AL-500P-II

INSTALLATION AND OPERATION MANUAL

Please leave this manual with the unit after installation

Important warranty information enclosed

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

INTRODUCTION

The AutoLoader 500P Digital Audio Announcement System can record and play up to a 32 minute audio message for music on-hold and other single-message applications. The AutoLoader 500P combines advanced digital storage, audio processing and microprocessor technology to obtain truly natural sound reproduction and user-friendly features.

The AutoLoader 500P incorporates an integrated tape transport to simplify loading of audio message information into its digital memory.

The AutoLoader 500P may be user set to 3.5Khz bandwidth (34KBps sampling), 7.0Khz (69KBps) or 7 Khz Enhanced(92KBps) providing a choice of storage time and audio quality options—the higher the bandwidth the better the quality, but the shorter the storage time.

AUTOLOADER 500P PHYSICAL DESCRIPTION

Front Panel Controls and Indicators

AUTOLOADER - The integrated high quality tape transport is behind the door. Insert the tape cassette by opening the door, placing the tape cassette into the transport top edge first, and close the door. *Remove the tape cassette by opening the door and lifting the exposed side of the tape cassette.*

MONITOR SPEAKER - A built-in monitor speaker allows for previewing the tape while downloading or listening to the message while playing. The volume level of the MONITOR SPEAKER is preset and can not be adjusted.

POWER LAMP - Shows that the unit is "on" and operational.

LOAD LAMP & PLAY LAMP - These lamps show the status of the AutoLoader 500P as indicated by the following table:

Load Light	Play Light	Indication
Slow flash	Off	Unit Empty – no tape, no messages
Fast flash	Off	Searching tape
On (no flash)	Off	Loading tape now
Off	On (no flash)	Playing message now
Off	Slow flash	Waiting for trigger
Alternating flash		Tape load error
Simultaneous flash		Hardware error

Table 1 – Load + Play Light Indications

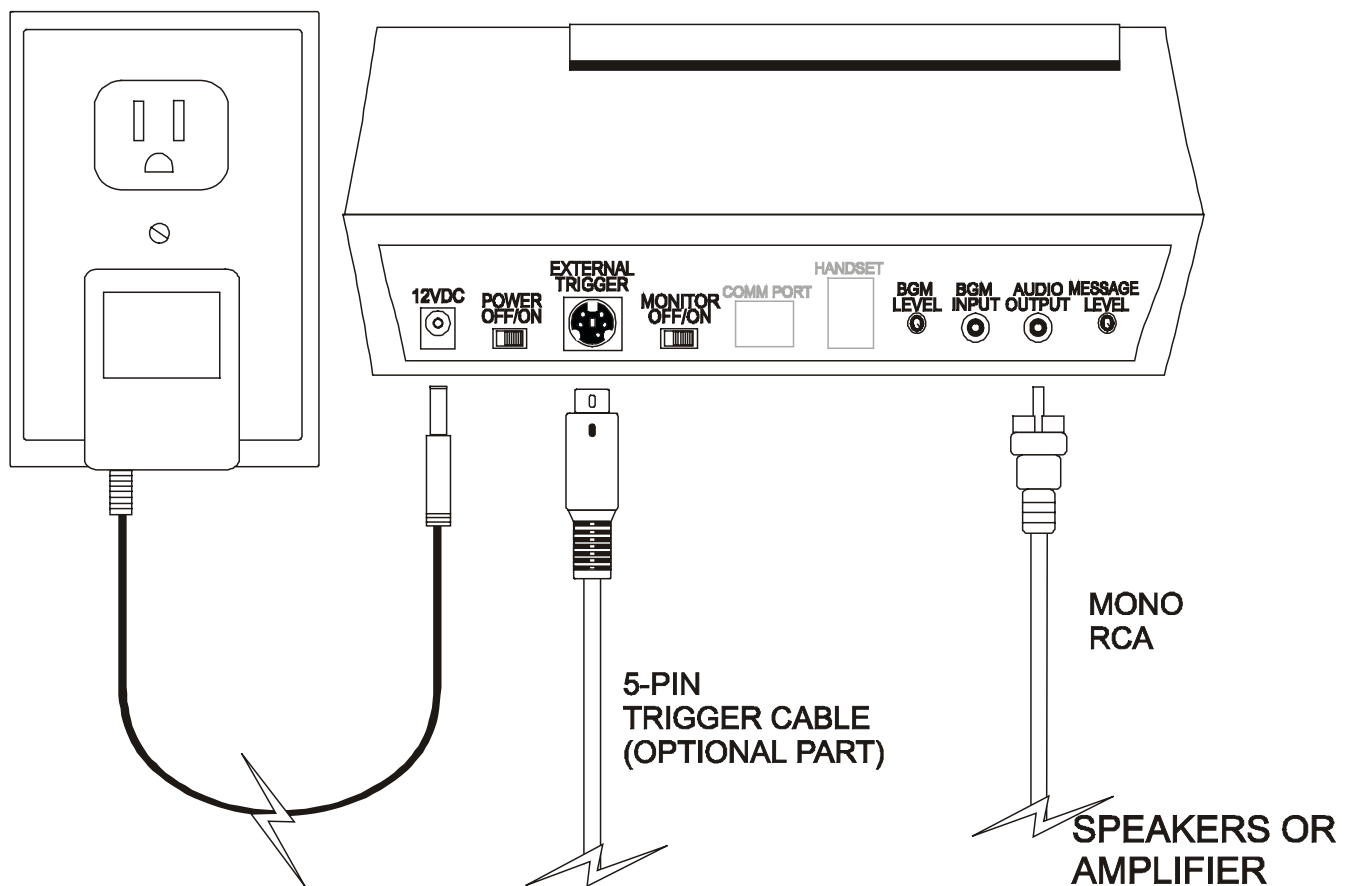## Rear Controls and Connections

Figure 1 – Rear Panel Connections Diagram

12 VDC - To connect the external DC power pack.

POWER OFF / ON - This switch enables external power to the system.

Note: The AL500P does not contain a battery backup system. Without system power, the stored messages are lost.

EXTERNAL TRIGGER - Message play is started by momentarily shorting one of the trigger leads to ground of the external trigger jack. Once started, the message plays in its entirety.

MONITOR OFF / ON - This control enables the internal speaker for previewing the message on the tape or listening to the audio message when playing.

COMM PORT - not used.

HANDSET - not used.

BGM LEVEL - not used.

BGM INPUT - not used.

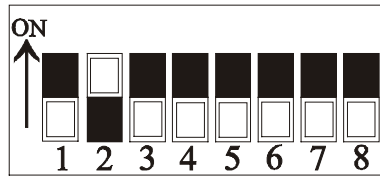AUDIO OUTPUT - This connector provides audio to the sound system input.

Figure 2 – Phono Plug (RCA) Connector

MESSAGE LEVEL - This control adjusts the audio level of the recorded audio message.

Bottom Controls

OUTPUT IMPEDANCE 1K OHM / 8 OHM - This switch located on the bottom of the unit, selects the audio output impedance. Most "on-hold" applications require the switch to be set in the "8 OHM" position. In the "8 OHM" position the unit can directly drive an 8 ohm speaker. The "1K OHM" setting is for those cases where a line level output drive is needed.

OPTION SELECT SWITCHES - This control located on the bottom of the unit, the Option Select Switches provides the user the capability to configure the AutoLoader 500P to meet their individual needs. These switches are used to select continuous or external trigger message play, bandwidth, and tape preview on/off.

Example:
Switch 1: Continuous play
Switches 2&3: 7KHz bandwidth - 69KBps
Switch 4: Tape preview disabled

☐ Switch Knob

Figure 3 – Option Select (DIP) Switch Diagram

A switch is "On" when it is pointing in the direction of the arrow <u>AWAY FROM</u> the switch numbers, and "Off" when it is pointing <u>TOWARDS</u> the switch numbers.

The diagram above is for illustrative purposes only—your actual switch settings will vary.

Switch settings are read <u>only</u> at the moment power is turned on. Therefore, any changes made to the switch settings while power is on do not take effect until the power is recycled.

Switch #	Option	Possible Values
1	Message play	On = Trigger only Off = Continuous play
2-3	Bandwidth	2 Off, 3 Off = 3.5KHz/34KBps 2 On, 3 Off = 7.0KHz/69KBps 2 Off, 3 On = 7.0E KHz/92KBps 2 On, 3 On = 7.0E KHz/92KBps
4	Tape load preview	On = Enabled Off = Disabled
5-8	Not used	

Table 2 – Option Select Switches

Message memory - AutoLoader 500P is available with 4, 8, 16 or 32 minutes (@3.5 KHz Bandwidth) of message memory. The system automatically senses the amount of message memory and adjusts the message length accordingly.

Memory Size				Bandwidth	Sample Rate
4 Min.	8 Min.	16 Min.	32 Min.		
4 Min.	8 Min.	16 Min.	32 Min.	3.5 KHz	34KBps
2 Min.	4 Min.	8 Min.	16 Min.	7.0 KHz	69 KBps
90 Sec.	3 Min.	6 Min.	12 Min.	7.0E KHz	92 KBps

Table 3 – Message Memory Table

Switch 1, Message play - Option switch 1 allows the user to configure the system for either Continuous Message play or Triggered Message play.

Switches 2-3, Bandwidth - Option switches 2 & 3 control the message bandwidth. If switch 3 is off the unit can be set for either 3.5 Khz (34KBps) or 7.0 Khz (69KBps) bandwidth using switch 2. If switch 3 is on the unit is set for a 7.0 Khz Enhanced(92KBps) bandwidth, regardless of whether switch 2 is on or off. Message bandwidth determines the fidelity of the audio message, the higher the bandwidth the better the audio quality but the shorter the storage time. See the message memory table on the previous page for details.

Switch 4, Tape load preview - Option switches 4 controls the Message Preview feature. If switch 4 is on the unit will play a small portion of the tape before loading the message into memory so that the audio may be confirmed. If switch 4 is off the unit will load the message directly without a preview.

INSTALLATION

Locate the AutoLoader 500P within 6 feet of a 110 VAC outlet. The AutoLoader 500P is designed to be placed on a flat, level surface. A wall mount kit is also available for vertical mounting. When locating, be sure to leave clearance for connection and adjustments. Connect the DC power pack supplied with the system to the 12 VDC power connection on the side of the unit and plug the power pack into a 110 VAC outlet. Set the OUTPUT IMPEDANCE switch, located on the bottom of the unit, to the proper position for the sound system (8 Ohm or 1K Ohm). Connect a cable from the AUDIO OUTPUT jack on the rear of the unit to the sound system input. Follow the Message Loading instructions below to load the unit with audio. Once loaded, adjust the MESSAGE LEVEL control and or the OUTPUT IMPEDANCE for optimum levels over the sound or telephone system.

TAPE LOADING

Loading the **AutoLoader 500P** is as simple as inserting a "Normal Bias" tape cassette into the tape transport and closing the door. The **AutoLoader 500P** detects the presence of the tape and automatically begins the load process.

While waiting for the load to begin, the **Load lamp** flashes slowly. Insert the tape into the transport, top edge first. If the **Message Preview switch** is On, the **AutoLoader 500P** performs a preview of the audio tape by rewinding the tape, playing approximately 10 seconds of the audio message, stopping, waiting 5 seconds. This wait provides the user the opportunity to stop tape load by removing the tape cassette from the transport. After the wait, the tape rewinds and the load lamp flashes quickly as it awaits audio detection. As soon as audio is detected, the load lamp becomes solid and recording begins. If the **Message Preview switch** is in the Off position, the unit will skip the preview, going directly into the recording process. Once audio information is detected, the **Load lamp** turns on, indicating that the message is loading. The **AutoLoader 500P** monitors the audio information on the tape for a 6 second period of silence. This 6 seconds of silence indicates the end of the audio message, recording is stopped and the last 6 seconds of silence is removed. At the end of message loading, the tape rewinds and message play begins, indicated by a solid play lamp.

Once loaded and playing, the tape is not required unless a power failure occurs. Removal of the tape cassette does not affect playing of the recorded message. Insertion of a cassette, however, causes the **AutoLoader 500P** to stop messages playing and initiate message loading. It is recommended that the tape be left in the cassette deck to facilitate automatic message re-load in the event of a prolonged power outage.

MESSAGE PLAY OPERATION

The **AutoLoader 500P** plays the audio message on a continuous or externally triggered mode.
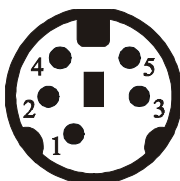
Continuous Play

In Continuous Play mode (Option Select Switch #1 = OFF), once the audio message is loaded it is played constantly, upon reaching the end of the message, it is immediately started again.

External Trigger

External Trigger operation (Option Select Switch #1 = ON) allows the message to

be activated from an external source. Electrically the trigger signal is optically coupled providing isolation, static protection and long wiring runs (1500 feet). Message play is started by shorting pins 1 & 5. Once started, the message plays in its entirety. At the end of the message, if pins 1 & 5 are shorted, the message plays again.

Connector and 6' Cable
NTL# ECC-M5

Mating Connector
LZR Electronics - MD50
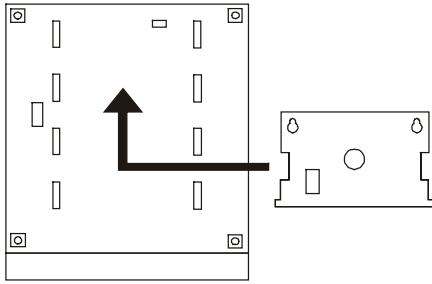
Figure 4 – Trigger Plug Pin Numbers

TAPE PREPARATION

Use only "Normal Bias" (Type I) tape cassettes not exceeding 90 minutes. Do not use DOLBY or any other type of noise reduction systems. The **AutoLoader 500P** was designed for optimum results without such noise reduction techniques.
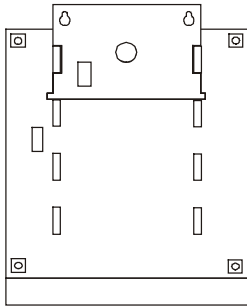
Record your productions in **2 channel mono** with the audio level averaging 0dB while peaking at no hotter than +6dB. Recordings made in this format will optimize the digitizing process and provide consistent output levels on all Nel-Tech Labs equipment.

Start the recording no further than 20 seconds from the beginning of your tape. The message must not have levels averaging less than -25 db for longer than 5 seconds. Any passages at less than -25 db longer than 5 seconds are interpreted the end of the load.
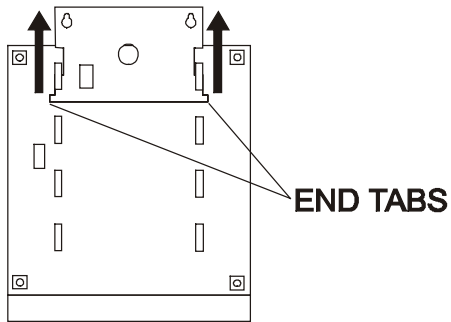
WALL MOUNT INSTRUCTIONS

Step 1: Turn the unit so that the base is facing you.

Step 2: Align the Wall Mount Bracket with the base as shown.

END TABS

Step 3: Slide the bracket up until the end tabs are stopped by the base.

Figure 5 – Wall Mount Diagram

FCC Notice

WARNING: This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when this equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense.

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la Class A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

LIMITED WARRANTY

TERMS: Nel-Tech warrants to the original purchaser ("Buyer") that the Product sold is free from defects in material and workmanship at the time of purchase. The warranty extends three (3) years from the date of original purchase and covers parts and labor. Buyer must provide written notice to Nel-Tech within the warranty period of any defective part or conditions. If the defect is not the result of improper use, service, maintenance or installation, and if the equipment has not been otherwise damaged or modified after shipment, Nel-Tech or its authorized representative shall either replace or repair the defective Product at Nel-Tech's option. No credit shall be allowed for work performed by Buyer or unauthorized parties. Out-of-warranty repairs will be invoiced at the current Nel-Tech hourly rate plus the cost of parts, shipping and handling. IN THE EVENT THAT THE PRODUCT SERIAL NUMBER IS MISSING OR HAS BEEN TAMPERED WITH IN ANY WAY, THE FOREGOING WARRANTY IS VOID AND WITHOUT EFFECT AND NEL-TECH SHALL HAVE NO LIABILITY WHATSOEVER ON ACCOUNT OF DEFECTS TO SUCH PRODUCT.

LIMITATIONS: EXCEPT AS STATED ABOVE, THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, THAT EXTEND BEYOND THE SPECIFICATIONS FOR THE PRODUCT. NEL-TECH EXPRESSLY DISCLAIMS ANY WARRANTY, EXPRESS OR IMPLIED, THAT EQUIPMENT SOLD HEREUNDER IS OF MERCHANTIABLE QUALITY OR THAT IT CAN BE USED, OR IS FIT FOR ANY PARTICULAR PURPOSE. BUYER PURCHASES AND ACCEPTS EQUIPMENT SOLELY ON THE BASIS OF THE WARRANTY HEREINABOVE EXPRESSED. UNDER NO CIRCUMSTANCES SHALL NEL-TECH BE LIABLE BY VIRTUE OF THIS WARRANTY OR OTHERWISE FOR ANY SPECIAL, INDIRECT, SECONDARY OR CONSEQUENTIAL DAMAGES TO ANY PERSON OR PROPERTY ARISING OUT OF THE USE OR INABILITY TO USE THE PRODUCT.

REPAIRING OR REPLACING PRODUCT: Buyer may obtain the repair or replacement of any flawed part or equipment covered under this warranty through Nel-Tech only. Buyer is responsible for all shipping and handling charges in connection with the performance of this warranty. Products returned to Nel-Tech must be securely packaged to prevent damage in transit, freight prepaid, and insured for replacement value. A return authorization number assigned by Nel-Tech must be clearly marked on the outside of the shipping container. Proof of purchase must accompany shipment. Items delivered to Nel-Tech without a return authorization clearly marked on the outside of the shipping container, and/or without proof of purchase will be refused. Please contact Nel-Tech at the address and phone number below to receive a return authorization number and to arrange for the repair or replacement of a flawed part covered by this warranty. Please indicate the Product's serial number in all correspondence; an authorization number will not be issued in the absence of a serial number. Nel-Tech Labs, Inc., 101 Zachary Road, Manchester, NH 03109-5609, telephone (603) 641-8844.

Information contained herein is subject to change without prior notification. Nel-Tech Labs, Inc. provides this manual without warranty of any kind, expressed or implied. This user's manual may contain technical and/or typographical errors.

Printed in the U.S.A.