



# **NCM 508**

**MEMORY LIGHTING CONTROL CONSOLE**

**OPERATION MANUAL**

## INTRODUCTION

Welcome. You are entering a new era of memory controlled stage lighting technology. The powerful NSI Micro-Plex designs involve the electrical marriage of microprocessor technology and digitally controlled multiplexing. The result is a comprehensive memory control package with unlimited flexibility for a variety of innovative applications.

The NSI NCM 508 Foot/Hand Operated Memory Controller console features an advanced computer based microprocessor design containing many benefits found in today's mainframe computers. The fully user programmable scenes and effects are easily created or changed at the touch of a button.

The NSI Micro-Plex technology found in all NSI products allows components of your lighting system to be interconnected by way of standard 3-conductor microphone cables or audio snakes. Up to 64 individual control signals may be transmitted to dimmer packs through a single microphone cable, eliminating the need for AC power cords on NSI controllers. This makes the remote placement of the NCM 508 easy and convenient.

The NSI NCM 508 Memory Controller represents our commitment of leading the industry in defining technological advances for stage lighting control.

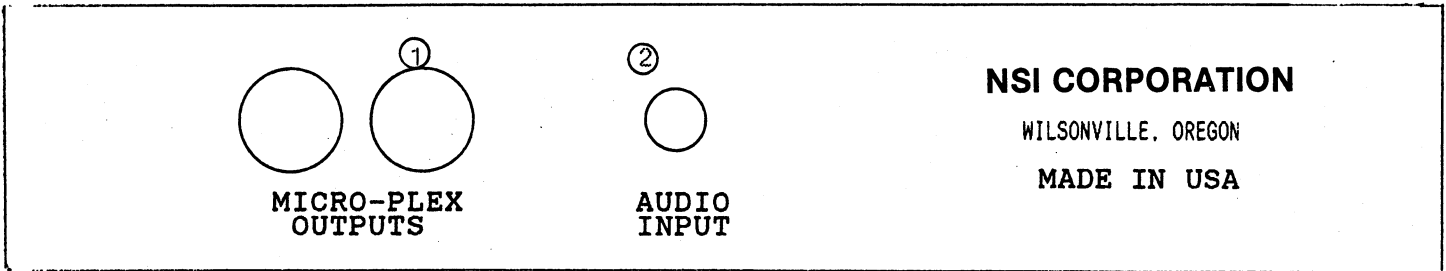
Welcome to the new era of memory controlled stage lighting.

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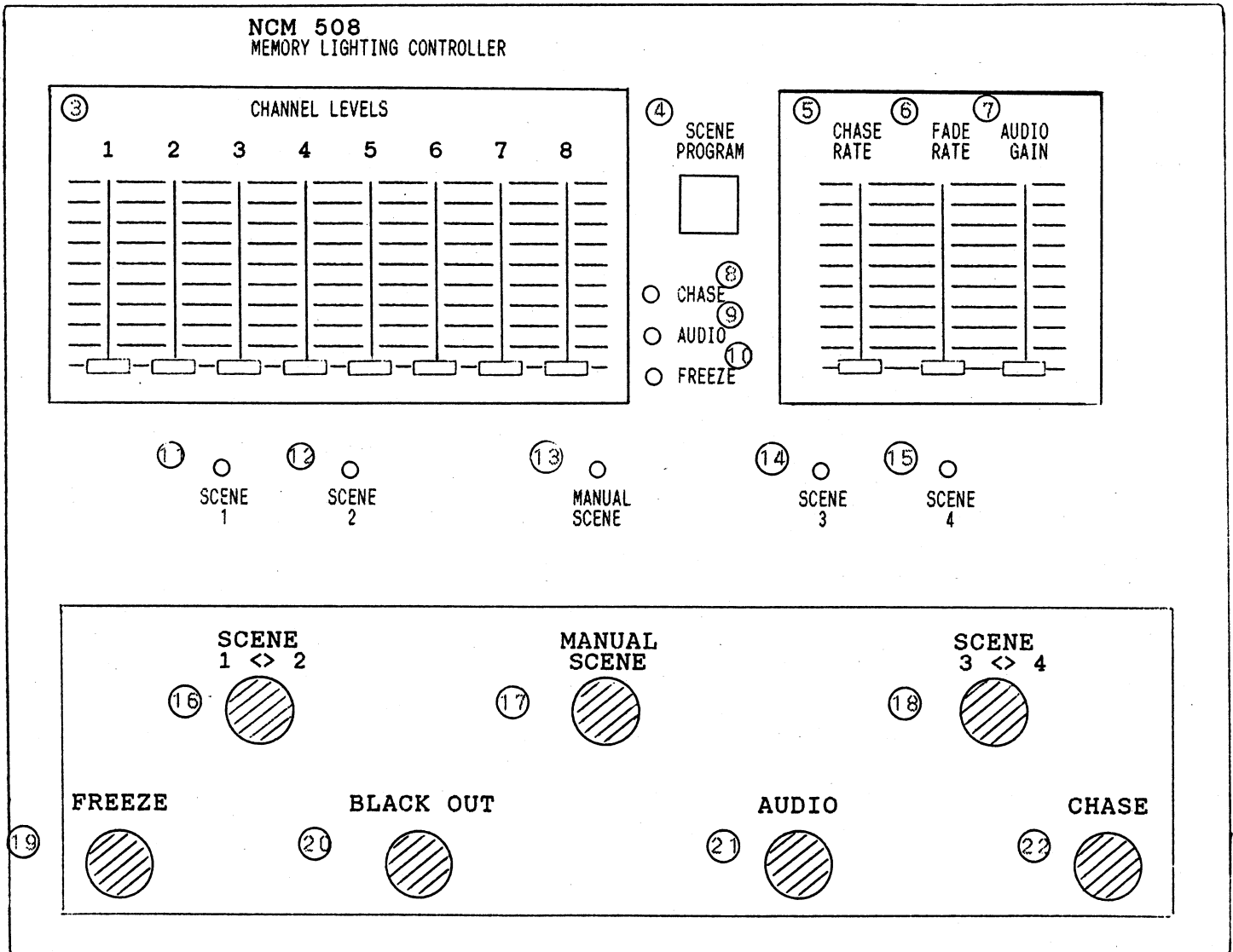
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# VISUAL LAYOUT

{REAR VIEW}



{TOP VIEW}



## LEGEND

- |                                 |                                |                                |
|---------------------------------|--------------------------------|--------------------------------|
| 1: Micro-Plex Outputs           | 8: Chase LED Indicator         | 15: Scene 4 LED Indicator      |
| 2: Audio Input Jack             | 9: Audio LED Indicator         | 16: Scene 1 & 2 Select Button  |
| 3: Channel Level Slide Controls | 10: Freeze LED Indicator       | 17: Manual Scene Select Button |
| 4: Scene Program Button         | 11: Scene 1 LED Indicator      | 18: Scene 3 & 4 Select Button  |
| 5: Chase Rate Slide Control     | 12: Scene 2 LED Indicator      | 19: Freeze Select Button       |
| 6: Fade Rate Slide Control      | 13: Manual Scene LED Indicator | 20: Black Out Select Button    |
| 7: Audio Gain Slide Control     | 14: Scene 3 LED Indicator      | 21: Audio Select Button        |

22: Chase Select Button

# PROGRAMMING

## Channel Presets -

Light intensity for each channel of the NCM 508 is controlled with eight individual slide controls. Adjustment of these controls increases or decreases light intensities to desired levels for each channel.

## Programmable Scenes -

The NCM 508 has four fully user programmable scenes, each consisting of eight preset channels. This means that four scenes of eight channels can be created and placed in memory for recall later.

To program your scenes, first tap the SCENE 1<>2 button until the Scene 1 LED is on. Now, adjust all eight channel presets to achieve your desired lighting effect.

To preview your scene, tap the SCENE PROGRAM button and the lights will come on according to your presets. Once all final adjustments have been made for Scene 1, tap the SCENE PROGRAM button to store your scene presets in memory. Simply repeat this procedure for the remaining scenes; 2, 3, and 4.

After you have programmed all four scenes, you can recall them by tapping any of the programmable scene buttons. Notice that each scene select button will activate two scenes (1 & 2, 3 & 4). Tap it once for on scene, and again for the other. When toggling back and forth between Scenes 1 and 2 or 3 and 4, each scene has an LED indicator which will light when the scene is activated for easy scene selection reference.

### NOTE

All of the buttons are momentary types and are touch sensitive. If you "tap" the buttons, the scenes will fade in and out according to where you have set the FADE RATE slide control. If you press and hold the buttons, the scenes will change instantly. Instant scene switching can be continued as long as the button is tapped again within 2 seconds. After a 2 second lapse, the instant activation mode is defeated and the scene buttons are normalized to respond to the tap or hold methods described above.

## PROGRAMMING (CONTINUED)

### Programmable Scenes (cont.)

All NCM 508s are shipped from the factory with this basic program:

- Scene 1: Channels 1 and 5 at full intensity
- Scene 2: Channels 2 and 6 at full intensity
- Scene 3: Channels 3 and 7 at full intensity
- Scene 4: Channels 4 and 8 at full intensity

If power to the NCM 508 is lost or turned off, it is designed to default to it's original factory programs. This insures that scenes are always available in memory and eliminates the need to stop and reprogram in case of power loss. With the factory backup program permanently retained, you will always light up your show!

### Manual Scene -

NSI provides a bonus fifth scene which is not stored in memory, and remains constantly adjustable. The Manual Scene is activated by the same tap or push and hold methods as the programmable scenes. With a tap, the manual scene fades in according to the settling of the FADE RATE slide control and with a push and hold of the button, the scene change is instant.

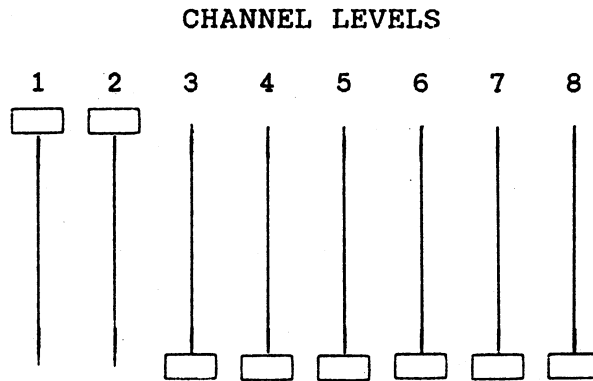
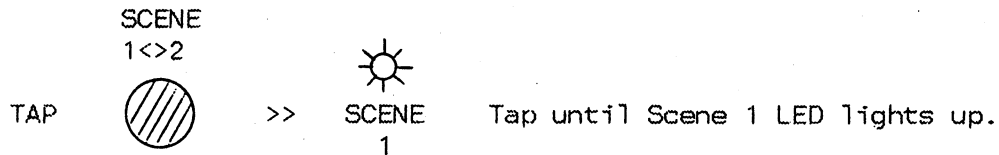
When the Manual Scene mode is selected, all eight channels are adjustable in "real time". When making adjustments in real time, lights will still fade at the set fade rate.

### Fade Rate -

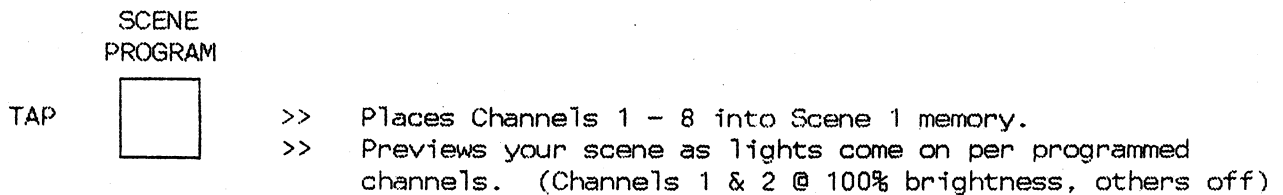
The FADE RATE slide control adjusts the rate at which all functions of the NCM 508 fade in and out. These functions include scene to scene fades, manual scene channel operation, chase, freeze, and black out.

## TO PROGRAM SCENES



Capability: 4 user programmable scenes with 8 preset channels each.



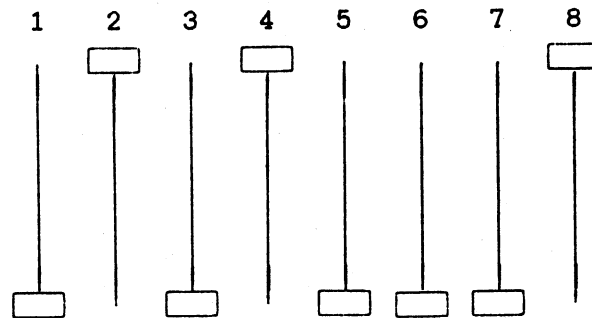
Adjust Channels 1 - 8 for desired lighting scene.




## TO PROGRAM SCENES (CONTINUED)

SCENE  
1<>2  
TAP  >>  SCENE 2 Tap until Scene 2 LED lights up.

### CHANNEL LEVELS



Adjust Channels 1 - 8 for desired lighting scene.

SCENE  
PROGRAM  
TAP  >> Places Channels 1 - 8 into Scene 2 memory.  
>> Previews your scene as lights come on per programmed channels. (Channels 2, 4 & 8 @ 100% brightness, others off)

Repeat for Scenes 3 & 4.

### NOTE

If power is lost or turned off, the NCM 508 is designed to default to it's original factory program.



The permanently retained factory backup programs are as follows:

|          |                                   |
|----------|-----------------------------------|
| Scene 1: | Channels 1 & 5 at full intensity. |
| Scene 2: | Channels 2 & 6 at full intensity. |
| Scene 3: | Channels 3 & 7 at full intensity. |
| Scene 4: | Channels 4 & 8 at full intensity. |





## SELECTING SCENES

SCENE  
1<>2

TAP  ONCE >>  SCENE  
1 LED indicator lights when Scene 1 is activated.

SCENE  
1<>2

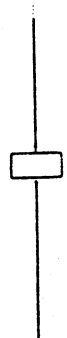
TAP  TWICE >>  SCENE  
2 LED indicator lights when Scene 2 is activated.

### NOTE

**ALL BUTTONS ARE MOMENTARY TYPE AND ARE TOUCH SENSITIVE!**


### FADE RATE

- Maximum -
- Longest Fade Time available -


 Adjust to Rate of Fade desired

- Minimum -
- No Fade -

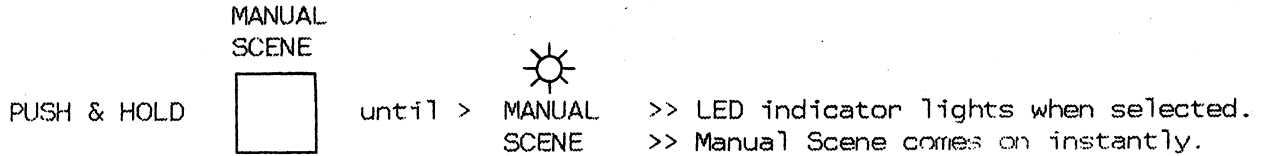
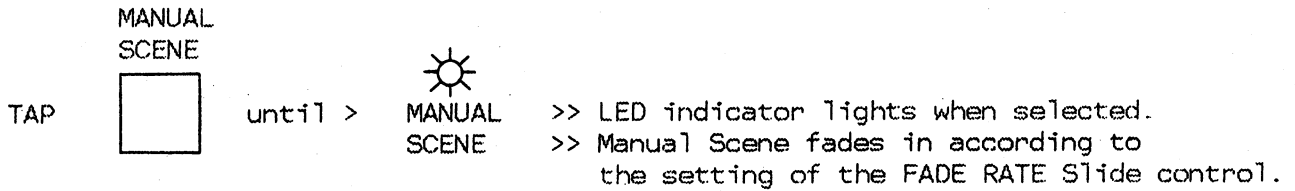
SCENE  
1<>2

TAP  >> Scenes fade in and out according to where you have the FADE RATE Slide Control set.

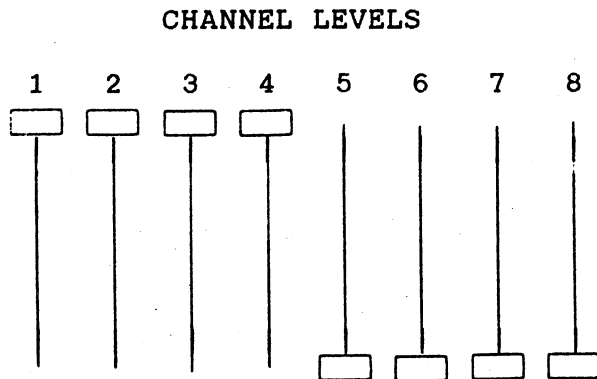
SCENE  
1<>2

PUSH & HOLD  >> Scenes will change instantly.  
>> Instant Scene Switching can be continued if the SCENE 1<>2 button is tapped again within 2 seconds. After 2 seconds have elapsed, the Instant Activation Mode is defeated and the buttons respond to the "TAP" or "PUSH & HOLD" methods.

## MANUAL SCENE SELECTING

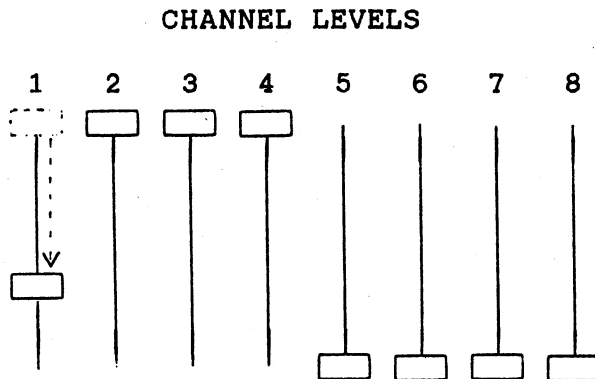


MANUAL SCENE allows for "Real Time" adjustments of Channels 1 - 8.



>> Existing Manual Scene:  
 Channels 1 - 4 at full intensity  
 Channels 5 - 8 off

Adjust in "Real Time"



>> Channel 1 Slide Control is adjusted to 25% intensity

### IMPORTANT NOTE

When making adjustments, the lights will still fade in and out according to where you have the FADE RATE Slide Control set. If you desire instant adjustment, simply turn the FADE RATE control off (FADE RATE Slide Control all the way down).

## FEATURES

### Chase Effects -

The CHASE button activates a variety of factory programmed special effects. Chase Mode II is also user programmable. Here is the sequence used to activate to activate the various Chase Modes:

| <u>CHASE MODE</u> | <u>ACTION TO ACTIVATE</u>   | <u>EFFECTS</u>   |
|-------------------|---|--|
| I                 | Tap CHASE once.<br>CHASE LED flashes.   | Sequences through channels:<br>1 & 5, 2 & 6, 3 & 7, 4 & 8  |
| II                | Tap CHASE twice.<br>CHASE LED "flickers".   | Sequences through channels:<br>4 & 5, 3 & 6, 2 & 7, 1 & 8  |
| II                | User programmable.<br>If power is lost or turned off, the NCM 508 defaults to factory programs. | While Chase Mode II is activated you can program 8 individual sequences. Select channel controls to be energized for sequence 1. Push slide controls for these channels all the way up and turn all others off. Now tap the SCENE PROGRAM button to store sequence 1 in memory. Repeat this process for the next seven sequences for a total of eight. If you exceed eight sequences, you will be starting over at sequence 1. After all sequences are programmed, tap CHASE once again and your chase effect will be activated. |
| III               | Tap CHASE three times. SCENE LEDs flash.  | Sequences through programmed scenes 1, 2, 3, & 4.  |

When activating Chase Modes 2 and 3, the CHASE button MUST be tapped the second and third times within five (5) seconds after the first tap. After five seconds, the activation mode is defeated and Chase Modes can no longer be selected.



To change modes, you must leave Chase Mode by selecting a scene, manual, or black out, and then tap the CHASE button to select a new mode. After the Chase Mode has been selected and five seconds has elapsed, you can tap the CHASE button for a manual chase sequence (Chase Rate is off), or press and hold to stop chasing (Chase Rate is not off).

### Chase Rate -



This slide control adjusts the rate at which lights will "chase". When this control is off, the CHASE button becomes manual for tapping through the sequence using your foot or hand.

# ACTIVATING CHASE EFFECTS






## Chase Mode I selection -

TAP CHASE  ONCE > CHASE  >> CHASE LED indicator flashes.  
>> Factory programming sequences through channels:  
1 & 5, 2 & 6, 3 & 7, 4 & 8

## Chase Mode II selection -

TAP CHASE  TWICE > CHASE  >> CHASE LED indicator flickers.  
>> Factory programming sequences through channels:  
4 & 5, 3 & 6, 2 & 7, 1 & 8  
>> Chase Mode is also user programmable.

## Chase Mode III selection -





TAP CHASE  THREE > SCENE  SCENE  SCENE  SCENE   
TIMES 1 2 3 4 >> SCENE LEDs flash  
>> Chase Mode sequences through factory programmed scenes 1, 2, 3, and 4

### NOTE


When activating Chase Modes II and III, the CHASE MODE button must be tapped the second and/or third times within 5 seconds after the first tap. After 5 seconds have elapsed, the Chase Activation Mode is defeated and Chase Modes can no longer be selected.

# ACTIVATING CHASE EFFECTS (CONTINUED)

## To Change Chase Mode Selection -

FIRST: Leave Chase Mode by selecting >  or  or  or 

SCENE 1<>2      SCENE 3<>4      MANUAL SCENE      BLACK OUT

THEN: Select Chase Mode desired >  > Tap once >> Chase Mode I  
Tap twice >> Chase Mode II  
Tap three times >> Chase Mode III

CHASE

## Chase Rate Selection -

CHASE  
RATE



- Fastest Rate -

>> Adjust to desired rate at which lights will chase

- Off -

# ACTIVATING CHASE EFFECTS (CONTINUED)


## To Operate the Chase Mode Manually -

When CHASE RATE is off >> CHASE RATE

CHASE  
TAP  >> For Manual Chase Sequence



When CHASE RATE is on >> CHASE RATE

CHASE  
PUSH & HOLD  >> To stop chasing



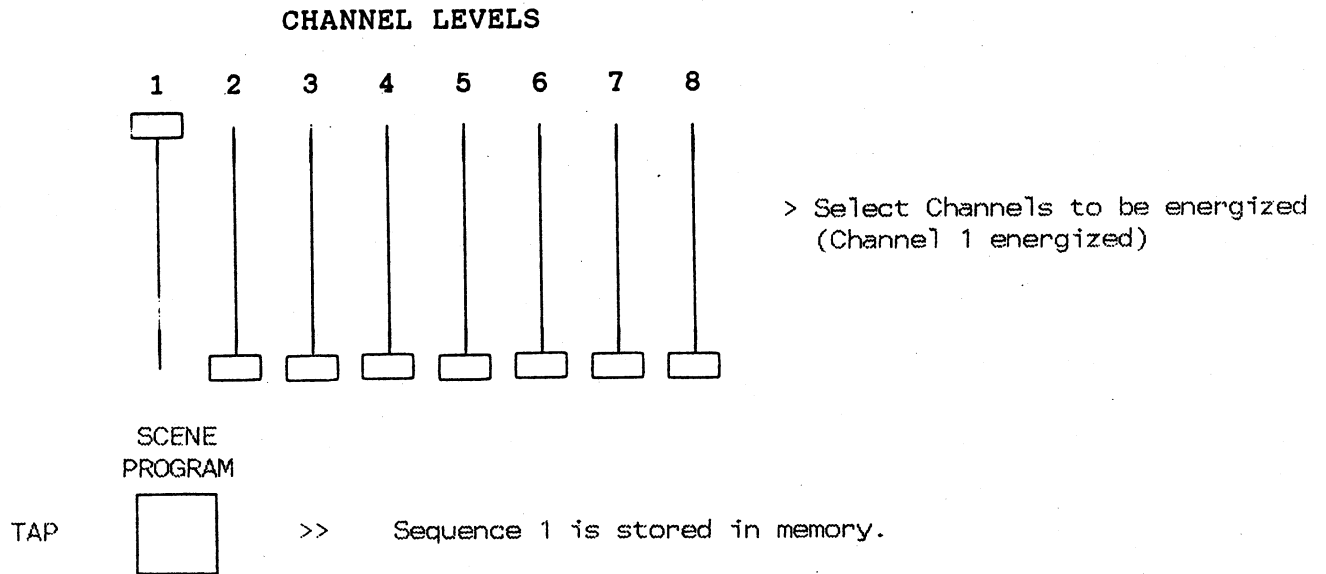
### NOTE

Manual Chase can be activated only after the Chase Mode has been selected and 5 seconds have elapsed.

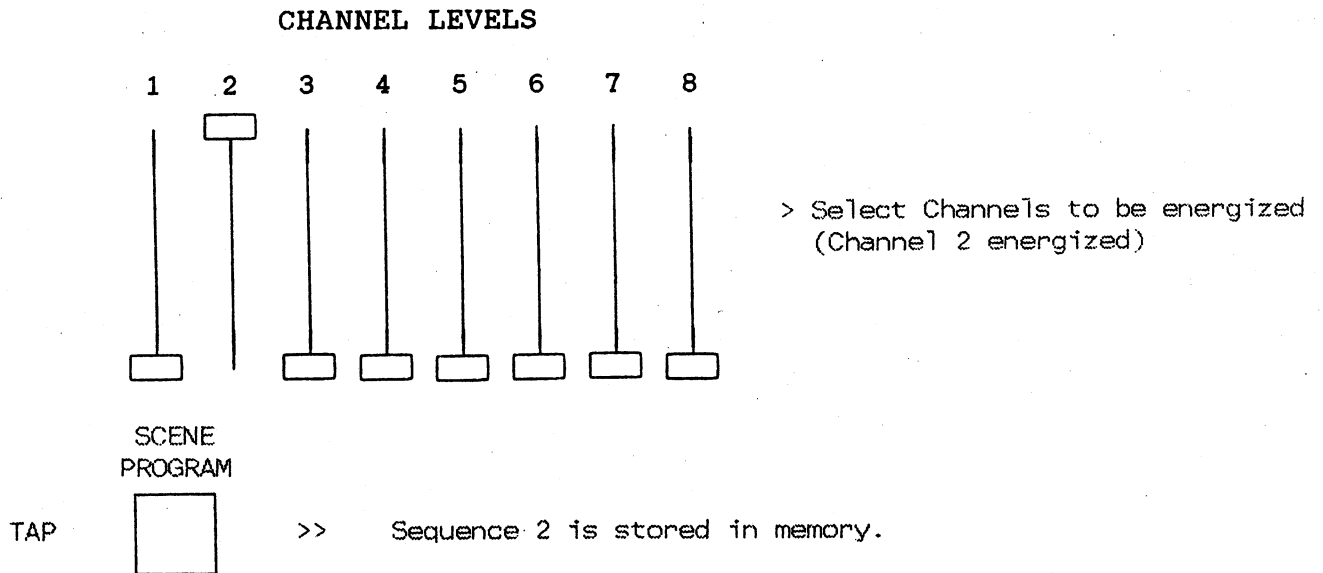
# PROGRAMMING CHASE MODE II

Eight individual sequences can be placed in memory.

## To Program Sequence 1 -




## To Program Sequence 2 -



Repeat for Sequences 3 through 8.

**NOTE**  
After programming 8 sequences,  
you will start over at Sequence 1.

After 8 sequences are programmed: TAP  ONCE >> Your Chase Effect will activate.

## OTHER FEATURES

### Freeze -

The FREEZE button will "freeze" any scene (including manual) and allow you to add another scene or chase effect. This process is called "pile on". The scene which is on when the FREEZE button is tapped will be frozen. The frozen scene remains on until it is released by tapping the FREEZE button again, or tapping the BLACK OUT button. Frozen scenes will fade out in the same manner as any other scene.

### Black Out -

The BLACK OUT button resets all modes, and turns off all lights when tapped. By tapping the BLACK OUT button, thereby activating the Black Out Mode, all lights will fade out as determined by the setting of the FADE RATE slide control. By pushing and holding the BLACK OUT button, all lights will black out instantly.

### Audio Synchronization -

The 1/4" audio input jack located on the back panel of the NCM 508 accepts line level audio signals. When activating Audio Sync. Mode by tapping the AUDIO button, lights will become energized by the audio signal levels and automatically flash to the beat of the music. The Audio Sync. Mode is turned off by tapping the AUDIO button again, or by activating Black Out.



The AUDIO GAIN slide control adjusts the sensitivity of the audio circuitry to match the incoming audio signal. This control is adjusted by beginning at minimum gain and adjusting the gain until the desired effects are reached. When the sensitivity (gain) is too great, the audio circuitry will overload and the lights will not synchronize properly.

Audio Sync. Mode can also be used by itself (by activating during Black Out), or with any Scene or Chase Mode. In Chase Modes I and II, the audio signal will only affect the Chase Rate, or if the Chase Rate slide control is off, Chase Mode will only sequence on the beat of the audio signal. In Chase Mode III, both intensity and rate are affected.





## OTHER FEATURES (CONTINUED)

### Freezing Scenes -

- FREEZE
- TAP  >>  FREEZE LED lights indicating a scene is frozen.
- >> The Scene that is on when the FREEZE button is tapped will be frozen.

### To Release a Frozen Scene -

- FREEZE                      BLACK OUT
- TAP  or  >> Frozen Scene will fade out in the same manner as any other scene.



### Audio Synchronization -

To activate:






AUDIO  
INPUT

Plug Audio Signal Cable into 1/4" jack on the back panel of the NCM 508 controller.

- AUDIO
- TAP  >>  AUDIO LED comes on
- >> Lights become energized by the Audio Signal Levels and automatically flash to the beat of the music.

To turn Audio Sync. off:

- AUDIO                      BLACK OUT
- TAP  or  >>  AUDIO LED goes off

## OTHER FEATURES (CONTINUED)

### Audio Synchronization (cont.) -

Adjusting Audio Circuitry to match Audio Signal:

AUDIO  
GAIN



-Maximum Sensitivity-

>> Increase sensitivity to achieve desired effects.

-Minimum Sensitivity-

#### CAUTION

When Audio Sensitivity is too great,  
the Audio circuitry will overload  
and the lights will not synchronize properly

Audio Sync. Mode can be used with any Scene, Chase Mode, or by itself (by activating during BLACK OUT).

#### With Chase Modes I and II:

Audio Sync. will only affect the CHASE RATE if the CHASE RATE Slide Control is on.

Audio Sync. will only sequence on the beat of the Audio Signal if the CHASE RATE Slide Control is off.

#### With Chase Mode III:

Audio Sync. will affect both intensity and Chase Rate.

## MICRO-PLEX OUTPUTS

### Micro-Plex Outputs -

These two Micro-Plex connectors located on the back panel of the NCM 508 are both outputs and will not accept any input signals.

Connect standard 3-pin microphone cables to one of these connectors and send up to 64 control channels to your NSI Dimmer Packs.

The NCM 508 receives it's power from the Dimmer Pack via the same microphone cable. Micro-Plex eliminates the need for AC power cords on the NCM 508, making placement easy and convenient. You can even use one channel of your audio snake to transmit control signals from the NCM 508 to the NSI Dimmer Packs in your lighting system setup.

## NSI CORPORATION LIMITED WARRANTY

NSI Corporation warrants new electronics products to be free from defective materials and workmanship for a period of one (1) year from the date of purchase to the original owner when purchased from an authorized NSI dealer.

The purchaser is responsible for completing and mailing to NSI, within 15 days of purchase, the warranty registration card enclosed with each product. NSI products that have been subject to accident, alteration, abuse, or defacing of the serial number are not covered by this warranty. The normal wear and tear of items such as knobs, jacks, and switches are not covered under this warranty.

If your NSI product requires service during the warranty period, NSI will repair or replace, at its option, defective materials provided you have identified yourself as the original owner of the product to NSI or any authorized NSI dealer. Transportation charges to and from an authorized dealer or the NSI factory for repair shall be the responsibility of the owner. All products returned to NSI must have factory authorization for return prior to shipping.

NSI Corporation is not liable for any incidental or consequential damages resulting from defect or failure other than repairs of the NSI product subject to the terms of this warranty. This warranty gives you specific legal rights, and you may have other rights which vary from state to state. This warranty is expressly in lieu of all other agreements and warranties expressed or implied except as may be otherwise required by law.