

OPERATING INSTRUCTIONS

EXTENDED MEMORY RECORDER

The Extended Memory Recorder (EMR) is designed to be operated in conjunction with a Digital Message Recorder (DMR) and will not function as a stand alone device. These instructions are an addendum to the operating instructions that are shipped with the Digital Message Recorder and take precedence over DMR instructions.

BEFORE YOU BEGIN:

Prior to connecting your Extended Memory Recorder(s) (EMR) it is recommended that you read through these instructions from beginning to end to familiarize yourself with the installation and operation of the device. Then proceed step-by step as outlined below. Remember to keep these instructions (along with the original shipping carton) in a safe place for future reference. Notify your shipping company or your dealer immediately if any shipping damage is evident.

In the package you will find:

- the Extended Memory Recorder Unit
- Ribbon Interconnect Cable w/ 4-40 screws
- Port 'B' Logic Connector - if more than 1 EMR is to be used
- Start Jumper w/ 1/8 in. mono plug end
- Sync Connector Cable(s) - RCA to RCA ends

STEP 1 CONNECTIONS

- a) Check with your supplier to ensure that the Digital Message Recorder that you will be using has been configured properly for operation with an Extended Memory Recorder. This consists of removing the memory chips and re-setting the DIP switches internally in the Digital Message Recorder. Re-configuring should be done **only by a qualified service technician**. Refer to the attached Connections Diagram as you proceed with hooking up the equipment.
- b) Most users find it convenient to stack the EMR directly on top of the DMR. With the power disconnected and the (Memory) Backup switches turned OFF, connect the Interconnect Cable (male ends) from the Digital Message Recorder (Port A) to the Extended Memory Recorder (Port A) as illustrated in the attached Connections Diagram. The cable should be secured at both ends with the 4-40 screws provided. Connect the Start jumper to positions S1 and S2 on the back of the DMR and plug it into the jack on the back of the EMR. The center 'tip' lead is connected to S1.

If more than one EMR is to be connected to the DMR it is necessary to connect them in a 'Daisy Chain'. The Port B Logic Connector (female ends) must be connected to all Port B receptacles (male) of the EMR's and the Sync connector should be connected from the Line Out jack of any one EMR to the Line In jack on the next EMR in the chain. Repeat these connections for all EMR's in the chain. Do not connect the Sync connectors to the DMR as the Line In and Line Out on the DMR are used for audio signals. Secure all connectors with 4-40 screws supplied and turn the (Memory) Backup switches to the ON position.

- c) Connect the power adapter to either the DMR or the EMR. Power is supplied to the other units in the chain via the Port A Data Connector. The LED indicator lights on the front panels of both units should turn on. (For solar applications the VOLUME and SIGNAL bargraph displays on the DMR may have been turned off internally at the factory to reduce power consumption).
- d) Leave the units plugged in for a minimum of 8 hours to ensure the internal batteries are adequately charged. (The units will act erratically if the batteries have not been sufficiently charged.) It is advisable to allow the units to charge in this manner after any extended period that they have not been plugged in. Ensure that the (MEMORY) BACKUP switch on the rear panel is switched ON. This switch should only be turned off for periods of storage longer than one month.
- e) Finish making connections as outlined in the instructions provided with the DMR (Speaker, Line Output, External Start, etc.). Ensure that the Auto-repeat switches on all units have been turned OFF (to the LEFT as you view the unit from the rear).

STEP 2 RECORDING

- f) Prior to recording it is necessary to clear the memory in the EMR's. Simply unplug the power plug and turn the (Memory) Backup switches to the OFF position. Wait 30 seconds and then turn the (Memory) Backup switches back to the ON position and reconnect the power.
- g) Ensure that the audio source is connected to the LINE IN jack of the DMR as shown in the enclosed diagram and that all Auto-repeat switches on the back of the EMR's have been turned OFF (to the LEFT as you view the unit from the rear). It may be advisable to disconnect any external start switches (if used) from the EMR prior to recording to avoid accidental starting of the units.
- h) Press the REC/PB (record/playback) button on the DMR. The red RECORD indicator light should now be on.
- i) Set the output level of the Source (typically a cassette recorder is used). You should be able to hear the source through the speaker - the DMR has an internal monitor feature so that you can hear what is being recorded. Only peak levels of audio should light up the top sectors of the SIGNAL indicator. Normally only the bottom 3-5 sectors will stay lit continuously. Note that the volume setting on the DMR has no bearing on the incoming (source) level.

If distortion is apparent through the monitor feature the input level is too high and should be reduced accordingly, otherwise extreme distortion will occur on playback due to "digital clipping". We encourage the user to experiment with various levels of input to experience this and to get a better feel for the operation of the DMR. It is not possible to damage the unit by over-driving the input.

- j) Cue the audio source to the point at which you wish the recording to begin. Note that the EMR cannot be 'paused' in the middle of the recording process so the source should be capable of down-loading the whole audio track without interruption.

- k) Press the STOP button then the START button on the DMR to begin the recording process and start the audio source.
- l) When you have finished recording the audio track press the REC/PB button on the DMR. This will stop the recording process and put the units back into the playback mode - the green playback light on the DMR should come on.
- m) If the EMR's are to auto-repeat, switch the Auto-Repeat switch on the back of the EMR to the ON position (to the RIGHT as you view the unit from the rear). Where multiple EMR's are being used use only the Auto-Repeat switch on the first EMR in the chain - all other Auto-Repeat switches must remain in the Off position
- n) Disconnect the LINE IN cord.

Your recordings are now held in digital memory and will remain so until you wish to record something else. The DMR will retain these messages in memory indefinitely unless the power to the unit is disconnected for a period of longer than 2 weeks (14 days), if the (MEMORY) BACKUP switch is turned off, or if the Interconnect cable(s) is disconnected. Should the units be inadvertently left unplugged for more than 14 days and the audio track is lost it is recommended they be plugged in for a minimum of 8 hours prior to re-recording.

STEP 3 PLAYBACK

- k) Make sure that the green playback LED light on the REC/PB switch on the DMR is lighted and all connections have been properly made. Press Start on the DMR or start the units in the auto-repeat mode by turning the auto repeat switch on the back of the first EMR in the chain. Set the VOLUME controls on the DMR to the desired listening level. Press VOL(+) to increase the volume and VOL(-) to decrease the volume. The volume setting is displayed in the volume indicator. (The DMR will "remember" the volume setting you have selected on every subsequent playback, even if the DMR remains unplugged over a period of time.)
- l) The message can be stopped during playback by pressing STOP on the DMR unless the Auto Repeat switch on the EMR is ON, in which case the audio track will reset to the beginning and start playing from that point. Note that the EMR has been configured in such a way that the message can not be stopped from any external start switches (if used) to avoid any interruptions during playback.

Recording hint: If a delay is desired before the audio track starts, simply leave a bit of blank space at the beginning of the audio track when making the recording.

*** CONGRATULATIONS ***
YOUR EXTENDED MEMORY RECORDER IS NOW READY TO GO TO WORK !

CARE AND CLEANING

Your new Extended Memory Recorder has been designed and constructed for the utmost in quality and durability. Because of its 100% solid-state design, the only thing you should ever have to do is dust it with a dry cloth. A cloth dampened with a mild soapy water solution can also be used. Do not immerse the unit in water. If any of the cords become damaged or frayed they should be replaced immediately to avoid damage to the equipment or any peripheral devices. Consult your nearest dealer for replacements.

The EMR and DMR should be plugged-in to the power source even when not in use to maintain the internal battery in peak condition. Normal battery life is five to seven years. To protect the battery for long term storage, ensure that they have been sufficiently charged by leaving the units plugged in with the (Memory) Backup switches turned ON for 48 hrs, then turn the (Memory) Backup switches OFF and unplug the units.

N.B. It is important that the 120 volt power outlet used for the equipment be uninterruptable (unswitched) to avoid damage to the equipment due to 'power spikes'.

SPECIAL NOTE: OUTDOOR APPLICATIONS

This equipment has been designed for ruggedness and is suitable for operation in almost any climate, from minus 20° F to plus 140° F. There are a few precautions, however, which should be followed to prolong the service life and operation of the units where they are exposed to environmental extremes:

The units should be enclosed in a water tight and dust-proof enclosure. These can be found (typically stocked) at an electrical supply store or ordered through Stop and Listen. All connections to outside equipment should be through the bottom of the enclosure through a "gland nut" packing.

Where extreme cold temperatures are expected (colder than minus 20° F) the box should be lined with about 1 inch of styrofoam insulation. Where a battery is used in conjunction with the units such as in solar applications, consideration should also be given to keeping the battery at suitable operating temperatures.

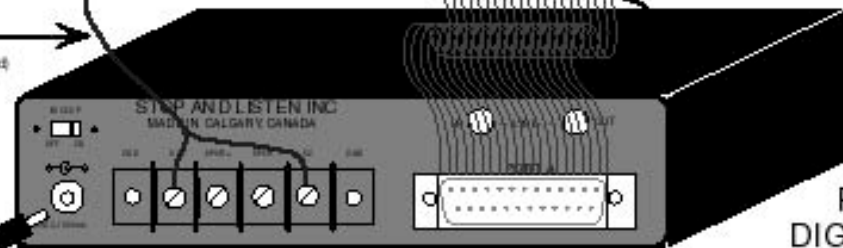
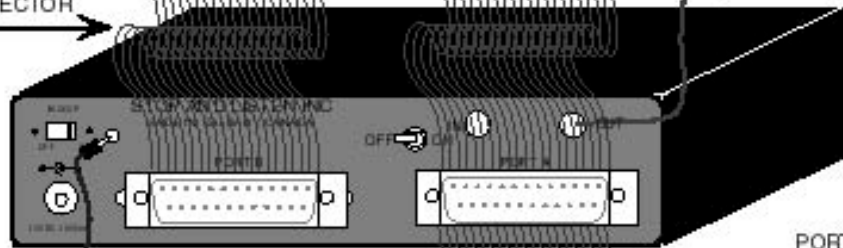
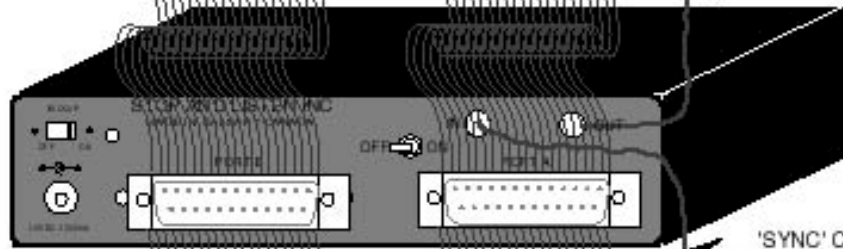
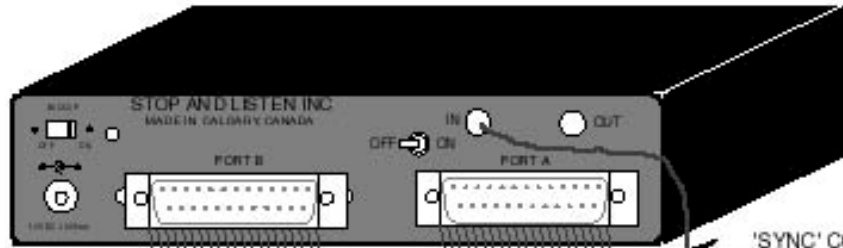
Where substantial vibration is anticipated the units themselves should be mounted using appropriate fasteners and all associated wiring and connections should well secured.

FCC, CSA NOTIFICATION

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the 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 these instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area may cause harmful interference in which case the user will be required to correct the interference at his own expense. Equipment changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This equipment does not exceed Class A limits for radio noise emissions as set out in Schedule V to VIII of the Radio Interference Regulations of Communications Canada.



FRONT PANEL
DETAIL



REAR PANEL(S)
EXTENDED
MEMORY
RECORDER(S)

PORT 'A' DATA CONNECTOR
(male ends)

REAR PANEL
DIGITAL MESSAGE
RECORDER

PORT 'B' LOGIC CONNECTOR
(female ends)

START JUMPER
tip connected to B1 (pos)
sleeve connected to B2 (grd)

Uninterruptible
120 VAC



REFER TO DIGITAL MESSAGE RECORDER INSTRUCTIONS FOR
ADDITIONAL WIRING INFORMATION

EXTENDED MEMORY RECORDER CONNECTIONS DIAGRAM

STOP AND LISTEN INC
CALGARY, ALBERTA

REV 2.0
OCT.92