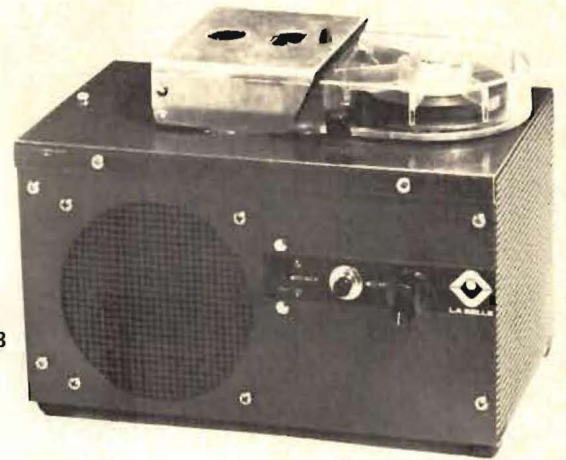
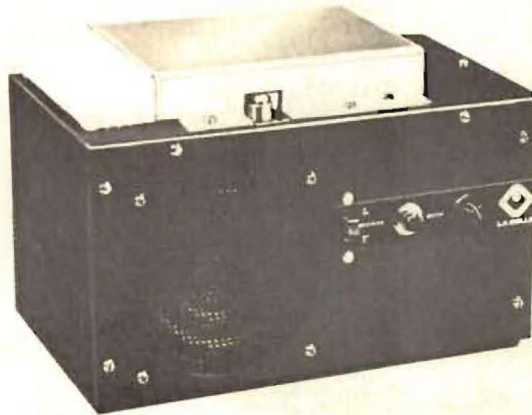


INSTRUCTIONS

PLA-MATIC 83 and 83-B



PLA-MATIC 83



PLA-MATIC 83-B



LA BELLE Industries

OCONOMOWOC WISCONSIN 53066

PHONE 414/567-5527

CONTENTS

	Section
A/C Accessory Outlets	7
A/C Sockets	7
Amplifier	11B
Automatic Stop-Start Signal	4
External Speaker Outlet	6
Maintenance	10A
Operation of the Pla-Matic 83 & 83-B	3
Operation of the Separate Visual Units	8
Preparation for Operation	1
Random Stopping	9
Remote Control Outlet Terminals	9
Remote Features	9
Repairs	11
Service	11
Tape-Slide Synchronization	8
Tape Transport Mechanism	11A

WARRANTY

LA BELLE INDUSTRIES, GUARANTEES THIS UNIT AGAINST DEFECTIVE MATERIAL AND WORKMANSHIP FOR ONE YEAR FROM THE DATE OF PURCHASE WHILE IN POSSESSION OF THE ORIGINAL OWNER, PROVIDED THAT:

1. This unit was purchased from an authorized La Belle sales agency.
2. This unit has been properly registered with an authorized sales agency, service station, or the factory.
3. This unit has been operated in accordance with our instructions using only approved La Belle Tape Cartridges and that there is no evidence that this unit has been subjected to damage or abuse.
4. Any prior repairs or service was performed only by an authorized La Belle Service Station or at the La Belle factory.

Correction of any malfunction with this unit caused by defective tape cartridge, or from lack of proper care and maintenance as recommended in the instructions, does not come under this guarantee.

OPERATING INSTRUCTIONS FOR THE LA BELLE PLA-MATIC 83 & 83-B

GET ACQUAINTED

1. PREPARATION FOR OPERATION (See Rear View)

Plug the Power Cord into the A/C Power Input (1) and the opposite end into the power source.

CAUTION

Use 110/120 volts 60 cycle A/C only.

2. INSTALLATION OF THE CARTRIDGE (see Front View)

The self-contained tape should be installed in the manner to be defined, bearing in mind that the units will not accept the Cartridge in any other way.

PLA-MATIC 83:

Slide the Cartridge Release Lever (Fig. #1) in its slot to allow the Cam Cover (Fig. #1) to Spring up. Insert the Cartridge by locating the Two Pilot Pin Holes on the bottom of the Cartridge and placing them directly over the Two Pilot Pins under the Cam Cover.

The unit is ready for operation by gently pushing down the Cam Cover.

PLA-MATIC 83-B:

Insert the program gently, but positively, sliding the Cartridge into the Cartridge Holder as far forward as it will comfortably go.

3. OPERATIONAL PROCEDURES (See Front View)

Pla-Matic 83 and 83-B (Fig. #1 or #2 respectively)

Turn ON the units' Power On/Off Switch (Fig. #1 or #2). Depress the Start Button a few seconds and the Tape Mechanism will commence to transport immediately.

Adjust the volume, as desired.

4. AUTOMATIC STOP SIGNAL

One of the outstanding features of the tape player unit is the Automatic Stop Signal. This self-operating signal is used at the completion of the program to prevent the endless loop tape cartridge from continuing on to repeat the cycle. This feature may be utilized in places of your choice, i.e., a planned break.

To Start again, after the Automatic Stop Signal has inactivated the tape, depress the Start Button (Fig. #1 or #2) for a few seconds.

5. RANDOM STOPPING (See Front View)

PLA-MATIC 83:

You can stop the tape at any point that you choose, by sliding the Cartridge Release Lever (Fig. #1) in its slot. This allows the Cam Cover to open and disengages the Tape Transport Mechanism. To start the tape again, close the Cam Cover.

PLA-MATIC 83-B

The program may be interrupted at any point by gently removing the Cartridge. To start the Tape Transport Mechanism, simply re-insert the Cartridge.

PLA-MATIC 83 – FRONT VIEW

PLA-MATIC 83 and 83-B – REAR VIEW

- LEGEND**
1. Cam Cover
 2. Tape Cartridge
 3. Cartridge Release Lever
 4. Volume Control
 5. Start Button
 6. On/Off Power Switch

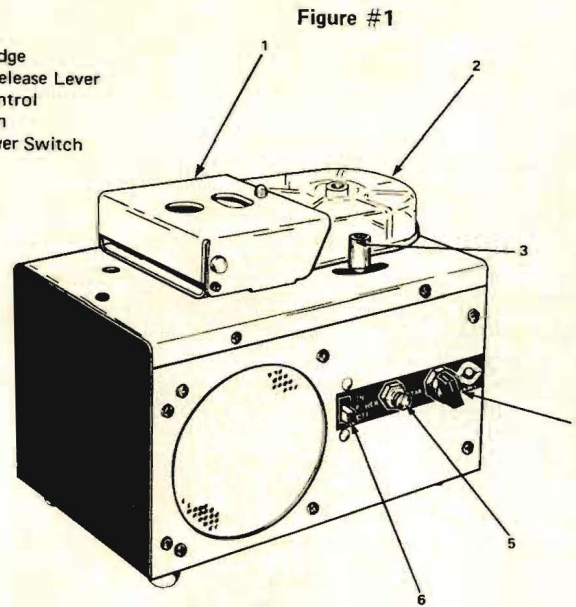
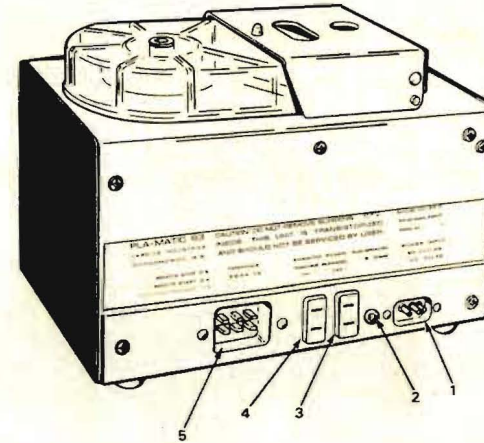


Figure #3

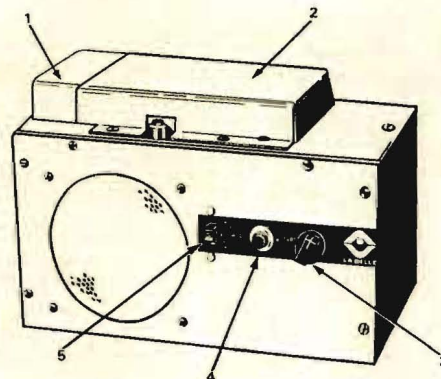


- LEGEND**
1. A/C Power Input
 2. External Speaker Outlet
 3. A/C Outlet #2
 4. A/C Outlet #1
 5. Remote Control Receptacle
 6. Socket
 7. Socket Terminals

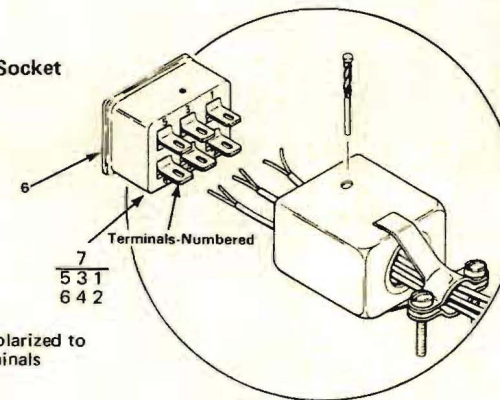
PLA-MATIC 83-B

Figure #2

- LEGEND**
1. Tape Cartridge
 2. Cartridge Holder
 3. Volume Control
 4. Start Button
 5. On/Off Power Switch



Disassembled Socket



Socket Terminals are Polarized to Match Receptacle Terminals

6. EXTERNAL SPEAKER OUTLET (See Rear View)

The External Speaker Outlet (Fig. #3) may be used by plugging into it a speaker of 8 ohm impedance. When an External Speaker is being utilized, the internal speaker is subsequently inactivated.

7. A/C ACCESSORY OUTLETS (See Rear View)

CAUTION

Wattage requirements from either A/C Outlet must not exceed 350.
Use intermediate relay if more current is required.

The main Power Switch is on the front of the unit and must be switched to the ON position to obtain power. When the Tape Drive Mechanism is not running, the A/C Outlet #1 (Fig. #3) is dead, supplying no power. At the same time, A/C Outlet #2 (Fig. #3) is energized and supplying power. When the Tape Drive Mechanism is started, A/C Outlet #1 becomes energized and A/C Outlet #2 is dead. When the Tape Deck again stops, the original mode exists; A/C Outlet #1 is dead, A/C Outlet #2 is energized.

A Typical Application:

Plug an accessory carousel or projector into A/C Outlet #1 and the house lights into A/C Outlet #2. Turn ON the Main Power Switch on the front of the unit. The Accessory unit will not be receiving any power and the house lights will be on. Start the Tape Deck again and the accessory unit will receive the power while the house lights will go out. When the Tape Deck stops, the accessory unit will shut off and the house lights will come on.

Understanding the functions of the A/C Outlets will enable you to utilize a wide choice of still or animated accessories with your Pla-Matic units.

8. OPERATION OF SEPARATE VISUAL UNITS

Separate remote controlled slide or filmstrip projectors may be operated by attaching an inter-connect cord from the Receptacle Accessory Control Terminals (1-2) to the Remote Control Terminals of the separate projector. 1000 Hz signals are recorded on the tape to trip the projector. Recording specifications are given with the manual.

Tape-Slide Synchronization:

If, for any reason, the tape and projected image are not in step, this can be corrected, as follows:

1. When the tape is AHEAD of the projected image:
Advance the frames by operating the auxiliary unit until the tape and the projected image are in synchronization.
2. When the tape is BEHIND the projected image:
Inactivate the projector while the tape catches up. If necessary, the inter-connect cord may be disconnected temporarily to inactivate the projector.

The unit is designed to operate separate projectors but can be used with other electrically controlled mechanisms. The Remote Control Receptacle is internally connected to a single pole, single throw switch, operated by a relay. The switch is rated at 1.5 amperes at 117 volts A/C.

9. REMOTE FEATURES (See Rear View)

A Remote Control Receptacle (Fig. #3) and Matching Socket (Fig. #3) are provided on the back of the Pla-Matic units. They are polarized to prevent improper mating. No cords or switches are furnished with the purchase of the unit, but are available upon request.

The Remote Control Receptacle has three sets of Terminals that coincide to the numbers 1-2, 3-4, & 5-6, to which their furnished Socket (Fig. #3) can be attached to obtain its particular function.

1. Accessory Control Terminals 1-2 (Fig. #3)

Defined in its entirety in section #8.

2. Remote Start Terminals 3-4 (Fig. #3)

The Remote Start feature may be utilized by attaching a cord from the Remote Start Terminals (3-4) to a momentary normally open switch. Closing the switch will start the Tape Transport Mechanism.

3. Remote Stop Terminals 5-6 (Fig. #3)

The Remote Stop features may be utilized by attaching a cord from the Remote Stop Terminals (5-6) to a momentary normally open switch. Closing the switch will stop the Tape Transport Mechanism.

10. MAINTENANCE

A. Care and cleaning of the Tape Playback Heads:

CAUTION

Do not move the Head on its mounting or misalignment will cause the machine to be inoperative. Realignment the Heads requires special tapes and equipment so the greatest of care must be taken when working around exposed heads.

As with all magnetic tape mechanisms, usage will eventually cause the Head, Pressure Pad and Drive Roller to become dirty from the tape particles. This condition can become severe enough to impair the performance of the machine. Periodic visual inspections should be made. To clean the system, use Alcohol or a commercial product, such as: *Long Life Cleanser, that has been designed for this purpose. Use NOTHING ELSE TO CLEAN THESE PARTS: Capstan, Roller, Head and Pressure Pad. Apply the cleanser with a soft brush only.

11. SERVICE

A. Tape Transport Mechanism:

A minimum of moving parts were designed into your tape player. This reduces possible complications and failures. DO NOT ATTEMPT REPAIRS OR ADJUSTMENTS. The only maintenance required is the care and cleaning of the Playback Head. Should service be necessary for any reason, contact LA BELLE INDUSTRIES, INC., or a Service Station that we recommend.

B. Amplifier:

The Amplifier is completely transistorized and should normally never cause any trouble. A Schematic Wiring Diagram is included with the manual for general informational purposes. The Amplifier should be serviced by a qualified Electronics Technician.

Your Pla-Matic deserves the same care and consideration as any precision equipment. Treat it well and it will serve you well.

*Long Life Cleanser is available from:

Distributors Group, Inc.
204-14th Street, N.W.
Atlanta, Georgia 30318

For information about other exciting Audio-Visual
equipment, ask for our full line brochure.

Write:

LA BELLE Industries

OCONOMOWOC WISCONSIN 53066

PHONE 414 567-5527



ORIGINAL MANUFACTURERS OF SYNCHRONIZED SLIDE-SOUND EQUIPMENT FOR
LA BELLE INDUSTRIES, INC.
510 SOUTH WORTHINGTON STREET • OCONOMOWOC WISCONSIN
TRAINING, SELLING, PROMOTION, PUBLIC RELATIONS, AND PRODUCTION LINE GUIDANCE

Printed in U.S.A.

COURIER / SENTINEL / PLAMATIC TAPE PROGRAM SPECIFICATIONS

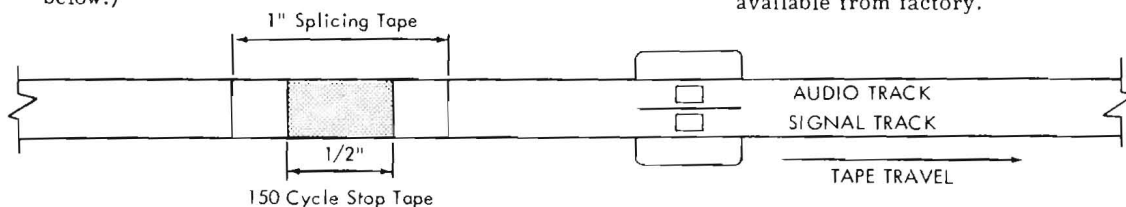
A. Tape

Master recordings should be made on high quality tape at 7.5 ips for best results. The Maestro IIC or a good professional type, half track recorder should be used. Program tapes must be duplicated on 3M #153-16 or equivalent, at 3.75 ips on conventional reels, cut to exact length, then wound into a continuous cartridge and spliced.

B. Tape Cartridge

For the Courier, use only the La Belle Tape Cartridge Model 1410, or equivalent. For the Sentinel, use La Belle Cartridge Model 1410 or 1430, or equivalent.

1. The maximum playing time for the Model 1410 cartridge is 15 minutes. Maximum time for Model 1430 cartridge is 38 minutes. These playing times are calculated for 1 mil tape at the required 3.75 ips playing speed.
2. The tape must be wound on the cartridge hub with the oxide in, or "A" wind.
3. For most accurate results, especially when using "STOP" tape provided by the factory, the tape should be spliced using vertical rather than diagonal cuts. The splice is used as the program starting point. (See sketch below.)



TAPE SPLICE AND PLA-MATIC HEAD AS VIEWED THROUGH TAPE

C. Head Configuration

These units utilize a standard 1/2 track stereo head. The lower track senses the "STOP" and "CHANGE" signals; the upper track plays the audio portion of the recording. (See sketch above.)

D. Recording Data

All signal strength references are with respect to the zero reference signal level as derived from the playback of an Ampex 3.75 ips test tape #313311-01.

1. Audio Program

The Program channel should be recorded at a level approximately 2 to 3 VU higher than that considered normal. This helps to insure a better signal-to-noise ratio. In other words, the recording meter may reach plus 3 VU.

a. Low audio levels may result from incorrect bias recording level. The 3M #153 lubricated tape has approximately the same recording characteristics as 3M #111 and should be peak-biased at 1 kc. in the same fashion.

b. Record Equalization. Use Standard recording equalization for 3.75 ips for flat response with 120 micro second playback equalization.

2. Cue Signals

a. Frame Change Signal. This signal should be recorded at a frequency of 1000 cps. with a 0.1 second duration at a level higher than plus 6 VU above zero level. See instructions below.

b. Stop Signal. This signal should be recorded at a frequency of 150 cps. with a 0.1 second duration at a level of plus at least 10 to 12 VU above zero level. See instructions below.

NOTE

150 cps tape recorded at proper level available from factory.

c. Instructions. Since the above cue signal recordings will be made with the record-level meter registering off-scale, it will be necessary to take special precautions and steps to insure that the proper level is placed on the tape.

A test tape can be used for comparison to check the cue signal recording setup for correct levels. Naturally, the 0.1 second duration cue signals cannot be checked with a meter due to the inertia of the pointer. An oscilloscope can be used, or else the test recordings of the cue signals can be extended in time to give good meter readings.

A reference test tape can be made and the cue signals recorded by the following procedure:

- (1) Make a 3.75 ips test recording at a level of 0-VU on the record-level meter and at a frequency of 1000 cps. This is the zero reference recording and should agree in play-back level with the zero reference tone on a 3.75 ips Ampex test tape, or approximately 2VU lower than the reference signal from a 7.5 ips test tape. Make a 2 minute recording.
- (2) With the above recorded reference signal being played back and monitored with the VU-meter or an external meter, adjust the playback gain so that the meter reads -9 VU. Do not change the playback gain or the meter connections; make a 2 minute 1000 cps recording at a record setting which gives a meter reading in the play-back monitor position of -3 VU. This is the Frame Change Signal at a level of plus 6 VU above zero level.
- (3) Under the same conditions as above, make a 2 minute 150 cps recording with the record level set to give a playback monitor reading of plus 1 to 3 VU. This is the Stop Signal recorded at a level of from plus 10 to plus 12 above zero reference level.
- (4) Splice the three recordings together and save this test tape for future reference to check recorded cue signal levels.
- (5) Make all cue signal recordings in conformance to the above instructions. Two separate audio oscillators may be preset for the correct levels and switched in at the proper times.