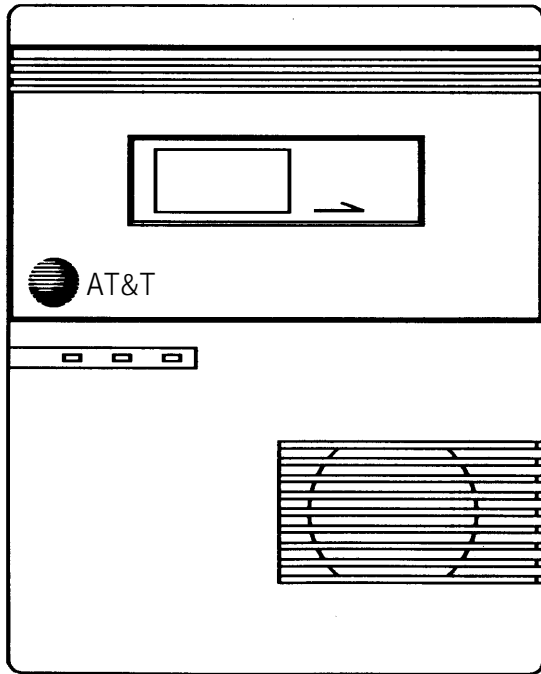




# Digital Magic On Hold<sup>SM</sup> Tape Deck Model DMOH

## Installation and Operation Instructions



**Magic On Hold is a Service Mark of AT&T**

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## Limited Warranty and Limitation of Liability

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AT&T warrants to you that the product will be free from defects in material and workmanship when title passes to you. If you notify AT&T that the product has failed to operate as warranted within one year of the date title passes to you, AT&T will, at its option, repair or replace the component or components of the product that failed to operate as warranted. Any repair or replacement components may be new or refurbished and will be provided on an exchange basis. If AT&T determines that the product cannot be repaired or replaced, AT&T will refund the purchase price to you.

If you purchase the product directly from AT&T, AT&T will perform warranty repair on your premises in accordance with the terms and conditions of AT&T's "Business Day" or "Around-the-Clock" warranty plans. The details of AT&T's warranty plans may be obtained from AT&T. If you purchased the product from an authorized dealer, you will be covered by AT&T's authorized dealer plan during the warranty period. Contact your authorized dealer for details of AT&T's authorized dealer warranty plan. AT&T's obligation to repair, replace or refund as set forth above is your exclusive remedy.

The limited warranties provided above do not cover damages, defects, malfunctions or product failures caused by:

- Failure to follow AT&T's installation, operation or maintenance instructions;
- Unauthorized modification or alteration of the product or its components;
- Product abuse, misuse or the negligent acts of persons not under the reasonable control of AT&T;
- Actions of third parties and acts of God other than power surges (e.g., lightning).

This limited warranty applies only to the product purchased directly from AT&T or purchased directly from an authorized AT&T dealer. This limited warranty does not apply to products purchased or operated outside the United States.

You may be required to provide AT&T with proof of purchase before AT&T will perform any warranty replacements.

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# Digital Magic On Hold<sup>SM</sup> Tape Deck Model DMOH

## Installation and Operation Instructions

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### To Order Copies of This Manual

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Call: Your AT&T Information Systems Sales Representative  
or  
Your Business Sales and Service Center  
1-800-247-7000  
or  
The AT&T Customer Information Center  
1-800-432-6600

Write: AT&T Customer Information Center  
P.O. Box 19901  
Indianapolis, IN 46219

Order: Digital Magic On Hold Tape Deck  
Model DMOH  
Installation and Operation Instructions  
Issue # 1

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### For Technical Assistance

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AT&T provides a toll-free customer helpline 24-hours a day. In the USA, call the AT&T Helpline at 1-800-628-2888 for assistance. In Canada, call one of the following Technical Assistance Centers for service or technical assistance:

Eastern Canada and Ottawa: 1-800-363-1882  
Ontario: 1-800-387-4268  
Central and Western Canada: 1-800-663-9817

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## FCC Notice

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This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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## Specifications

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**Sampling Method:** Adaptive Delta Modulation (ADM)

**Sampling Frequency (Switch Selected):** 32/45 Kilobits/sec.

**Message Length (Switch Selected):** 3 or 4 minutes

**Power Required:** 12V AC/DC. Power supply included with the unit provides 12VAC @ 800mA from 110VAC source

**External Speaker Power:** 1 Watt into 8 ohms

**Input:** High-quality Magic On Hold cassette-tape. Fully automatic operation

**Output:** LINE 600-ohms/transformer-balanced via RCA phono jack; 1Watt into 8-ohms via RCA jack (can be used to power an external speaker)

**Controls:** POWER on/off switch; SPEAKER on/off switch; VOLUME control (for monitor speaker, 1WATT and LINE output jacks); TRIG(ger) jack for single play operation

**Indicators:** LEDs for POWER, PLAY and RECORD

**Mounting:** Desk-top or wall-mounting, template and hardware included

**Dimensions:** 7-7/8" x 6-3/8" x 3-1/4"

**Shipping Weight:** 3 lbs.

**Cassette Tape:** Magic On Hold – AT&T Customized Programming Service

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## Introduction

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The AT&T Digital Magic On Hold (DMOH) Tape Deck plays a digitally recorded Magic On Hold announcement over the message-on-hold bus of most telephone systems. To obtain Magic On Hold customized cassette programs call your AT&T account executive or 1-800-247-7000.

To operate, place a cassette tape in the tape compartment. The unit automatically plays (previews) a portion of the audio program over its monitor speaker, and then pauses so that you can change tapes if desired. If you leave the cassette in the compartment, the message is recorded (downloaded) into digital memory. The digitally-stored message then plays continuously (it can be set for single-play operation). Solid-state operation results in less wear of the tape and tape drive mechanism, increasing reliability and performance.

The DMOH unit has two sampling rates, which determines the maximum recording times (shorter record time provides the highest quality playback sound). The unit can record 3 minutes or 4 minutes, 20 seconds total. The unit features:

- Automatic downloading, with preview function, from a Magic On Hold cassette tape
- Automatic reload after power outage
- High reliability with no tape wear or maintenance problems
- Choice of 600-ohm "Line" output or 1 Watt (8-ohm) output
- Built-in monitor speaker with on/off switch
- Volume control (for monitor speaker, 600-ohm/1-Watt outputs).
- One time play capability (triggered by external contact closure)

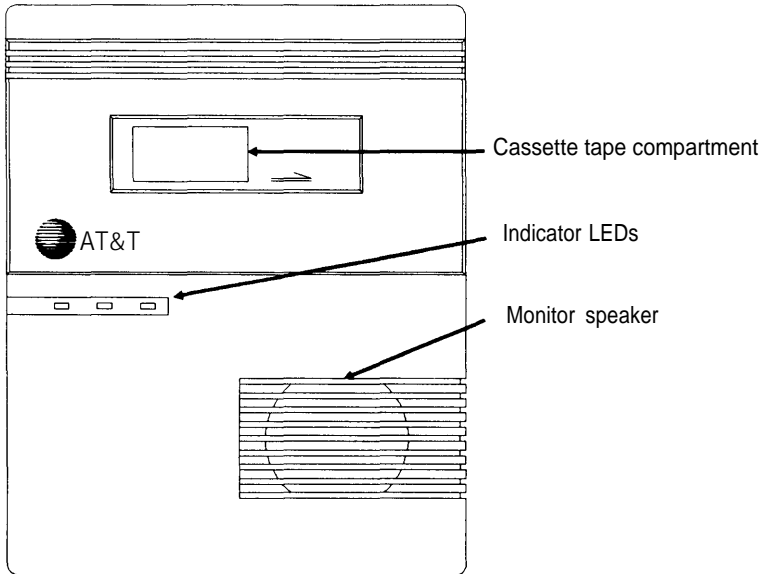
To change a message, simply insert a new cassette. The new message is previewed and then automatically downloaded. Once a message has been loaded, the cassette rewinds and remains in the tape compartment. Then, if the power goes out, or if you turn your system off, the message is automatically reloaded once power is restored.

The unit provides 600-ohm and 1-watt output jacks for connection to the music-on-hold (MOH) bus of a telephone system, external speaker, or public address system. The unit mounts easily on a wall or shelf and comes complete with wall-mounting hardware, an audio patch cord, stereo mini plug, and 12 VAC power supply which can be plugged into any convenient 110V AC outlet.

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## Front Panel Features

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### Cassette Tape Compartment

High-quality cassette tape drive mechanism accepts a Magic On Hold cassette tape. Cassette tape direction indicator is shown on the compartment door.

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### LED Indicators

For POWER, PLAY, & RECORD. PLAY illuminates only while the digitally stored message is playing. It goes out when recording (downloading) and between playbacks during single-play operation.

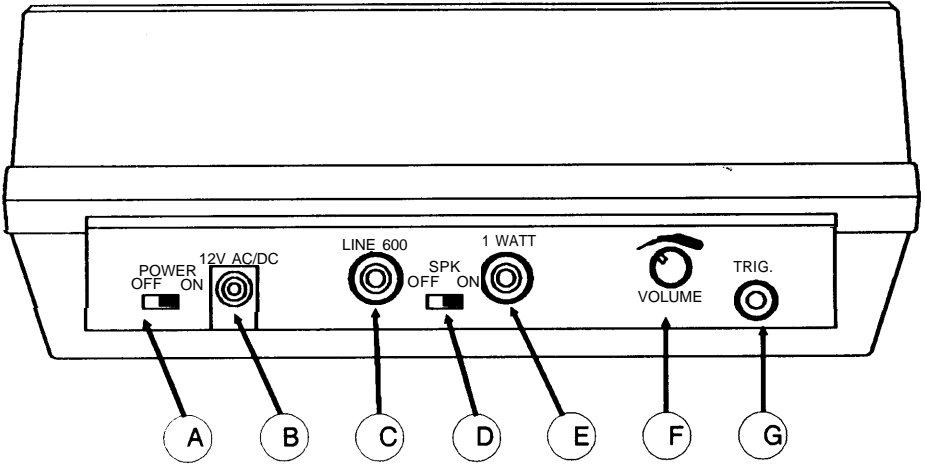
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### Monitor Speaker

Lets you monitor the tape during the preview and downloading process, and when the unit is operating. An on/off switch is included on the rear panel (SPEAKER).

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## Rear Panel Controls and Connectors



A	POWER	Turns power on. The memory is erased when the switch is off.
B	12V AC/DC	Jack accepts 12V AC or DC power to the unit. The power supply provides 12V AC @ 800mA from a 110V AC source.
C	LINE 600Ω	600-ohm output to the MOH input on a telephone system or to a loudspeaker system.
D	SPEAKER	Turns monitor speaker on or off.
E	1 WATT	RCA jack provides 1 Watt @ 8 ohms.
F	VOLUME	Controls output level of the monitor speaker and the 1WATT and LINE 600 Ω jacks.
G	TRIG	External trigger jack for single-play operation. Accepts a mono or stereo mini-plug (you can monitor system operation when a stereo mini-plug is used).



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## Installation & Operation

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### DMOH Package Contents

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- Digital Magic On Hold unit (Comcode: 406659342)
- Power Supply
- Cassette Tape, Generic (Comcode: 406659359)
- Audio Patch Cord
- Stereo Mini-Plug
- Wall Anchors
- Installation & Operation Instructions
- Mounting Template
- Customer Card

### Unpacking & Inspection

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The DMOH unit was carefully checked at the factory. Inspect the carton and unit for signs of damage. If damage is found, notify the location from whom the unit was purchased. If the unit was shipped to you directly, notify the transportation company without delay if it is damaged or fails to operate correctly. Save the carton and all packing material as evidence of damage for their inspection.

### Installation Precautions

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#### **Observe the following installation precautions:**

- Do not install the unit in damp areas, or in areas where it is likely to be exposed to rain or moisture.
- Do not install the unit in areas where the ambient temperature is likely to go below 40° F or exceed 90° F.
- Do not place the unit on other equipment which produces high heat, uncomfortable to the touch.
- Use suitable fasteners on hollow walls or other similar thin materials. Plastic screw anchors are included.

### Installation Procedure

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#### **Select Memory Capacity**

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A MODE switch on the underside of the unit sets the maximum memory capacity. Set to 3/6 position for highest sound quality. Set to 4/8 position for extended memory capacity of 4 minutes, 20

seconds. The unit only acknowledges changes in memory capacity on power-up or cassette changes.

### **Connecting a Power Supply**

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Connect the output plug from the power supply to the 12V AC/DC jack on the rear panel of the unit. Plug the power supply into any convenient 110V AC outlet.

### **Connecting to the Telephone System**

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Use the audio patch cord terminated with an RCA plug (included) to connect the LINE 600 ohm or 1 WATT output to the telephone system's music-on-hold (MOH) input. Refer to page 9 for wiring connections. All MOH connections should be per the specific telephone system (Merlin, Partner, etc.) requirements.

### **Connecting an External Speaker**

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The 1 WATT output RCA jack can be used to power an external speaker. The output provides 1 watt into 8 ohms. The LINE 600Ω or 1 WATT outputs can also be used to feed the input of a loudspeaker system's amplifier.

### **Loading Cassette Tape**

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**Use the following procedure to load a Magic On Hold cassette tape.**

- Set the sampling rate/memory capacity using the MODE switch on the underside of the unit.
- Place the POWER switch in the ON position. The red POWER indicator will illuminate.
- Be sure the SPEAKER switch is in the on position (if desired), and set the VOLUME control between its minimum and maximum positions
- Open the tape compartment door and insert the cassette tape. The tape direction is indicated on the compartment door. Close the tape compartment door.

The unit rewinds the cassette tape (if necessary) and then begins to play. It plays (preview) approximately 5 seconds of the audio message and then stops (the RECORD and PLAY indicators do not illuminate during the preview). The tape heads then retract for approximately 5 seconds following the preview, allowing you to

remove the cassette, if desired. If you do not remove the cassette, it rewinds and the message downloads into digital memory (the RECORD indicator illuminates when downloading starts). Adjust the volume for comfortable listening level during downloading and play.

**Important Notes:**

1. The downloading process starts when audio signal is sensed, ensuring that memory capacity will not be consumed during tape leader travel or for a delay of the audio recording.
2. The audio RCA outputs do not operate during the downloading process.

Recording stops (and the RECORD indicator will go out) when 4 seconds of silence has elapsed following the recording, **or** when memory capacity is exceeded, **or** when the cassette tape reaches the end of its travel. After the message has been downloaded, the cassette automatically rewinds, and should be stored in the tape compartment for reloading after power outages.

Following the downloading process, the message will play continuously (the PLAY LED will illuminate). To properly adjust the volume level for telephone message output, the following steps should be followed:

- Slide speaker monitor switch to off position.
- Connect the unit to the telephone system through the LINE 600 ohm output or 1 WATT output, refer to page 9 for system wiring connections. If telephone system has MOH volume control, set it to approximately 1/2 output level.
- Place a call to your telephone from another telephone.
- Place the calling telephone on hold.
- Adjust DMOH volume control to obtain a comfortable listening level. If level is not acceptable, adjust telephone system MOH volume.

## Optional External Trigger Operation

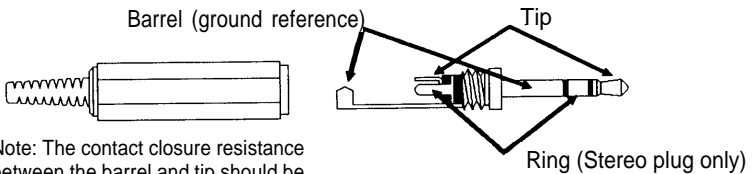
### External Trigger Operation is not required for most AT&T MOH Applications

The unit can be set for single-play operation, activated by an external trigger. (Note: the PLAY LED on the front panel illuminates only during digital playback.)

The TRIG mini-jack on the rear panel accepts a mono or stereo mini-plug, as shown in the illustration below. When the plug is inserted, the unit automatically switches to the single-play mode. (If the trigger is inserted during the playback, the message will play through to the end and then stop.)

The external trigger offers two modes of operation: If the contacts are closed and then opened within 5 five seconds, the message will play completely and then stop (any further contact closure action at the trigger is ignored until the playback is complete). If the contacts are closed for more than five seconds, playback will stop when the contacts are opened and the unit will return to its idle state.

If a stereo mini-plug is used, the middle ring and barrel provides 0V DC or 5V DC level which can be used to indicate unit status: The 0V DC level indicates digital playback operation; 5V DC indicates the unit has stopped playing the message. (Note: the signal is for monitoring purposes only and can not be used to directly operate external equipment.)



Note: The contact closure resistance between the barrel and tip should be less than 1 kilohm.

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## Troubleshooting

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Power LED does not light – Check power supply connection. Turn Power switch On.

Tape plays too fast – Remove cassette and tighten up any slack in the cassette.

Output too low or sounds distorted over telephone – Readjust volume or change type of output used. Some telephone systems also have a volume control for the MOH system; this may also require adjustment.

Cannot remove cassette because head is engaged – Turn power off and then on. Wait for head to retract then remove cassette.

Unit does not preview or download cassette – The DMOH is not compatible with CrO<sub>2</sub> tapes. You must use a proper AT&T Magic On Hold cassette.

Tape does not load properly or drive mechanism continues to spin with the tape in place – can be caused if an endless-loop tape is inserted into the unit. Do not use endless-loop tapes.

Unit fails to download or message is very saturated – Check the temperature at the unit's location. If it is below freezing, let the unit settle at room temperature and try again.

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## Care and Maintenance

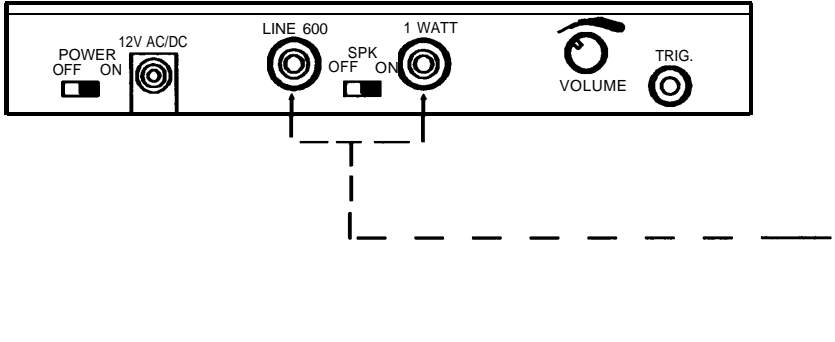
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The impact-resistant housing and quality construction of the DMOH virtually eliminates the need for service or maintenance.

If the tape drive mechanism receives extensive wear, the tape head, capstan, and pinch roller can be cleaned with isopropyl alcohol using a cotton-tipped applicator.

## Wiring Connections

# Digital Magic On Hold Tape Deck



TELEPHONE SYSTEM	MUSIC ON HOLD CONNECTION (See Note)	DMOH OUTPUT
MERLIN® 206, 410, 820	PAGING CARTRIDGE #6102-MHPA	1 WATT
MERLIN 1030/3070	SERVICES MODULE #61320A	1 WATT
MERLIN II MERLIN LEGEND	MUSIC COUPLER #61398A - THROUGH LOOP START TRUNK PORT	600 OHM
MERLIN PLUS	BUILT INTO CONTROL UNIT (MOH JACK)	1 WATT
PARTNER® II PARTNER PLUS SPIRIT®	BUILT INTO CONTROL UNIT (MOH JACK)	600 OHM
System 25	TIP/RING CIRCUIT PACK ZTN-78 (#62504A) or ANALOG LINE CIRCUIT PACK TN742 (#63111A) KIT-OF-PARTS D-181575 (#62513)	1 WATT
System 75/ DEFINITY Generic	AUX. TRUNK CIRCUIT PACK TN763B (#63118A) 36A COUPLER (#65235)	600 OHM

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Note: Connect the Magic On Hold unit to the telephone system per the telephone system installation instructions for Music-On-Hold.

