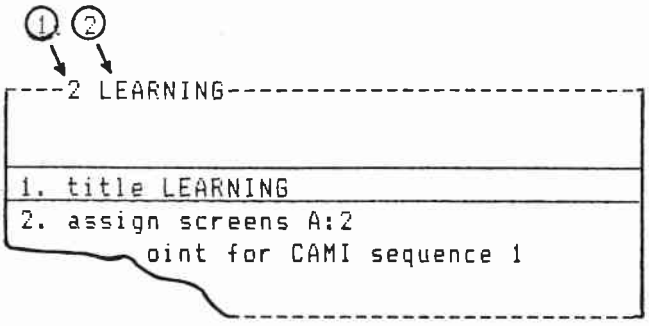
The edited version of LEARNING appears in window 1.



1. Number of this programming window.
2. File name of the edited version of LEARNING.

[↑](shift) + [F2]

The original, unedited version of LEARNING appears in window 2.

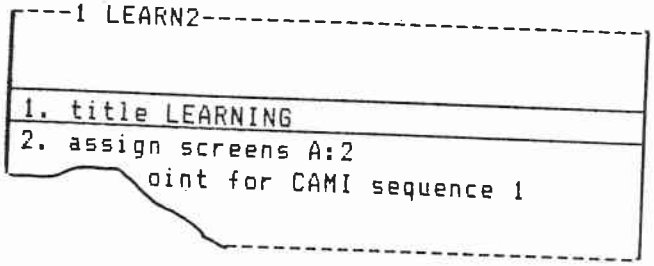


1. Number of this programming window.
2. File name of the original version of LEARNING.

PROGRAMMING 3: Putting LEARN2 and LEARNING in Windows 1 and 2 continued

[↑](shift) + [F1]

Programming window 1 returns.



[↑](shift) + [F1] through [F8] moves through programming windows 1 through 8.

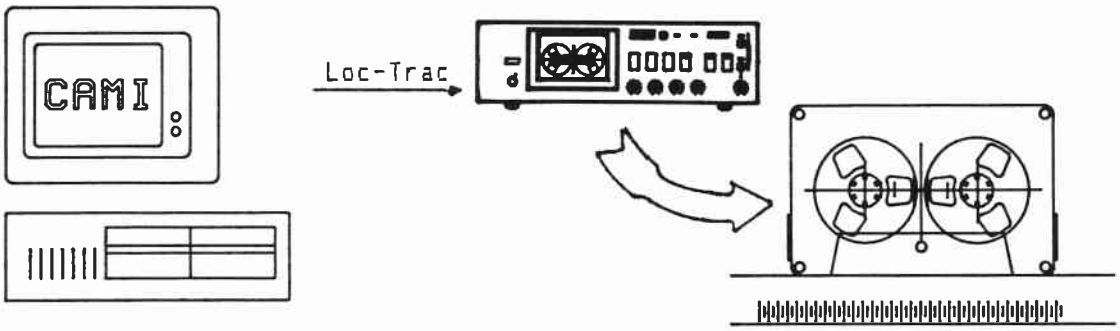
[↑](shift) + [F9] goes to the WASTE window.

[↑](shift) + [F10] goes to the BUFFER window.

This ends Putting LEARN2 and LEARNING in Windows 1 and 2. Now go on to Recording Loc-Trac.

PROGRAMMING 3: Recording Loc-Trac

Loc-Trac is CAMI's synchronizing signal. In a real show it is recorded on tape alongside the soundtrack.



Here record Loc-Trac on a blank tape. Then play Loc-Trac back into CAMI to make sure it was recorded on tape.

F8
exit

The START keys return

F4
sync

The SHOW window appears.

F4
Loc-Trac

F1
start Loc-Trac at

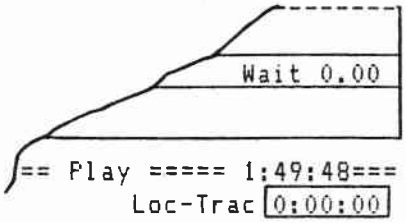
The Loc-Trac starting time entry box appears:
start Loc-Trac at [00:00:00]

You can type in any Loc-Trac starting time from 0 seconds to 254 minutes.

[↵]

The 0:00:00 Loc-Trac starting time is accepted.

The Loc-Trac time appears in the lower right of the SHOW window.



Connect an audio cable between the CAMI Mate-Trac board OUT jack and your tape recorder's sync IN jack.

REWIND the tape.

Put the recorder in RECORD/PAUSE.

Set the record level between -3 and 0 dBu.

Put the recorder in RECORD/PLAY.

↓

F2
start Loc-Trac output

↓

Record 1:30:00 (one minutes and thirty seconds) of Loc-Trac.

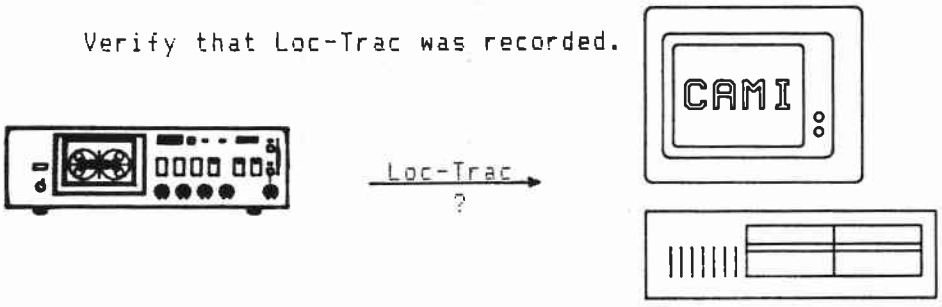
↓

F1
stop Loc-Trac output

↓

STOP and REWIND the tape.

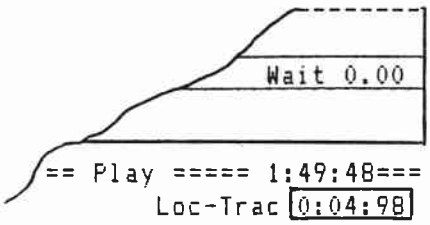
Verify that Loc-Trac was recorded.



Connect an audio cable between your tape recorders sync OUT jack and the CAMI Mate-Trac board IN jack.

PLAY the tape.

The Loc-Trac box will show the taped Loc-Trac time if Loc-Trac has been recorded.



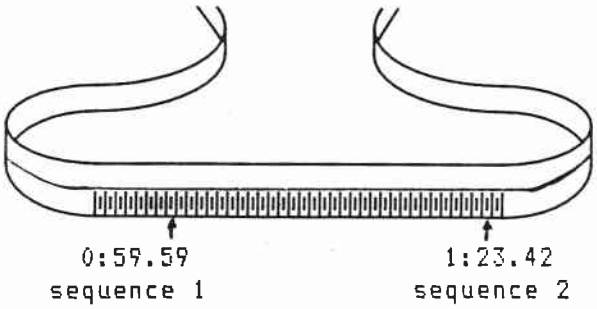
REWIND the tape.

This ends Recording Loc-Trac. Now go on to Synchronizing to Loc-Trac.

PROGRAMMING 3: Synchronizing to Loc-Trac

Synchronize CAMI sequence 1 to start when the Loc-Trac reaches 0:59.59.
Synchronize CAMI sequence 2 to start at 1:23.42.

These are arbitrary starting times. In a real show synchronizing is done while listening to the soundtrack. The soundtrack events would just happen to occur when the Loc-Trac reaches 0:59.59 and 1:23.42.



↓

F8
exit to sync

↓

F1
start play at seq

↓

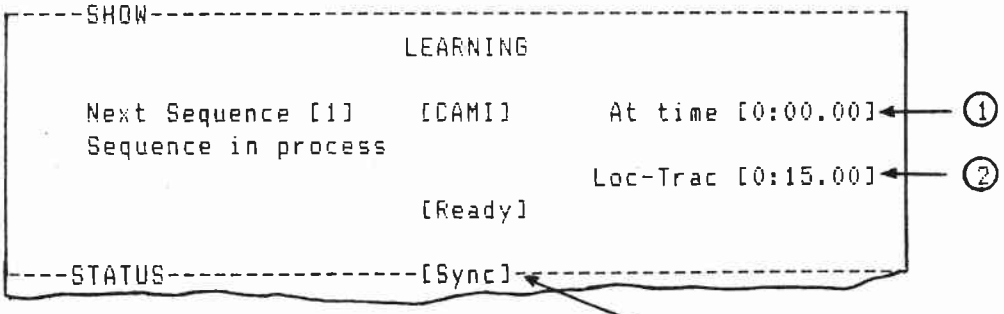
Type: 1

↓

[↵]

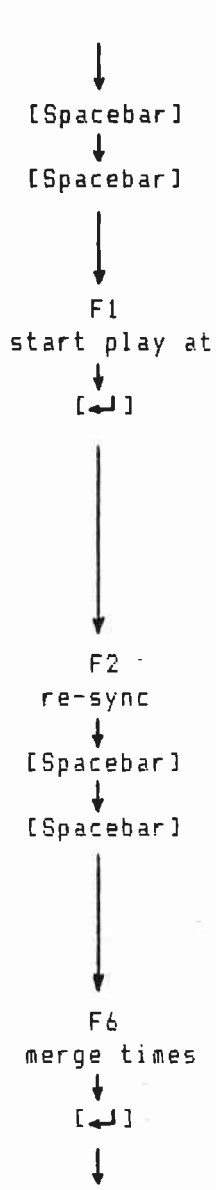
↓

The At time, Loc-Trac and Sync boxes appear when Loc-Trac is received.



1. The next sequence's starting time. ③
2. Taped Loc-Trac time.
3. Appears when sequences are ready to be synchronized.

PROGRAMMING 3: Synchronizing to Loc-Trac continued



PLAY your tape.

When the Loc-Trac reaches 0:59.59

When the Loc-Trac reaches 1:23.42.

STOP and REWIND your tape.

[F2]re-sync is used to get sequence starting time even closer to 0:59.59 and 1:23.42.

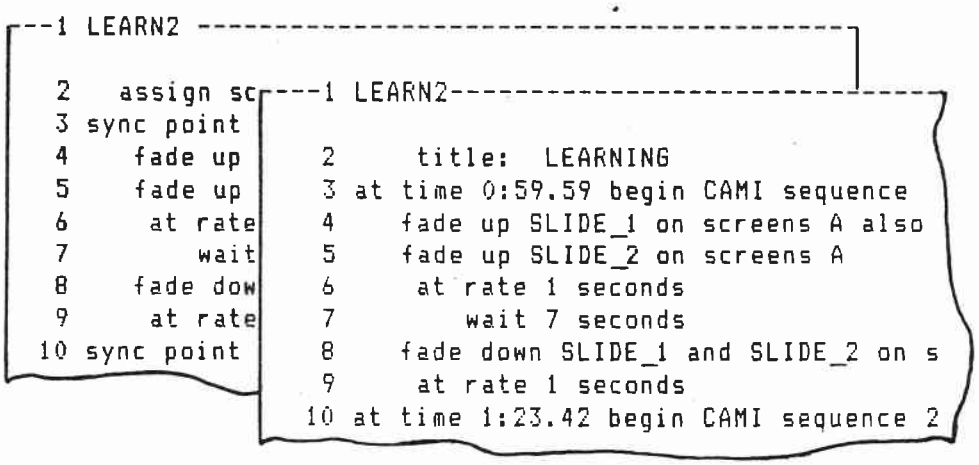
PLAY your tape.

When the Loc-Trac reaches 0:59.59.

When the Loc-Trac reaches 1:23.42.

STOP and REWIND your tape.

Programming window 1 returns. The sync times have been merged into the edit file.



1. At times have replaced sync point for. (M:SS.HH is the Loc-Trac starting time in minutes, seconds, and hundredths of a second.)

Use the typewriter keys to get sequence 1 and sequence 2 to start precisely at 0:59.59 and 1:23.42.

↓

[↓] Scroll down line 3 into the highlighted line.

`3 at time M:SS.HH gin CAMI sequence 1`

[→] Cursor right to the time.

`3 at time M:SS.HH begin CAMI sequence 1`

Type: 0:59.59

`3 at time 0:59.59 begin CAMI sequence 1`

[↑] Scroll up line 10 into the highlighted line.

`10 at time M:SS.HH begin CAMI sequence 2`

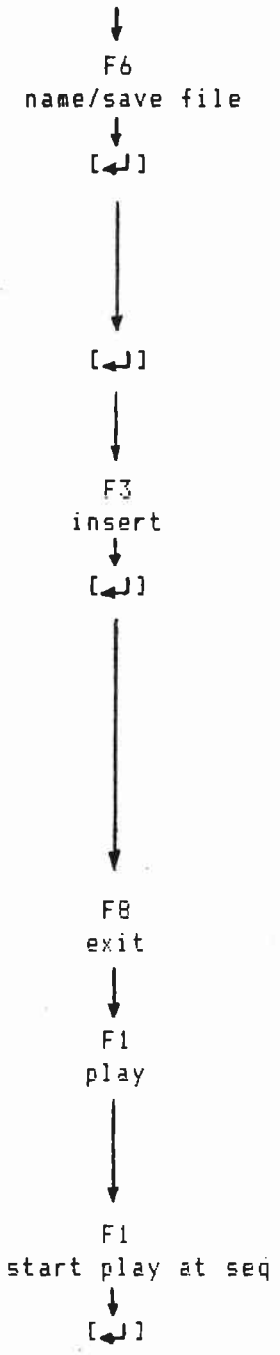
[←] Cursor left to the time.

`10 at time M:SS.HH begin CAMI sequence 2`

Type: 1:23.42

`10 at time 1:23.42 begin CAMI sequence 2`

PROGRAMMING 3: Synchronizing to Loc-Trac continued



Prompt line message is:
* A file with this name is already on disk.
  [Enter] if OK.

LEARNING with Loc-Trac starting times is saved on disk under the file name LEARN2.EDT.

Going in and out of insert forces CAMI to compile a new playback version of the edit file for the SHOW window. Do this when making only typing changes.

CAMI automatically compiles a new playback version whenever a complete line is inserted or deleted.

The START softkeys return.

The SHOW window returns.
[F1]PLAY brings up only the softkeys needed to playback the show.

PLAY the tape.

Sequence 1 plays back at 0:59.59.

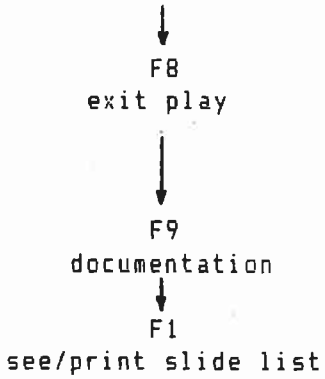
Sequence 2 plays back at 1:23.42.

STOP the tape.

This ends Synchronizing to Loc-Trac. Now continue to Documentation - Tray Listings.

PROGRAMMING 3: Documentation - Tray Listings

Tray listings show where the slides go.



The START keys return.

```
----LISTFILE-----------------------------------

      LEARNING        Tray Listing for Screen A
Tray
Pos.   Proj 1         Proj 2
  1    SLIDE_1        SLIDE_2
  2    SLIDE_3        SLIDE_4
```

Congratulations! You've finished PROGRAMMING 3.

To exit to DOS:

BLANK AND BROKEN LINES

Blank lines between sequences can make the program easier to read.

Put in blank lines by pressing [↵] in CREATE and INSERT.

```
----1 WINDOW1-------------------------------------------------

  60  at time 0:07.59 begin WORDS sequence 6
  61     dissolve from ABSTRACT_2 to ABSTRACT_3 on screens A
  62          at rate 1 seconds
  63  at time 0:09.34 begin WORDS sequence 7
  64     dissolve from ABSTRACT_3 to ABSTRACT_4 on screens A
  65          at rate 1 seconds
```

```
----1 WINDOW1-------------------------------------------------

  60  at time 0:07.59 begin WORDS sequence 6
  61     dissolve from ABSTRACT_2 to ABSTRACT_3 on screens A
  62          at rate 1 seconds
  63
  64  at time 0:09.34 begin WORDS sequence 7
  65     dissolve from ABSTRACT_2 to ABSTRACT_3 on screens A
  66          at rate 1 seconds
```

Individual lines can be broken to make the program easier to understand.

Force breaks in lines by pressing [↵] between keyword entries in CREATE and INSERT.

```
----1 WINDOW1-----------------------------------

  70  live cue for DAHLBERG sequence 9
  71     fade down THEME_ART_2 on screens A also
  72     fade up GLOW_1 on screens ABC also
  73     fade up BKGD_3 on screens BC
  74        at rate 2 seconds
```

```
---1 WINDOW1----------------------------------------

 70  live cue for DAHLBERG sequence 9
 71     fade down THEME_ART on screens A
 72  also
 73     fade up GLOW_1 on screens ABC
 74  also
 75     fade up BKGD_3 on screens ABC
```

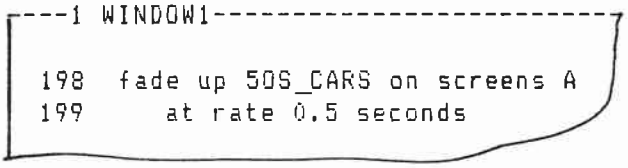
```
---1 WINDOW1----------------------------------------

 31  sync point for EYES sequence 13
 32     dissolve from EYES_1 to EYES_2 then to EYES_
 33         at rate 0.5 seconds
 34     action time 3.6 seconds
```

```
---1 WINDOW1----------------------------------------

 31  sync point for EYES sequence 13
 32     dissolve from EYES_1 to EYES_2
 33     then to EYES_3 then to EYES_4
 34  on screens A
 35        at rate 0.5 seconds
 36     action time 3.6 seconds
```

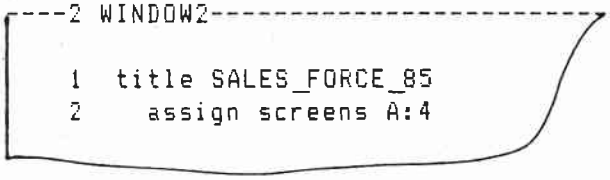
MISCELLANEOUS KEYS

[Ctrl] + [Break] emergency return to [F1]PLAY [F2]EDIT [F3]CREATE

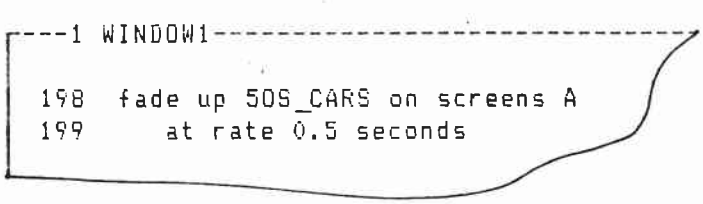
[⬆](shift) + [F1] through [F8] in CREATE and EDIT move through programming windows 1 through 8.



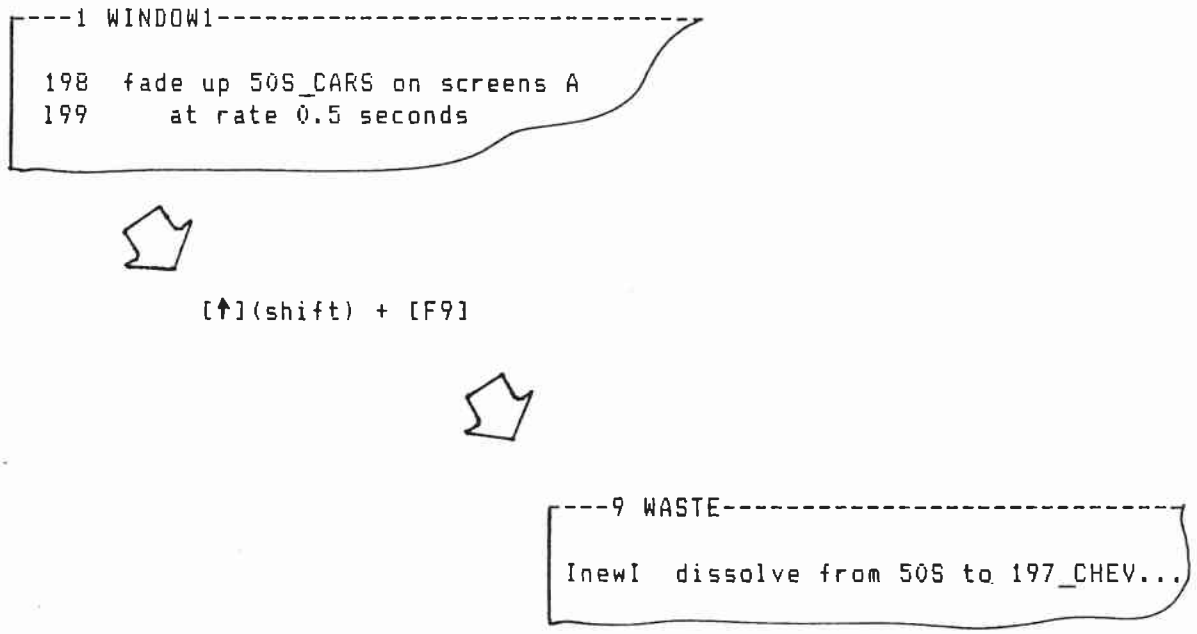
[⬆](shift) + [F2]



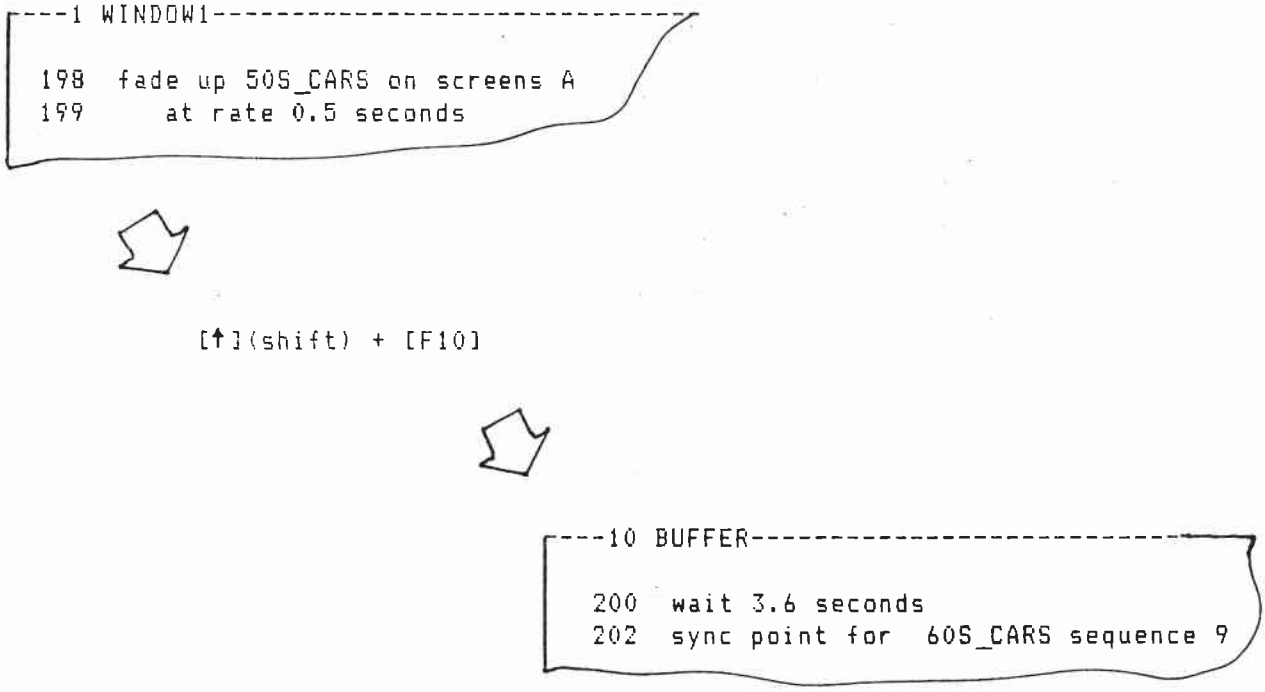
[⬆](shift) + [F1]



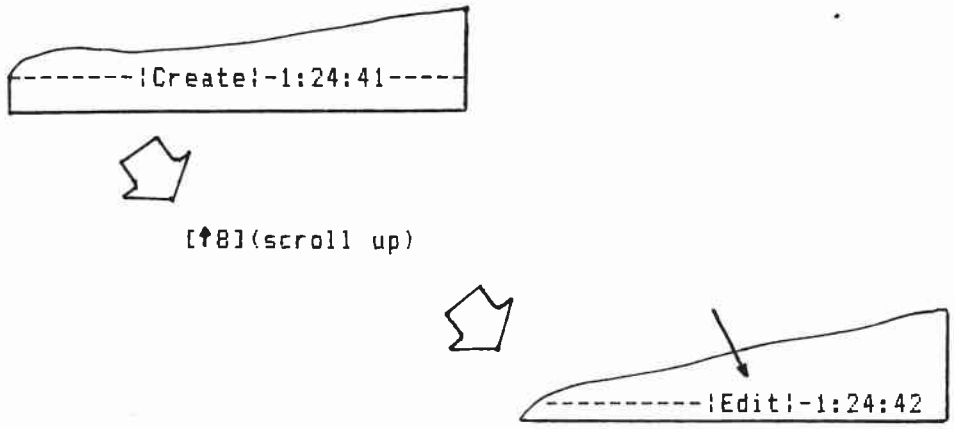
[↑](shift) + [F9] in CREATE and EDIT go to the WASTE window. The WASTE window holds deleted lines.



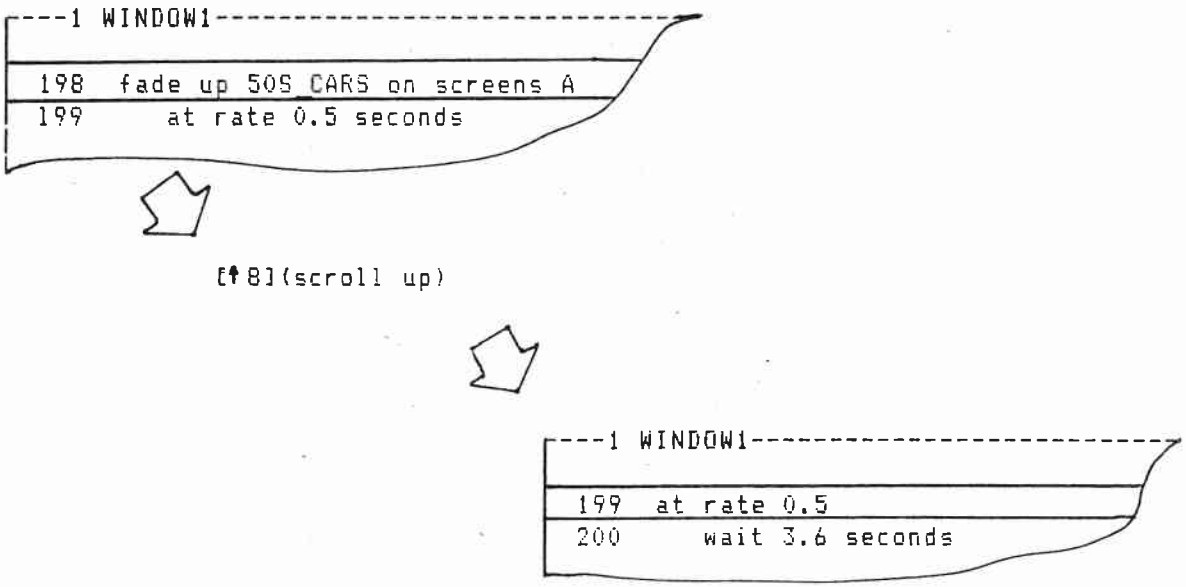
[↑](shift) + [F10] in CREATE and EDIT go to the BUFFER window. The BUFFER window temporarily stores copied and extracted lines.



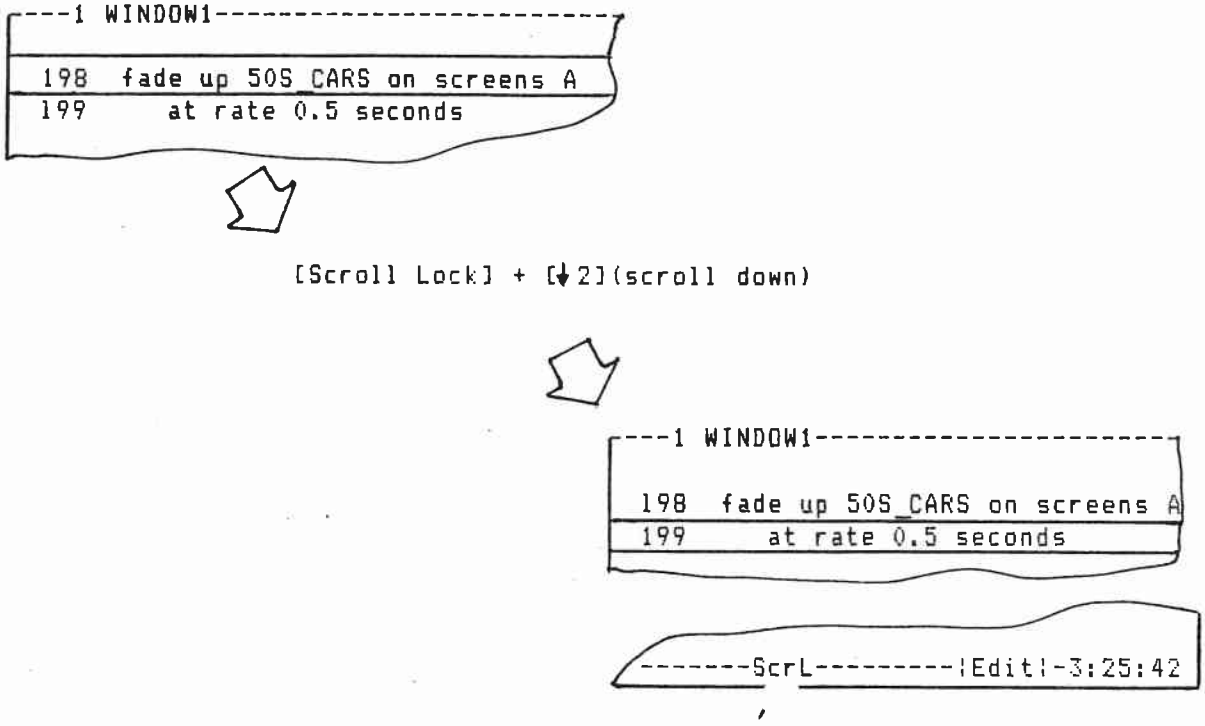
[↑8](scroll up), [↓2](scroll down) in CREATE and INSERT return to EDIT.



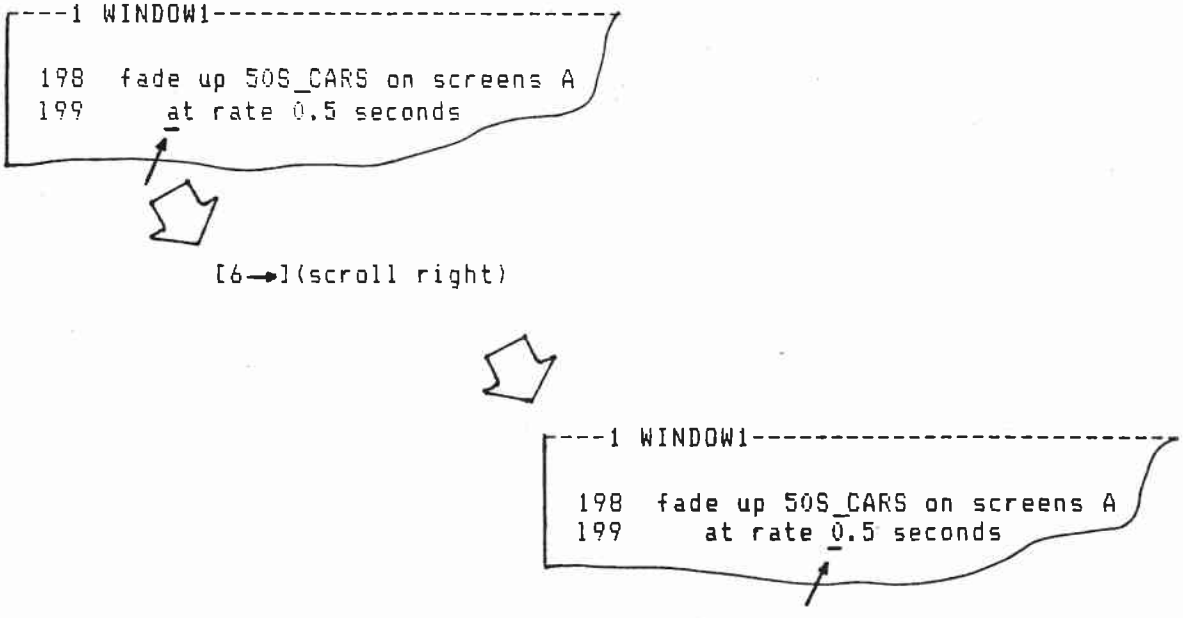
[↑8](scroll up, [↓2](scroll down) in EDIT moves the edit file up and down one line at a time.



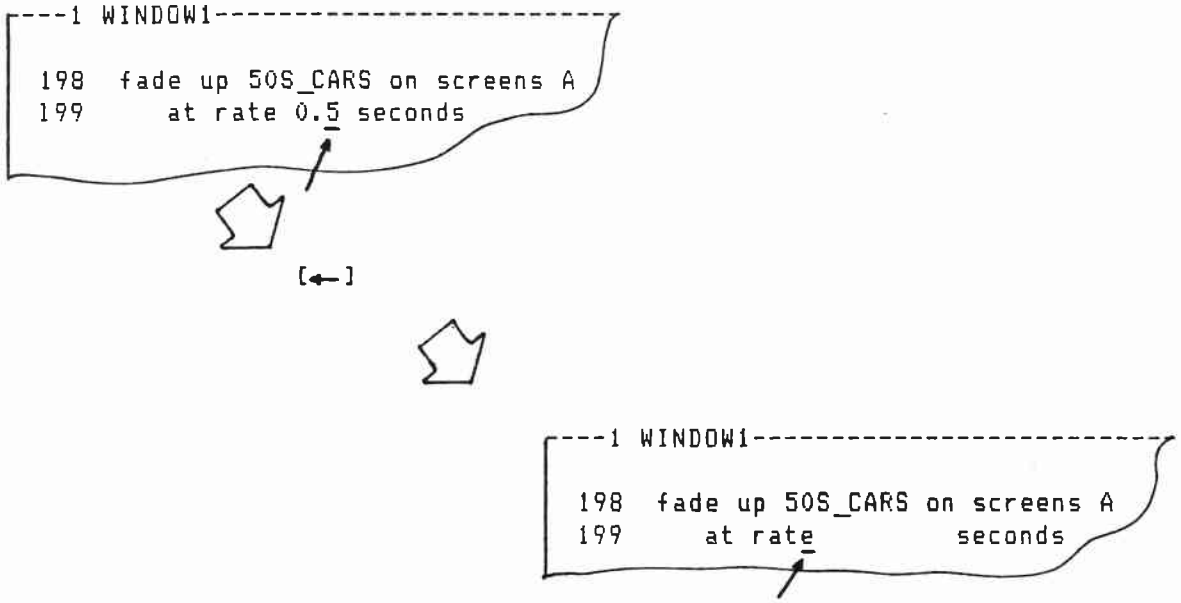
[Scroll Lock] + [↑8](scroll up), [↓2](scroll down) in EDIT moves the highlighted line through the edit file.



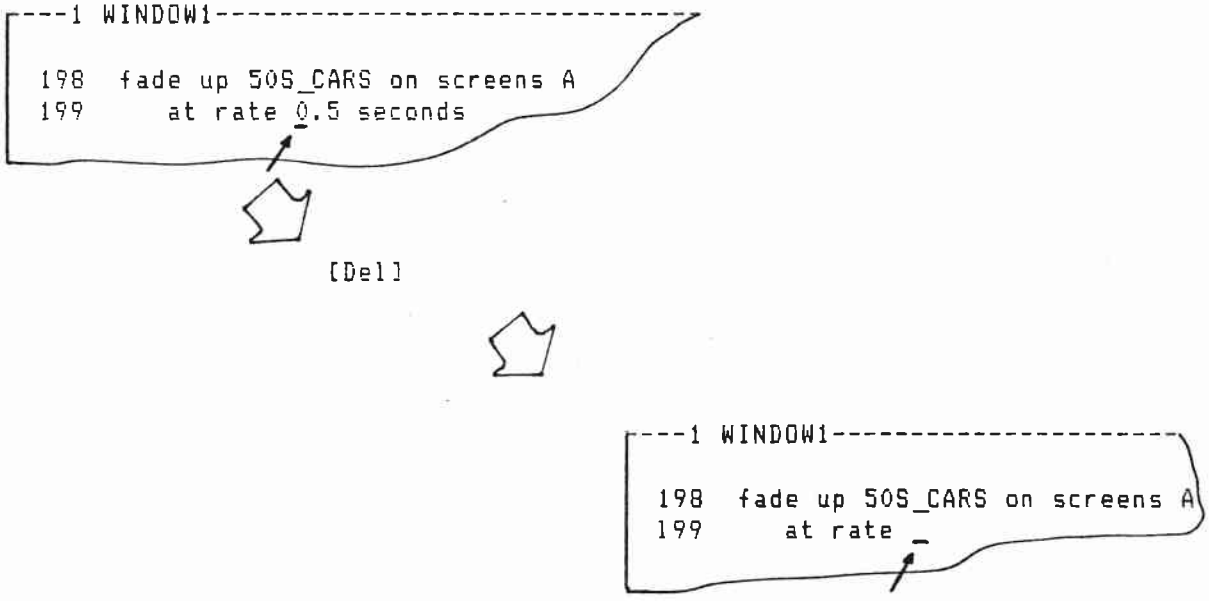
[← 4](scroll left), [6 →](scroll right) on CREATE, INSERT, and EDIT move the cursor left and right without erasing.



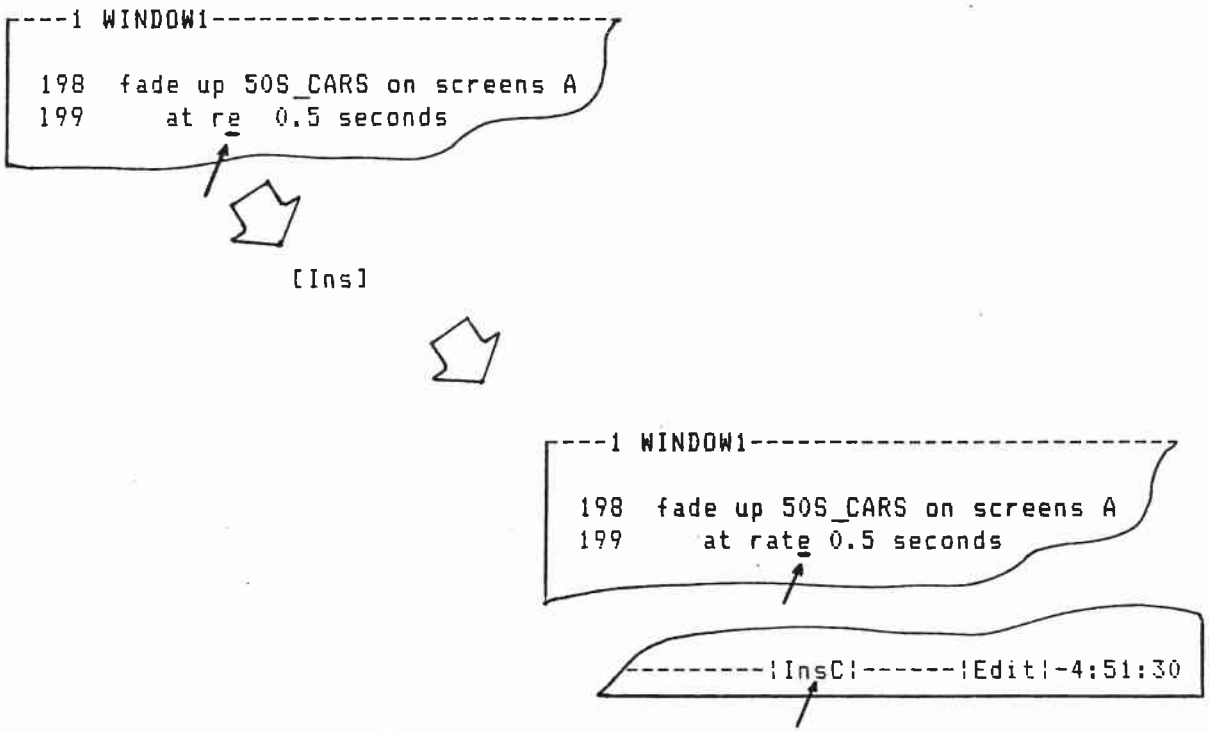
[←](backspace) in CREATE, INSERT, and EDIT moves the cursor to the left while erasing characters.



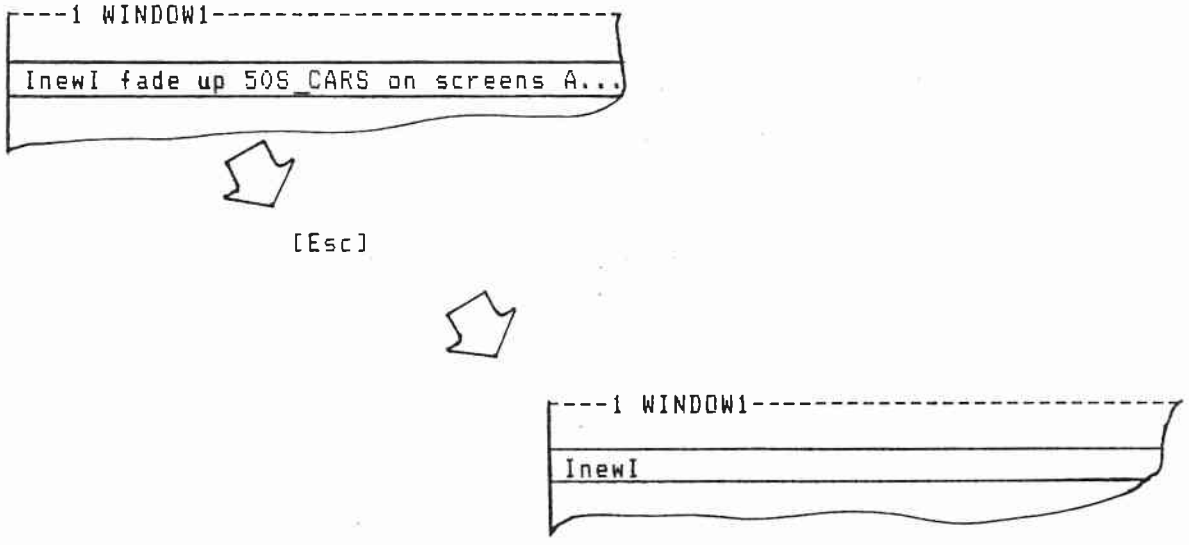
[Del] in CREATE, INSERT, and EDIT erases where the cursor is positioned.



[Ins] in CREATE, INSERT, and EDIT lets new characters be inserted to the left of the cursor.

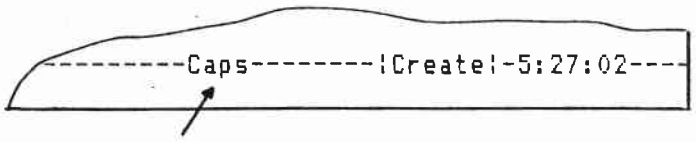


[Esc] in CREATE and INSERT removes softkey entries from new lines.

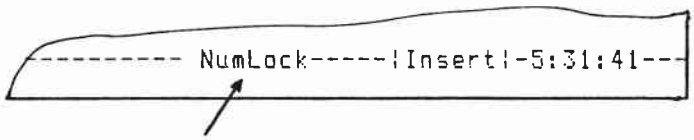


Miscellaneous Keys continued

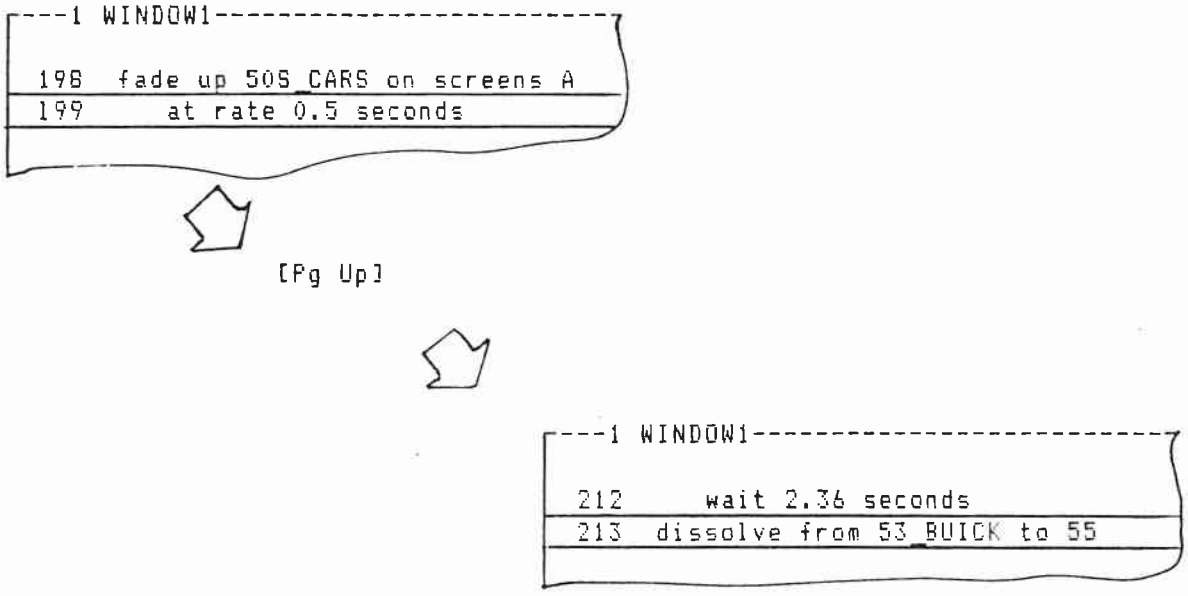
[Caps Lock] in CREATE, INSERT, and EDIT turns on capitol lock.



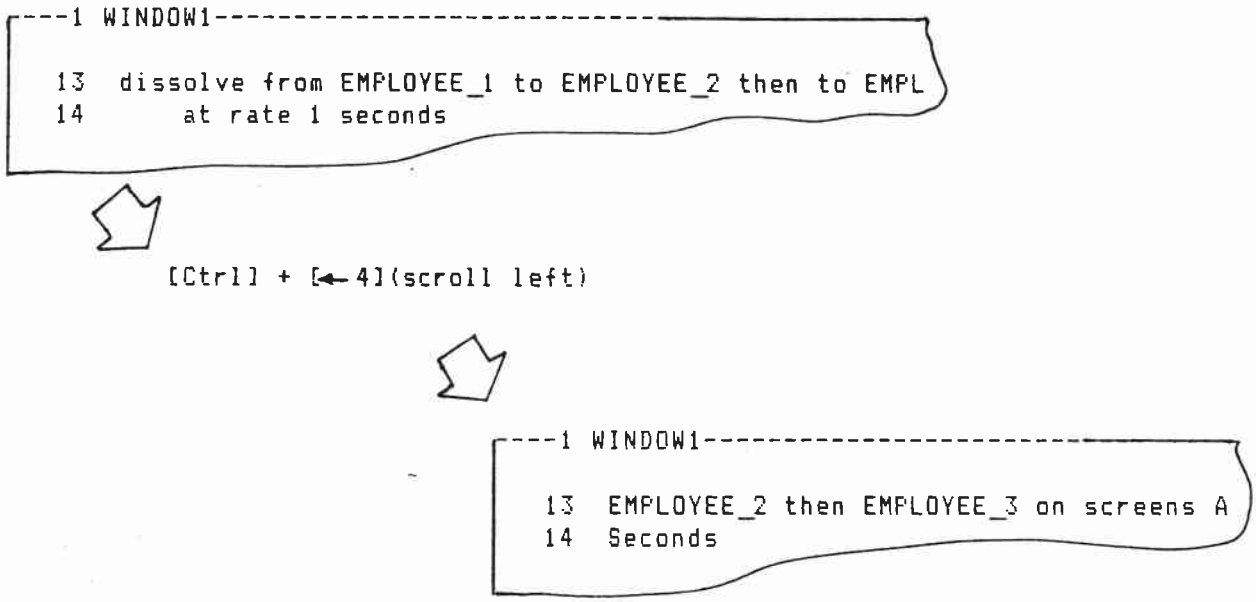
[Num Lock] in CREATE, INSERT, and EDIT turns on number lock.



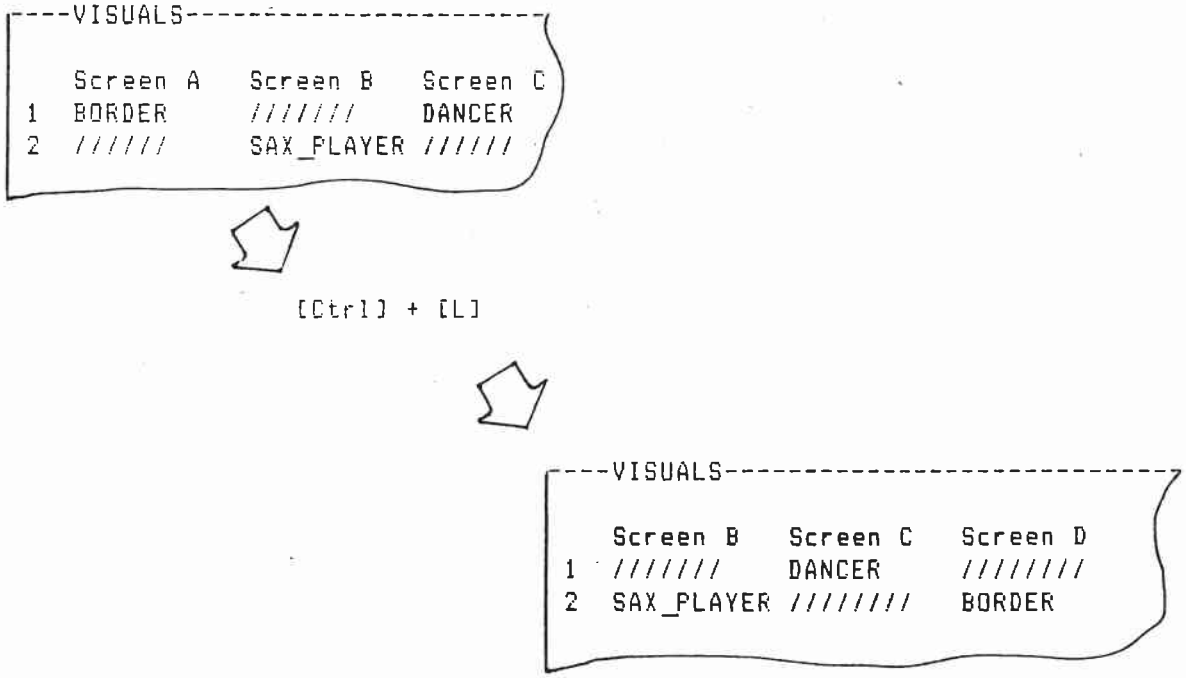
[Pg Up] [Pg Dn] in EDIT move the edit file up and down 14 lines at a time.



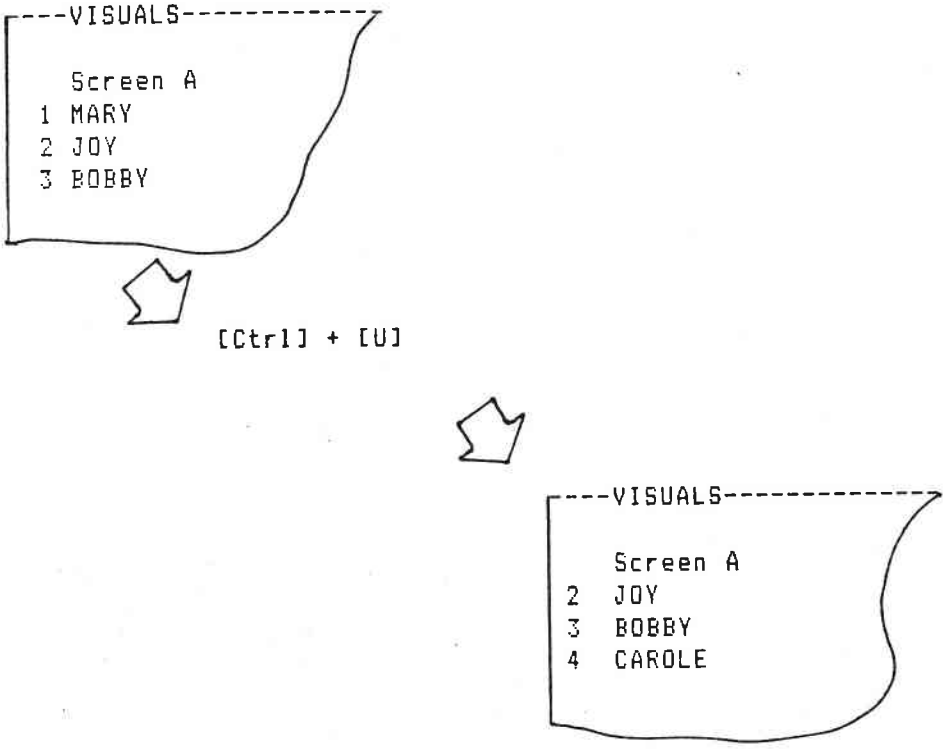
[Ctrl] + [←4](scroll left), [6→](scroll right) in EDIT and at the LISTFILE window moves the edit file text left and right.



[Ctrl] + [L], [R] in CREATE, INSERT, EDIT, at the LISTFILE window, and at the SHOW window moves the screen columns in the visual assignment area left and right.

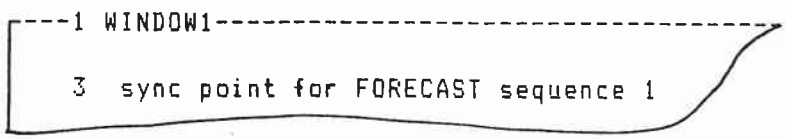


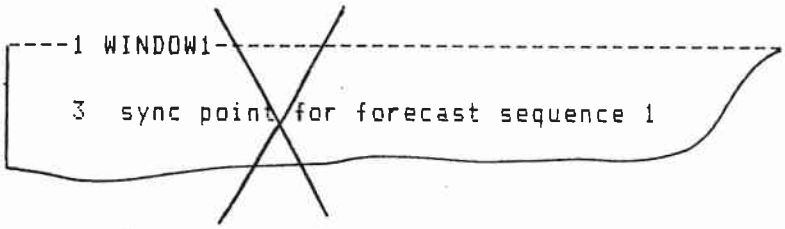
[Ctrl] + [U], [D] in CREATE, INSERT, EDIT, and at the LISTFILE and SHOW windows moves the screen columns in the visual assignment area up and down.



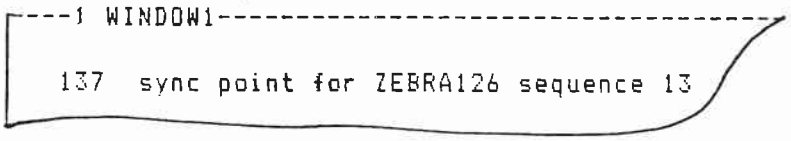
SEQUENCE NAMES

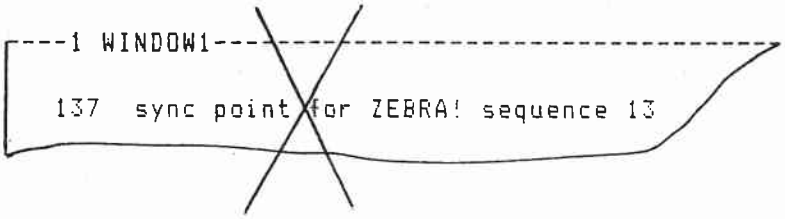
Capitalize sequence names.





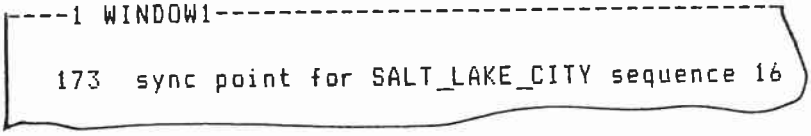
Sequence names can have all the letters of the alphabet and numbers 0 through 9.

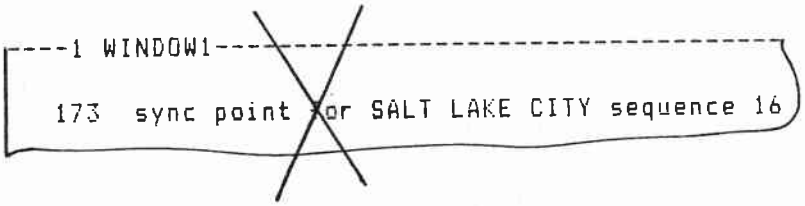




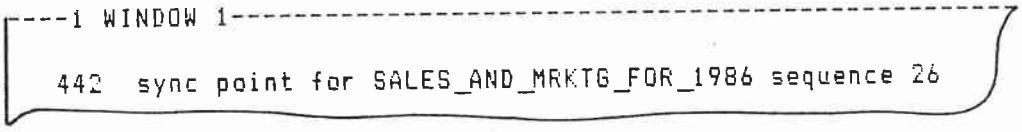
Sequence Names continued

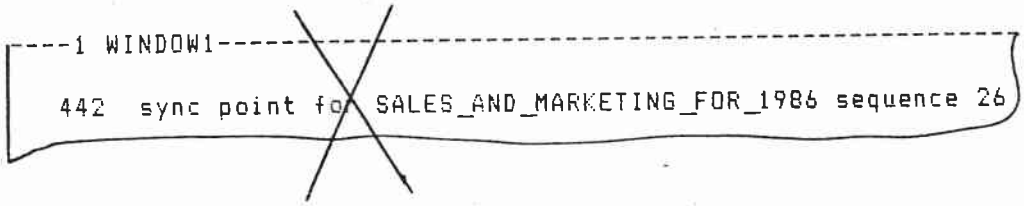
Underscore spaces in sequence names.





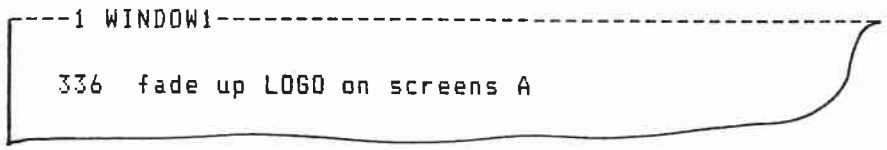
Sequence names can be up to 24 characters long.

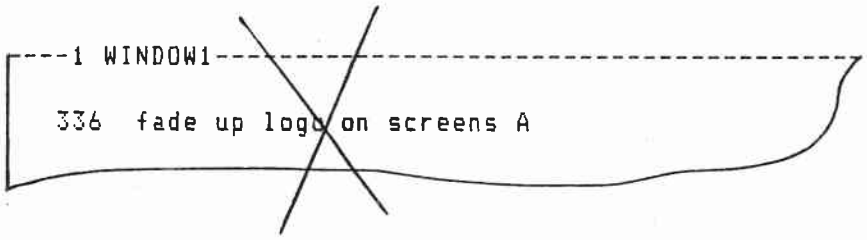




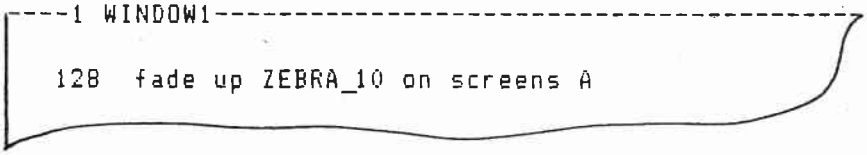
SLIDE NAMES

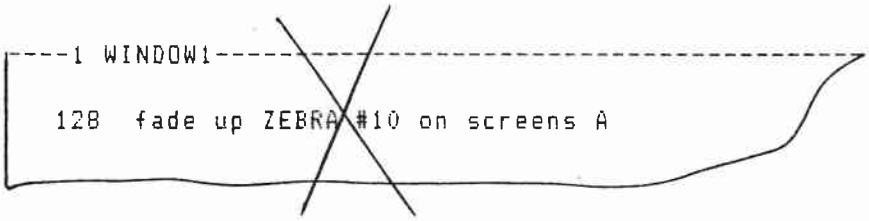
Capitalize slide names.





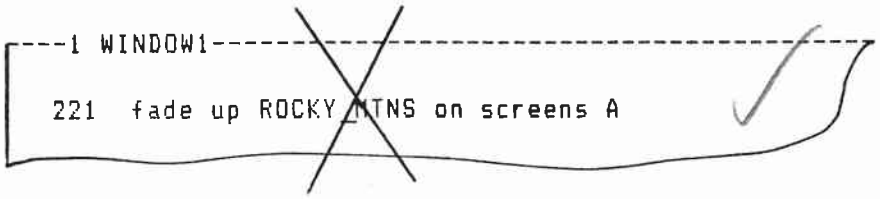
Slide names can use all the letters of the alphabet and numbers 0 through 9.

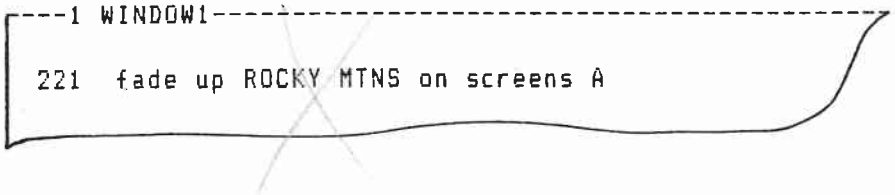




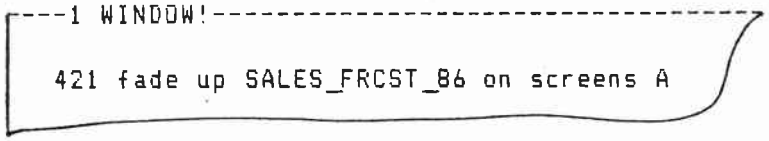
Slide Names continued

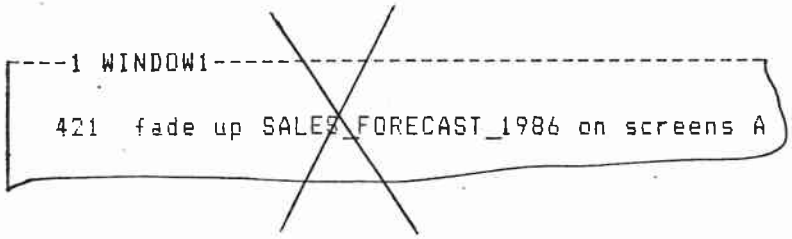
Underscore spaces in slide names.





Slide names can be up to 14 characters long.

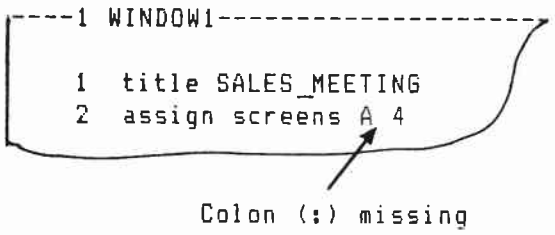




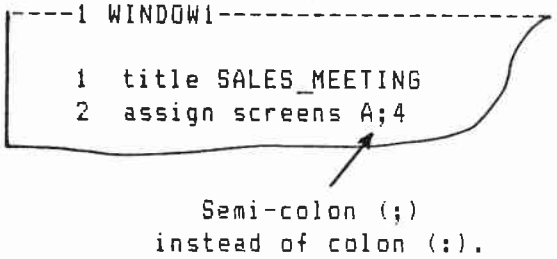
ERRORS

Error messages appear in the UPDATE window. Errors are made during programming and editing. Errors stop compiling. Errors must be corrected.

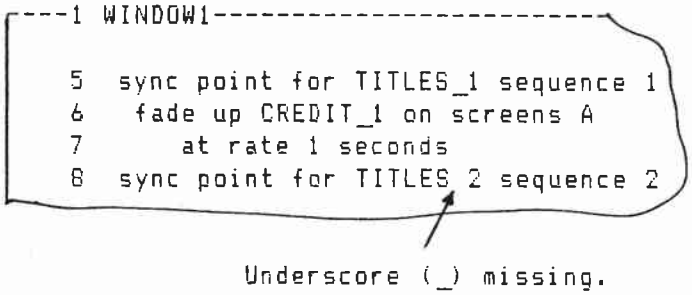
* Error in "assign screens" entry.



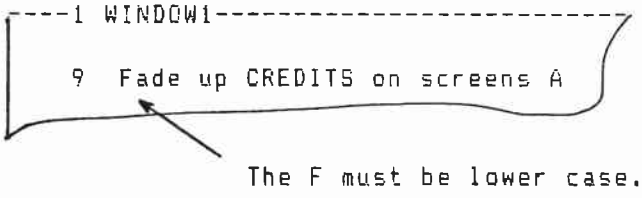
* Error in "assign screens" entry.



* Error: Invalid keyword (2)



* Error: Invalid keyword (Fade)



* Error: Visual name not found (COMIT)

```
----1 WINDOW1-------------------------

  28  fade up COMET on screens A
  29     at 2.5 second rate
  30  wait 3.3 seconds
  31  fade down COMIT on screens A
```

Misspelled.

* Error: Visual name not found (ICHART1)

```
----1 WINDOW 1------------------------

  62  fade up CHART1 on screens A
  63     at 0.5 second rate
  64  wait 5.6 seconds
  65  fade down CHART_1 on screens A
```

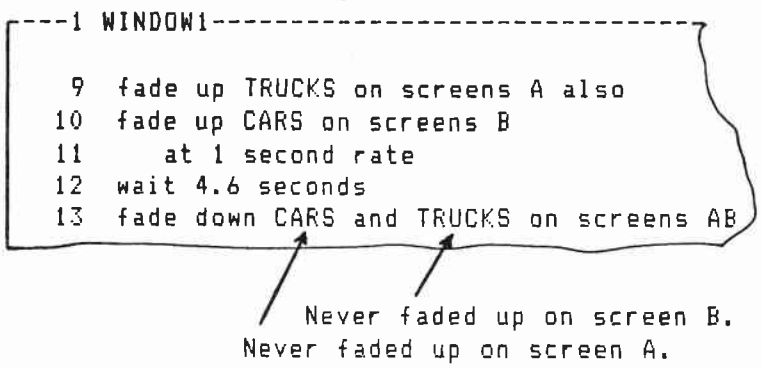
Underscore makes CHART_1 different from CHART1.

* Error: Visual name not found (STARS)

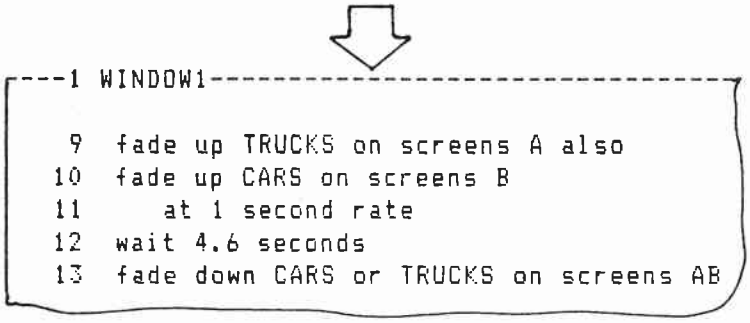
```
----1 WINDOW1-------------------------

 118  fade up STARS on screens A
 119     at rate 1 seconds
 120        wait 3.67 seconds
 121  fade down STARS on screens B
```

Wrong screen.

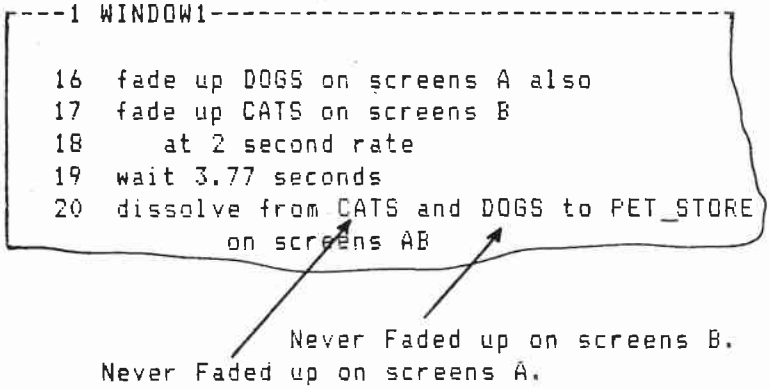
* Error: Visual name not found (CARS)



Use or to simultaneously fade down different slides on separate screens.



* Error: Visual name not found (CATS)



Use or to simultaneously dissolve down different slides on separate screens.

```
----1 WINDOW1----------------------------

  16  fade up DOGS on screens A also
  17  fade up CATS on screens B
  18     at 2 second rate
  19  wait 3.77 seconds
  20  dissolve from CATS or DOGS to PET_STORE
       on screens AB
```

* Error: Wait time cannot be zero ( )

```
----1 WINDOW1----------------------------

  26  fade up PLANES on screens B
  27     at 1 second rate
  28  wait 0 seconds
  29  fade up TRAINS on screens A
```

Wait times can be from 0.05 to 255.00 seconds.

Use also to simultaneously fade up different slides on the same, separate, or overlapping screens.

```
----1 WINDOW1----------------------------

  26  fade up PLANES on screens A also
  27  fade up TRAINS on screens A
  28     at 1 second rate
```

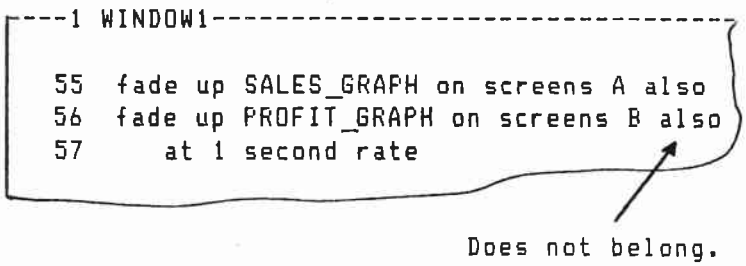
* Error: No projector available for (FRIES)

```
----1 WINDOW1----------------------------

   2  assign screens A:2
   3  fade up HAMBURGER on screens A also
   4  fade up HOT_DOG on screens A
   5     at rate 1 second
   6  wait 2.7 seconds
   7  fade up FRIES on screen A
```

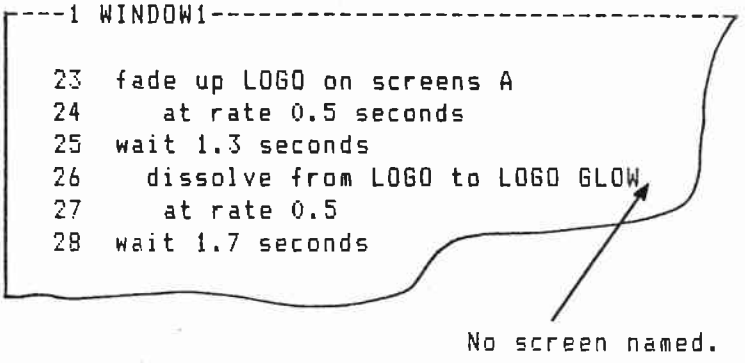
Goes to projector 1.
Goes to projector 2.
No projector available.

Errors continued

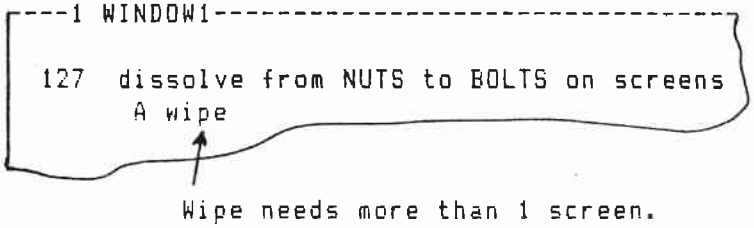
* Error: No projector available for { }



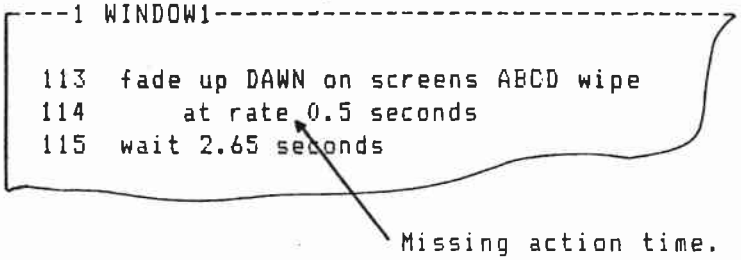
* Error: No screens indicated! {1.7}



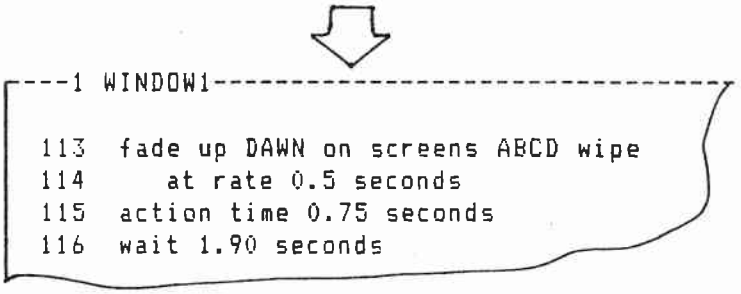
* Error: Multiple action not indicated { }



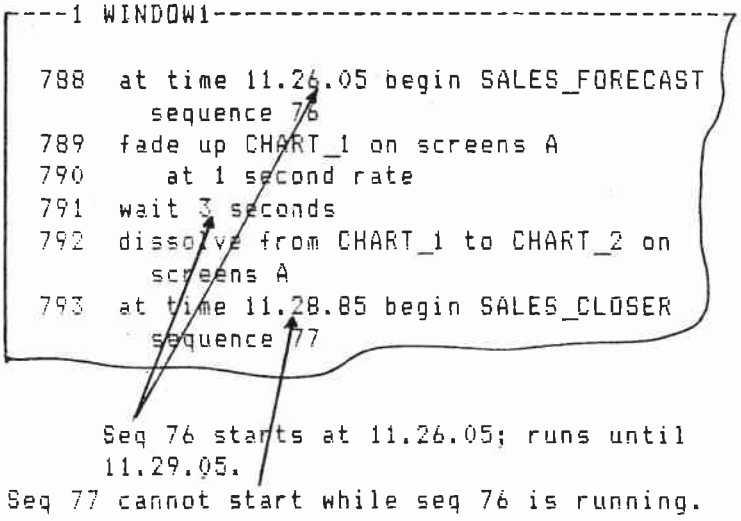
*Error: Action time is required (2.65)



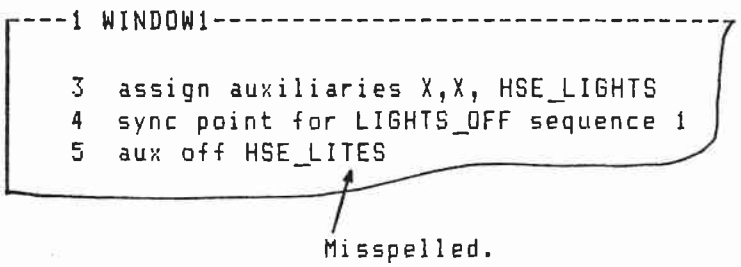
Wipe, then, and then to require action times.



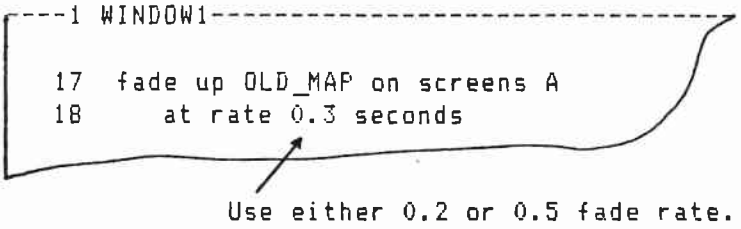
*Error: Absolute 'run time' overlap ( )



* Error: Auxiliary Not Defined (HSE_LITES)



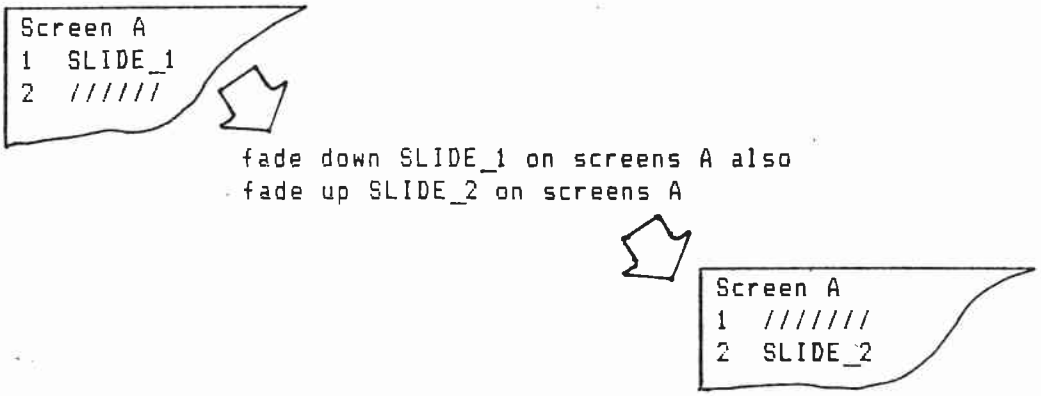
* Error: Fade rate is invalid (.3)



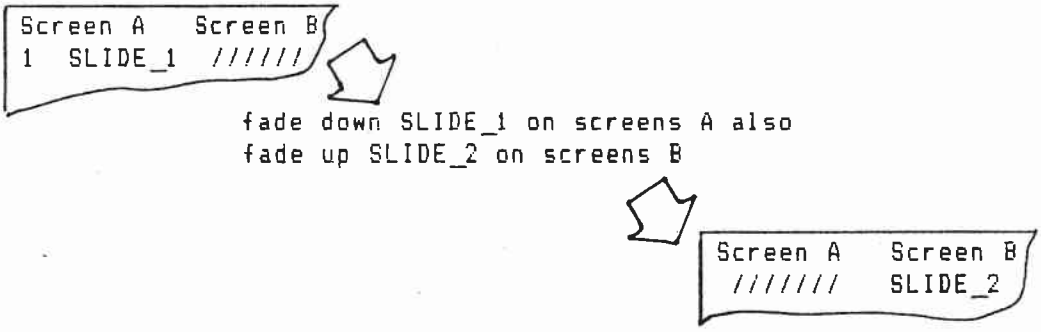
Valid fade rates are 0, 0.2, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4 through 16, and all even rates between 16 and 98.

ALSO continued

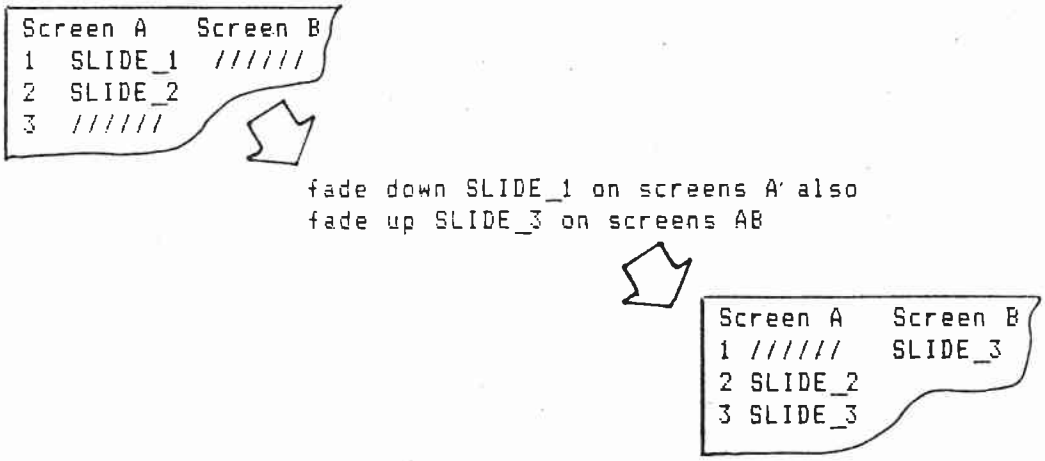
Also following a fade down statement simultaneously fades up different slides on the same screen.



Also following a fade down statement simultaneously fades up different slides on separate screens.

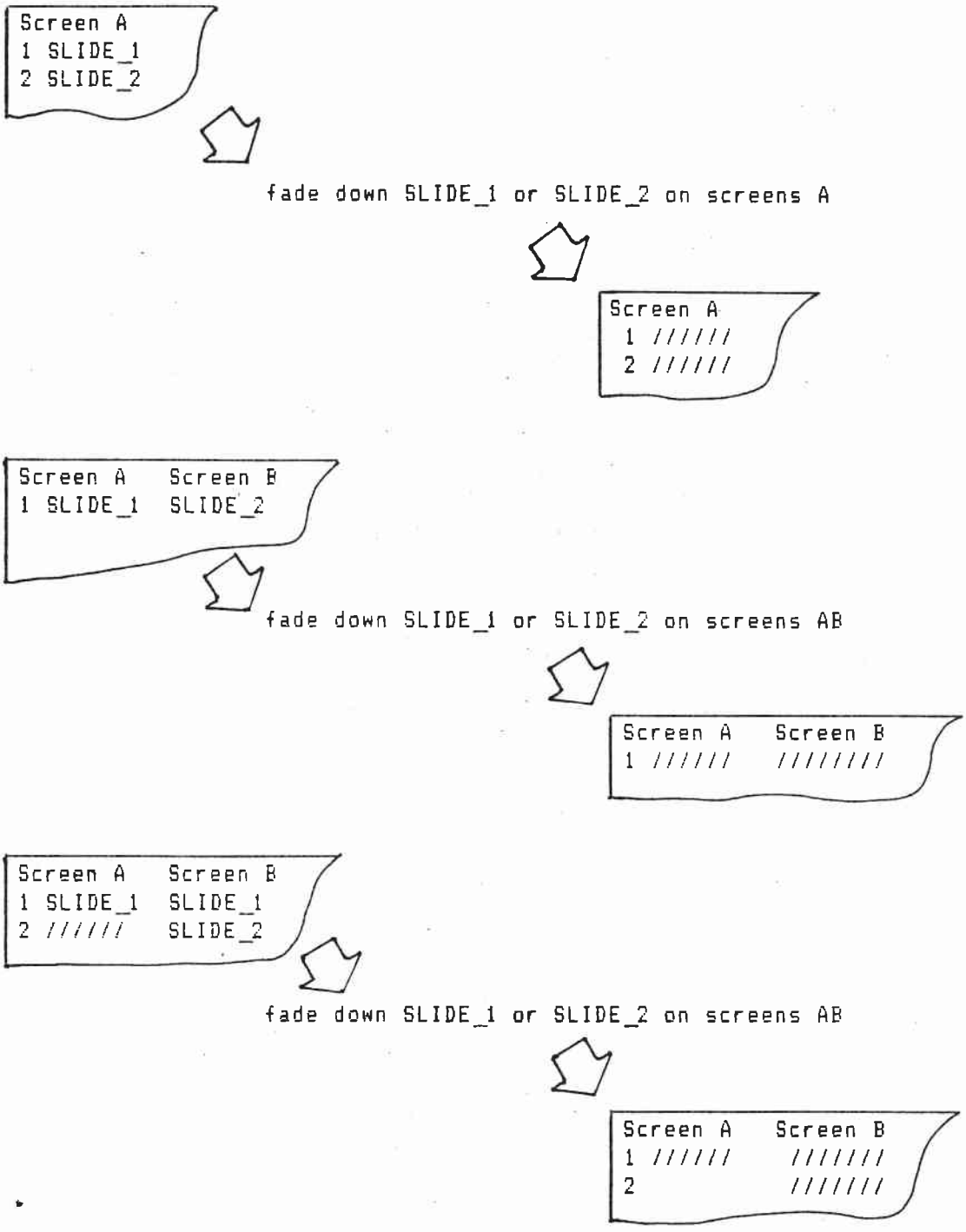


Also following a fade down statement simultaneously fades up different slides on overlapping screens.

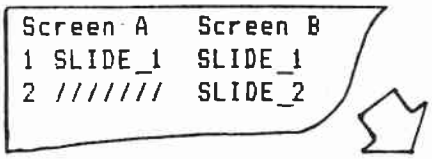


OR

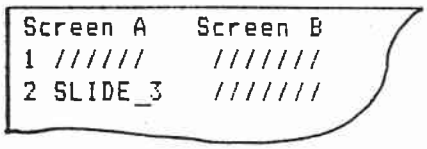
Or links the names of different slides that are to simultaneously fade down on the same, overlapping, or separate screens.



Or continued

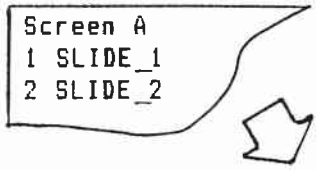


fade up SLIDE_3 on screens A also
fade down SLIDE_1 or SLIDE_2 on screens AB

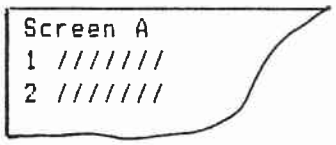


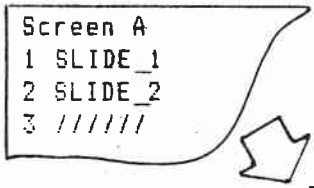
AND

And joins the names of slides that are fading down or dissolving down together on the same screen.

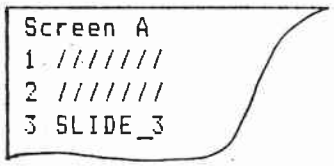


fade down SLIDE_1 and SLIDE_2 on screens A



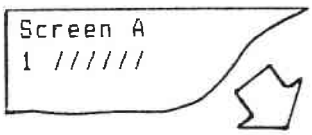


dissolve from SLIDE_1 and SLIDE_2 to SLIDE_3 on screens A

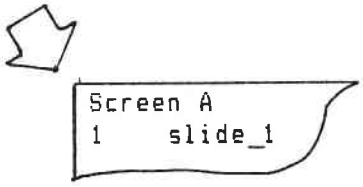


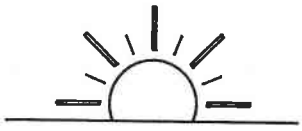
TO LEVEL

To level fades slides to partial brightness. Level 1 is 10% brightness. Level 10 is full brightness.

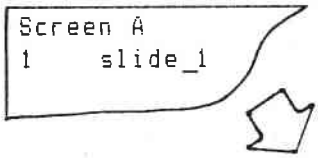


fade up SLIDE_1 to level 7 on screen A

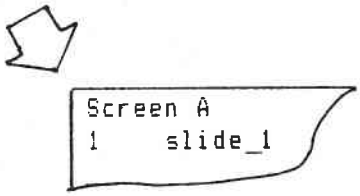




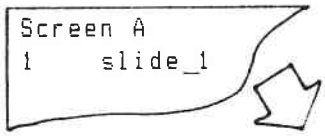
70%



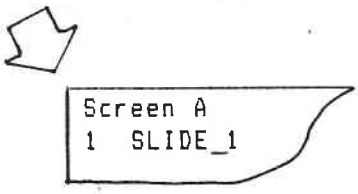
fade down SLIDE_1 to level 3 on screens A

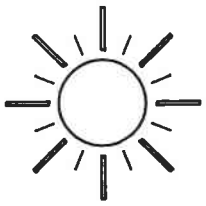


30%



fade up SLIDE_1 to level 10 on screens A

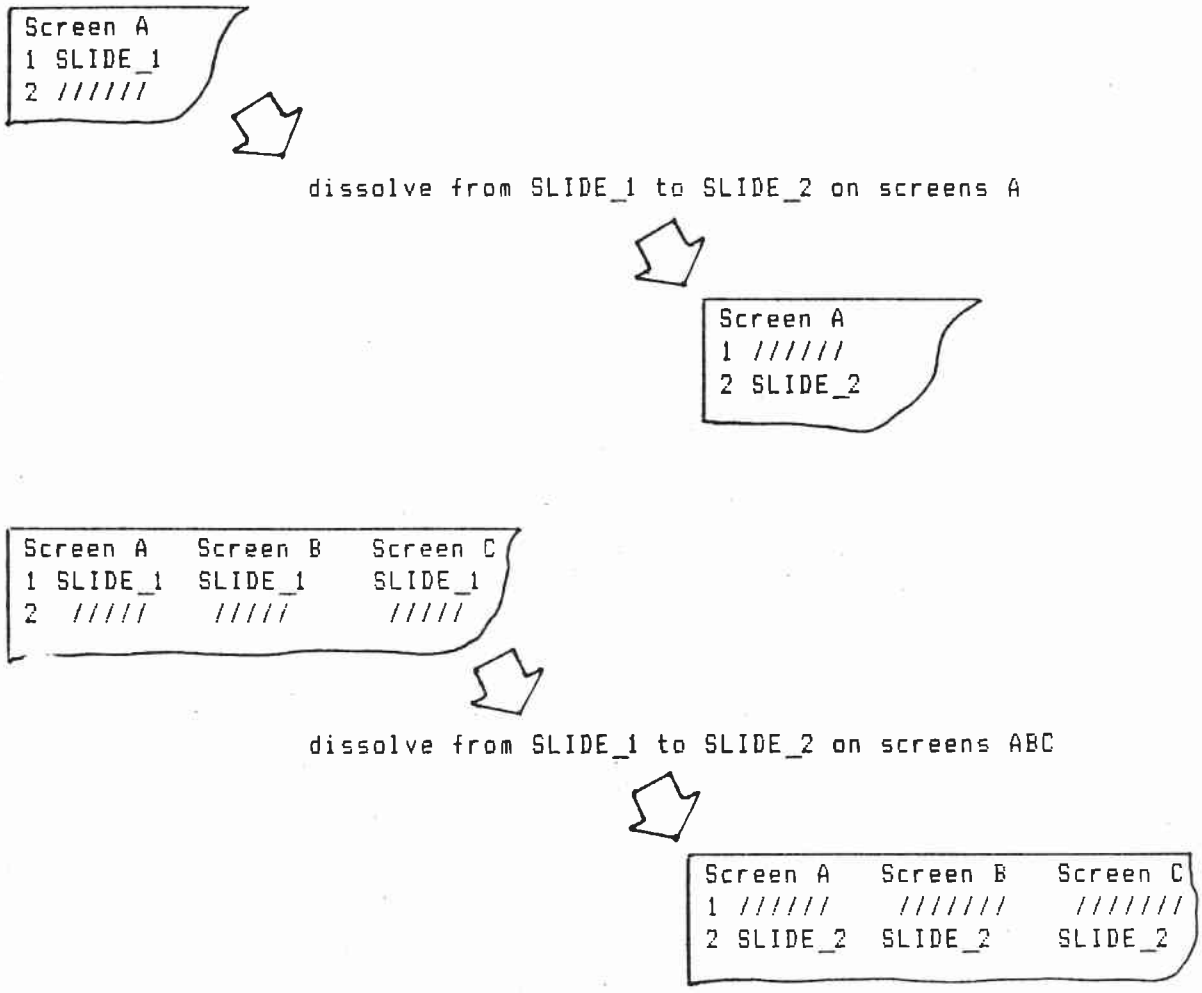




100%

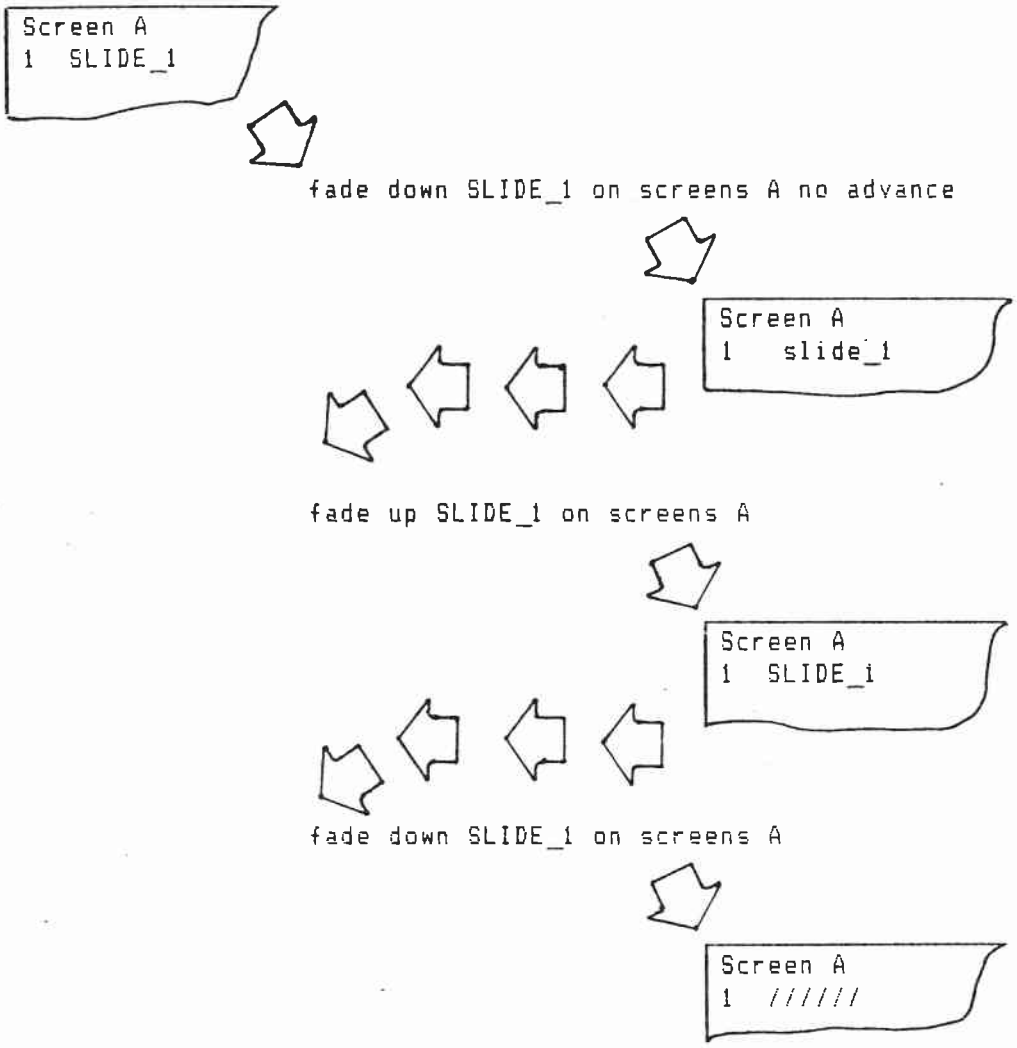
DISSOLVE FROM, TO

Dissolve from fades down old slides as new slides fade up on the same screens.



NO ADVANCE

No advance fades off slides without a tray advance.



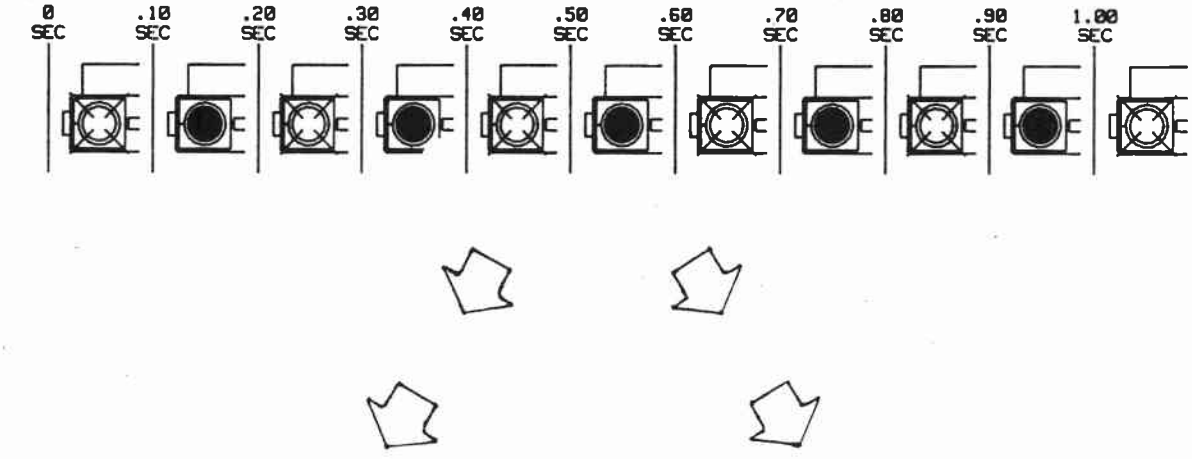
ANIMATE

Animate fades up single slides flashing. Flashing is at a 0 second rate. Flashing continues until either a clear animate or the slide fades down.

Animate is followed by an on time. The on time is amount of time the slide stays on before cutting off. CAMI puts in an equal off time.

On times are 0.05, 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, and 0.9 seconds.

```
----1 WINDOW1-------------------------

  26  animate 0.10 seconds
  27  fade up ARROW on screens A
  28     at rate 1 seconds
```




```
----1 WINDOW1-------------------------

  29  wait 3 seconds
  30  clear animate ARROW on screens A
```

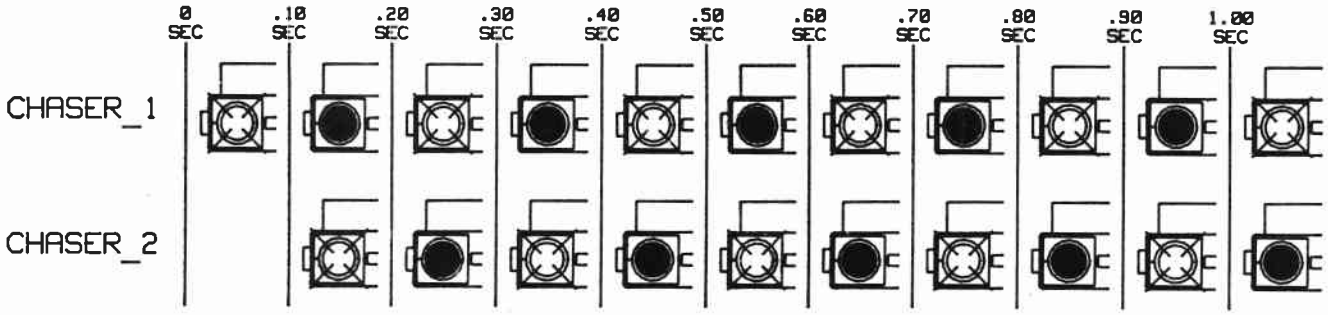
```
----1 WINDOW1---------------------

  29  wait 3 seconds
  30   fade down ARROW on screens A
```

Animate continued

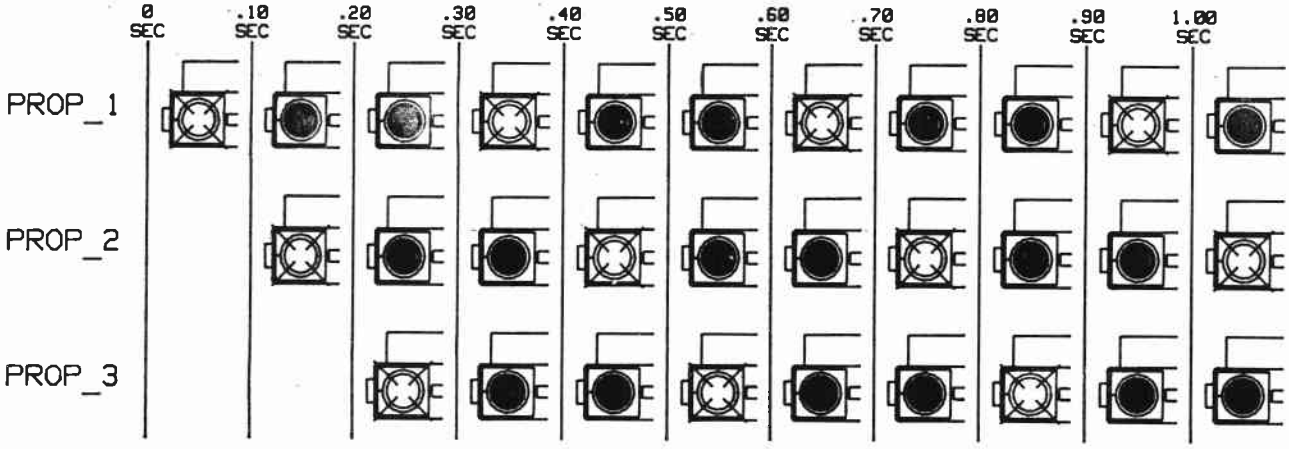
Animate fades up two or more slides animating.

The animate on time sets the time each slide stays on before cutting off. CAMI automatically puts in an off time so that as one slide cuts off the next slide cuts on.

```
----1 WINDOW1-----------------------------------

  13  animate .1 seconds
  14  fade up CHASER_1 and CHASER_2 on screens A
  15      at 2 second rate
```




```
----1 WINDOW1-----------------------------------

 190  animate .1 seconds
 191  fade up PROP_1 and PROP_2 and PROP_3 on screens A
 192      at 1.5 second rate
```



The shorter the animate on time, the faster the animation. The longer the animate on time, the slower the animation.

Available animate on times for two slide animations are 0.05, 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8 and 0.9 seconds.

Available animate on times for three slide animations are 0.05, 0.1, 0.2, 0.3 and 0.4 seconds.

Available animate on times for four slide animations are 0.1, 0.2, and 0.3 seconds.

Available animate on times for five slide animations are 0.05, 0.1 and 0.2 seconds.

LIVE CUE FOR

Live cue for is used for speaker support sequences.

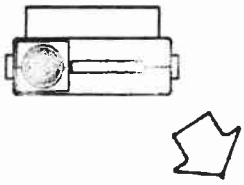
Live cue for is used instead of at time or sync point for. Live cue for sequences can never be assigned sync points. They are always manually executed.

Live cue for is typed in.

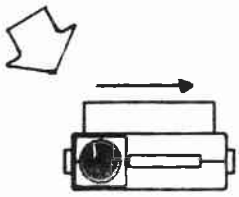
```
----1 WINDOW1-------------------------------------------------

  98  at time 13:67.45 begin MAP sequence 16
  99     fade down NEW_LOCATIONS on screens A
 100        at 1 second rate
 101  at time 14:90.36 begin TAPE_STOP sequence 17
 102     aux on TAPE
 103        wait 0.5 seconds
 104     aux off TAPE
 105  live cue for CEO_INTRO sequence 18
 106     fade up CEO_PORTRAIT on screens A
 107        at 1 second rate
 108  live cue for CEO_SPEAKS
 109     dissolve from CEO_PORTRAIT to LOGO on screens A
```

FORWARD

Forward advances slides without first having to fade them on and then off.

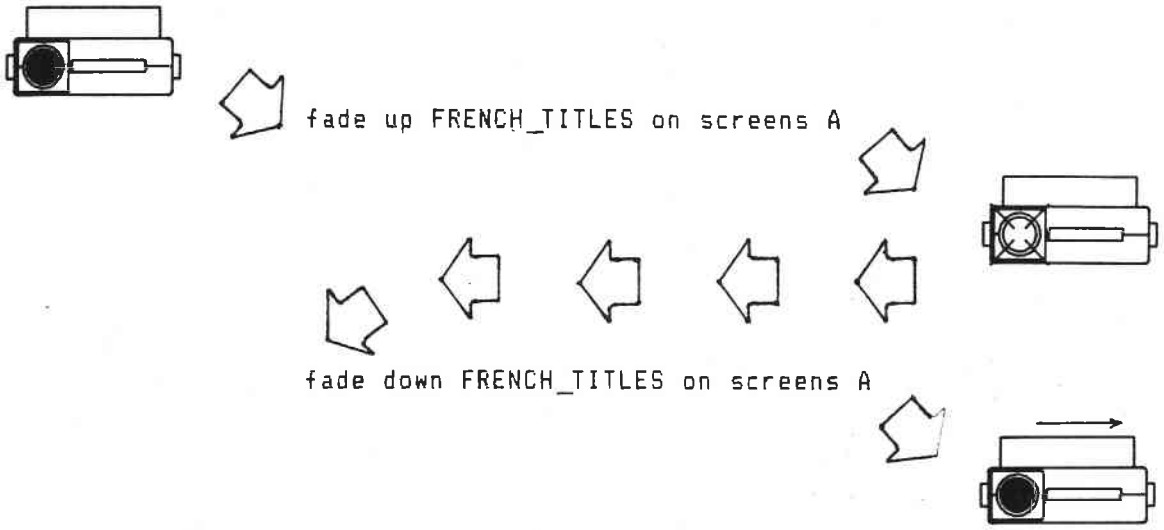


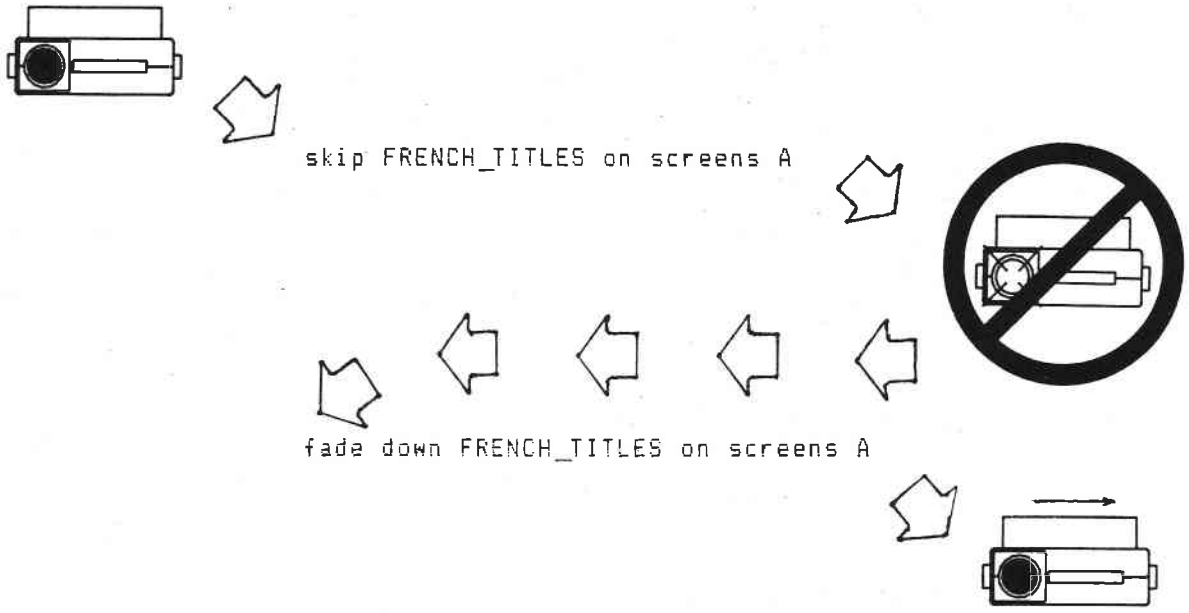
Forward SLIDE_1 on screens A



SKIP

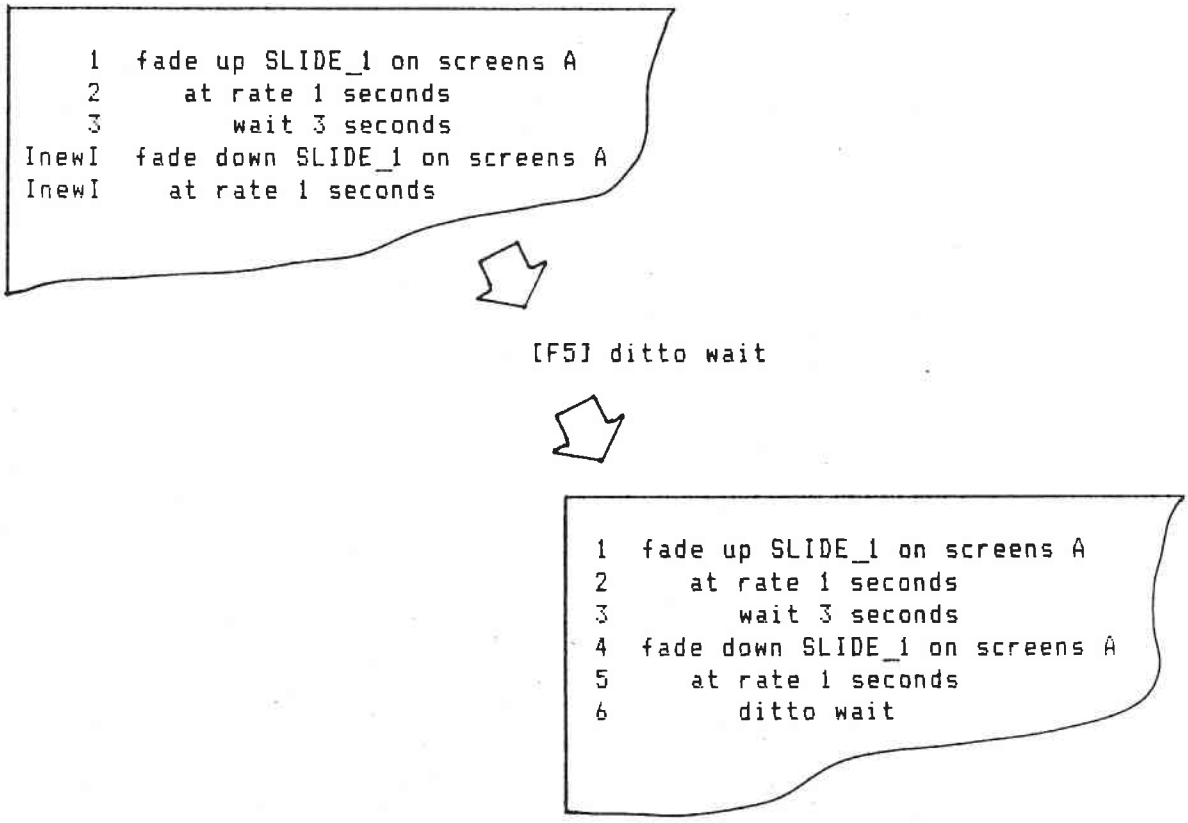
Skip passes over trayed but unused slides. Skip takes the place of fade up. Fade down advances skipped slides.





DITTO WAIT

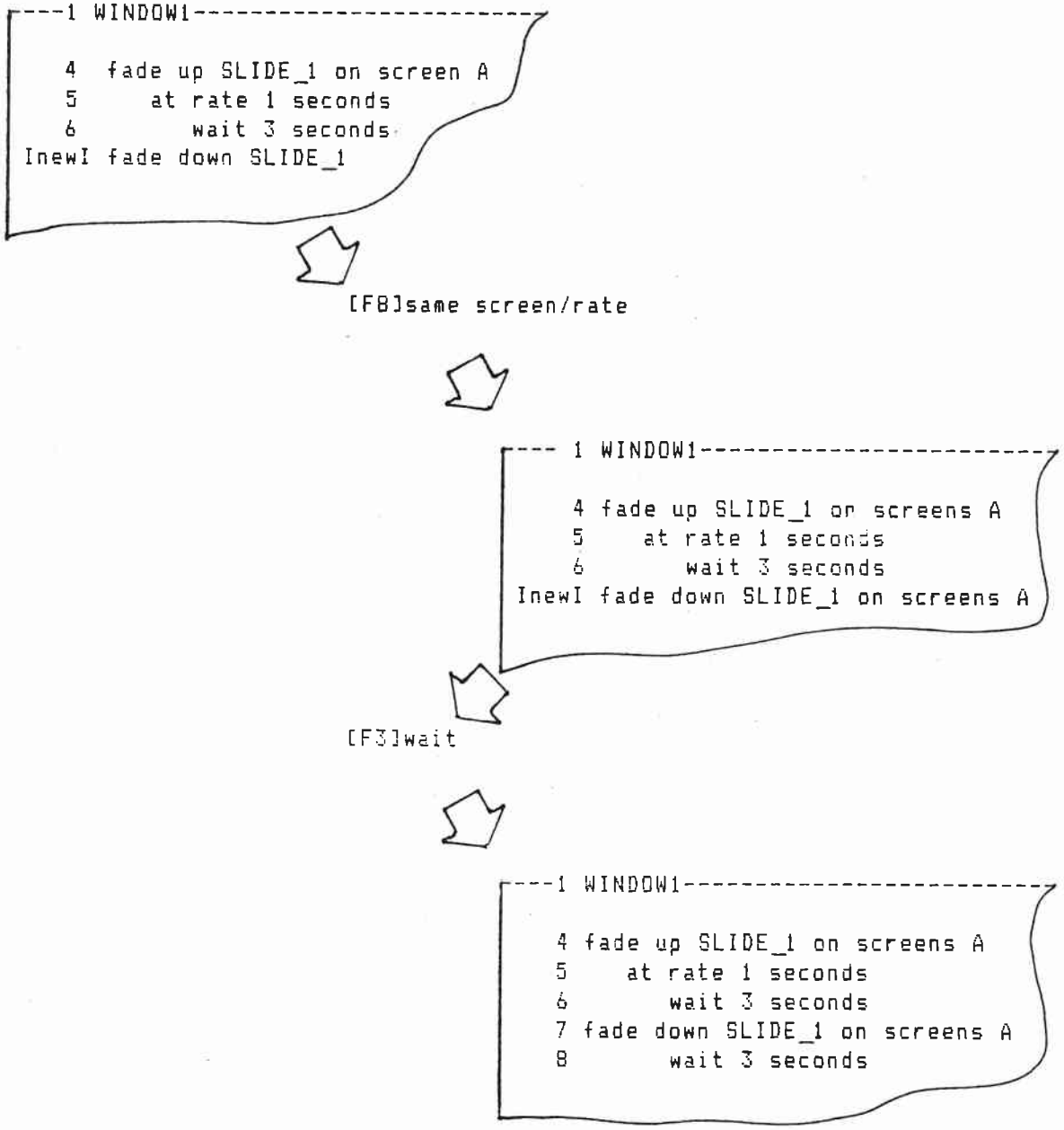
Ditto wait is a convenience key that repeats the last wait time used.



SAME SCREEN/RATE

Same screen/rate is a programming convenience key used when the same screen and rate are repeated.

When a new fade rate is not entered, the last fade rate is reused.



START LOOP, LOOP TIMES

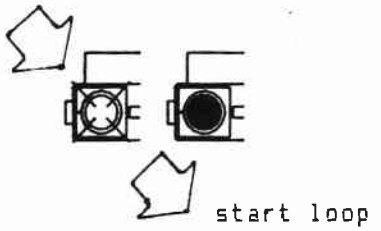
Start loop marks the beginning of a repeated action.

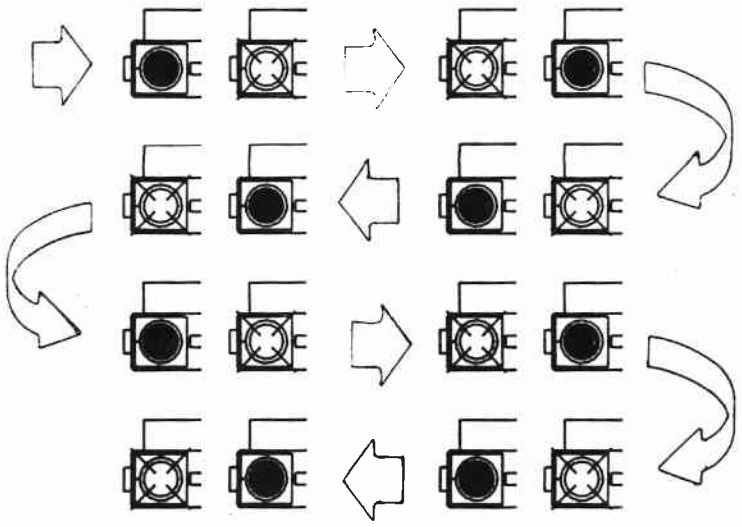
Loop times marks the end of the repeated action and sets the number of repeats. Actions can be repeated up to 255 times.

Projector trays are not advanced in loops.

Start loop and loop times are found in the tool kit.

```
----1 WINDOW1-----------------------------------------------

 114 fade up LOGO on screens A
 115    at rate 0.5 seconds
 116       wait 1.35 seconds
 117 start loop
 118 dissolve from LOGO to LOGO_W_GLOW on screens A
 119    at rate 0.5 seconds
 120       wait 1.35 seconds
 121 dissolve from LOGO_W_GLOW to LOGO on screens A
 122    at rate 0.5 seconds
 123       wait 1.35 seconds
 124       loop times 4
```

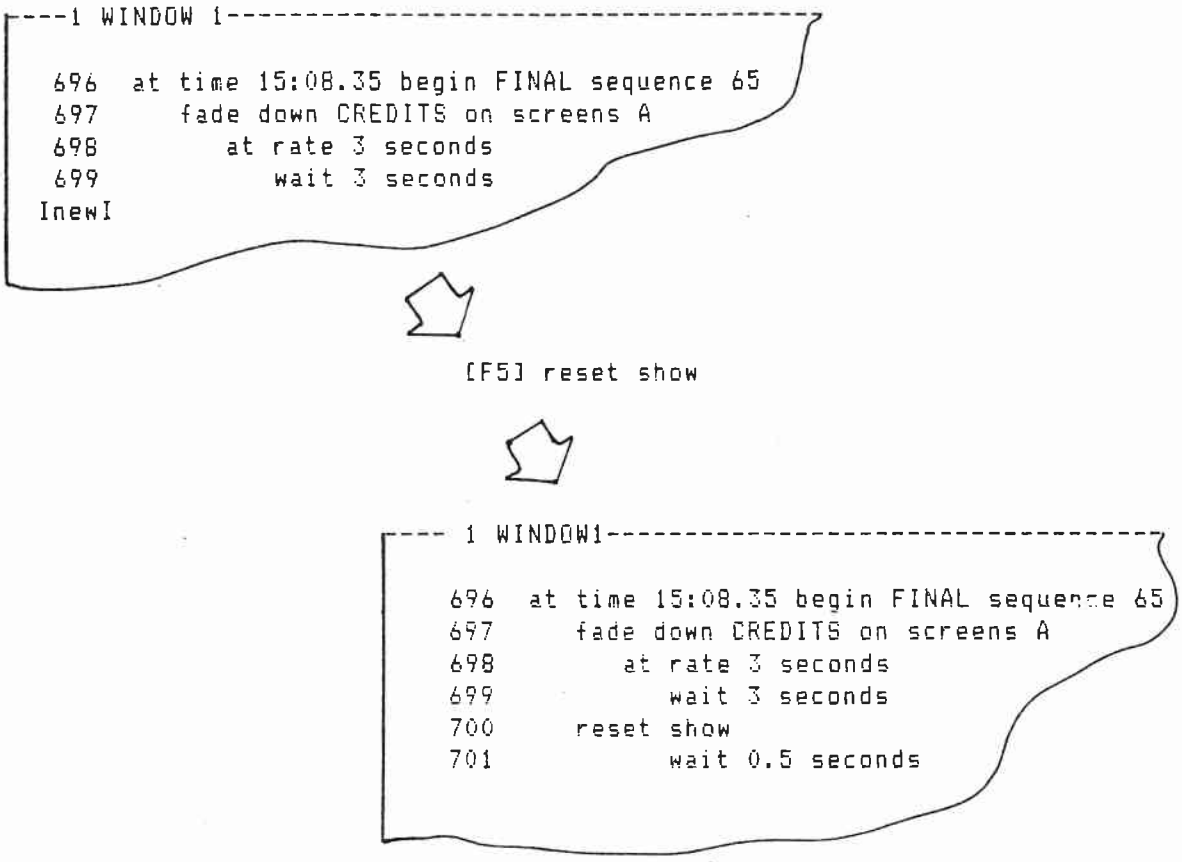




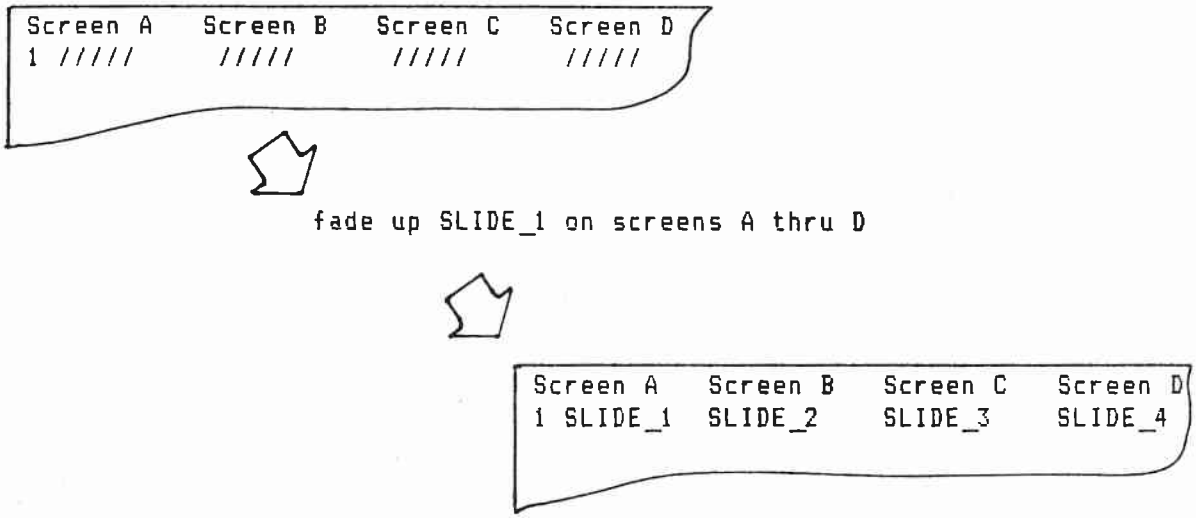
RESET SHOW

Reset show homes projectors and returns the edit file to sequence 1.

Find reset show in the tool kit.

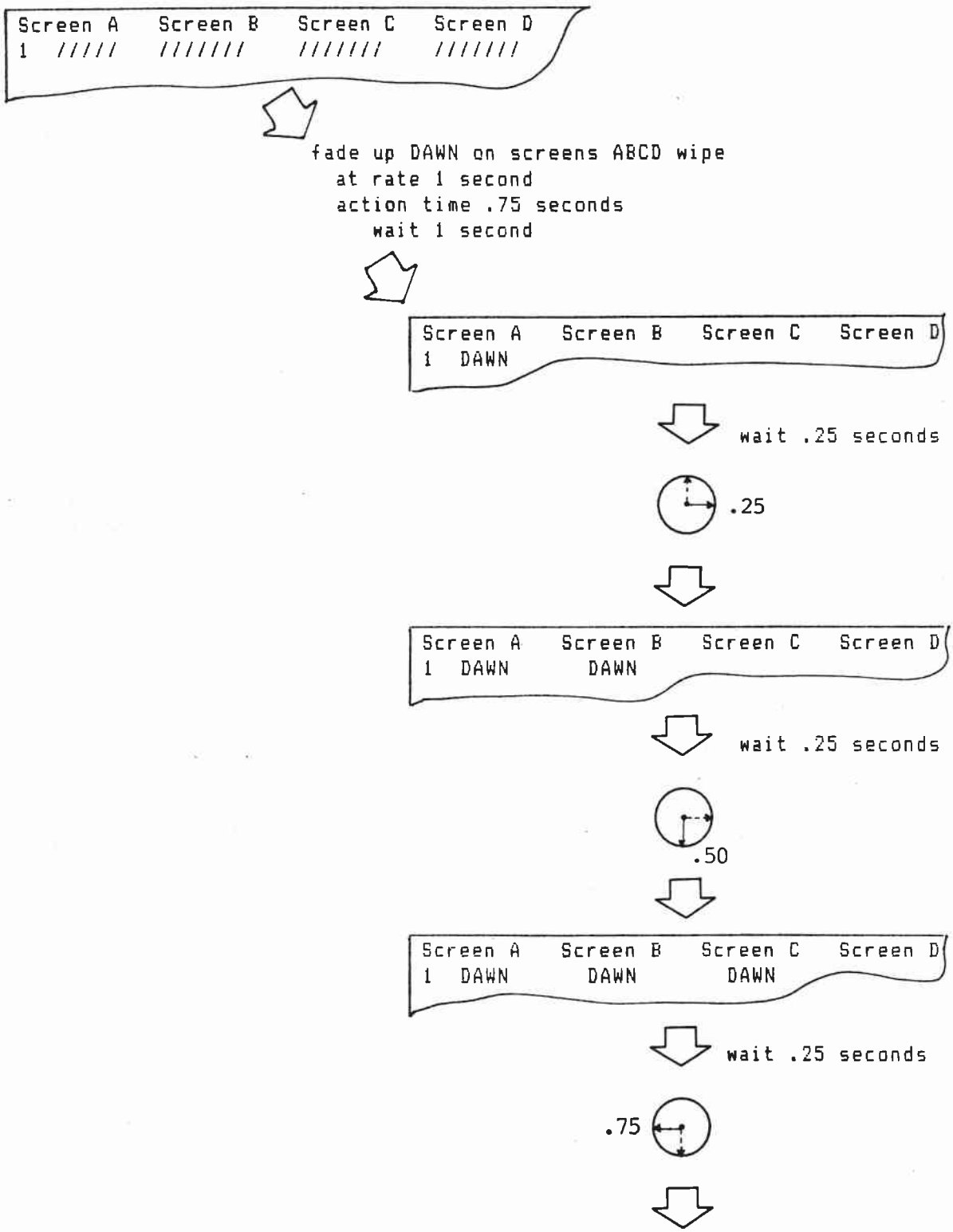


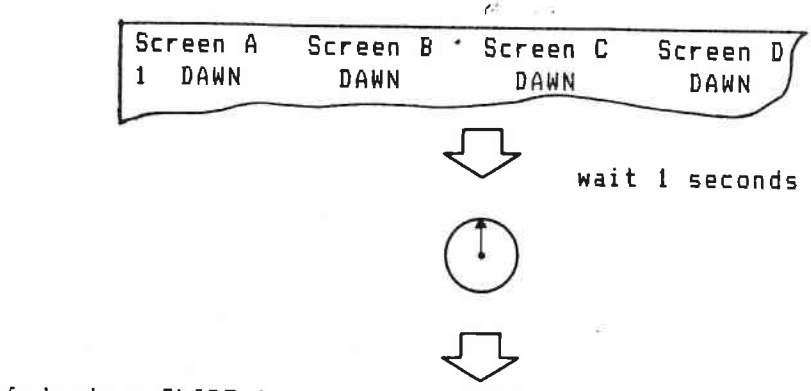
Thru is a quick way to name screens.



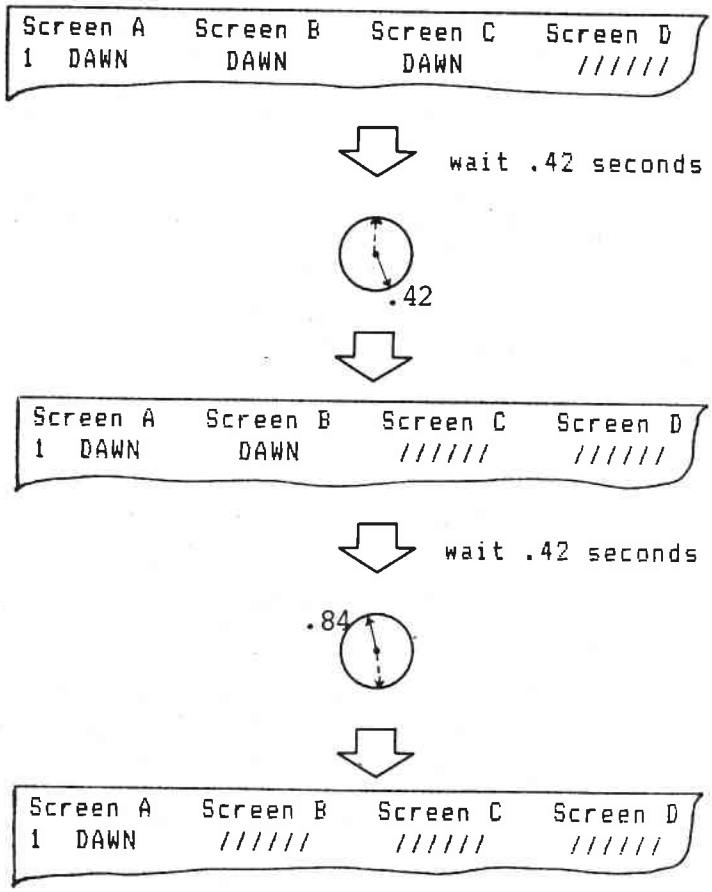
WIPE

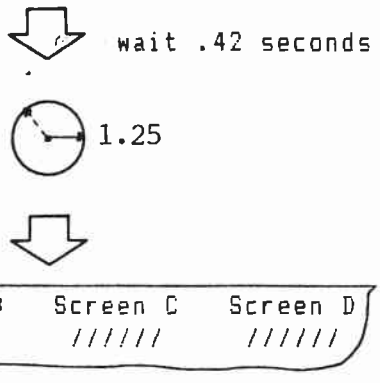
Wipe works with action times to create sweeping effects across multiple screens.

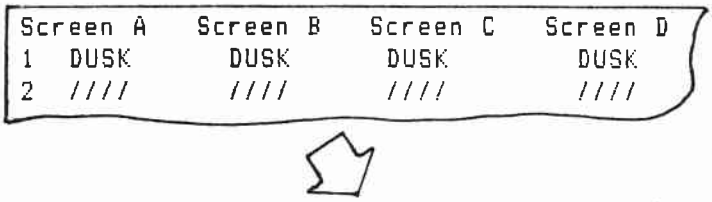




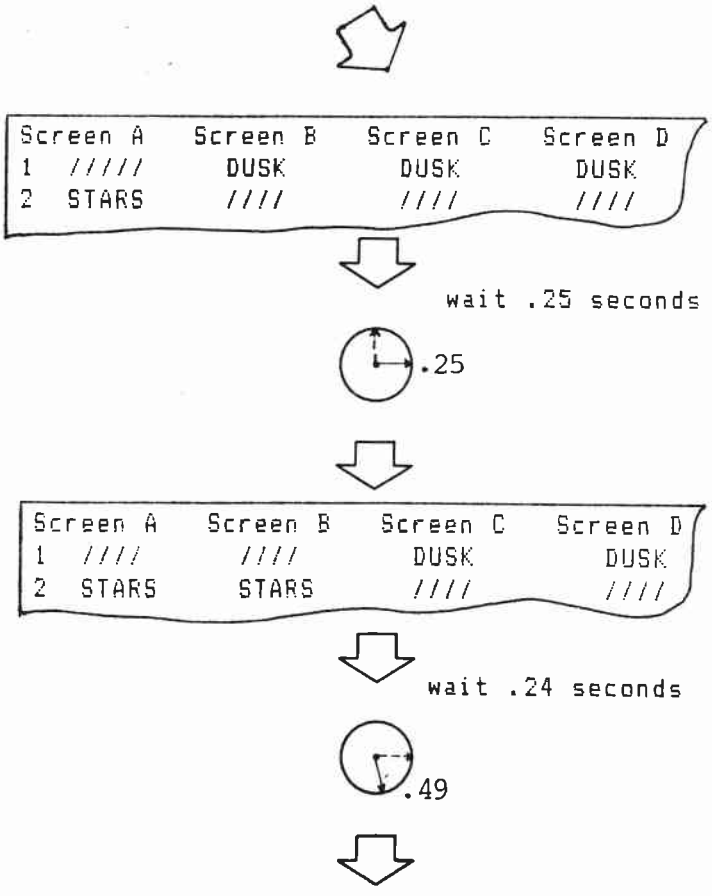
fade down SLIDE_1 on screens DCBA wipe
at rate 1 seconds
action time 1.25 seconds



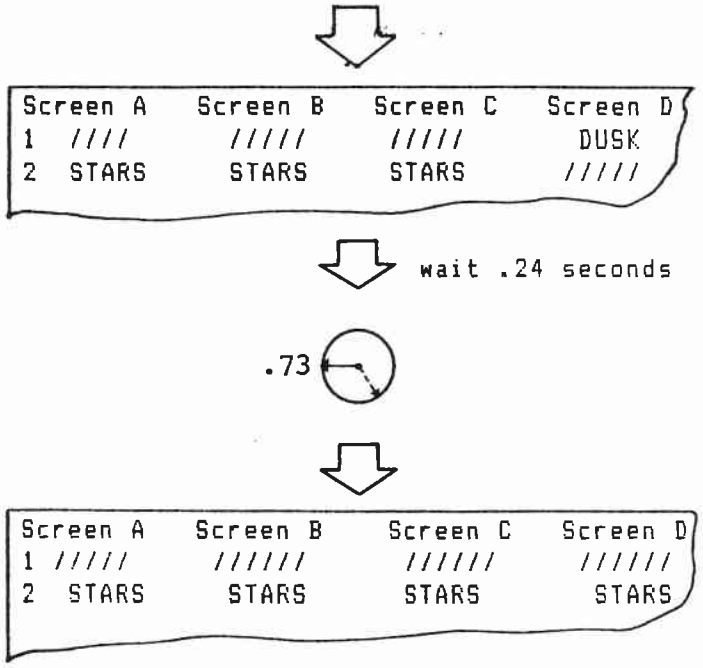




dissolve from DUSK to STARS on screens ABCD wipe
at rate 1.5 seconds
action time .73 seconds

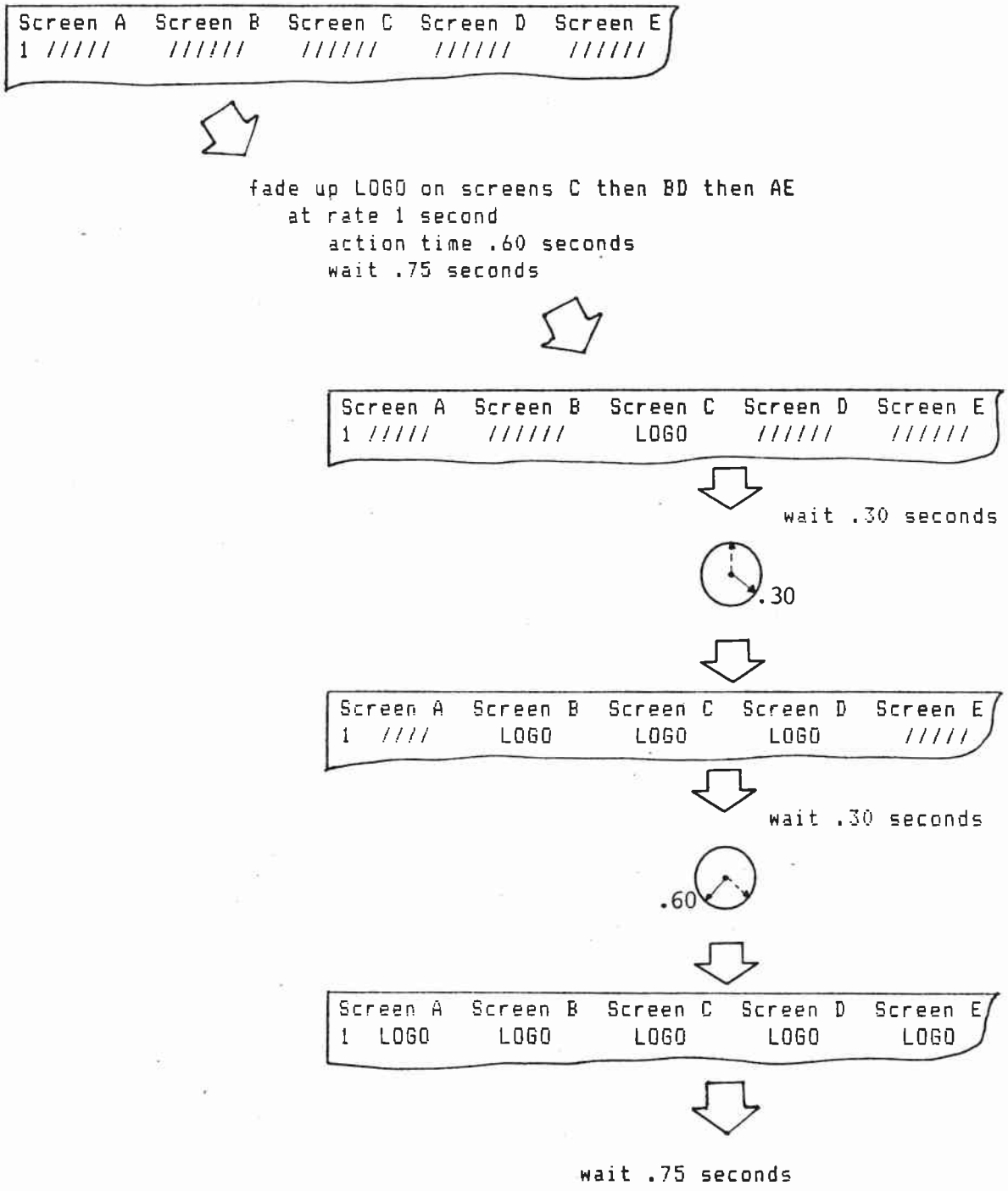


Wipe continued

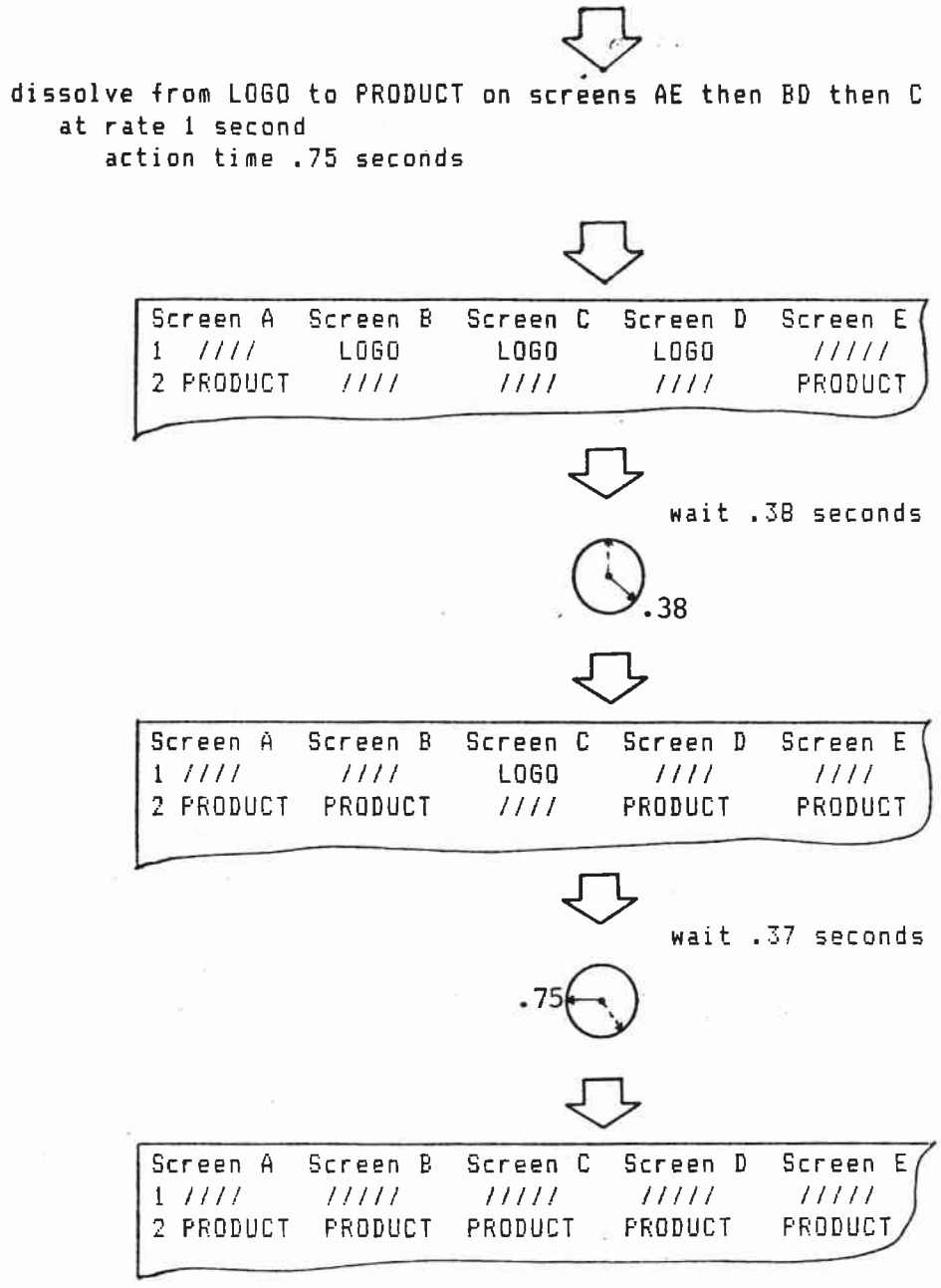


THEN

Then works with action times to set the order in which slides fade across multiple screens.

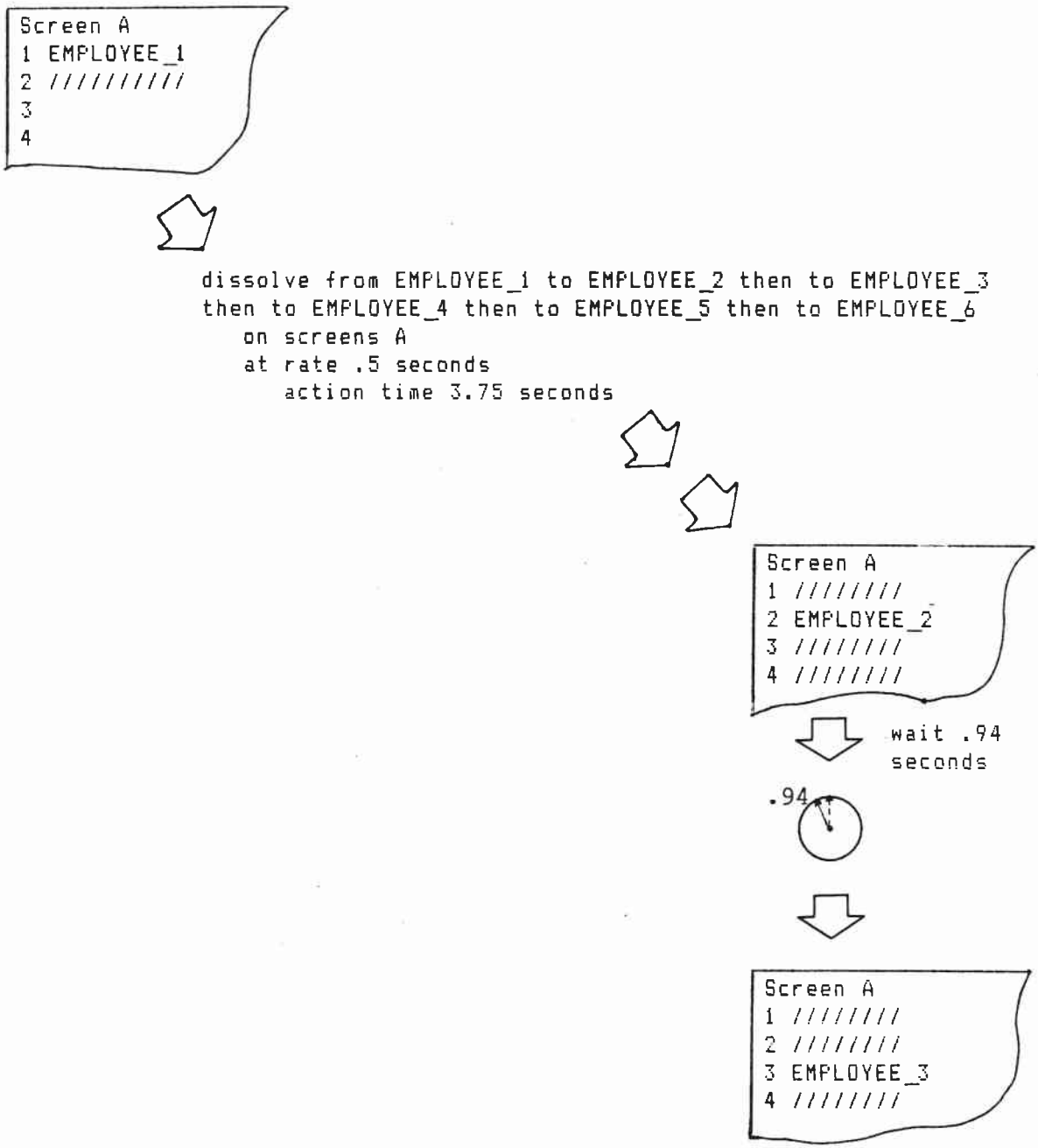


Then continued

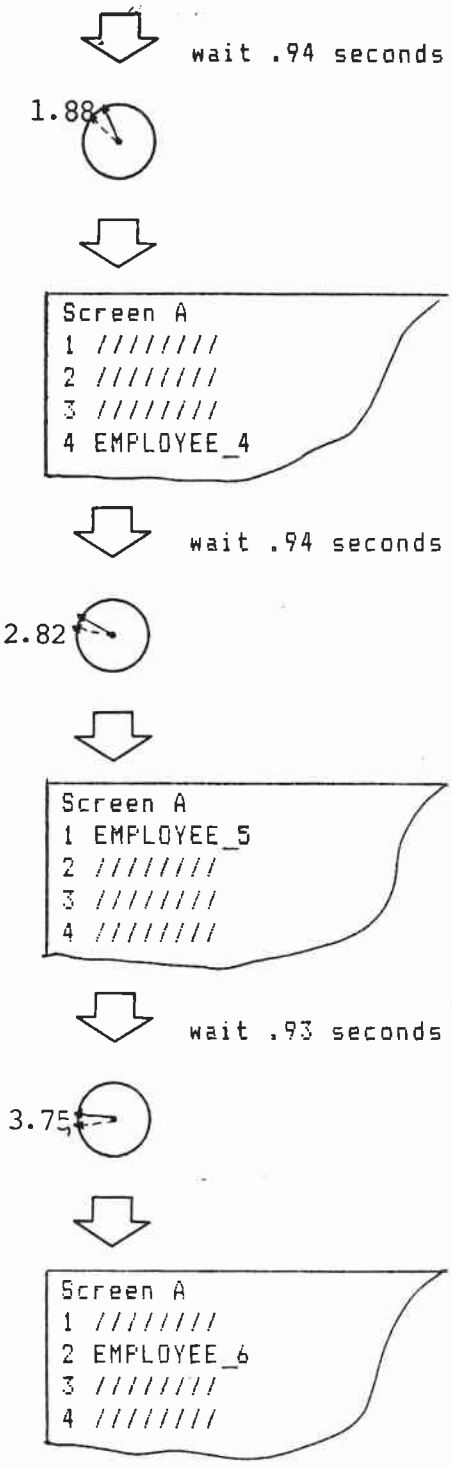


THEN TO

Then to works with action times to connect the names of slides that are to dissolve successively on the same screen.



Then to continued



Rsrv proj/s sets aside projectors. Clear proj/s releases reserved projectors.

Rsrv proj/s and clear proj/s force slide assignment where keystoning is critical.

Find rsrv proj/s and clear proj/s in the tool kit.

Screen A	Screen B	Screen C	Screen D
1 /////	///////	///////	///////
2 /////	///////	///////	///////
3 /////	///////	///////	///////

rsrv proj/s 2 for screens ABCD
fade up SLIDE_1 on screens ABCD also
fade up SLIDE_2 on screens ABCD

Screen A	Screen B	Screen C	Screen D
1 SLIDE_1	SLIDE_1	SLIDE_1	SLIDE_1
2 (reserved)	(reserved)	(reserved)	(reserved)
3 SLIDE_2	SLIDE_2	SLIDE_2	SLIDE_2

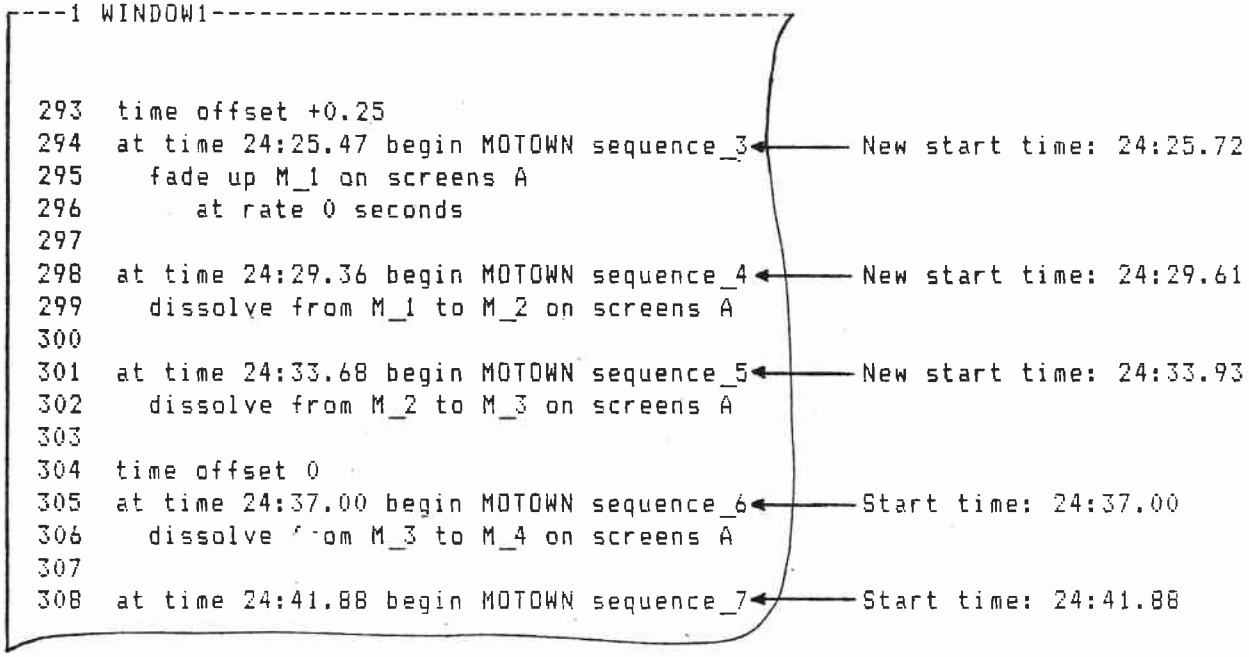
clear proj/s 2 for screens ABCD
fade up OCEAN on screens ABCD

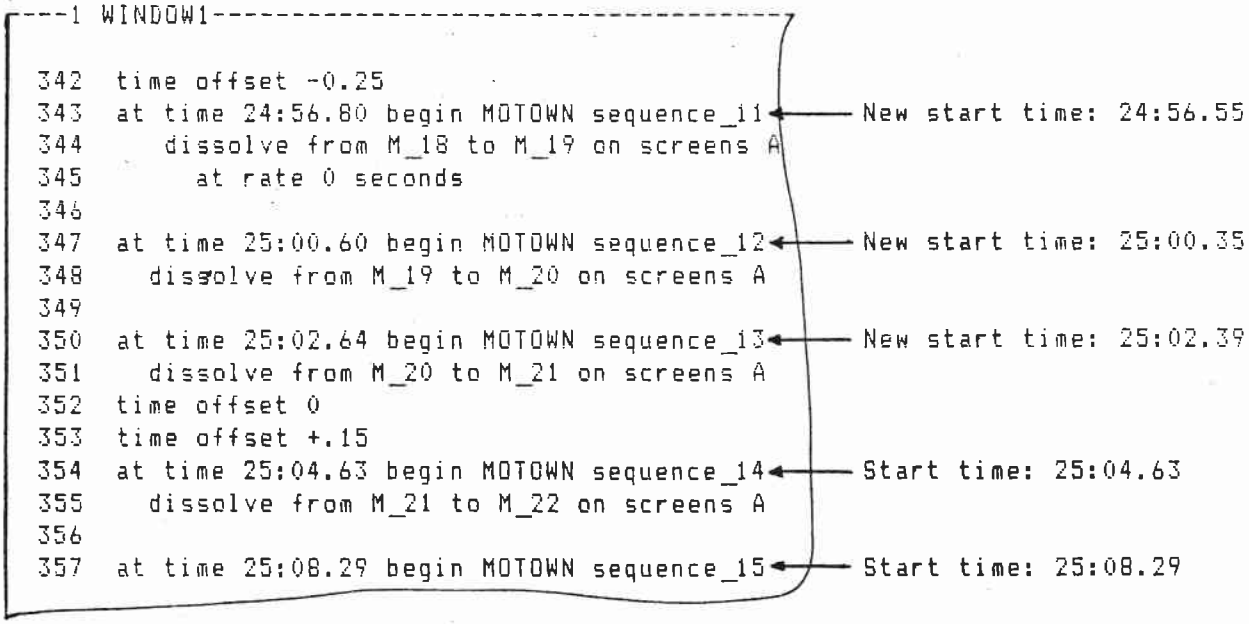
Screen A	Screen B	Screen C	Screen D
1 SLIDE_1	SLIDE_1	SLIDE_1	SLIDE_1
2 OCEAN	OCEAN	OCEAN	OCEAN
3 SLIDE_2	SLIDE_2	SLIDE_2	SLIDE_2

TIME OFFSET

Time offset moves the starting times of synchronized sequences earlier or later by up to 99.99 seconds.

Time offset is in the tool kit.





merge time shows at time block
delete time block when negative

AUTO EXECUTE

Use auto execute for actions that happen after the trays start homing. Auto execute sequences automatically run.

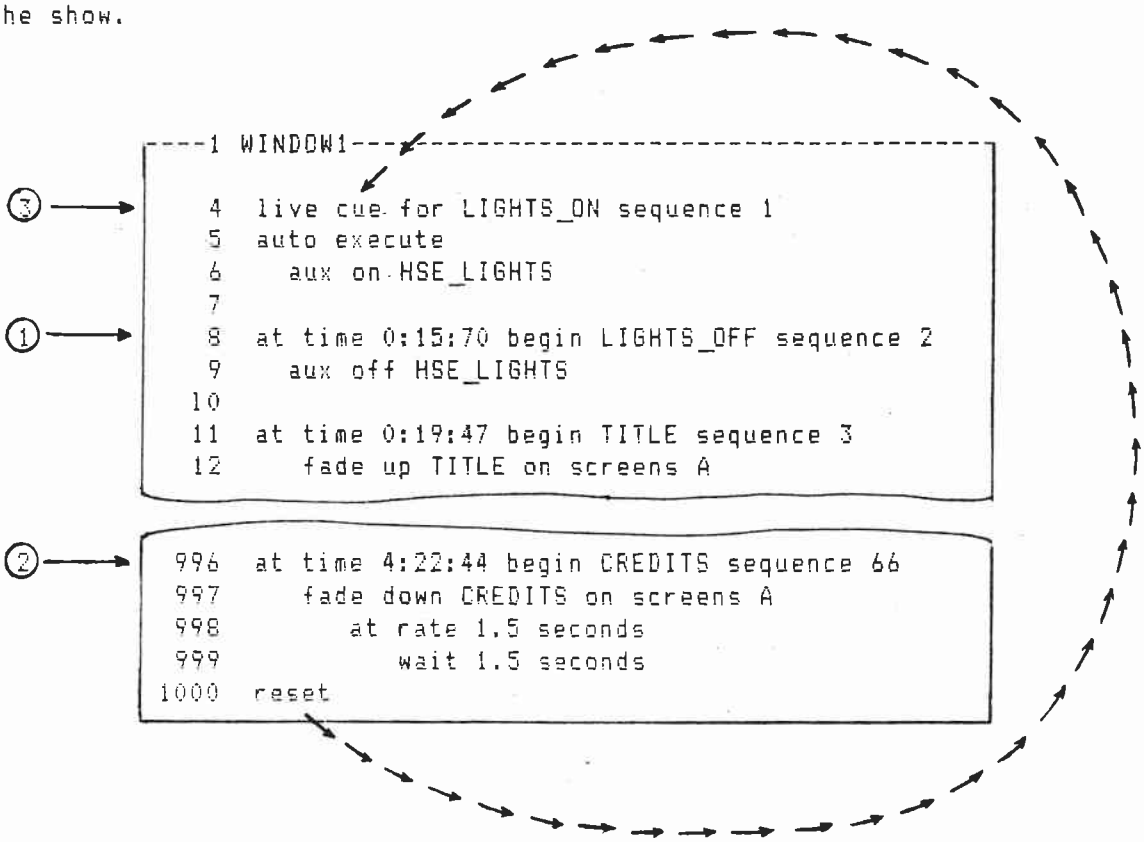
Use auto execute in sequence 1. Make the actions that are to happen after the trays start homing -- house lights up, tape rewind, etc. -- part of sequence 1.

Sequence 1, though the first sequence in memory, is the last sequence to run. Sequence 2 is the beginning of the show the audience sees.

Reset show at the end of the edit file homes projectors and returns the show to sequence 1. Anything that is to happen after the projectors run has to be made part of an auto execute sequence 1.

Auto execute is in the tool kit.

In this example an auto execute sequence 1 turns on house lights at the end of the show.

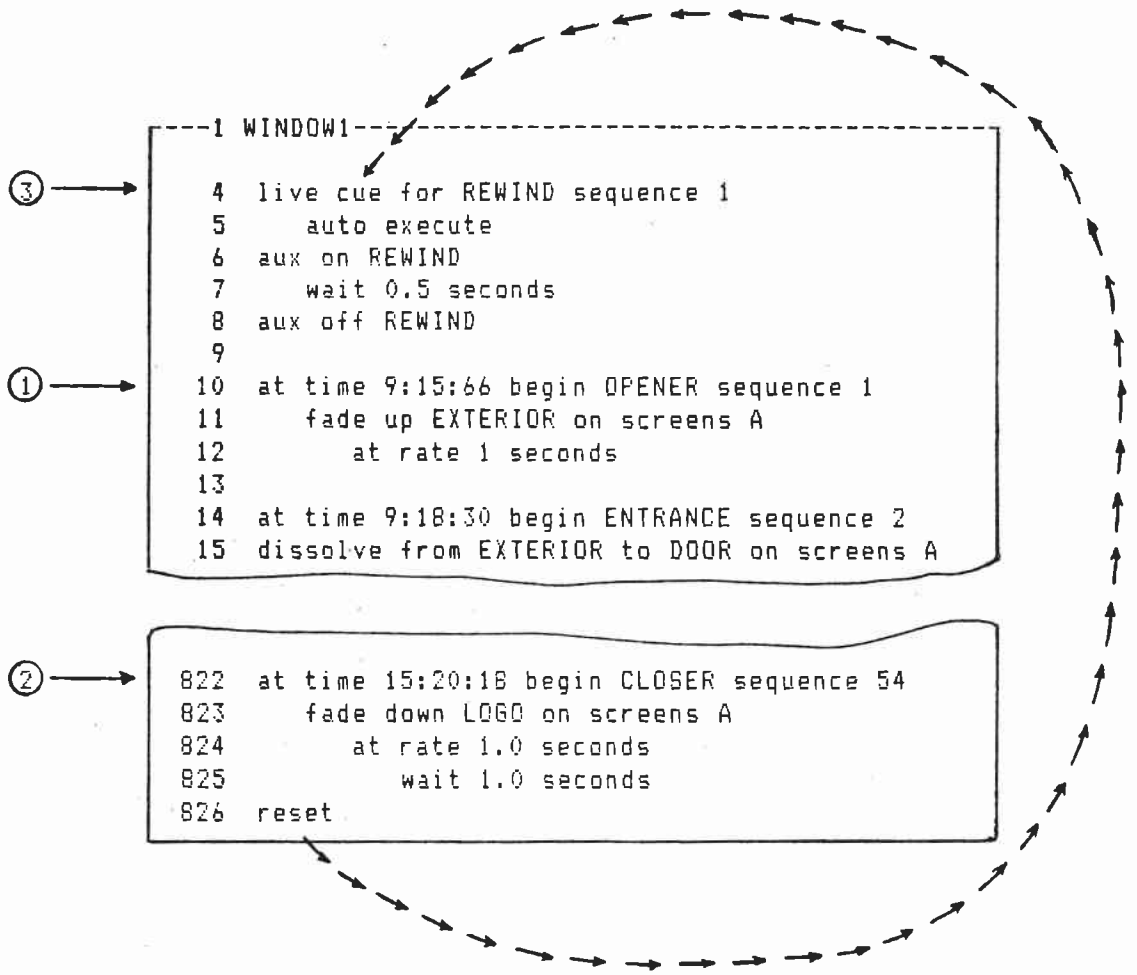


1. First sequence the audience sees; first sequence recorded on tape. Turns house lights off.

2. End of show audience sees. Fades down last slide, starts projectors homing, and returns to sequence 1.

3. Last executed sequence; last sequence recorded on tape. Automatically runs, turns house lights back on.

In this example auto execute rewinds the tape in an Arion Express Four.



1. First sequence recorded on tape; first sequence audience sees.

2. Last sequence audience sees. Fades down last slide, starts trays homing, and returns to sequence 1.

3. Last sequence recorded on tape. Automatically runs and puts rewind command on tape.

NO LIST, UPDATE

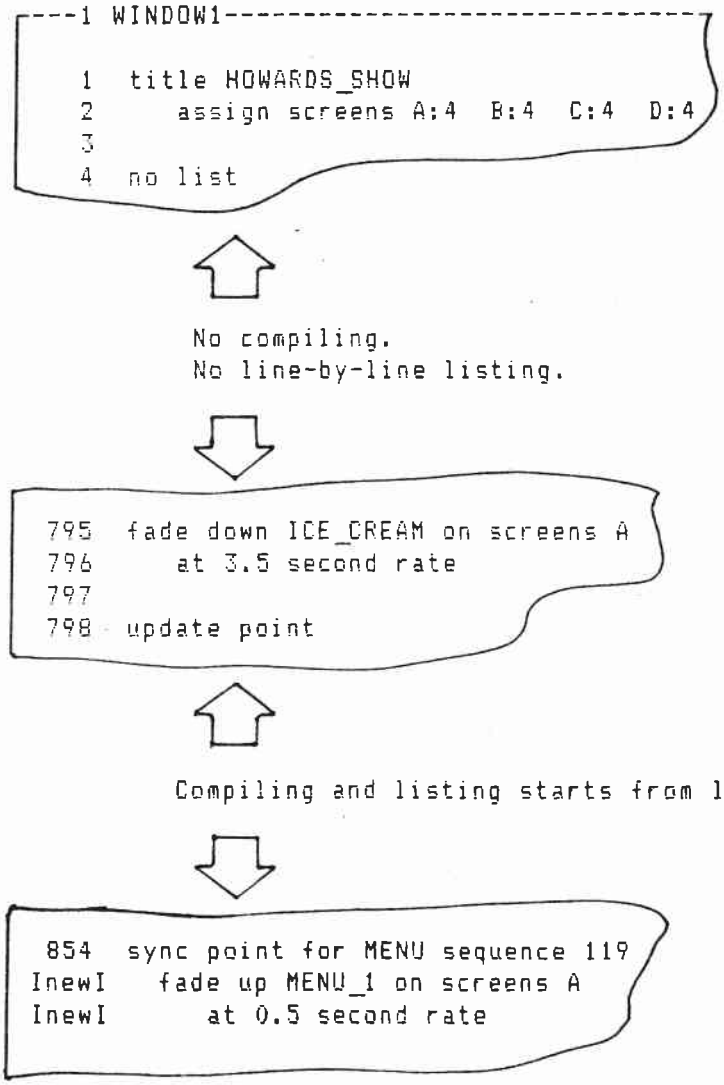
No list and update save time and memory as the edit file grows longer.

No list turns off the line-by-line listing of the edit file in the LISTFILE window and programming window 1.

Update starts compiling from the update line. When a new line is created or inserted, compiling begins at the update instead of at the start of the edit file.

Update turns on the line-by-line listing.

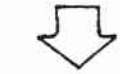
No list and update are in the tool kit.



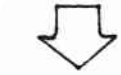
Get takes at times stored in window 8 and moves them into window 1.

Get is useful when you want to first set the sync points to the beat of the music and create the slide actions later.

Create sync points in window 1.



```
---1 WINDOW1-----------------------------------

   3 sync point for MOTOWN sequence 1
   4 sync point for MOTOWN sequence 2
   5 sync point for MOTOWN sequence 3
   6 sync point for MOTOWN sequence 4
```

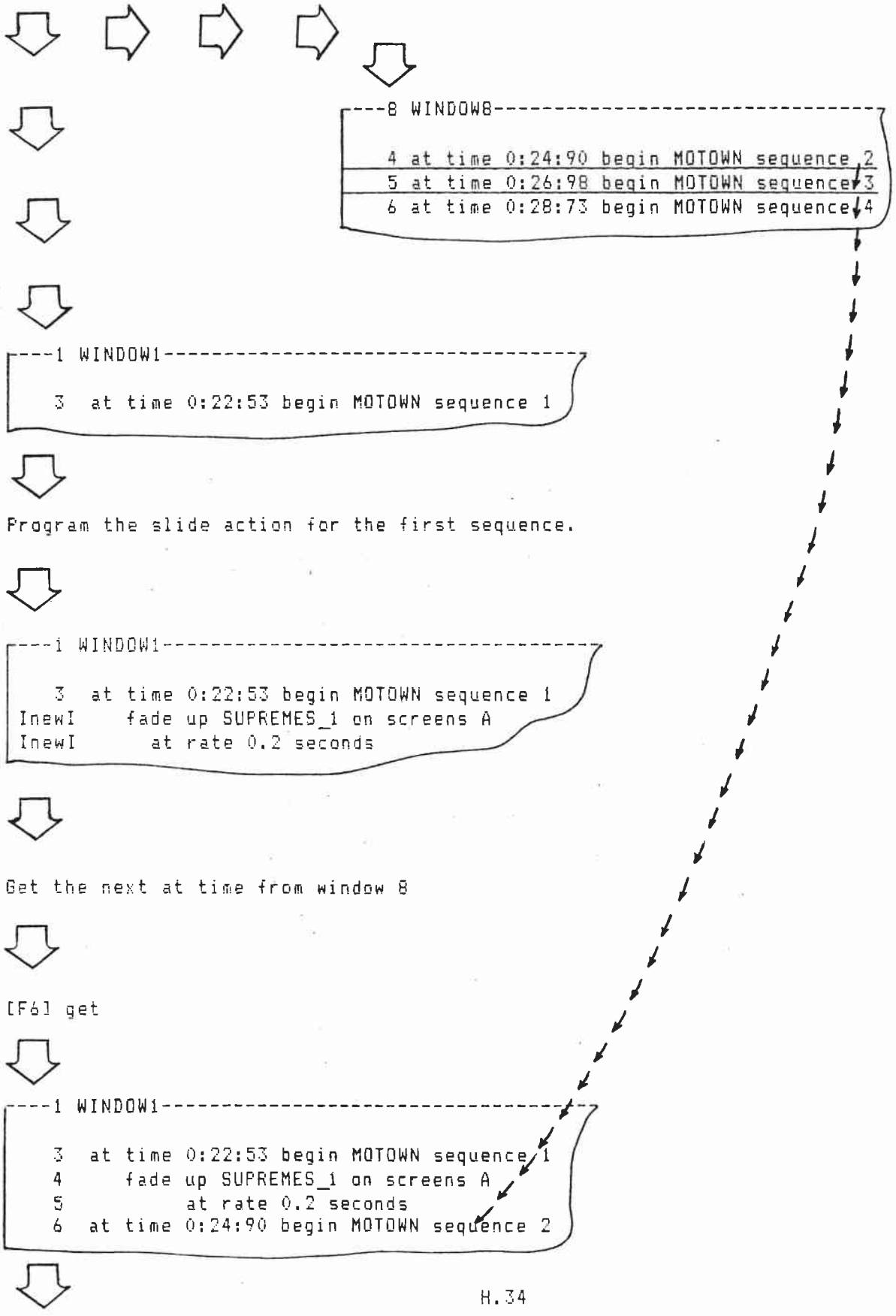


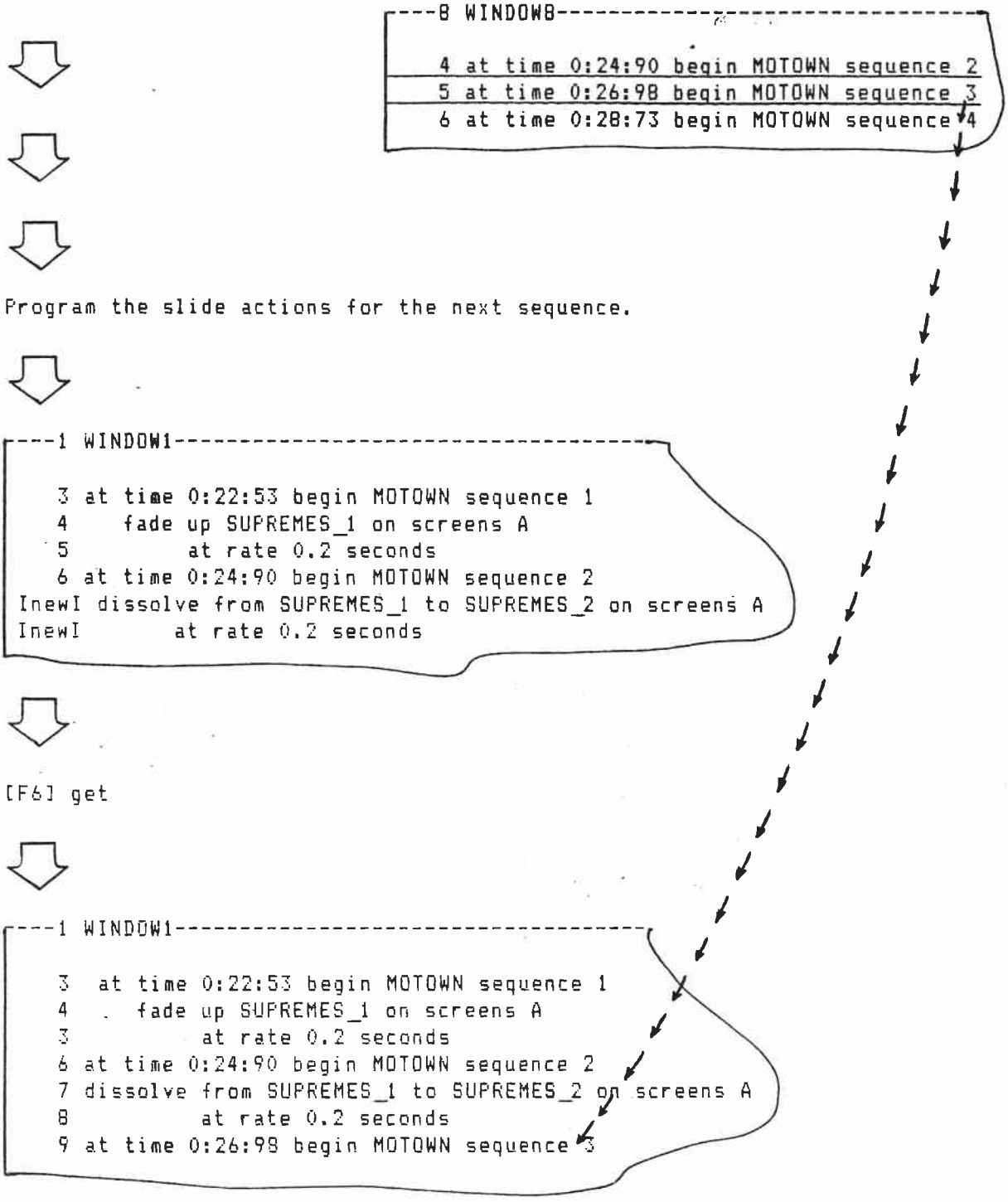
Sync and merge times.

```
---1 WINDOW1-----------------------------------

   3  at time 0:22:53 begin MOTOWN sequence 1
   4  at time 0:24:90 begin MOTOWN sequence 2
   5  at time 0:26:98 begin MOTOWN sequence 3
   6  at time 0:28:73 begin MOTOWN sequence 4
```

Get continued

Extract and retrieve all at times - except the first - into window 8.




---8 WINDOW8----------
4 at time 0:24:90 begin MOTOWN sequence 2
5 at time 0:26:98 begin MOTOWN sequence 3
6 at time 0:28:73 begin MOTOWN sequence 4
Program the slide actions for the next sequence.
---1 WINDOW1----------
3 at time 0:22:53 begin MOTOWN sequence 1
4 fade up SUPREMES_1 on screens A
5 at rate 0.2 seconds
6 at time 0:24:90 begin MOTOWN sequence 2
InewI dissolve from SUPREMES_1 to SUPREMES_2 on screens A
InewI at rate 0.2 seconds
[F6] get
---1 WINDOW1----------
3 at time 0:22:53 begin MOTOWN sequence 1
4 fade up SUPREMES_1 on screens A
3 at rate 0.2 seconds
6 at time 0:24:90 begin MOTOWN sequence 2
7 dissolve from SUPREMES_1 to SUPREMES_2 on screens A
8 at rate 0.2 seconds
9 at time 0:26:98 begin MOTOWN sequence 3

CONCURRENT PROGRAMS, INCLUDE AFTER, END MODULE

Concurrency -- to simultaneously run two or more edit files.

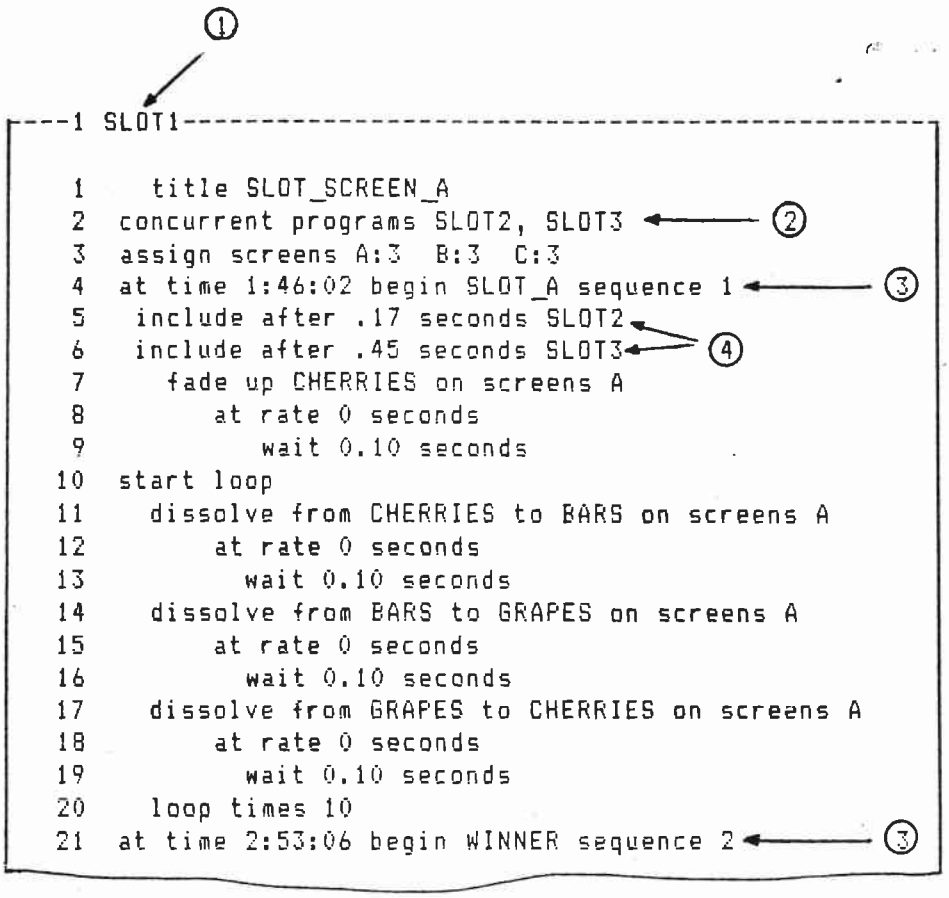
A complicated visual effect can be built out of simple edit files. Each edit file can be programmed, run, and edited separately. Then concurrency can combine them and run them simultaneously.

Changes made in one edit file do not affect the other edit files.

Concurrent programs and include after link the main edit file -- which is always in window 1 -- with the subsidiary edit files in windows 2 through 8.

End module marks the end of concurrent sections in the subsidiary edit files.

In this example, the spinning wheels of a slot machine are projected across screens A, B, and C. SLOT1 is the main edit file and is in window 1. SLOT2 and SLOT3 are the subsidiary edit files in windows 2 and 3. SLOT1 handles the A screen projectors. SLOT2 and SLOT3 handle the B and C screen projectors.



1. SLOT1, the main program, is assigned to window 1.

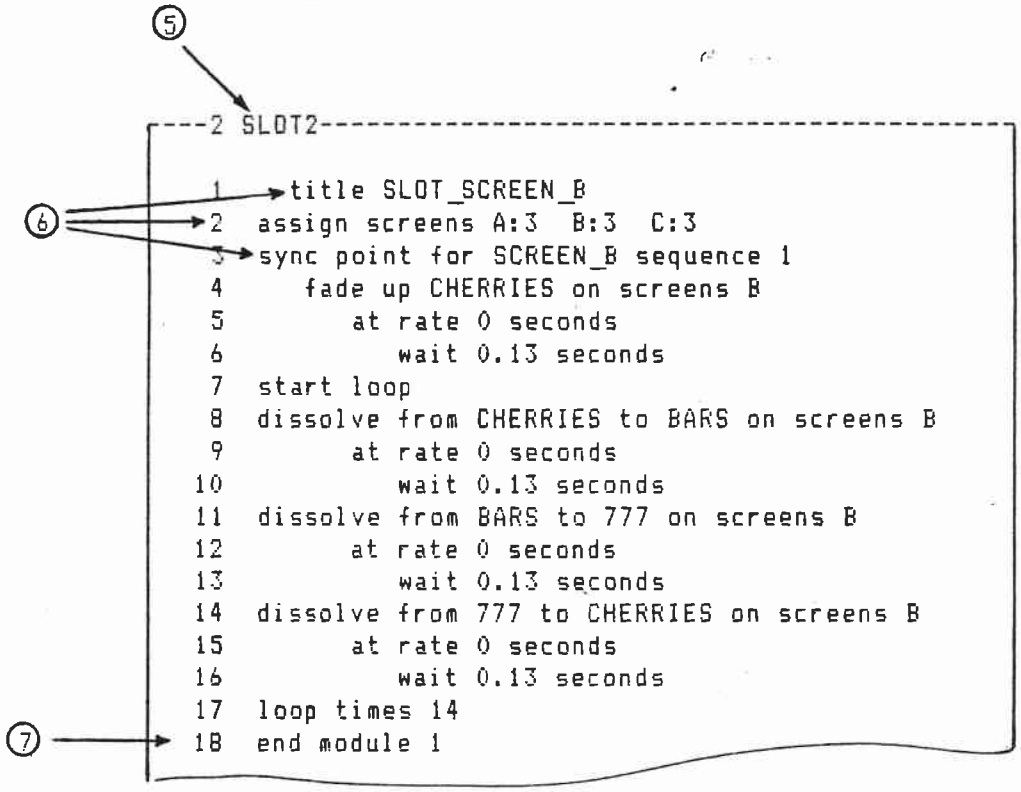
2. The concurrent programs are SLOT2 and SLOT3. SLOT2 and SLOT3 are in windows 2 and 3. When SLOT2 compiles for playback, SLOT2 and SLOT3 are automatically moved into windows 2 and 3.

3. Sequences in the main edit need at times. The main edit file must also have an at time that starts running after the modules in the subsidiary edit files stop running.

   Concurrency does not work with sync points or live cue fors.

4. Include after sets the starting times of modules in SLOT2 and SLOT3. The starting time is measured from the last at time or wait time. This SLOT2 module starts at 1:46:19. This SLOT3 module starts at 1:46:47

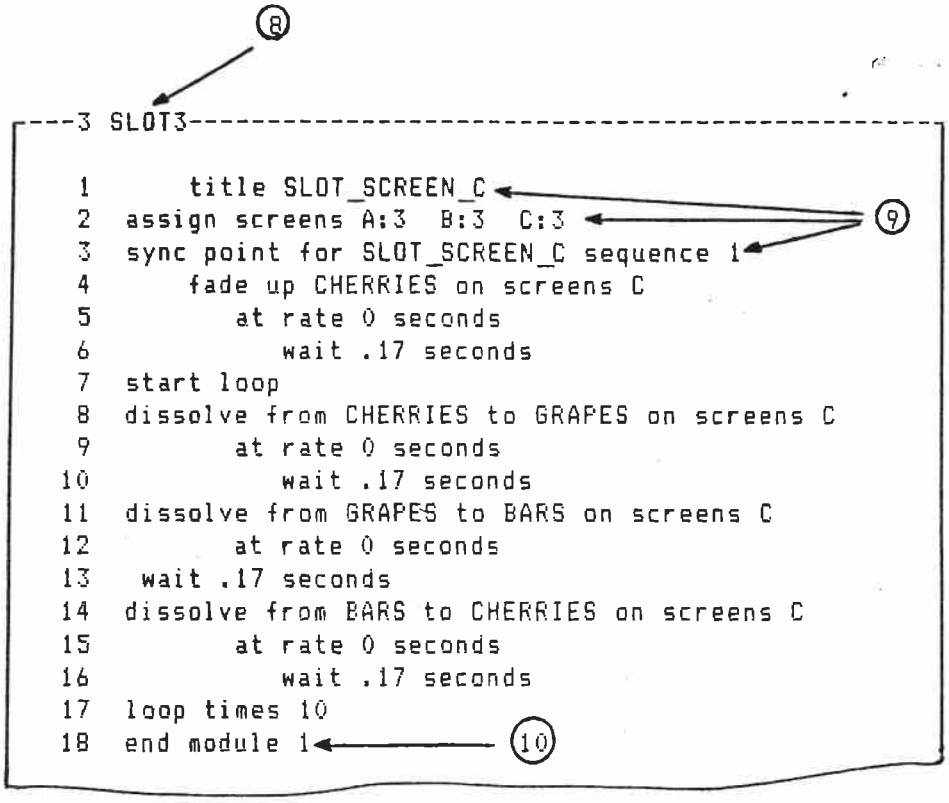
   Put the include after statements in after the concurrent programs have been completed.



5. SLOT2, the first concurrent edit file (see (2)), is assigned to programming window 2.

6. Titles, screen assignments, and sync points entered when SLOT2 was programmed and run from programming window 1 are now ignored. Concurrent edit files can be created in window 1 and then moved to windows 2 through 8.

7. End module marks the end of the first module in SLOT2.



8. SLOT3, the second concurrent edit file (see (2)), is assigned to programming window 3.

9. Titles, screen assignments, and sync points put in when SLOT3 was programmed in window 1 are now ignored.

10. End module marks the end of the first module in SLOT3.

MAP PROJECTORS

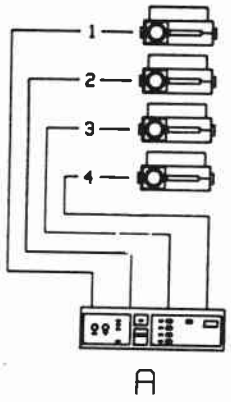
Map projectors matches projectors with dissolve controls.

Use map projectors when the automatic map projector default uses too many dissolve controls or produces awkward cabling.

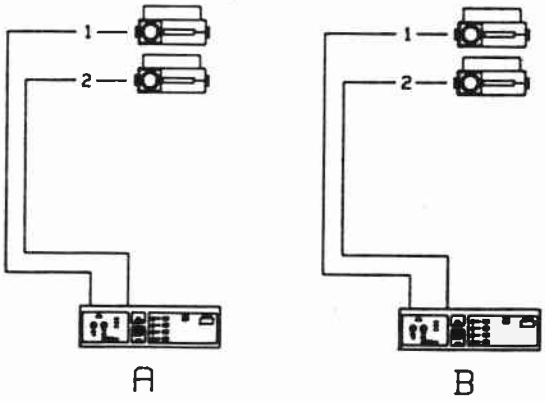
Map projectors is in the tool kit.

When there are four or less projectors per screen, the map projectors default works as follows: An A bank dissolve controls the first screen's projectors. A B bank dissolve controls the second screen's projectors, etc.

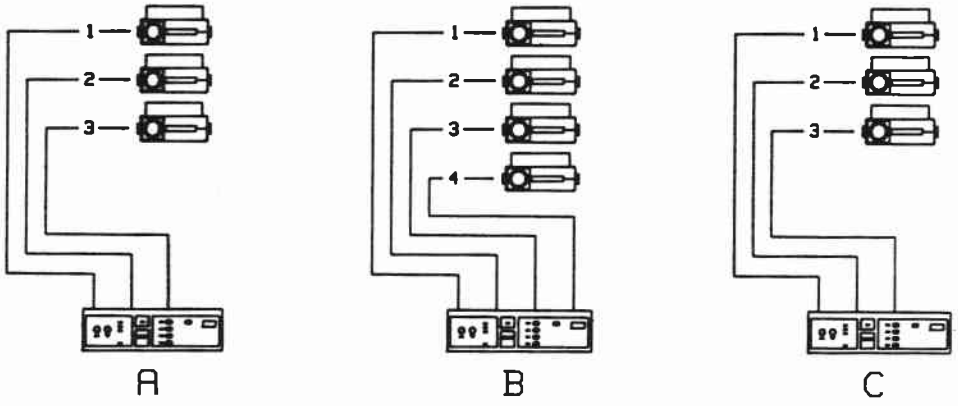
```
----1 WINDOW1----------------------

   1  title MAP DEFAULT
   2  assign screens A:4
```




```
----1 WINDOW1----------------------

   1  title MAP DEFAULT
   2  assign screens A:2 B:2
```

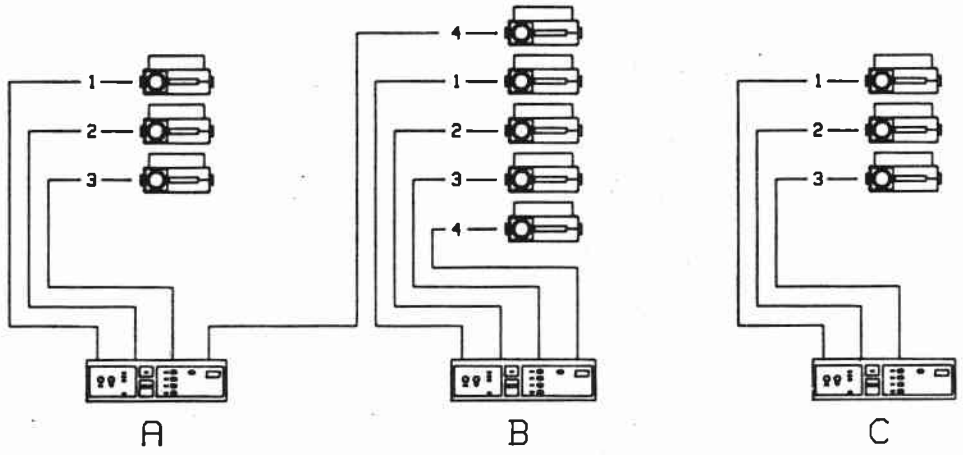


```
---1 WINDOW1-----------------------------

   1  title MAP DEFAULT
   2  assign screens A:3  B:4  C:3
```



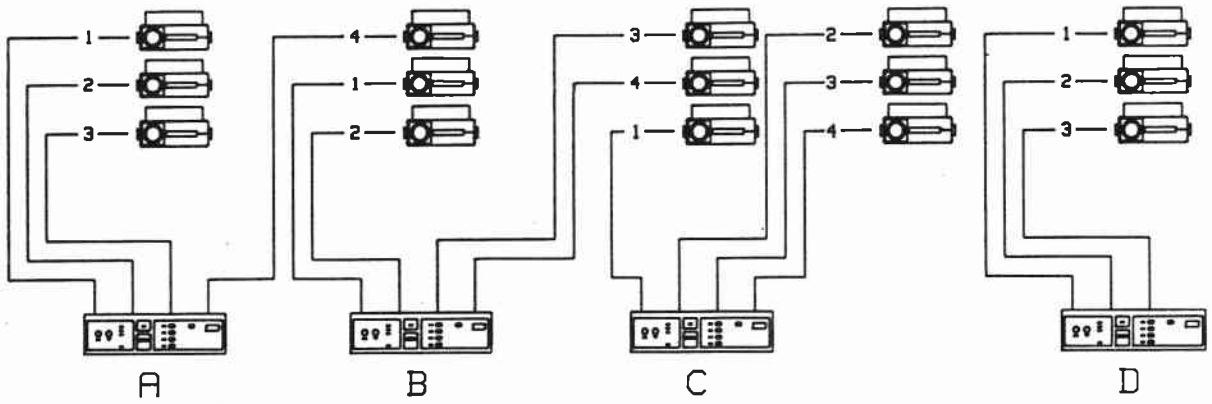
When there are more than four projectors per screen, the map projectors default works as follows: An A bank dissolve controls the first four projectors. A B bank dissolve controls the next four projectors, etc.

```
---1 WINDOW1-----------------------------

   1  title MAP DEFAULT
   2  assign screens A:3 B:5 C:3
```



When there are more than four screens, the map projectors default works as follows: An A bank dissolve controls the first four projectors. A B bank dissolve controls the next four projectors, etc.

```
----1 WINDOW1--------------------------------

   1  title MAP_DEFAULT
   2  assign screens A:3 B:3 C:3 D:3 E:3
```

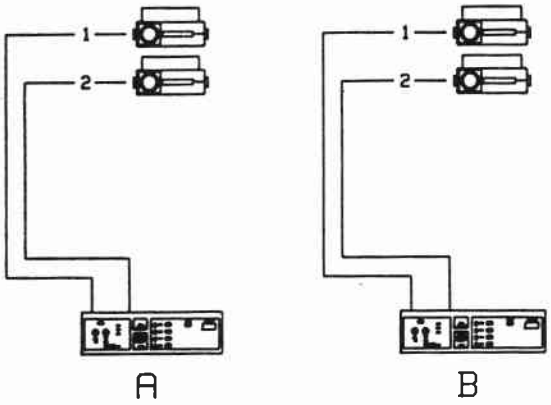


Map Projectors continued

Use map projectors to economize on dissolve controls.

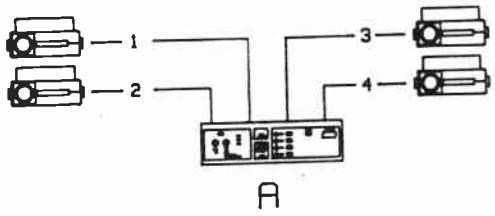
In this example, the map projectors default requires two dissolve controls.

```
----1 WINDOW1--------------------

   1  title MAP_DEFAULT
   2  assign screens A:2  B:2
```



Mapping projectors plays the show back on one dissolve.

```
----1 WINDOW1--------------------------

   1  title MAP_PROJECTORS
   2  assign screens A:2  B:2
   3  map projectors  A:1  1,2,3,4
```

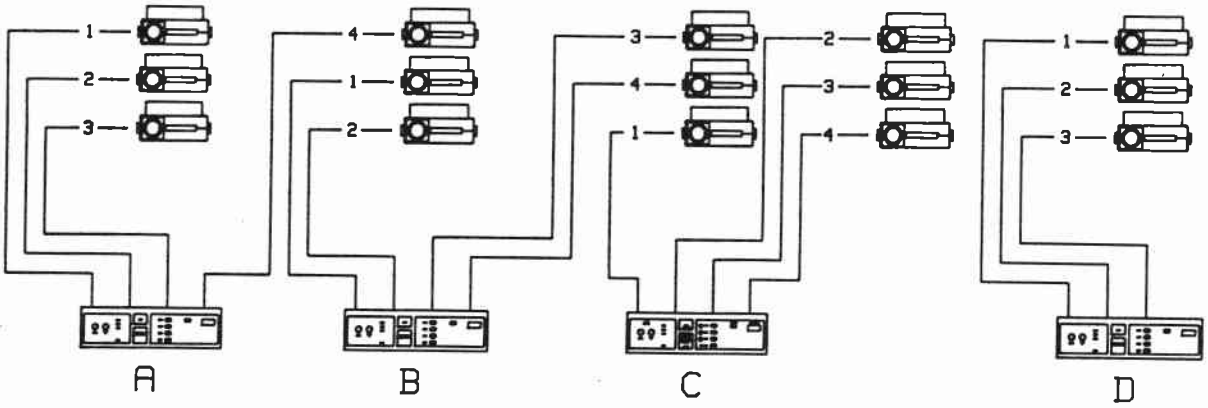


1. A:1 — The four projectors (1,2,3,4) are controlled through an A bank dissolve receiving Mate-Trac 1.
2. 1,2,3,4 — Projectors 1, 2, 3, and 4 are connected to control cables 1, 2, 3, and 4 of the A bank dissolve.

Use map projectors to eliminate awkward cabling.

In the example below, the map projectors has cables straddling between screens.

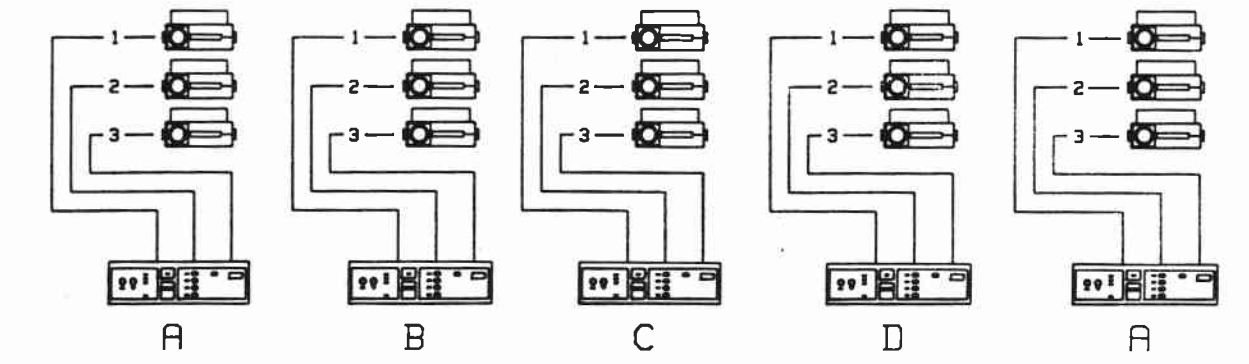
```
----1 WINDOW1----------------------------------

   1  title MAP_DEFAULT
   2  assign screens A:3 B:3 C:3 D:3 E:3
```



Map projectors gives each screen a separate dissolve control.

Note: Both Mate-Trac 1 and Mate-Trac 2 are needed to control all the projectors. Playing back this format using recorded Mate-Trac requires separate tracks of Mate-Trac 1 and 2.

```
----1 WINDOW1-------------------------------------------------------------

   1  title MAP PROJECTORS
   2  assign screens A:3  B:3  C:3  D:3  E:3
   3  map projector A:1 1,2,3 B:1 4,5,6, C:1 7,8,9 D:1 10,11,12 A:2 13,14,15
```



Map Projectors continued

1.	A:1	The first 3 projectors (1, 2, 3) are controlled through an A bank dissolve receiving Mate-Trac 1.
2.	1, 2, 3	Projectors 1, 2, and 3 are connected to control cables 1, 2, and 3 of the A bank dissolve.
3.	B:1	The next 3 projectors (4, 5, 6) are controlled through a B bank dissolve receiving Mate-Trac 1.
4.	4, 5, 6	Projectors 4, 5 and 6 are connected to control cables 1, 2, and 3 of the B bank dissolve.
5.	C:1	The next three projectors (7, 8, 9) are controlled through a C bank dissolve receiving Mate-Trac 1.
6.	7, 8, 9	Projectors 7, 8, and 9 are connected to control cables 1, 2, and 3 of the C bank dissolve.
7.	D:1	The next three projectors (10, 11, 12) are controlled through a D bank dissolve receiving Mate-Trac 1.
8.	10,11,12	Projectors 10, 11 and 12 are connected to control cables 1, 2, and 3 of the D bank dissolve.
9.	A:2	The last three projectors (13, 14, 15) are controlled through an A bank dissolve receiving Mate-Trac 2.
10.	13,14,15	Projectors 13, 14, and 15 are connected to control cables 1, 2, and 3 of the A bank dissolve.

ASSIGN AUXILIARIES, AUX ON, AUX OFF

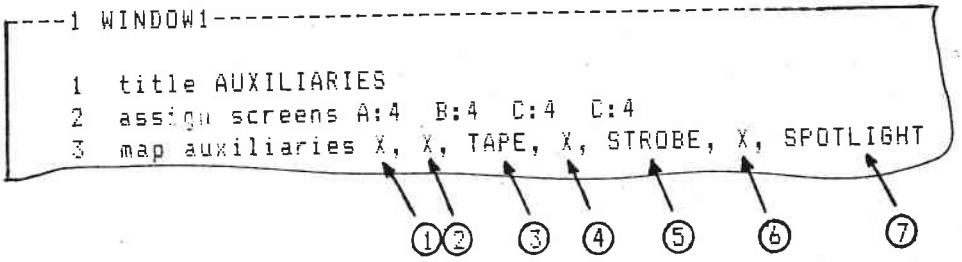
Assign auxiliaries matches auxiliary devices to specific dissolve control auxiliary outputs.

The auxiliaries named following assign auxiliaries are matched to dissolve control auxiliary outputs 3 per bank, starting with the A bank.

The first three auxiliaries are connected to auxiliary outputs 1, 2, and 3 of an A bank dissolve receiving Mate-Trac 1. The next three auxiliaries named are connected to auxiliary outputs 1, 2, and 3 of a B bank dissolve receiving Mate-Trac 1.

Auxiliaries 7 through 12 are connected to auxiliary outputs 1, 2, and 3 of C and D bank dissolves receiving Mate-Trac 1. Auxiliaries 13 through 24 are connected to auxiliary outputs 1, 2, and 3 of A, B, C, and D bank dissolves receiving Mate-Trac 2.

The auxiliary on the Two Plus and Kodak Ektagraphic dissolve control is auxiliary 3.

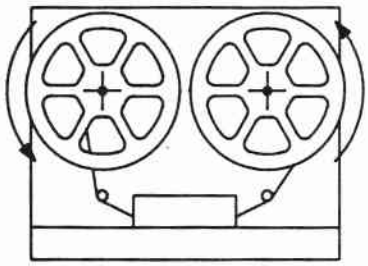


1. A bank auxiliary 1, unused.
2. A bank auxiliary 2, unused.
3. A bank auxiliary 3, controls tape start/stop.
4. B bank auxiliary 1, unused.
5. B bank auxiliary 2, controls strobe.
6. B bank auxiliary 3, unused.
7. C bank auxiliary 1, controls spotlight.

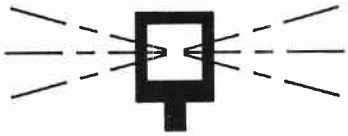
Aux on activates auxiliary outputs. Aux off deactivates auxiliary outputs.

Aux on and aux off are followed by the names of auxiliaries.

```
----1 WINDOW1-----------------------------------

  45  live cue for TAPE_START sequence 4
  46    aux on TAPE
  47         wait 0.5 seconds
  48    aux off TAPE
```



```
----1 WINDOW1-----------------------------------------

  673  at time 8:36.20 begin STROBE sequence 6.5
  674     aux on STROBE
  675          wait 0.5 seconds
  676     aux off STROBE
```



ALPHA PROJ

Alpha proj identifies projectors by letters instead of numbers.

Alpha proj is in the tool kit.

```
----1 WINDOW1--------------------------------

   1  title MOTIVATION_86
   2  alpha proj
   3  assign screens L:3 C:3 R:3
   4    sync point for TITLE
   5       fade up TITLE on screens LCR
```

```
      Screen L    Screen C    Screen R
   A  TITLE       TITLE       TITLE
   B
   C
```

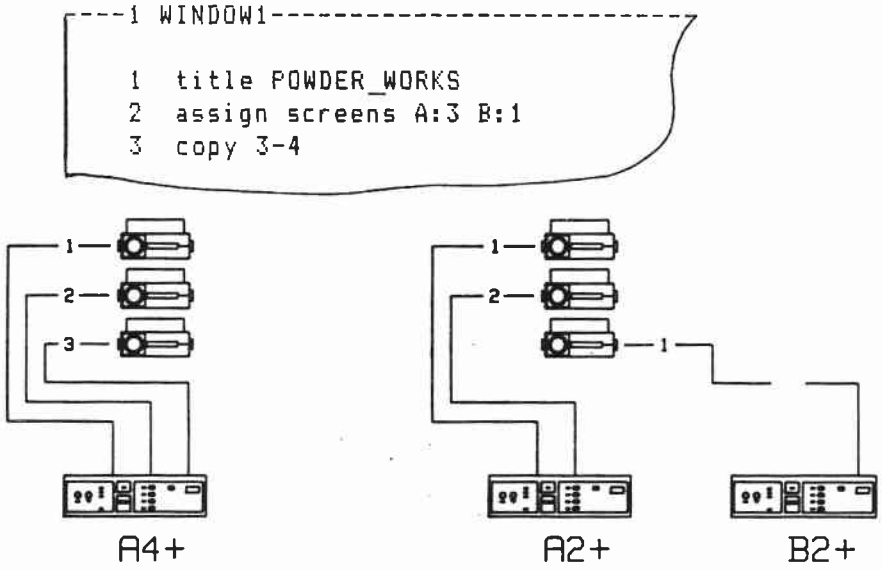
COPY

Copy lets the same single screen 3 or 4 projector show playback through a Four Plus or a pair of Two Pluses.

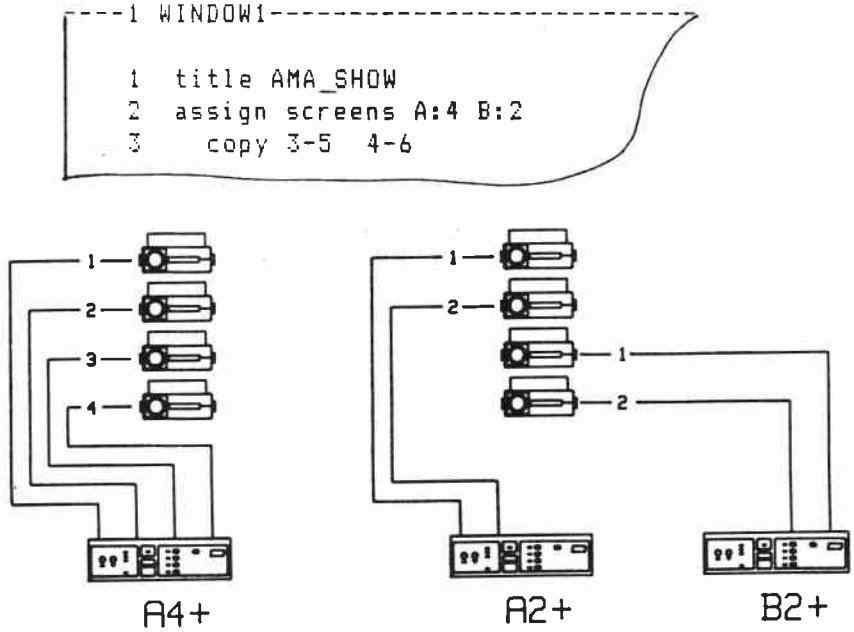
Program for the A screen only. The Mate-Trac output from the SHOW window will playback equally well through a Four Plus or pair of Two Pluses.

Copy is in the tool kit.

A single screen, 3 projector show.



A single screen, 4 projector show.



RS232OUT

Use rs232out to send out ASCII alpha-numeric messages through your PC's com1: serial communications port. These messages can be received by any device - such as a walking billboard, video monitor, or printer - that has an rs-232 port and can respond to ASCII characters.

Find rs232out in the tool kit.

1. Copy the DOS file MODE.COM from your DOS System diskette to your CAMI working diskette.

   Put your DOS System diskette in drive A. Put your CAMI working diskette in drive B.

   ↓

   Type: COPY MODE.COM B:

   ↓

   [<-']

2. Create an autoexec.bat file on your CAMI working diskette. This file has a mode command to initialize the PC com1: port. This mode command sets the com1: protocol to match that of the receiving device.

   In this example the receiving device is set for 2400 baud, no parity, 8 bit data, and 1 stop bit.

   In this example the autoexec.bat file also boots up CAMI.

   See the BATCH and MODE commands in your Disk Operating System manual for more about these commands.

   Put your CAMI working diskette in drive A.

   Type: COPY CON: A:AUTOEXEC.BAT
   MODE COM1: 2400, N, 8, 1
   CAMI

   ↓

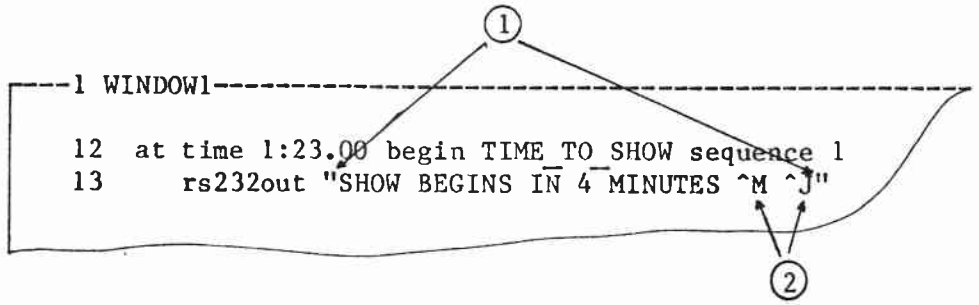
   [F6]

   ↓

   [<-']

   CAMI must be rebooted for rs232out to work.

3. Program your rs232out messages using the following example as a guide.



1. " " mark the beginning and the end of the ASCII message.

2. ^M is the CAMI version of the ASCII control character CR. The device receiving the ASCII message uses the CR control character to display one line.

   ^J is the CAMI version of the control character LF. The receivng device uses the LF to move up one line.

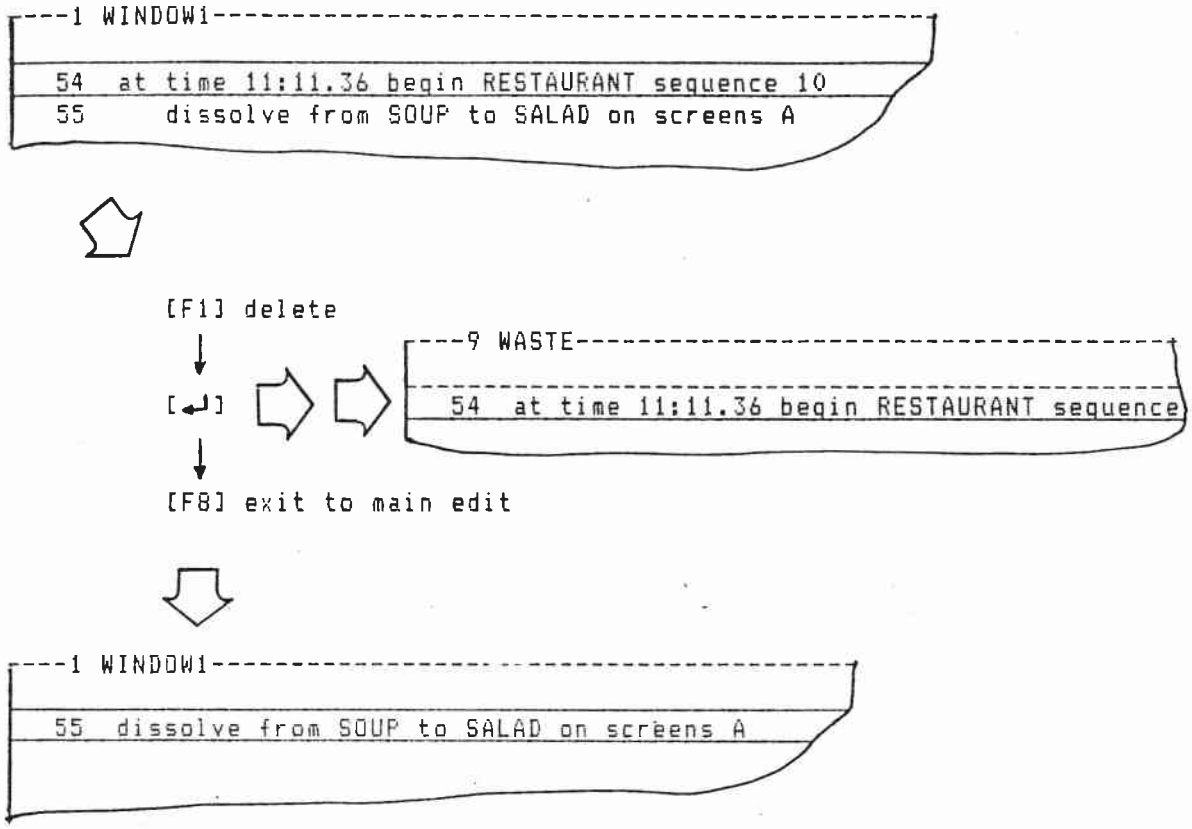
Use the ASCII Control Characters to CAMI Control Characters Table for converting the standard ASCII control characters to CAMI control characters.

ASCII Control Characters to CAMI Control Characters

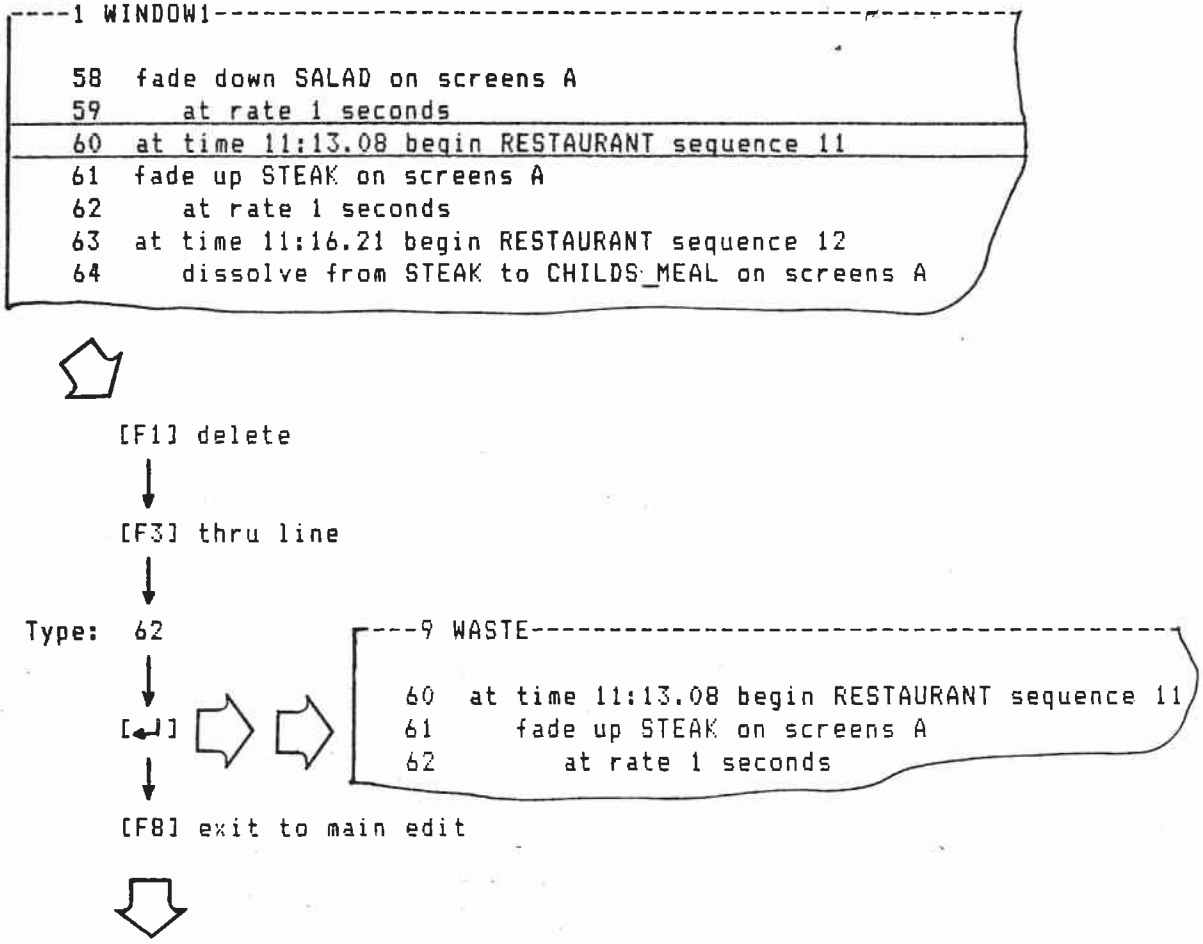
ASCII control character	CAMI control character	ASCII control character	CAMI control character
NUL	^@	DLE	^P
SOH	^A	DC1	^Q
STX	^B	DC2	^R
ETX	^C	DC3	^S
EOT	^D	DC4	^T
ENQ	^E	NAK	^U
ACK	^F	SYN	^V
BEL	^G	ETB	^W
BS	^H	CAN	^X
HT	^I	EM	^Y
LF	^J	SUB	^Z
VT	^K	ESC	^[
FF	^L	FS	^\
CR	^M	GS	^]
SO	^N	RS	^^
SI	^O	US	^_

DELETE

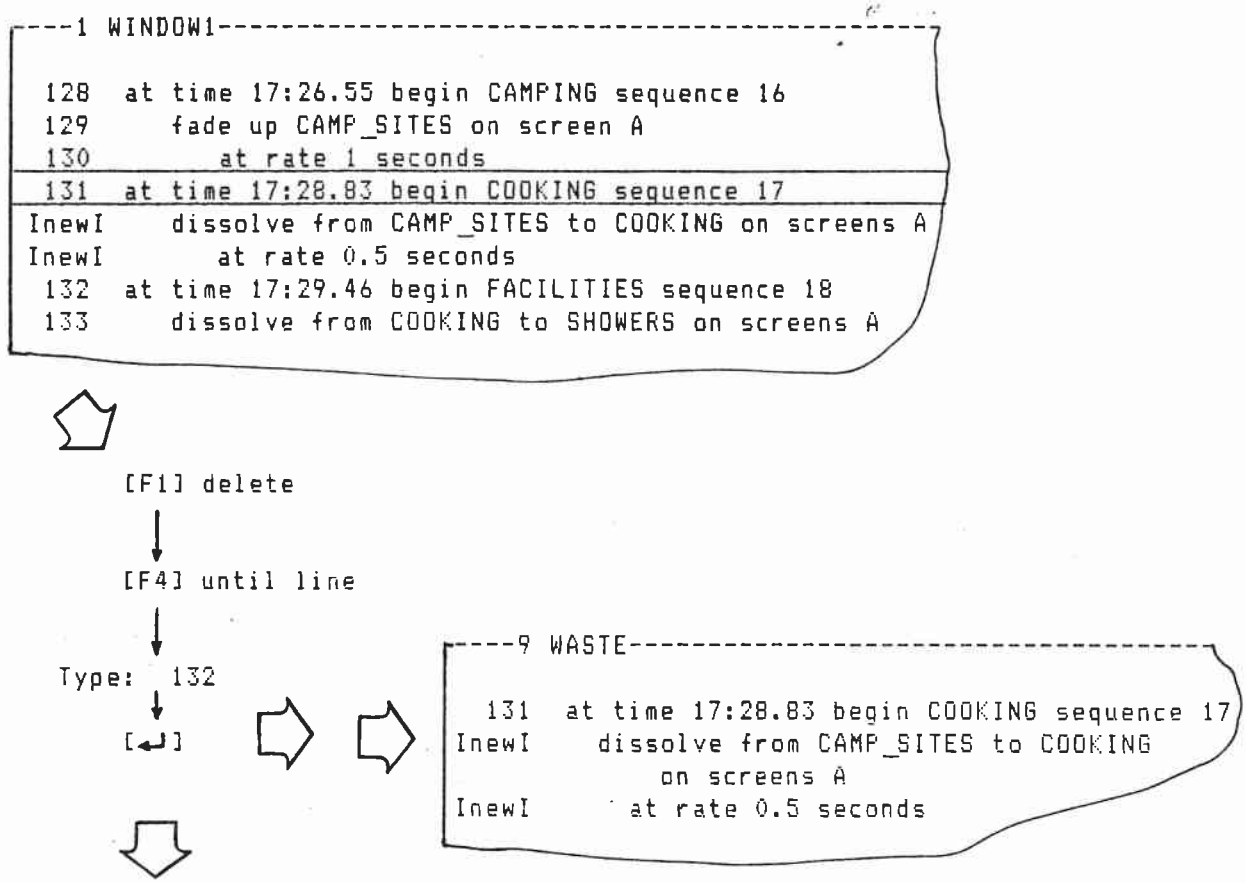
Delete removes complete lines. Deleted lines go to the WASTE window.



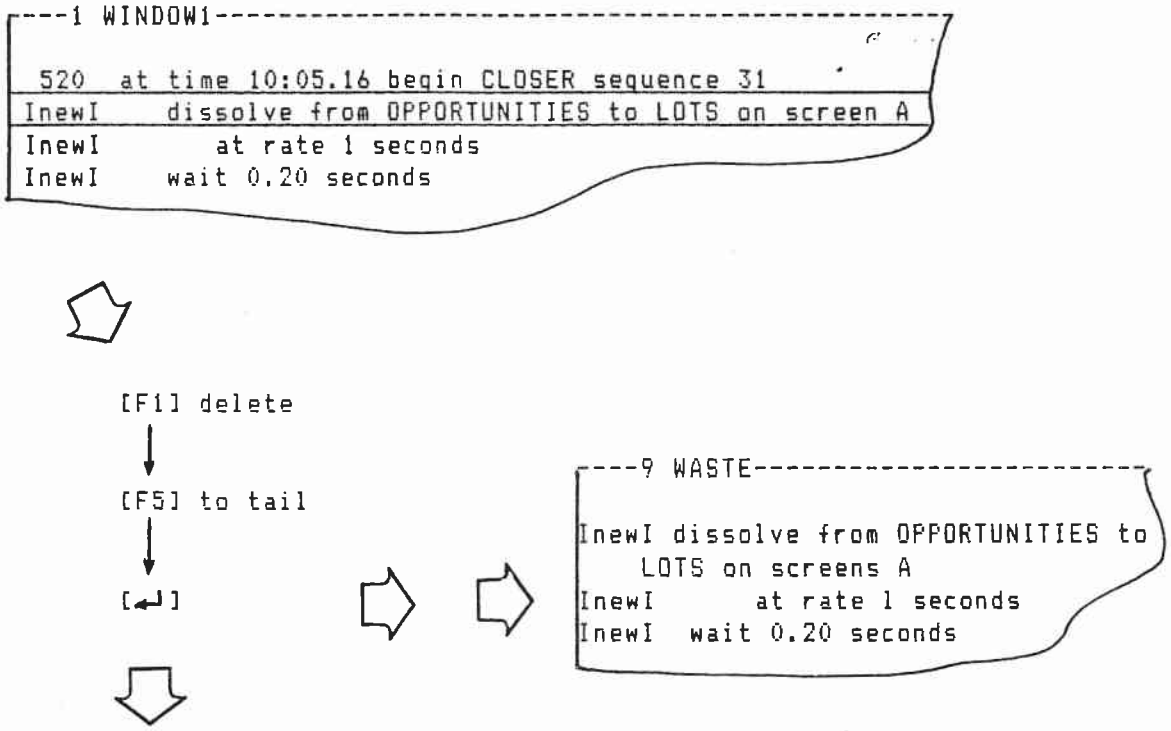
Delete continued



Delete continued



Delete continued

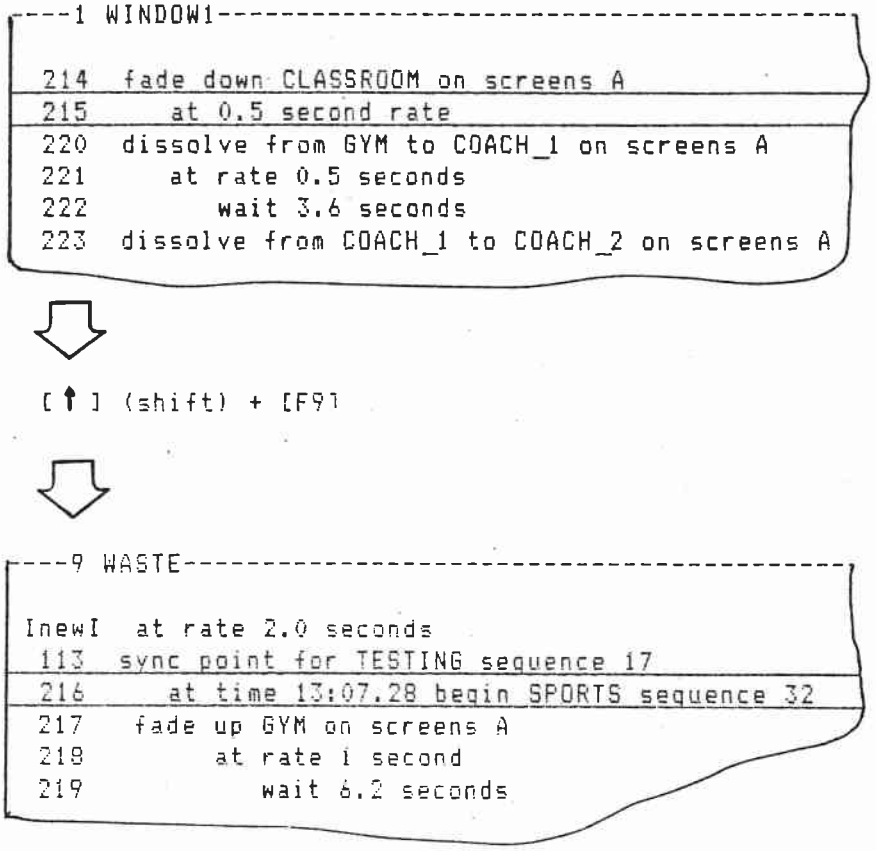


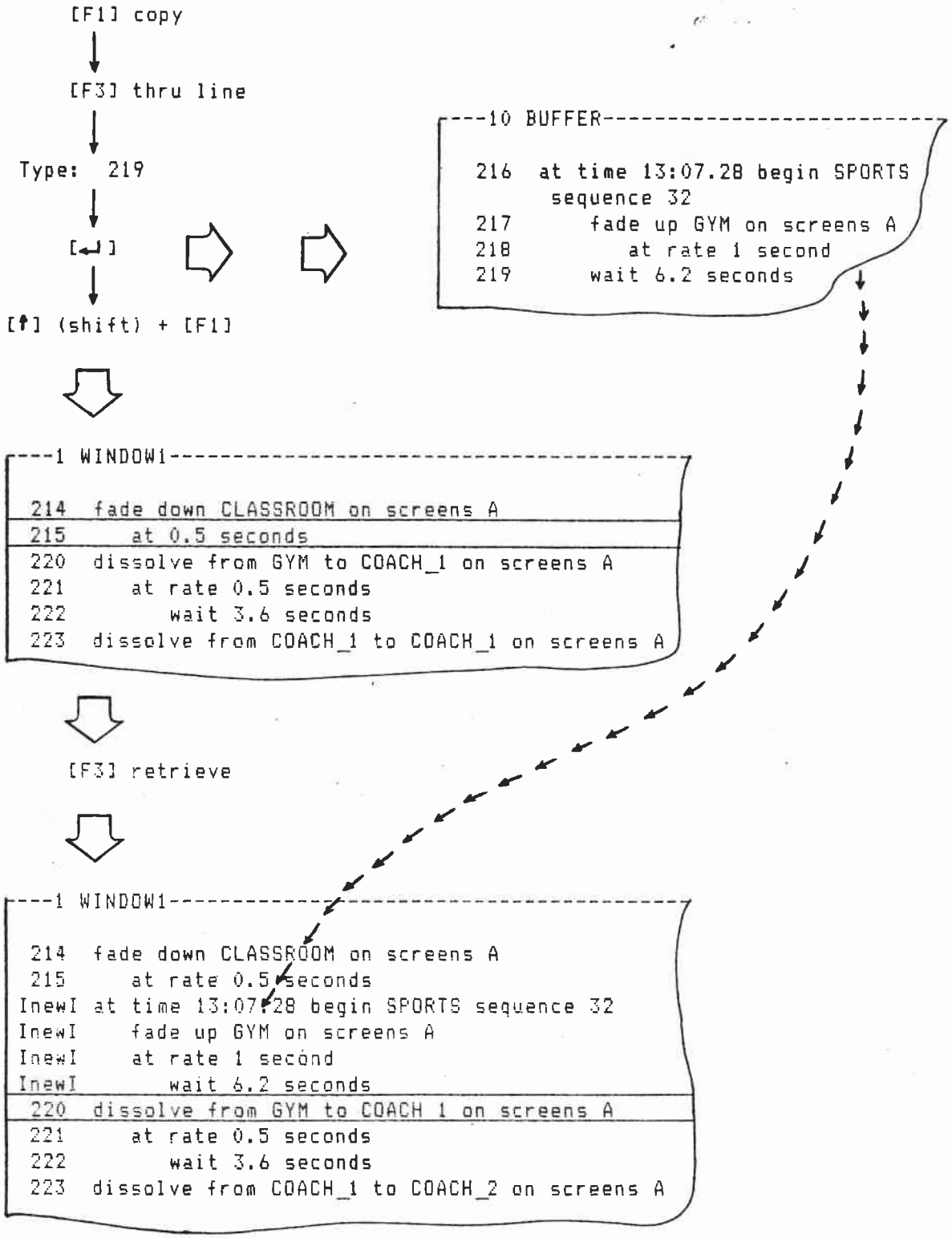
RETRIEVE - RECOVERING ACCIDENTALLY DELETED LINES

All deleted lines go to the WASTE window.

To recover deleted lines, go to the WASTE window. Copy the lines into the BUFFER window. Return to the programming window. Then retrieve the lines from the BUFFER window.

In this example, accidentally deleted lines 216 through 219 are returned to programming window 1.




[F1] copy
[F3] thru line
Type: 219
[↵]
[↑] (shift) + [F1]
---10 BUFFER----------
216 at time 13:07.28 begin SPORTS
sequence 32
217 fade up GYM on screens A
218 at rate 1 second
219 wait 6.2 seconds
---1 WINDOW1----------
214 fade down CLASSROOM on screens A
215 at 0.5 seconds
220 dissolve from GYM to COACH_1 on screens A
221 at rate 0.5 seconds
222 wait 3.6 seconds
223 dissolve from COACH_1 to COACH_1 on screens A
[F3] retrieve
---1 WINDOW1----------
214 fade down CLASSROOM on screens A
215 at rate 0.5 seconds
InewI at time 13:07.28 begin SPORTS sequence 32
InewI fade up GYM on screens A
InewI at rate 1 second
InewI wait 6.2 seconds
220 dissolve from GYM to COACH_1 on screens A
221 at rate 0.5 seconds
222 wait 3.6 seconds
223 dissolve from COACH_1 to COACH_2 on screens A

COPY

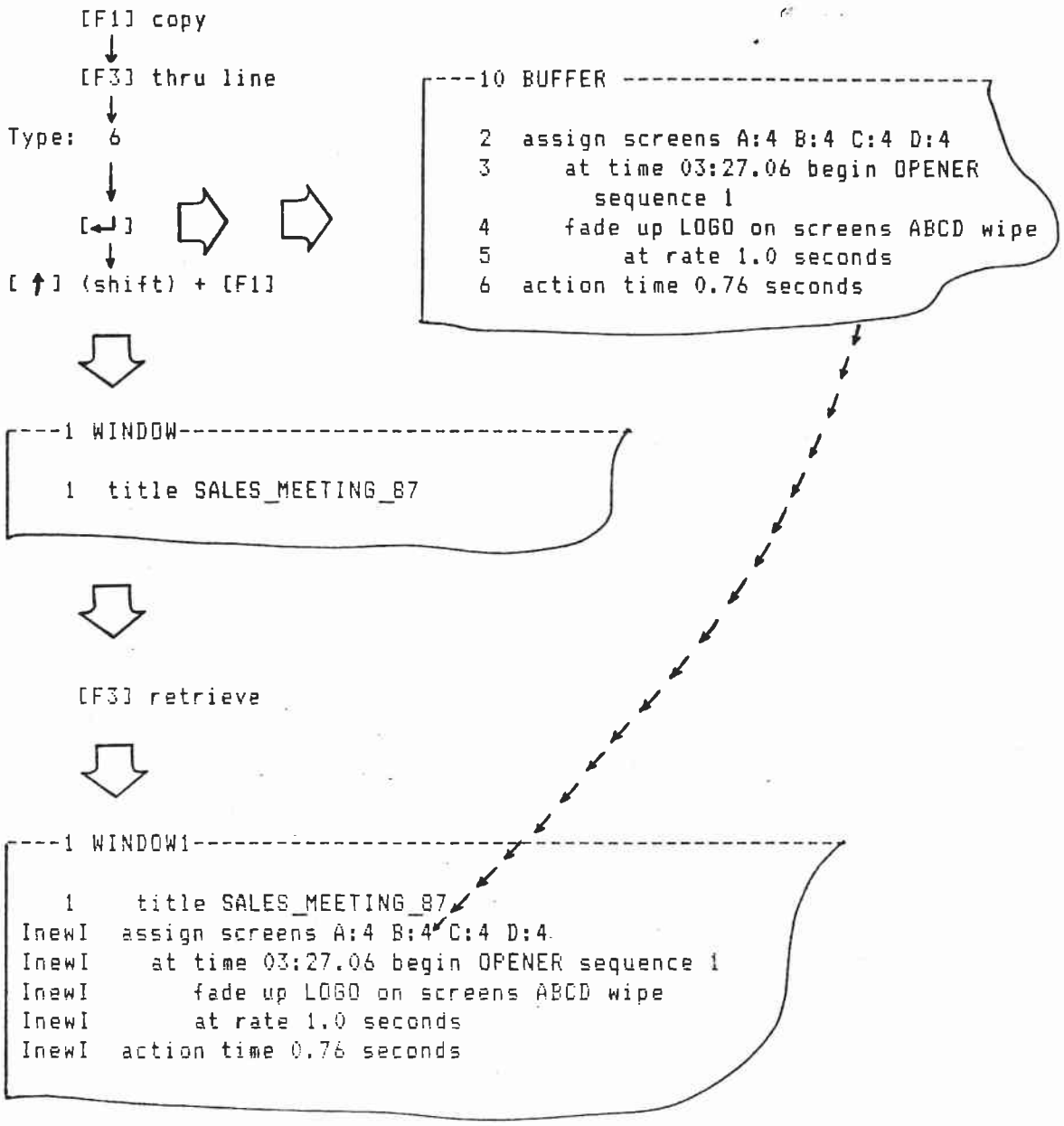
Copy duplicates lines. Copied lines are sent to the BUFFER window. Retrieve returns copied lines to programming windows.

Use copy to move useable bits of old shows from windows 2 through 8 into new shows being constructed in programming window 1.

In this example an old program is in window 2. Opening lines 2 through 6 are moved into programming window 1.

[↑] (shift) + [F2]

```
----2 WINDOW2-------------------------------------------------

   1    title SALES MEETING 84
   2  assign screens A:4  B:4  C:4  D:4
   3  at time 03:27.06 begin OPENER sequence 1
   4       fade up LOGO on screens ABCD wipe
   5          at rate 1.0 seconds
   6       action time .76 seconds
   7  at time 03:31.24 begin OPENER sequence 2
   8       dissolve from LOGO to THEME_84 on screens ABCD
```


[F1] copy
[F3] thru line
Type: 6
[↵]
[↑] (shift) + [F1]
---10 BUFFER----------
2 assign screens A:4 B:4 C:4 D:4
3 at time 03:27.06 begin OPENER
sequence 1
4 fade up LOGO on screens ABCD wipe
5 at rate 1.0 seconds
6 action time 0.76 seconds
---1 WINDOW----------
1 title SALES_MEETING_87
[F3] retrieve
---1 WINDOW1----------
1 title SALES_MEETING_87
InewI assign screens A:4 B:4 C:4 D:4
InewI at time 03:27.06 begin OPENER sequence 1
InewI fade up LOGO on screens ABCD wipe
InewI at rate 1.0 seconds
InewI action time 0.76 seconds

EXTRACT AND RETRIEVE

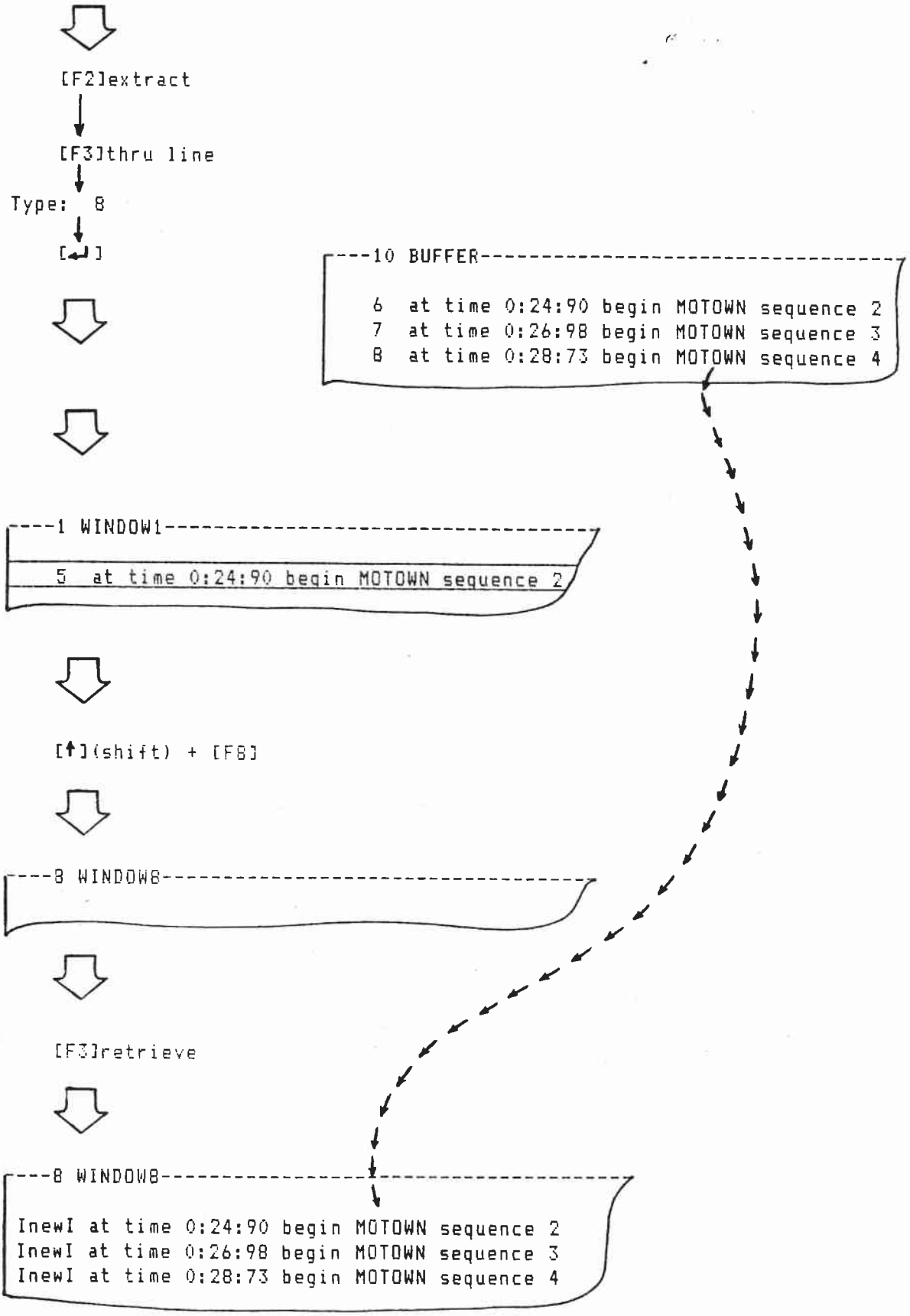
Extract removes lines from the edit file and sends them to the BUFFER window. Retrieve returns lines from the BUFFER window.

Use extract to move lines from one window to another.

In this example, at times -- already synced to the beat of the music -- are in window 1. They are to be extracted from window 1 and retrieved into window 8.

Once the at times are in window 8, the slide actions can be programmed in window 1. Get can be used to individually bring at times from window 8 to window 1.

```
---1 WINDOW1-----------------------------------

   5  at time 0:22:53 begin MOTOWN sequence 1
   6  at time 0:24:90 begin MOTOWN sequence 2
   7  at time 0:26:98 begin MOTOWN sequence 3
   8  at time 0:28:73 begin MOTOWN sequence 4
```

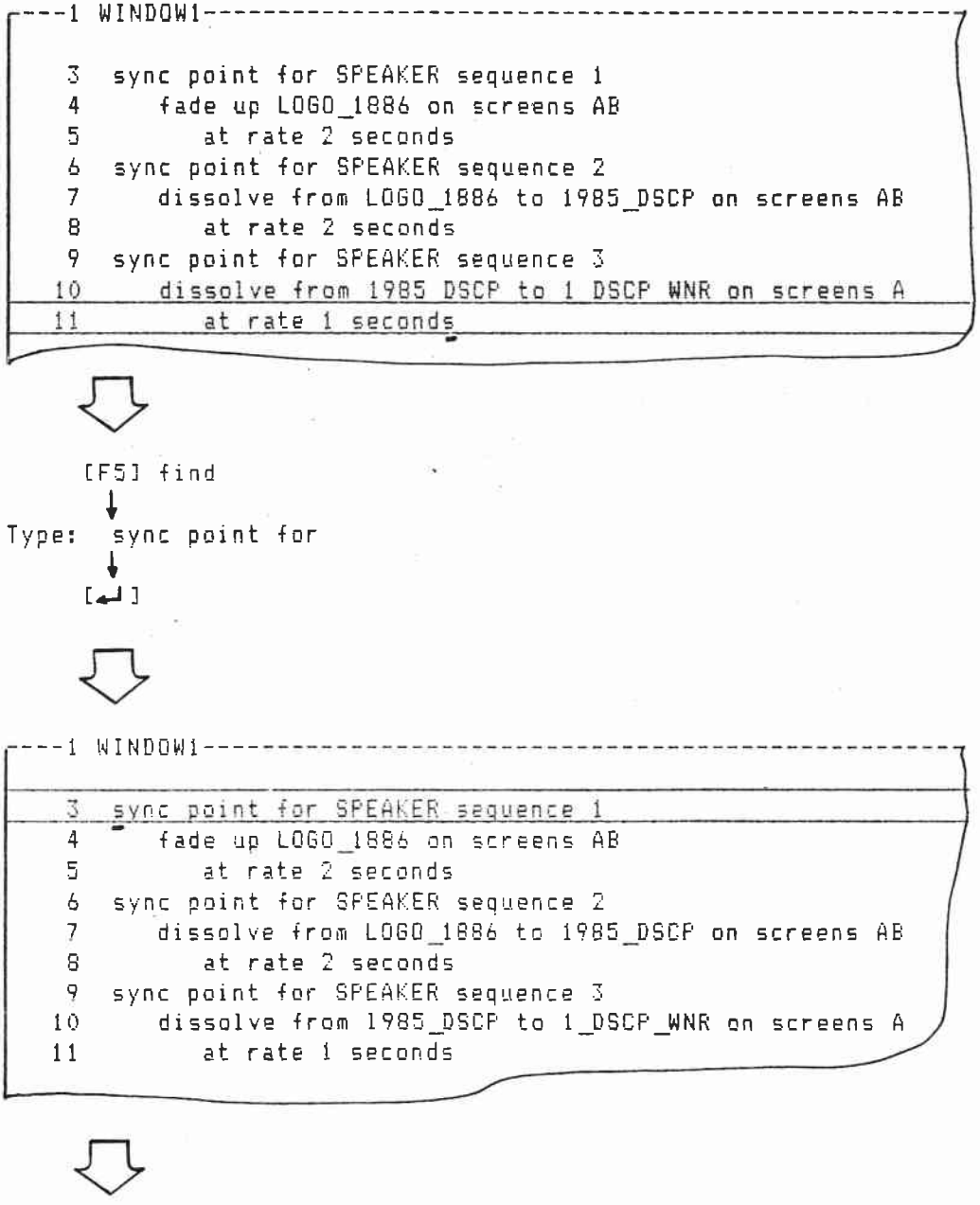

[F2]extract
[F3]thru line
Type: 8
[↵]
---10 BUFFER----------
6 at time 0:24:90 begin MOTOWN sequence 2
7 at time 0:26:98 begin MOTOWN sequence 3
8 at time 0:28:73 begin MOTOWN sequence 4
---1 WINDOW1----------
5 at time 0:24:90 begin MOTOWN sequence 2
[↑](shift) + [F8]
---8 WINDOW8----------
[F3]retrieve
---8 WINDOW8----------
InewI at time 0:24:90 begin MOTOWN sequence 2
InewI at time 0:26:98 begin MOTOWN sequence 3
InewI at time 0:28:73 begin MOTOWN sequence 4

FIND AND REPLACE

Find locates strings in edit files.

A string is a set of characters such as "wait 1 seconds," "sync point for," or "SLIDE_10."

Replace substitutes new strings for old strings.



```
     [F1] replace with
          ↓
Type:  live cue for
          ↓
     [↵]
```

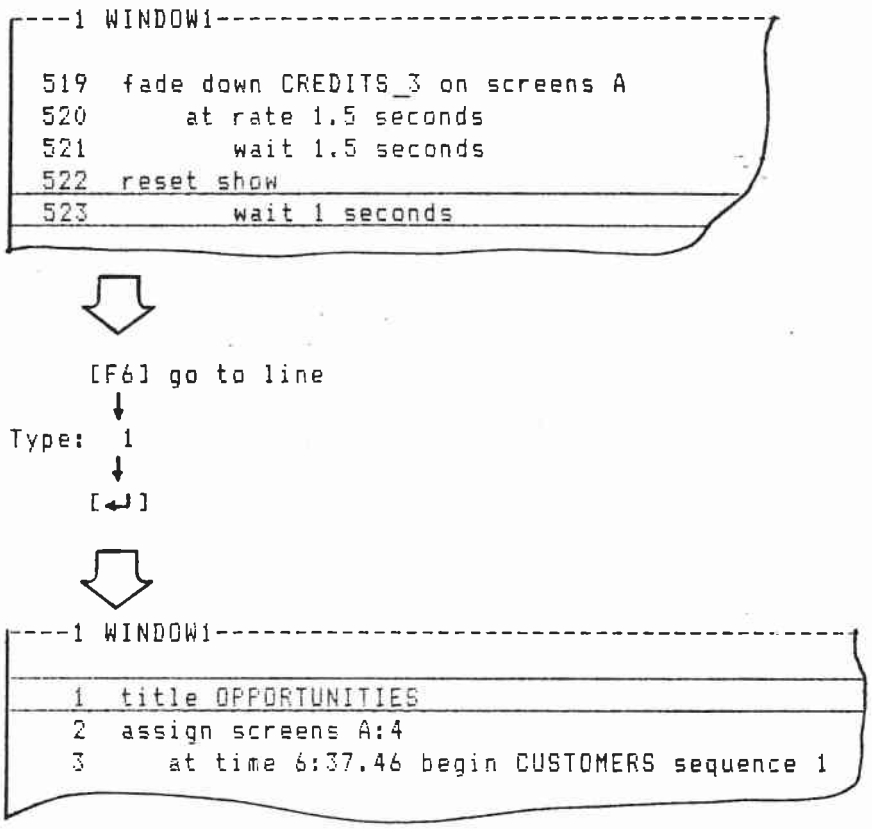
```
----1 WINDOW1----------------------------------------------------

    3  live cue for SPEAKER sequence 1
    4     fade up LOGO_1886 on screens AB
    5        at rate 2 seconds
    6  sync point for SPEAKER sequence 2
    7     dissolve from LOGO_1886 to 1985_DSCP on screens AB
    8        at rate 2 seconds
    9  sync point for SPEAKER sequence 3
   10     dissolve from 1985_DSCP to 1_DSCP_WNR on screens A
   11        at rate 1 seconds
```

```
     [F3] replace all
          ↓
     [F5] to tail
          ↓
     [↵]
```

```
----1 WINDOW1----------------------------------------------------

    3  live cue for SPEAKER sequence 1
    4     fade up LOGO_1886 on screens AB
    5        at rate 2 seconds
    6  live cue for SPEAKERS sequence 2
    7     dissolve from LOGO_1886 to 1985_DSCP on screens AB
    8        at rate 2 seconds
    9  live cue for SPEAKER sequence 3
   10     dissolve from 1985_DSCP to 1_DSCP_WNR on screens A
   11        at rate 1 seconds
```

GO TO LINE

Go to line goes to any line in the edit file.



Renumber puts line and sequence numbers in order.

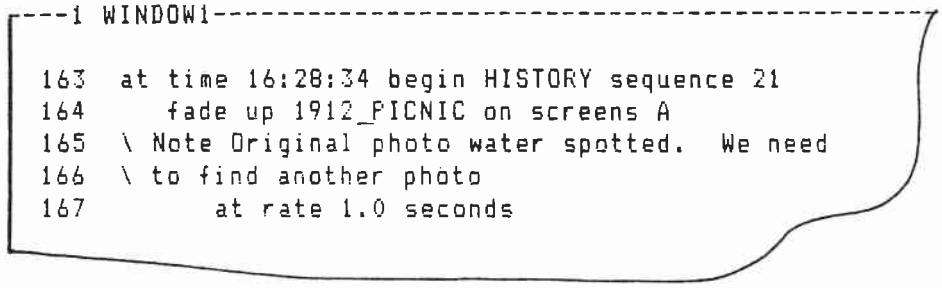
```
----1 WINDOW1----------------------------------------------

 214  at time 13:06.07 begin VACATIONS sequence 30
InewI     fade up PLAINS on screens A
InewI        at rate 1.5 seconds
 220  at time 13:09.19 begin VACATIONS sequence
 221     dissolve from PLAINS to DESERT on screens A
 222        at rate 1 seconds
 223  at time 13:15.02 begin VACATIONS sequence 30
```

[F5] renumber

```
----1 WINDOW1----------------------------------------------

 214  at time 13:06.07 begin VACATIONS sequence 30
 215     fade up PLAINS on screens A
 216        at rate 1.5 seconds
 217  at time 13:09.19 begin VACATIONS sequence 31
 218     dissolve from PLAINS to DESERT on screens A
 219        at rate 1 second
 220  at time 13:15.02 begin VACATIONS sequence 32
```

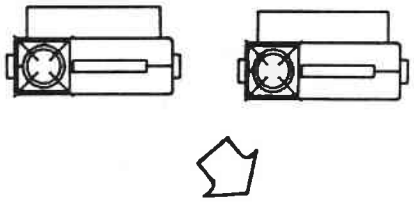
LEFT BACKSLASH (\)

Use the left backslash (\) to put in comments.

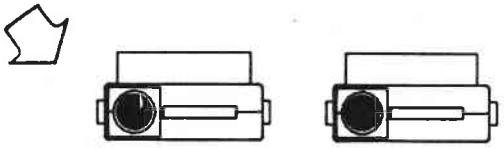


STANDBY

Standby sends out Mate-Trac that turns off all projector lamps.



[F5]standby



SLIDE LOCK

Slide lock holds slides in place when editing completed shows.

Keep slide lock off when creating shows. Turn slide lock on when editing shows.

CAMI assigns slides on the basis of projector availability. Slide assignments are made anew each time CAMI compiles.

During editing small changes in wait times, fade rates and sync times can change projector availability. CAMI then switches slides around the next time it compiles.

Slide lock writes a list of slide assignments to disk. This list also goes into memory. CAMI, instead of creating new lists, uses this list for slide assignments when compiling.

Steps for using slide lock.

1. Create the edit file as usual.

   Note: Slide lock will not work if different slides appearing on the same screen have the same name.

   Example: LOGO_1 is faded on screen A at the start of the show. Another slide, also named LOGO_1, is faded on screen A at the end of the show.

2. Go to the setup keys and turn on slide lock. Then save slide lock onto disk.

   ↓

   [F5] setup

   ↓

   [F5] slide lock

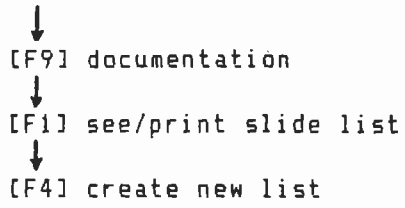
   ↓ * ON - slide lock is now ON appears.

   [F7] save setup

   ↓ The disk drive runs briefly.

   [F8] exit

3. Write slide lists to disk.



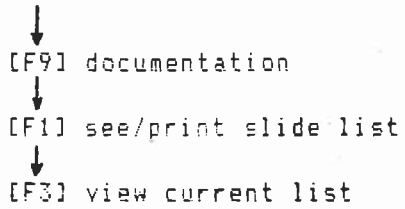
The disk drive runs briefly.

CAMI writes a permanent list of slides to disk. CAMI uses this list, as long as slide lock is on, to make slide assignments.

Slide lists have the same file name as their edit file but use extensions S00 through S99. For example, a 3 screen show has the file name SALES.EDT. Slide lists for the screens have file names SALES.S00, SALES. S01, and SALES.S02.

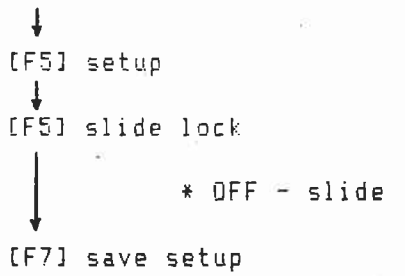
"Reading slide lists" appears briefly in the SHOW window whenever these slide lists are being used to make slide assignments.

4. To come back later and view the slide list.



CAUTION: Do not press [F4] create new list unless you want to create a new slide list.

5. To turn slide lock off.



The disk drive runs briefly.

ADD SLIDE

Add slide is used to add slides to specific trays. Use add slide when slide lock is on after the show has been completed.

Add slide minimizes retraying when only a few slides are being added.

In this example a LOGO slide is going to be added to the start of Fantasie, a completed, single screen, four projector show. The LOGO slide will be put in tray 1, slot 1.

The FANTASIE edit file is in window 1. Slide lock is on. A slide list has already been created and written to disk.

Insert the LOGO slide commands in the Fantasie edit file.

```
----1 FANTASIE-----------------------------------

   1  title FANTASIE
   2   assign screens A:4
   3  at time 1:03.68 begin TITLES sequence 2
   4     fade up IDS_1 on screens A
   5        at rate 1.0 seconds
   6     fade down IDS_1 on screens A
```

```
----i FANTASIE-----------------------------------

   1  title FANTASIE
   2   assign screens A:4
InewI  at time 0:57.68 begin LOGO sequence
InewI    fade up LOGO on screens A
InewI       at rate 0.5 seconds
InewI  at time 1:00.27 begin LOGO sequence
InewI    fade down LOGO on screens A
   3   at time 1:03.68 begin TITLES sequence i
   4     fade up IDS_1 on screens A
```

Save the modified Fantasie edit file on disk.

Add Slide continued

Go to the files window and bring up the slide lists. Assign the FANTASIE slide list to window 5. Windows 5 through 8 have special tab settings to make slide editing easy.

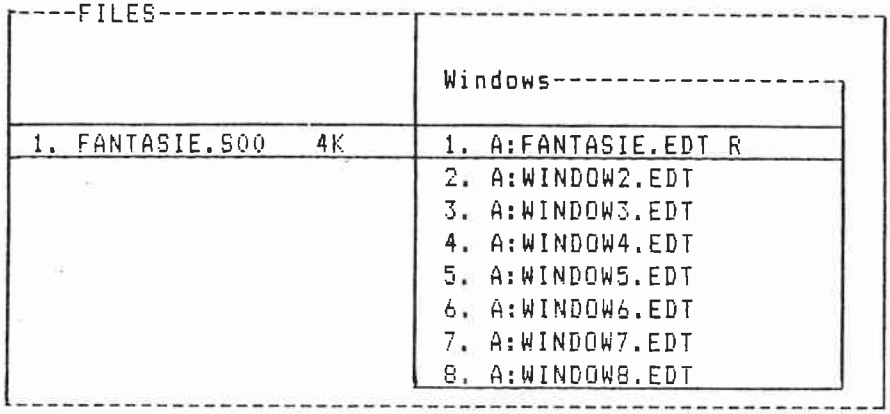
↓

[F6] show dir

↓

[F2] slide list

↓ The files window, showing slide lists on disk, appears.



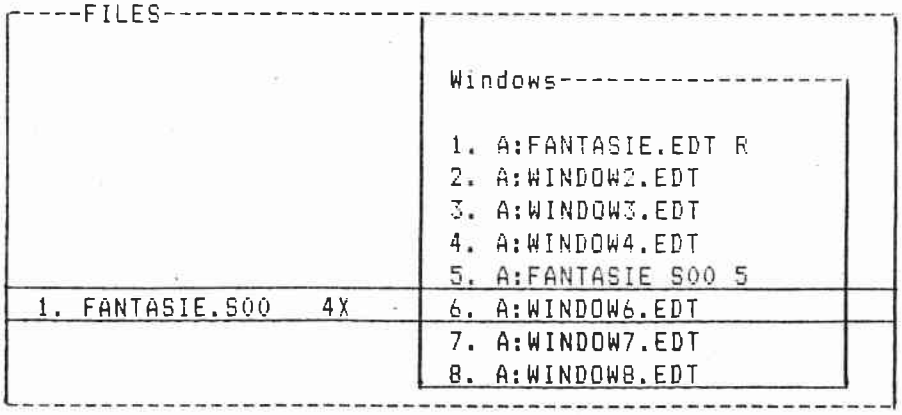
↓

[Scroll Lock] + [↓]

↓ Move the assign/remove highlighted line down to window 5.

[F1] assign file

The Fantasie slide list is assigned to window 5.



Move the FANTASIE slide file into memory and then go to window 5.

↓

[F7] press to proceed

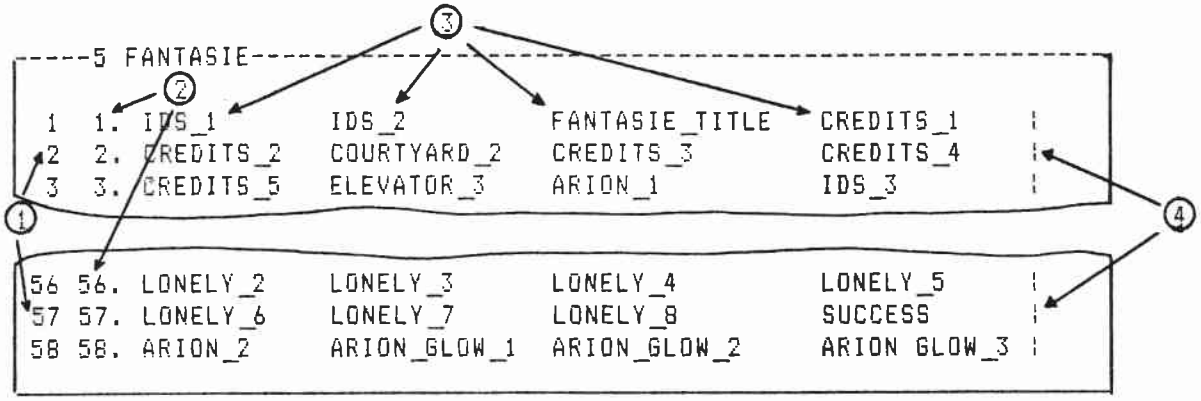
↓

[F2] EDIT

↓

[↑](shift) + [F5]

The Fantasie slide list appears in window 5.

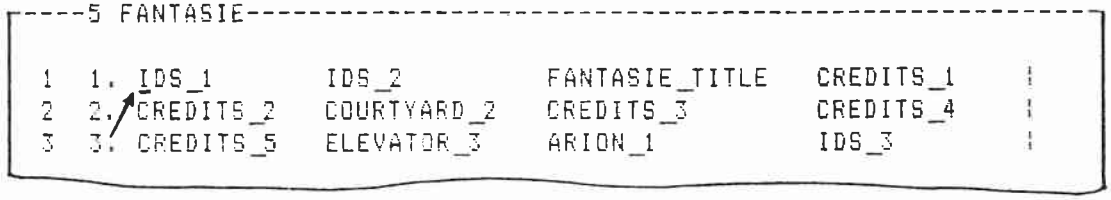


1. Line numbers.
2. Tray positions.
3. Slide lists for trays 1, 2, 3, and 4.
4. Vertical bars; must line up horizontally at the end of each line.

↓

[⇆]

Use the tab key to move the cursor to the slide in tray 1, position 1.



Go to the add slide key in EDIT.

↓

[F9] more

↓

[F9] more

↓

[F1] add slide

The add slide box appears.

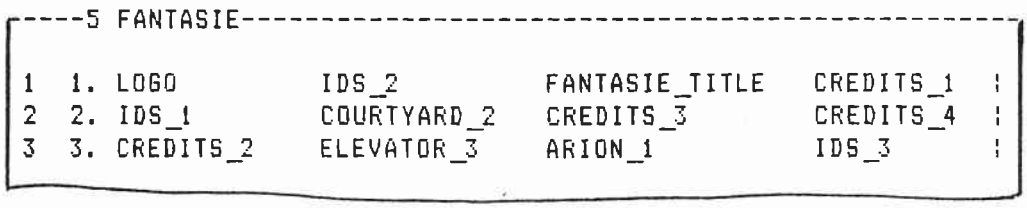
add slide [_]

Add Slide continued

Type: LOGO

[↵]

The LOGO slide is added to tray 1, slot 1.



Save the modified slide list to disk.

Force a new reading of the slide list by removing the Fantasie edit file from window 1 and then re-assigning it to window 1.

DELETE SLIDE

Use delete slide to remove slides from specific trays. Use delete slide when slide lock is on, after the show has been completed.

Delete slide minimizes retraying when removing only a few slides.

In this example the LOGO slide is going to be removed from FANTASIE. The LOGO slide will be removed from tray 1, slot 1. FANTASIE is a completed, single screen, four projector show.

Window 1 holds the FANTASIE edit file. Slide lock is on a slide list that has already been created and saved to disk.

Delete the LOGO slide commands from the FANTASIE edit file.

```
---1 FANTASIE-----------------------------------

  1  title FANTASIE
  2  assign screens A:4
  3     at time 0:57.68 begin LOGO sequence 1
  4        fade up LOGO on screens A
  5     at rate 0.5 seconds
  6     at time 1:00.27 begin LOGO sequence 2
  7        fade down LOGO on screens A
  8     at time 1:02.68 begin TITLES sequence 3
```

```
---1 FANTASIE-----------------------------------

  1  title FANTASIE
  2  assign screens A:4
  8     at time 1:03.68 begin TITLES sequence 3
  9        fade up IDS_1 on screens A
 10     at rate 1.0 seconds
 11        wait 1.60 seconds
```

Delete Slide continued

Go to the files window and bring up the slide lists. Assign the FANTASIE slide list to window 5. Windows 5 through 8 have special tab settings to make slide editing easy.

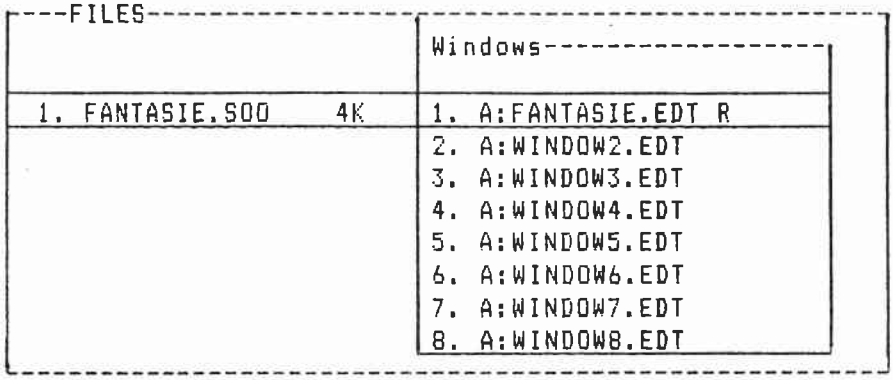
↓

[F6] show dir

↓

[F2] slide list

The files window, showing slide lists on disk, appears.



↓

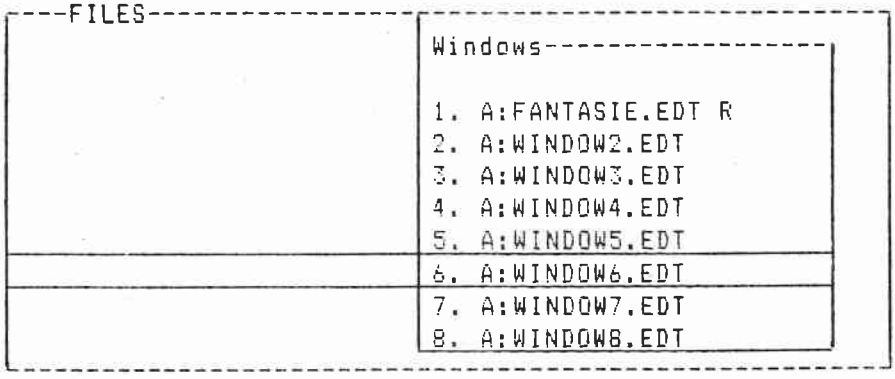
[Scroll Lock] + [↓]

↓ Move the assign/remove highlighted line down to window 5.

↓

[F1] assign file

The Fantasie slide list is assigned to window 5.



Move the FANTASIE slide file into memory and then go to window 5.

↓

[F7] press to proceed

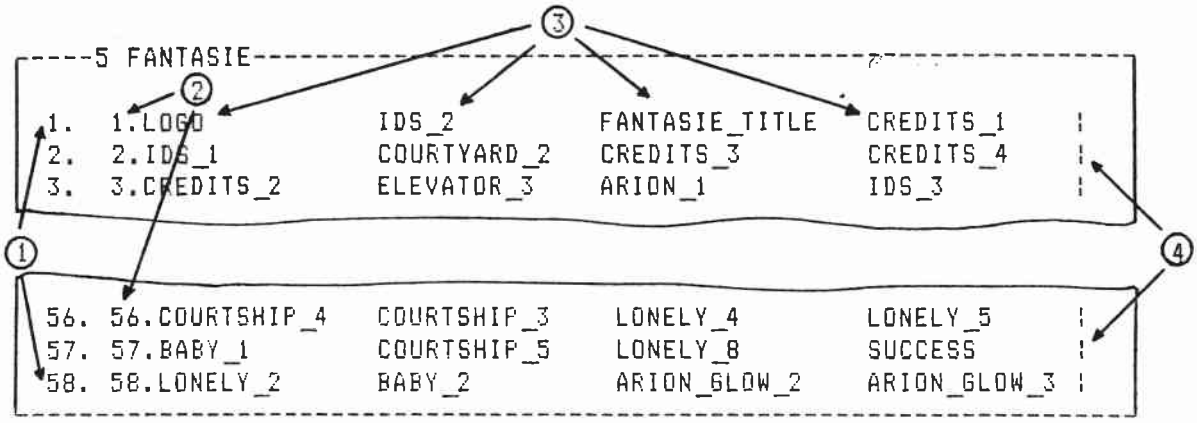
↓

[F2] EDIT

↓

[↑](shift) + [F5]

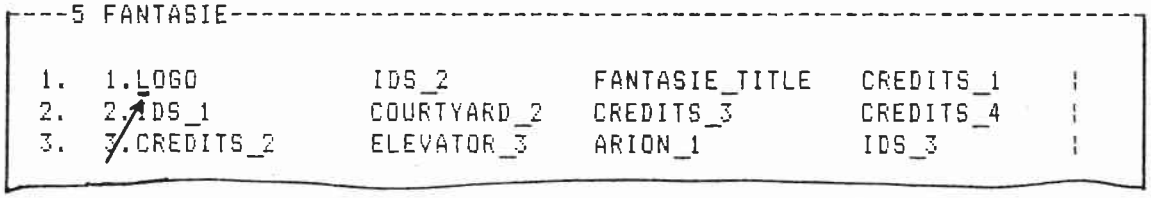
The Fantasie slide list appears in window 5.



1. Line numbers.
2. Tray positions.
3. Slide lists for trays 1, 2, 3, and 4.
4. Vertical bars; must line up horizontally at the end of each line.

[⇆]

Use the tab key to move the cursor to the slide in tray 1, position 1.



Go to the delete slide key in edit.

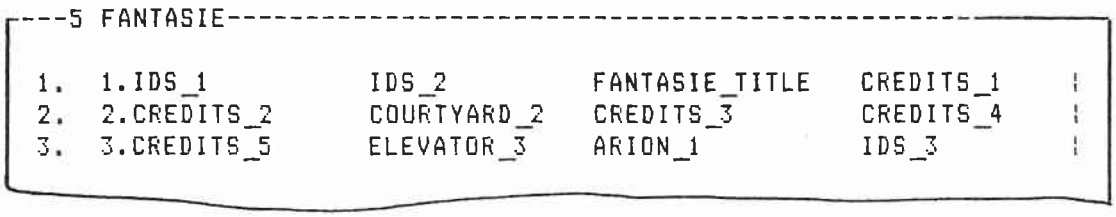
[F9] more

[F9] more

Delete the LOGO slide.

[F2] delete slide

The LOGO slide is removed from tray 1, slot 1.



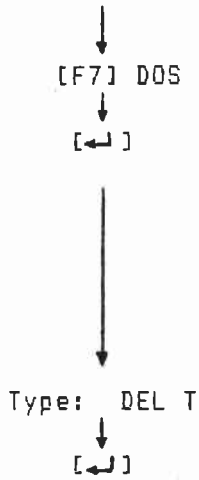
Save the modified slide list to disk.

Force a new reading of the slide list by removing and then reassigning the FANTASIE edit file to window 1.

DEL: ERASING FILES FROM DISK

Use the DOS command DEL (delete) to erase unwanted files from disk.

In this example, erase a file named TEST.EDT.



You can use the DOS command DIR (directory) before deleting to list all the files on disk.

The A drive prompt appears.
A>

The disk drive runs briefly TEST.EDT erases.

You can use the DIR command after deleting to make sure the files are gone.