



## **Installation / Operating Manual**

Infinity Series Model AS2002

Distributed by: Shyda's Services Inc.

## **WARRANTY: INFINITY SERIES MODEL AS2002**

For two(2) years from the original date of purchase, Lincoln Traps will repair any defects in workmanship on PARTS ONLY. For five(5) years from the original date of purchase, Lincoln Traps will repair/replace any defects in workmanship on the one way bearing(part #SC120H). These defects must be determined to be so by our own examination.

The owner shall, at his own expense and risk, return the machine or defective parts to Shyda's Services Inc., with all transportation charges to be prepaid.

All replacement parts will be FOB Lebanon, PA or your Lincoln Traps dealer. We shall not be liable for any drayage or labor costs.

**This limited warranty is in addition to any statutory warranty.**

We do not authorize any person or representative to make any other warranty, or assume for us any liability, other than those contained herein. Any agreement outside of or contradictory to the foregoing shall be void and of no effect. The free parts replacement portion of this warranty applies only to the Lincoln Traps clay target throwers owned and operated in North America.

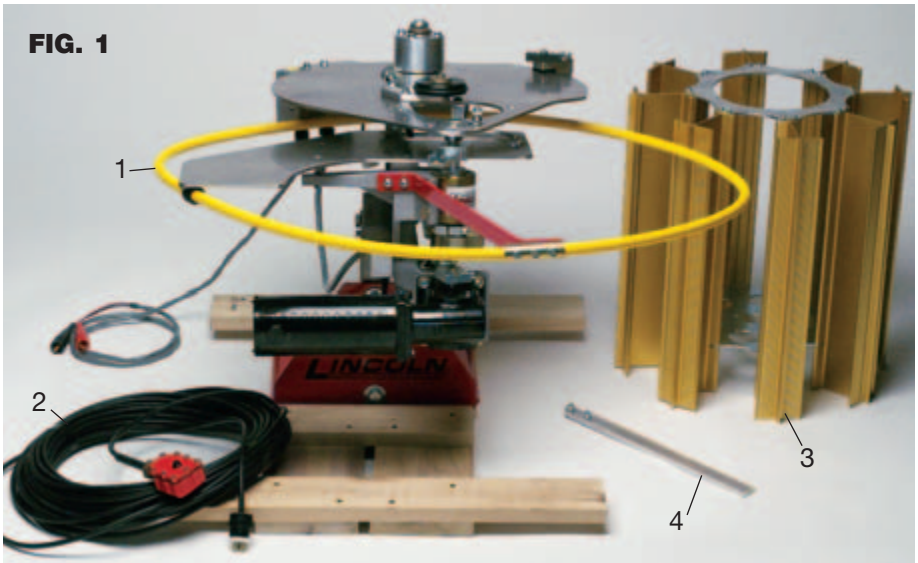
The following are **not** considered defects and are **not** included in the warranty:

1. Damage resulting from an improper line of voltage.
2. Service required from damage due to misuse or abuse.
3. Service required from accidents, alteration, fire, flood or other act of God, and
4. Service required to regular wear parts such as service cords, throwing arms, reed switches, target retainer O-rings and brushes.

**This limited warranty ends and our responsibility ceases if any alterations are made to the machine, if the serial number is mutilated, altered or removed or if any parts or devices not manufactured or distributed by Lincoln Traps are added to the working mechanism of the machine.**

## UNPACKAGING:

- Remove all packing materials.
- Check for any visible damage.
- If any damage has occurred during shipment, please contact the transport company as well as your Lincoln Traps dealer as soon as possible.
- Please make sure that the following parts **FIG. 1** are included with the machine:
  1. Throwing Arm Indicator Ring (part #AL179A)
  2. Release cord
  3. Magazine (shipped in a separate carton)
  4. Launch Arm (part #AL154A)
  5. Instruction Manual (not pictured)



## SAFETY PRECAUTIONS:

Please note and follow the warnings written below:

**DANGER!** Ignoring this information may result in immediate danger!

**WARNING!** Ignoring this information is associated with extreme danger or serious personal injury.

**CAREFUL!** Ignoring this information may result in minor personal injury or equipment failure.

**IMPORTANT!** Please give this information extra attention. The following warnings must be followed to ensure the safety of all persons operating and/or repairing the equipment:

**WARNING! The equipment must be bolted down on a secure base when in use! Yellow throwing arm indicator ring must be installed and in place at all times!**

- Observe all electrical equipment as being current carrying.

**Warning!** Prior to performing service and maintenance on the equipment, the main electrical switch should be moved to the release position momentarily **then to the off position. Finally disconnect the main power supply. FIG. 2.**

**Release the spring tension using the mainspring adjusting nut (part #SC110R). Make sure that the machine is UNCOCKED! FIG. 3**

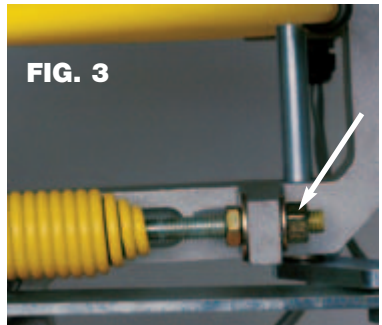
**Important!** Please note voltage indicated on machine. This equipment is intended for 12-volt DC use only.

**PERSONAL SAFETY:**

**DANGER!** Every person involved with the set-up, service, maintenance and daily operation of this equipment must read and follow the safety precautions outlined in this manual.

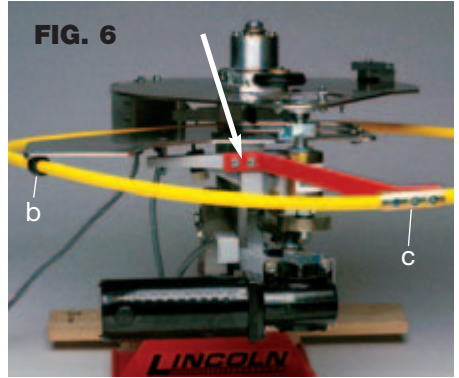
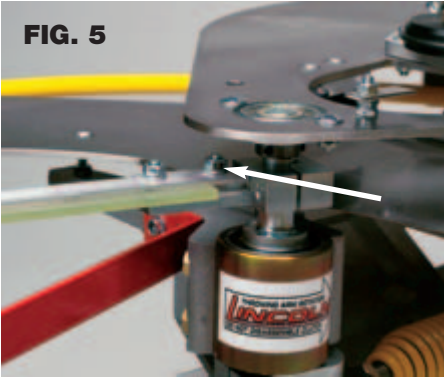
**WARNING!** No persons or loose objects should be kept within the danger area **FIG. 6**. By staying within the danger area (inside yellow throwing arm indicator ring), the risk of personal injury from moving parts, as well as risk of being hit by clay targets, can occur.

**The safety equipment's functions should be checked often. Check to make sure the main safety release is working properly. FIG. 4**



## INSTALLATION/SET-UP:

1. The machine must be bolted down to a secure base or our optional cart/stand.
2. The throwing/launch arm(part #AL154A) must be securely installed onto the machine(as shown) using the hardware provided. **FIG. 5**



3. Install the throwing arm radius indicator ring (part #AL179A) as follows:
  - a. Attach the support arm to the front of the casting as shown. **FIG. 6**
  - b. Install clamp around yellow tubing and attach the clamp to the front corner of the launch table using the hardware provided.
  - c. Connect tubing at front of support arm using hardware provided.
4. Install the target magazine (part #AL200A) using the following instructions:
  - a. Carefully, place the magazine over the hub making sure not to damage the escapement roller. **FIG. 7**
  - b. Align the 4 (four) holes, install with hardware provided and tighten securely. **FIG. 8**



**OPERATING INSTRUCTIONS:**

**Warning!** Machine must be mounted to a secure base and throwing arm indicator must be installed prior to turning on or attempting to operate.

**Important!** Use a high quality 12 volt deep cycle marine-grade rechargeable battery.

**CAUTION: MACHINE MUST BE IN THE FIRED/UNCOCKED POSITION FIG. 9 AND THE POWER DISCONNECTED PRIOR TO LOADING CLAY TARGETS OR MAKING ANY AJUSTMENTS.**

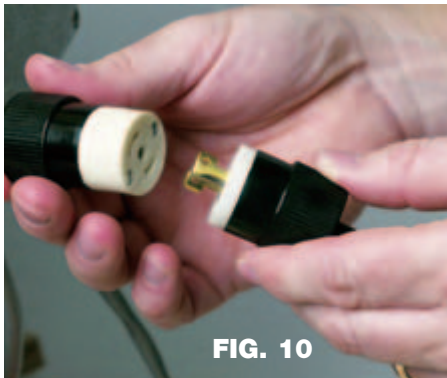


**FIG. 9**

1. Loading of clay targets – use the highest quality targets available. Load targets as evenly as possible. DO NOT OVERLOAD THE MAGAZINE!

2. Connection of release cord or wireless release system–Locate release plug and connect to matching receptacle on the machine

**FIG. 10** NOTE: Please refer to wiring diagram for all other hook-ups.



**FIG. 10**



**FIG. 11A**



**FIG. 11B**

3. Connection to 12 volt DC battery – Red = + positive  
Black = - negative

When properly connected, a green light will appear on main control box. **FIG. 11A** The light marked power will illuminate red with improper hook-up. **FIG. 11B**



4. The red light, labeled cocked, will illuminate when the machine is in the cocked position. **FIG. 12-13**

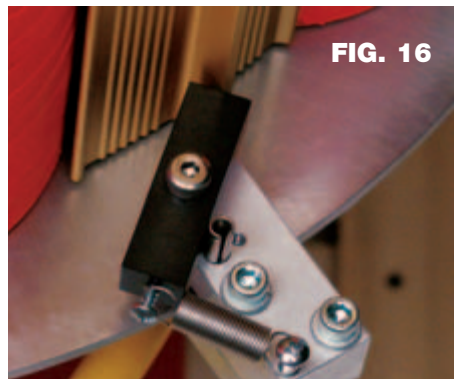
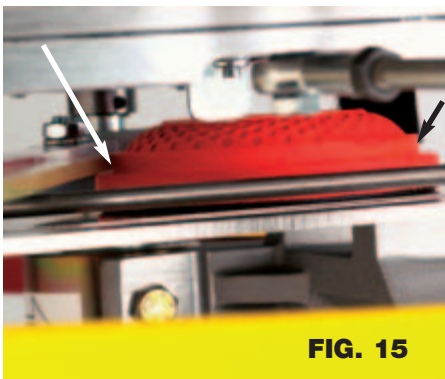
5. Main Electrical Box – Master Switch **FIG. 14** - move switch to the on position to operate. When operating the machine always stand to the rear of the machine, behind throwing arm radius indicator ring. To turn machine off and release the throwing arm, move the switch to the release position, momentarily.

**NOTE: 30 AMP CIRCUIT BREAKER.**

**ADJUSTMENTS:** BEFORE MAKING ANY ADJUSTMENTS OR REPAIRS BE SURE THAT THE MACHINE IS UNCOCKED, THE MAIN ELECTRICAL SWITCH PUSHED TO THE RELEASE POSITION MOMENTARILY AND THE POWER IS DISCONNECTED



1. **Arm in cocked position** - When the arm is in the cocked position, the throwing arm (AL154A) should be against the target and the target should be making slight contact with the brush (AL150). **FIG. 15**

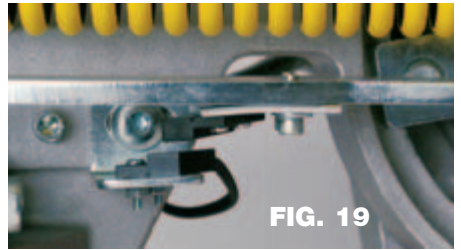
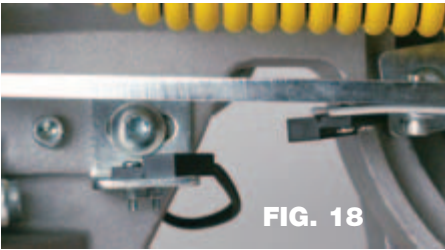


2. **Indexing Bar adjustment** - Proper position of the indexing finger for advancement of magazine is pictured. **FIG. 16**

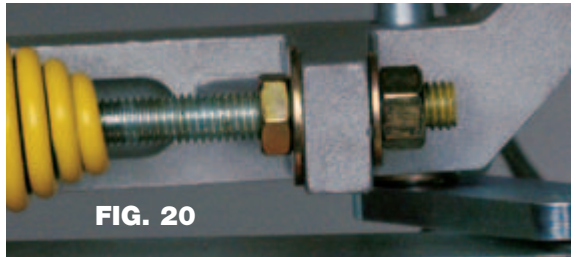
3. **Knife separator (AL153)** – Proper knife adjustment is crucial. The knife may need to be adjusted depending on the brand of target being used. The knife is needed only to separate targets that are wet, frozen or sticky due to humidity. Proper adjustment is achieved by moving the knife up or down until the knife edge is placed between the first and second bird as shown. If machine is being used in a weather-tight enclosure, the knife may be eliminated by simply swinging it out of the way. **FIG. 17**



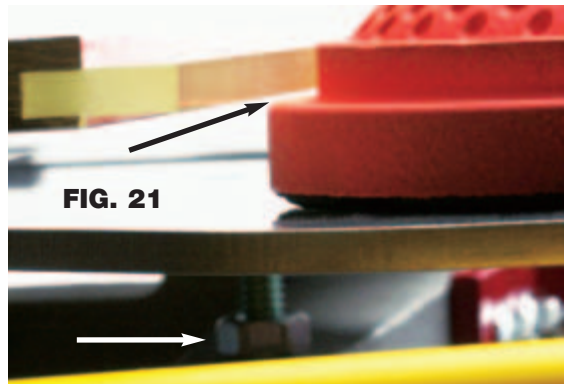
4. **Reed switch/limit switch (AL118)** adjustment- The reed switch is factory set and under normal circumstances should not need to be adjusted. **FIG. 18-19**



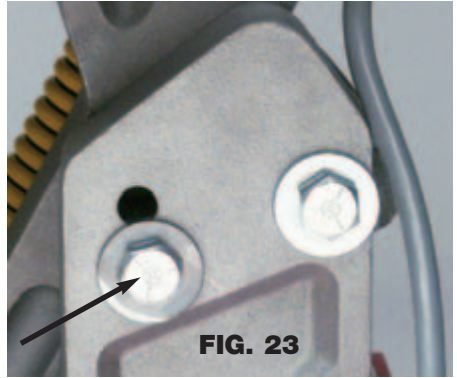
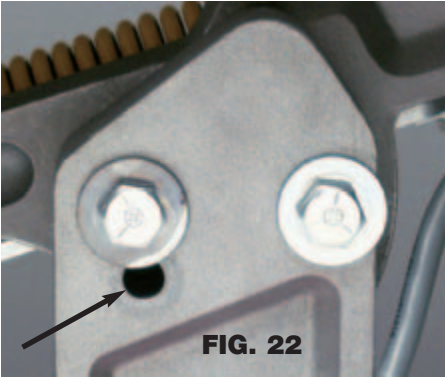
5. **Spring adjustment-** To adjust target distance or speed, tighten or loosen the spring adjusting nut (SC110R) accordingly. **FIG. 20**



6. **Launch table adjustment** – Launch table is preset at the factory. In the event that you should need to adjust the table to achieve the proper target-launch arm relationship, adjust as shown. Arm must make contact with the second rim of the target, without pinching the bottom rim. **FIG. 21**



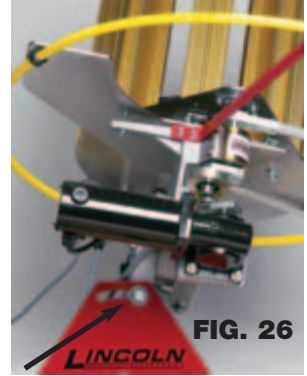
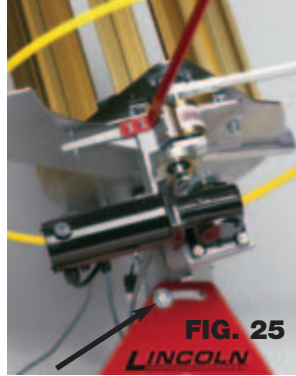




**7. Presentation adjustment –**

A. elevation adjustment – **FIG. 22-23** – rear pivot bolt must be removed and reinstalled into the bottom hole as shown. This change will allow machine to be adjusted from 40 degrees to 65 degrees (teal position).

B. tilt adjustment **FIG. 24, 25, 26** Machine may be tilted side to side. Using a 3/4" wrench loosen the clamp bolt in the slot. Make adjustment and retighten securely.



## TROUBLESHOOTING:

If after following all of the instructions, you experience any problems or have additional questions not answered by this manual please contact your Lincoln dealer or call Lincoln Traps Customer Service Dept. at (800)380-8727.

PROBLEM	CAUSE	POSSIBLE SOLUTION:
Machine will not start	Dead Battery	Check power supply
	Bad Connection	Check battery connections
	Circuit Breaker Out	Push reset <b>FIG. 14</b>
Machine will not release with the release cord	Bad Reed Switch	Check / Replace Switch
	Faulty release cord	Replace with new cord
	Faulty relay	Replace relay
Inconsistent/erratic target flight	Bent Launch Arm	Replace
Launching broken targets	Check condition of target	Replace with fresh targets
Feeding broken targets	Knife	Refer to knife Adj. <b>FIG. 17</b>
	O-Ring broken	Replace
	O-Ring roller stuck	Free up or replace

## MAINTENANCE INSTRUCTIONS

Keep machine clean and free of trash, debris, etc. Always remove broken targets.

Using a light gun-grade oil (such as G-96), lightly lubricate the following areas:

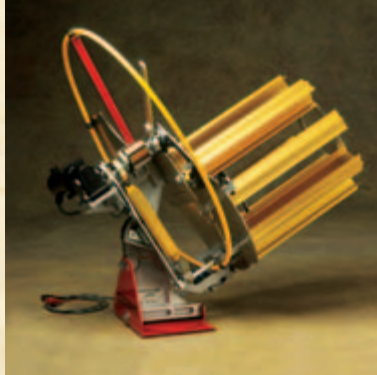
- a. bearings / indexing link
- b. index finger pivot **FIG. 16**
- c. escapement wheel axle **FIG. 7**
- d. pivot points as needed

**CAUTION:** DO NOT OVER OIL OR USE HEAVY GREASE AS DIRT AND DEBRIS WILL BE ATTRACTED TO THIS AND CAUSE POSSIBLE MALFUNCTION OF THE MACHINE.

Motor Maintenance - Direct current motor brushes should be inspected at least once yearly. When one-half of the brush remains (3/8" in length), replace both with the same grade brush.(see your dealer or call the factory to order) This unit has been permanently lubricated at the factory. Periodic lubrication is not required under normal operating conditions. All right angle gear boxes use synthetic Mobil Gear Oil SHC634. (see manufacturers warranty)

**RECOMMENDED SPARE PARTS**

- 1 – AL154A            Launch Arm
- 1 – AL137Y           Yellow Mainspring
- 1 – AL252            Relay
- 1 – AL168            O-ring
- 1 – AL144            Index Spring
- 1 – AL158            Escapement Spring
- 1 – AL150            Target Brush
- 1 – AL118            Reed Switch



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