807 TAPE TRANSPORT CONTROL

The 807 Tape Transport Control is the interface between the Programmer or the Decoder and the tape player. It performs four distinct and separate functions when plugged into the system.

1) It will allow any programmed tape start or tape stop cues stored in memory to be executed.

2) If a show tape is started and the slide trays are not in the proper position relative to the Loc-Trac, the tape will instantly stop and wait until each tray is in position. Only then will the tape start - - automatically.

3) Any slide jam, lamp burn out or projector malfunction that causes the Alert LEDs on the Controller or Fader/Sensors to light or flash will also activate the Alert LEDs on the 807. It also activates a warning buzzer in the 807 to provide an audible alert.

4) Any user-provided remote bell, buzzer or light plugged into the REMOTE ALERT receptacle on the back of the 807 will also be activated by the 807's built-in warning system. Remote warning lights or buzzers may be located at a tour guide's desk, receptionist's desk or any remote location.

On the front panel of the 807 Tape Transport Control are three LED's and two switches.

1) POWER Green LED will be on steady when 807 is plugged into a Programmer or Decoder that has its AC power on.

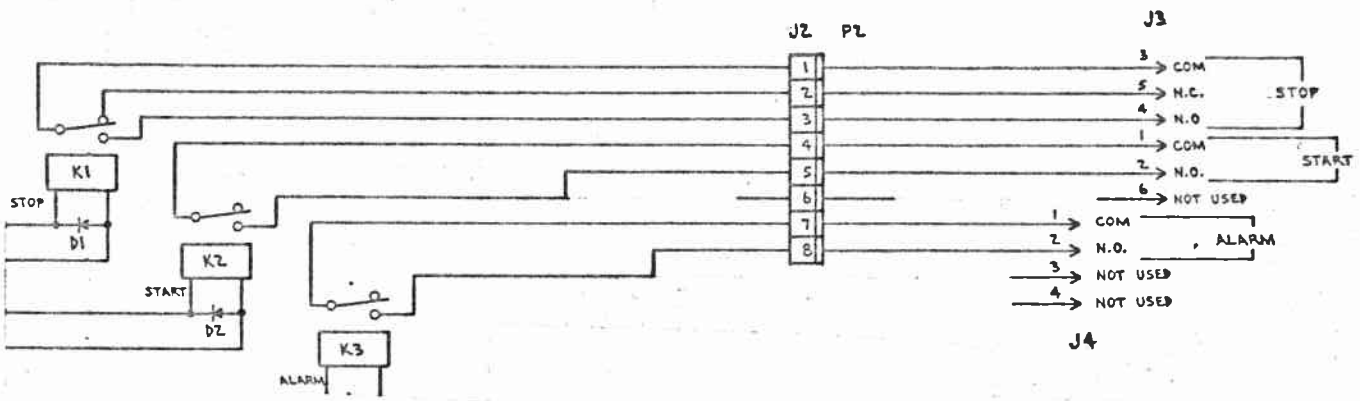
2) MINOR Amber LED will be on steady during any minor alert such as tray homing or anytime trays are moving to a new start position. It will also be on during a major alert.

3) MAJOR Red LED will flash on and off during a major alert such as a slide jam or a lamp burn out.

4) AUTO STOP When this switch is to the right (ON) the tape will stop anytime a major or minor Alert is indicated. It will start automatically as soon as the alert is cleared. When positioned to the left (OFF) the tape will continue to play during the alert.

   NOTE: With Omni-Loc even a major alert can be corrected while a show is in progress. Consequently, it is suggested that Auto Stop not be used for playback to an audience because "the show must go on". Auto Stop is a programming and production convenience and should be used accordingly.

5) ALARM RESET Press this switch to stop the audible alarm. It will stop the alarm and reset to buzz for any subsequent alert.



The cable from the 807 Tape Transport Control to your tape recorder is not supplied by Arion since every manufacturer of tape recorders uses a different remote receptacle and some manufacturers use different wiring for different models of the same brand. Arion does, however, supply the plug for the "Arion end" of the cable.

The dealer or supplier of your tape recorder should be able to supply you with the plug for the "recorder end" of the cable along with the pin identification for the remote tape start and stop.

The six-conductor Cinch Jones plug supplied with the 807 should be wired to the cable as follows:

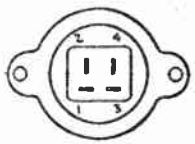
Pins 1 & 2 . . . . . to recorder start circuit

Pins 3 & 4 . . . . . to recorder stop circuit (normally open)

3 & 5 . . . . . to recorder stop circuit (normally closed)

Pin 6 . . . . . is not used

J4 – FRONT VIEW



J3 – FRONT VIEW

If a remote warning system is used it should be wired to the four-conductor Cinch Jones plug provided as follows:

Pins 1 & 2 . . . . . to remote alarm

Pins 3 & 4 . . . . . not used

PROGRAMMING

Remotely controlled tape recorders start and stop using momentary closures. Since the 800 Programmer programs only latch closures, the latch can be made into a momentary by programming a .4 sec time interval between the latch "on" and the latch "off."

To program a tape start (in PRO mode)

1. Press G
2. Press AUX
3. Press .4 (Shift D)
4. Press G
5. Press AUX
6. Press CUE

To program a tape stop (in PRO mode)

1. Press H
2. Press AUX
3. Press .4 (Shift D)
4. Press H
5. Press AUX
6. Press CUE

OPERATION

When the programmed AUX G cue is executed the tape recorder will start. The AUX H will stop the recorder.

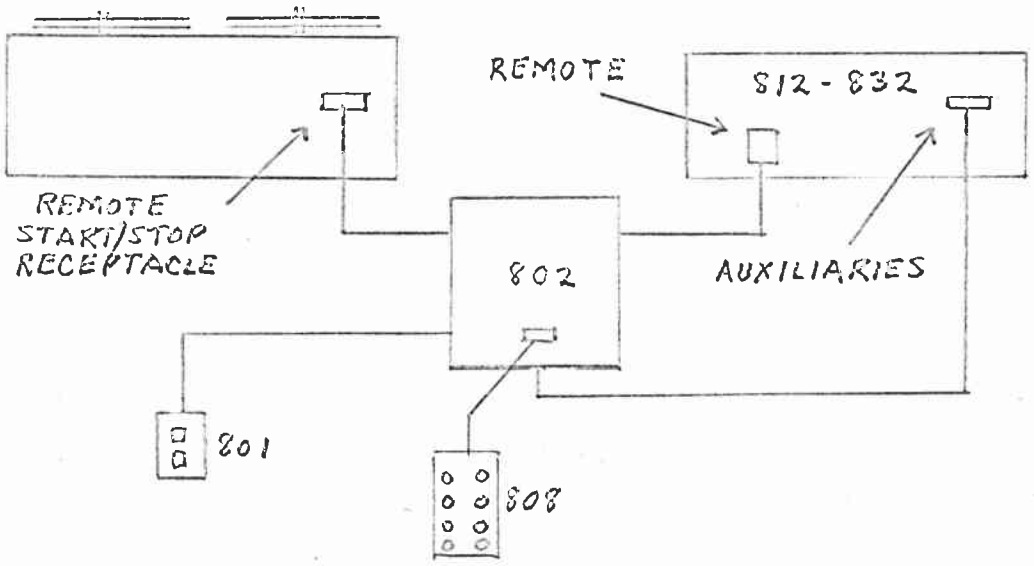
If it should be necessary to stop the recorder other than a programmed stop, it must be stopped by local control at the recorder.

While the tape is running the red DISABLE LIGHT will be lit. When the tape stops by programmed command, the red light will go off. If the tape recorder is stopped by local control, it will be necessary to press the RESET SWITCH to reset the 802 circuitry for another programmed tape start.

802 TAPE STOP/START CONTROL

The 802 is an Arion accessory used as the interface between the 832 or 812 Micro Programmer and any remote controlled tape recorder equipped with tape start/stop solonoids.

The 802 provides programmed start/stop control of the tape recorder. Both the start and stop cues are stored in the memory of the Programmer. The stop cues are executed from tape. The start cues are executed using the Arion accessory 801 Remote Hand Control or the EXECUTE key on the 800 keyboard.



Hook up the 802 as shown. The 801 and 808 are optional, however:

1. The 801 Remote Hand Control must be used if the tape is to be started by programmed remote control.

2. The 808 Auxiliary Output Adapter must be used if auxiliaries other than tape start and stop are programmed. Since the 802 uses AUX. G for tape start and AUX. H for tape stop, only auxiliaries A through F are available at the 808.

The user must supply the cable to the remote start/stop receptacle(s) of the tape recorder. A six-conductor Cinch Jones plug is supplied with the 802. The user-supplied cable should be wired to the Arion-supplied plug as follows:

Pins 1 & 2 - - Start

Pins 3 & 4 - - Stop

OMNI-DECODER 852

The Omni-Loc 852 Decoder is strictly a playback only unit. There are two versions, one is for use with Show Cards only, and the other is for Show Cards or tape loaded memory. Physical appearance of both models is identical. The following will help identify the model**.

**Note: When using Show Cards;
Always turn off power to the Omni-Decoder (power switch located on rear panel) before inserting or removing the Show Card. Circuit damage may result if power is not turned off first.

Show Card only

When the power is first turned on with the Show Card in place, the display will show **Cue 1.**
When the power is first turned on without the Show Card in place, the display will show **Ero.**

Show Card & Memory Load

When power is first turned on with the Show Card in place, the display will show **Cue 1.**
When the power is first turned on without the Show Card in place, the display will show **Lod.** With **Lod** appearing in the display, you may load the memory from tape.

There are four different words which may appear in the display of a Omni-Decoder. Those words and what they represent are listed below.

Word		Meaning
FrS	-	Frame Step - Manually proceed through memory by Frames.
Lod	-	Load - The memory of the 852 is ready to be loaded from tape.
Cue	-	Cue - Memory is updated for playback from tape or manual execution.
Ero	-	Error - The Show Card is not in the slot, or, memory being loaded from tape is not accepted by the 852.

There are two types of Alert conditions. They are labled **Minor** and **Major.** The condition that will render a **Minor Alert** is:

1. trays moving to the place in memory which appears in the display.

Those conditions that would render a **Major Alert** are:

1. blown projector lamp
2. jammed slide
3. damaged Tray Band
4. projector power failure
5. tray not properly seated on projector

The display of the Omni-Decoder has the capability of indicating both Minor and Major Alert conditions and also the reception of the Loc-Trac signal. These indications are displayed in the following manner;

CUE – First, during normal operation the center bar opposite the word Cue flashes every second indicating that the Loc-Trac signal is being received.

CUE _ With only the lower bar on steady or flashing, indicates that a minor Alert exists.

CUE ‾ With both the upper and lower bars on steady or flashing, indicates that a major Alert exists.

The four buttons on the Omni-Decoder serve as a combination lock. To gain access to the memory you punch in a combination for any of the operations listed below.

The procedure to enter any one combination is:

1) Press **Clear**
2) Press the 1 and/or 4 keys to construct the combination for the operation you dersire. (For example, the number 40 would be entered by pressing the 4 key ten times.)
3) Press **Execute** to proceed

	Operation	Combination
1)	Execute memory Cue by Cue	14
2)	Turn projector lamps off (Standby)	15
3)	Turn projector power off	22
4)	Execute memory Frame by Frame (Frame Step)	26
5)	Frame Step with lamps off	27
6)	Reset and Update memory to Cue number 1	34
7)	Send the trays to the "0" tray position	40

Once the tape starts the system is automatically updated to the tape. From this point on, the Loc-Trac is in control of the presentation.

USING YOUR 929 FILM CONTROL

When using the 929 Film Projector Control System your film projector should have the:

1) main power turned on
2) direction of travel set to "forward"
3) lamp and motor power turned on

LOCAL OPERATION

You may control your 929 locally by utilizing the two buttons on the front panel labeled "Start" and "Stop". It is suggested that Local Control be used for setup and test purposes only. Extended local operation should be done at the projector. When the 929 is plugged into a 120 volt AC receptacle, the yellow power indicator will immediately lite. To connect your projector to the 929 for Local Control:

1) The projector power cord is plugged into the receptacle labeled **Projector AC Cable** on the rear of the 929
2) Connect the lamp cable* to the receptacle labeled **Lamp or Douser** also on the rear panel of the 929

* If your projector has not been modified for use with the 929, there will not be a "lamp cable". The lamp will simultaneously turn on and off with the motor.

* If your projector has been modified for use with the 929, and there is a switch on the lamp cable, that switch must be set in the "OFF" position when operating the 929.

To utilize Local Control:

1) Press and hold the **Start** button
   The red Line indicator and the projector motor will start and, one second later the blue Lamp or Douser indicator and the projector lamp will turn on.
2) Release the **Start** button
   The blue Lamp or Douser indicator and the projector lamp will immediately turn off. However, the projector motor and the red Line indicator will remain on.
3) Press the **Stop** button
   The projector motor and the red Line indicator will turn off

This procedure can also be used as a test for the operation of the 929.

MANUAL REMOTE CONTROL OPERATION

Connection of the 929 for Remote Control operation is the same as that used for Local operation.

Using the Arion 801 Remote Control

Your Arion 801 Remote Control may also be used to remotely control the 929. The procedure for using the 801 is:

1) Plug the 801 remote control into the **Remote A Input**
2) Press **Forward**
   The red Line indicator and the projector motor will start and, one second later the blue Lamp or Douser indicator and the projector lamp will turn on.
2) Press **Reverse**
   Both the projector motor and lamp, and their respective indicators will turn off simultaneously.

The red Ready indicator on the 801 Remote Control is not active when being used with the 929.

Using the Kodak Carousel Remote Control

The 929 may be remotely controlled by using a standard Kodak Carousel remote control. To utilize the remote control capability:

1) Plug the Kodak remote control into the **Remote A Input**
2) Press the **Forward** button
   The motor will start and, one second later the lamp will turn on.
3) Press the **Focus** button
   The lamp will turn off
4) Press the **Reverse** button
   This will turn the projector power off.

PROGRAMMED OPERATION

The 929, along with the 917 Cue Sync Control, may be programmed to start and stop your film projector at selected locations within a presentation. First, to connect the 929 for Programmed Operation:

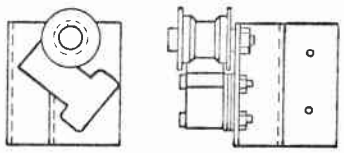
1) Connect the Arion 808 Auxiliary Adapter to the proper Micro Programmer auxiliary output (Normal or Shifted)
   NOTE - Be sure that the 808 cable is pointed downward before inserting.
2) Connect an Arion #A0624 cable between the selected auxiliary channel on the 808 and the **C** input on the 929
3) Plug the cable which is attached to the 917 Cue Sync into the **B** input on the 929 (the A input is not used for Programmed Operation)
4) The projector power cord is plugged into the receptacle labeled **Projector AC Cable** on the rear of the 929
5) Connect the lamp cable* to the receptacle labeled **Lamp or Douser** also on the rear panel of the 929

* If your projector has not been modified for use with the 929, there will not be a "lamp cable". The lamp will simultaneously turn on and off with the motor.

* If your projector has been modified for use with the 929, and there is a switch on the lamp cable, that switch must be set in the "OFF" position when operating the 929.

The 917 Cue Sync Control

The 917 is a specialy designed sensing device developed by Honeywell in cooperation with Arion, which enables accurate, repetitive film cueing for any number of film segements. Standard Scotch Brand Aluminized Sensing Tape* is applied to the film. When this tape passes over the 917 sensor, it signals the 929 to stop the projector motor.

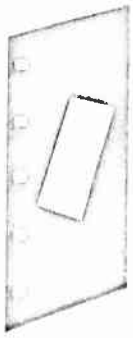


How to apply sensing tape to film

Before applying sensing tape to the "show" film, it is suggested that you practice on a piece of scrap film.

To apply the sensing tape:

1) Locate the desired frame at which the film is to start or appear on the screen.
2) Count 18 frames from the starting frame (heads to tails).
   This is what is known as the "sensing frame"
3) Cut a piece of sensing tape approximately 3/8 of an inch long.
4) Apply the tape to the film in the center of the "sensing frame", but at a slight angle (refer to diagram).



No two projectors, even if they are the same model, "coast" an equal number of frames when the motor is stopped. For that reason you may have to move the tape forward or backward on the film, depending on the "coasting" distance of your projector.

Programming 929 Operation

To start the projector at the location you have selected:

1) Turn on the selected auxiliary channel by entering that channel. This command will start the projector motor and, one second later the lamp will automatically turn on.

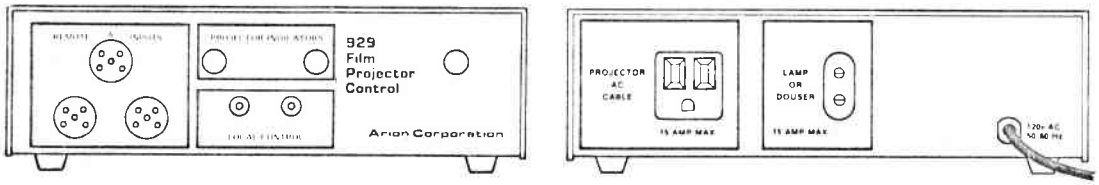
To turn off the lamp:

2) Turn off the selected auxiliary channel This will turn the lamp off.

When the sensing tape passes over the 917 Cue Sync, the motor will automatically stop.

* Scotch Brand Aluminized Sensing Tape - Catolog No. 51 7/32 S

The preceeding instructions are valid for a vast majority of 929 applications. However, because of the numerous film projectors available it is impossible to provided explicit instructions for each model. The 929 contains a host of momentary and latching inputs and outputs to accommodate virtually any film projector. If your projector requires different contacts, closures or control, refer to the Specifications section or contact the Arion Technical Services Department.



SPECIFICATIONS

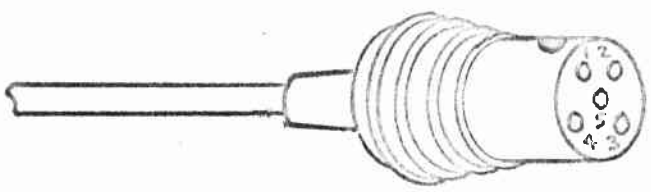
- o Construction
  Anodized Aluminum Case
- o Warranty
  2 Year Limited
- o Max. Lamp Capacity
  15 Amperes
- o Power Consumption
  500 ma
- o Line Voltage
  110 Volts A.C.
- o Line Frequency
  60 Hertz
- o Unit Weight
  2.75 Pounds
- o Dimensions
  8.25" X 6.125" X 2.5"

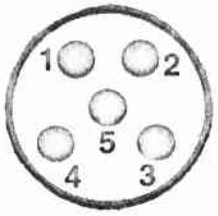
INPUTS

* For all inputs, the center pin (#5) is common.

Input	Closure	Pin	Line	Lamp	Delay
A	momentary	1	-	off	no
A	momentary	2	on	on	yes
A	momentary	3	off	off	no
A	none	4	remote Line indicator		
B	none	2	+12 volts for 917		
B	momentary	3	off	off	no
C	latching	2	on	on	yes
C	momentary	2	on	-	-
C	momentary	3	-	off	-

The Arion A0624 Cable





Pin	Color	Arion Remote	Kodak Remote
1	Black	-10 VDC	Focus
2	Red	Forward	Forward
3	White	Reverse	Reverse
4	Brown	+10 VDC	-
5	Yellow	Common	Common

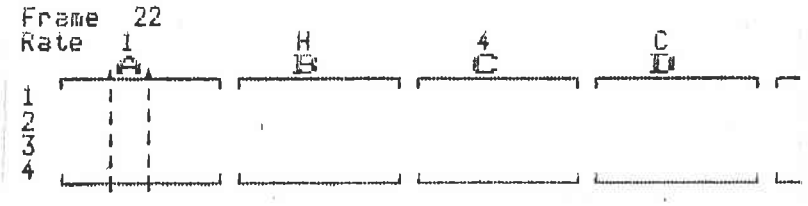
OMNI-PRINTER

In the course of programming a multi-image presentation, a printed manifestation of your work can prove to be extremely useful. One of the accessories which can be used with the Micro Programmer is the Omni-Printer. The Omni-Printer provides you with an unambiguous and attractively stylized account of any program (or portion of one) while it is in the making or after it has been Loaded into the Micro Programmer. With respect to the actual printing format there are the following options:

STORYBOARD FORMAT

A storyboard is a Frame-by-Frame depiction of the activities, visual and otherwise, which are elicited by your program. The details found on Storyboard pages produced by the Omni-Printer can serve as a powerful analytic tool for perfecting your presentations.

Each channel (A through H) of the Micro Programmer is represented by a box with a bold-type letter above it (see illustration). Symbols depicting the actual status of each projector lamp appear in the center column of each box. Supplementary information may be present in the left and/or right columns. The fade rate specified for each channel applies to lamps beginning to fade on or off within the given Frame.



The following are explanations of the symbols employed in this uniquely informative method of program documentation.

Center Column	Definition
X	Lamp is beginning to fade off. The tray will automatically advance when the lamp is finally off.
v	Lamp is in the process of fading off.
-	Lamp is off or there is no corresponding projector.
h	Lamp is off and the tray did not advance, i.e. a Hold command is in effect.

Center Column	Definition
1 to 80	Lamp is beginning to fade on. The number refers to tray position.
↑	Lamp is in the process of fading on.
H	Lamp is fully on, or is maintaining a Freeze level (see Left Column symbol "F" below).
R	Lamp which was off, as represented by an **h**, is beginning to fade on. Since the tray had not advanced when the lamp was last turned off, an **R**(Recall) appears instead of a new tray position.
S	Lamp has just been designated (set) to take part in an animation. Numbers for the on and off durations are in the right column.
C	Lamp has just been cleared from an animation.
F	A Freeze fade is beginning.
A	The slide tray is advancing to the tray position indicated in the right column.

Left Column	Definition
A	Lamp is set to take part in an animation. When the center column shows that the lamp is on or fading, an **A** in the left column means that the lamp is also flashing as part of an animation.
F	The lamp is fading to or is at a particular Freeze level. A number in the right column preceded by a hyphen tells what Freeze level is being maintained.
&	This stands for an **A** and an **F** in the left column.

In the right column, numbers with decimal points indicate the time (in seconds) required for the completion of the activity represented in the center column.

The symbol > indicates that a lamp was not allowed to complete the activity that was previously called for.

LIST FORMAT

This format yields a concise record of the entries that make up your program. When printing while programming, the List Format is most useful.

The command to fade a lamp off is represented with a lower case letter; an upper case letter corresponds to a fade on.

Setting up the Printer

Please read carefully the Owner's Manual packaged with the Omni-Printer.

NOTE: Be sure to remove the nylon tie-down strap restraining the print head (see page 2-1 of the Owner's Manual).

Already attached to the printer is one ribbon cable with two connectors. First plug the connector which has a red line on its cable, into the **Shifted Auxiliary** receptacle on the rear panel of the Micro Programmer. Plug the remaining connector into the **Accessory** receptacle.

NOTE: Orient the plugs so that the ribbon cable goes downward.

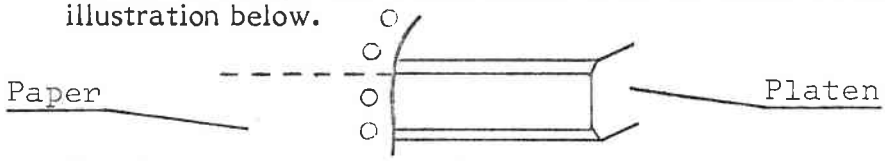
Loading the Paper

Turn the Omni-Printer on (the power switch is on the back side).

Follow the instructions a. through f. on page 2-14 of the Owner's Manual. To adjust the page to the proper vertical starting position:

With the Line switch still in the OFL position,

1) There is an unlabeled switch on the top of the printer and to the left. Push and hold this switch to the **left...**
2) Advance the paper by pushing the FF/LF switch to the **left,** until the top of a page (the perforations) is at the point shown in the illustration below.



The direction of the paper feed is reversed by pushing the FF/LF switch to the right. You should only reverse by a small amount to avoid bunching paper underneath the printer.

Run out of paper?

If the paper supply to the Omni-Printer runs out, the **Paper** indicator lights and printing ceases. Put the Line switch in the **OFL** position before you put more paper in the printer. Printing will resume from where it left off when the switch is returned to the ONL position.

Using Your Omni-Printer

1) Load the Print Program using the Program Label specified on the tape cassette.
2) Press **Reset**
3) If you wish to obtain a printing of a program which has been Sent to tape, Load that program.

NOTE: For Micro Programmer versions 4.7 and up, the Erase procedure does not affect the accessory program. **CL** appears in the Step area of the display to indicate that all but the accessory program has been cleared from the memory.

For Micro Programmers prior to 4.7, the Erase procedure clears the entire memory. Do not use the Erase key if you want to preserve the accessory program. Instead, delete Cues using Table A 3 and delete Cue Points using Table A 10 (see pages 2-10 & 2-12).

Page Heading

Until the Micro Programmer is instructed to do otherwise, the heading printed on each page will be that shown on the sample.

Use the left vertical row of keys and the lettered keys which also have number legends on their faces, to enter the date (e.g. for March 13, 1980, you would press **3**, enter **13**, then enter **80**).

Use the keys represented by bold type in the following table, to enter your Show Title (e.g. to enter the word "THE", press **D3**, press **H1**, and press **E1**).

A	B	C	D	E	F	G	H
A1	**B1**	**C1**	**D1**	**E1**	**F1**	**G1**	**H1**
I	J	K	L	M	N	O	P
A2	**B2**	**C2**	**D2**	**E2**	**F2**	**G2**	**H2**
Q	R	S	T	U	V	W	X
A3	**B3**	**C3**	**D3**	**E3**	**F3**	**G3**	**H3**
Y	Z	space	'	,	-	.	?
A4	**B4**	**C4**	**D4**	**E4**	**F4**	**G4**	**H4**

To enter the date to be printed on each page:

1) Press **Reset**
2) Press **Table A**
3) Enter number **11**
4) Press **Execute**

Enter numbers for the:

5) month, press **Execute**
6) day, press **Execute**
7) year, press **Execute**

To enter the Show Title to be printed on each page:

1) Press **Reset**
2) Press **Table A**
3) Enter number **12**
4) Press **Execute**
5) Enter your Show Title (up to 32 characters may be entered)

Print Format

At the moment that the Micro Programmer is Loaded with the Print Program, it is set up to use the Storyboard Format.

To select the List Format:

1) Press **Reset**
2) Press **Table A**
3) Enter **13**
4) Press **Execute**

To return to the Storyboard Format:

1) Press **Reset**
2) Press **Table A**
3) Enter **14**
4) Press **Execute**

NOTE: You can switch back and forth between the different formats in the printing of any given program.

Starting and Stopping the Printer

With the Line switch on the Omni-Printer in the ONL (ON Line) position,

I. FOR CUES ALREADY IN THE MICRO PROGRAMMER MEMORY,

To start printing:

1) Press **Reset**
   Make sure that the top of a page is adjusted in the printer according to the "Loading the Paper" instructions.

   If you wish to be able to restart the printer from where it leaves off when you stop it, "unlock" the keyboard (if this has not already been done) i.e.:

   i) Press **Table A**
   ii) Enter **15**
   iii) Press **Execute**

2) Press **Shift** and, while holding it down, press **Delete**
   Prt will appear in the display under the word MODE.

3) Enter the range of Cues to be printed:
   (lower Cue number), **Execute,** (higher Cue number), **Execute**

   If just one Cue is to be printed:
   (Cue number), **Execute, Execute**

   Printing will commence after the last depression of the Execute key.

To stop printing:

4) Press **Cue** and hold it down until **HLd** appears under the word MODE.

   The printer will continue to print for a short time after you release the Cue key.

To resume printing from where you stopped:

5) Press **Execute**

To take the Micro Programmer out of the Print mode:

6) Press **Reset**

II. WHILE PROGRAMMING,

To start printing:

1) Press **Reset** *
2) Press **Program**
3) Press **Shift** and, while holding it down, press **Delete**
   A **P** above the word FUNCTION signifies that the Omni-Printer will respond as you program.

   Printing will automatically occur at the termination of each Frame. You do not have to wait for the printer to stop to continue programming.

To disable the Omni-Printer:

4) Press **Next Step** (or any key which will take the Micro Programmer out of the Program mode)

* When returning to the Program mode after step #4 above, do not press **Reset**. Pressing Reset causes the printer to begin a new page.

The printer itself can be stopped by putting the Line switch in the OFL (OFf Line) positon. Printing will resume from where it left off if the switch is then returned to the ONL positon.

Before turning the power to the Omni-Printer off:

1) Put the Line switch in the **OFL** position
2) Push the FF/LF switch to the **left**