

ADJUSTMENT OF THE EDISON ELECTRIC AUTOMATIC STOP (E.A.S.)

The first thing you should understand is that the Type-B mechanism (used on all Edison Diamond Disc Phonographs after 1915; except for the 60 and 80 models) with the E.A.S. feature does NOT require the electric stop to be energized to work properly and stop the Phonograph as it should. Even with a dead battery or broken wire, the Phonograph will continue to operate exactly as designed.

There is only one adjustment provided for the stop (aka brake) to be calibrated to stop the turntable from revolving at the end of a record; the following tutorial and image should be adequate to explain the function of the stop lever, and how it is to be properly adjusted. This same procedure is used for all Type-B mechanisms on Edison Phonographs *without* the E.A.S. feature, until the introduction of the “Edisonic” (and possibly the “Long Playing”) models, at which point an eccentric adjustment screw replaced the adjustment set screw.

The Electric Automatic Stop is provided with a “Safety Stop” feature which trips the stop in the event of the electric mechanism failing for some reason; from battery exhaustion, or broken or heavily corroded connections. Regardless of the electrical circuit, this “Safety Stop” *must* be properly adjusted to stop the turntable at the end of a record, **BEFORE** the reproducer stylus reaches the outer circumference of the record label, to prevent possible damage to the stylus or mechanism.

Please read this entire document and familiarize yourself with the procedure so you completely understand it, before attempting any adjustments to the stop.

The procedure for adjustment is as follows:

1. Let the Phonograph wind down completely, or turn the speed control furthest clockwise as far as it will go to stop the turntable from rotating. **THIS IS CRITICAL, TO PREVENT POSSIBLE INJURY OR DAMAGE TO THE MECHANISM.**
2. Release the brake by moving the stop (brake) lever to the right, as for normal “start” operation.

NOTING THE OPERATION OF THE SAFETY STOP:

3. With a record on the turntable, and the reproducer in the “UP” position (do not lower as you would for play), move the reproducer/horn by hand slowly toward the spindle, and note when the “safety stop finger” contacts the stop lever, and trips it.
4. If the stop lever is triggered prematurely (before the end of the record), then the brake needs to be adjusted so that it comes in contact with the safety stop finger later. If the stop lever is triggered too late (past the outer circumference of the label), then it needs to be adjusted to contact the safety stop finger earlier.
5. Once you have determined which direction the stop lever is to be adjusted, then you can commence with the adjustment process.
6. Move the reproducer/horn back furthest to the right.
7. Remove the reproducer and place it in a safe location with the stylus UP so that it isn't damaged.
8. Remove the turntable, by lifting it upward off of the spindle.

ADJUSTING THE STOP LEVER:

9. Using the image below, locate the stop lever adjustment “set screw” (this may be rusted in

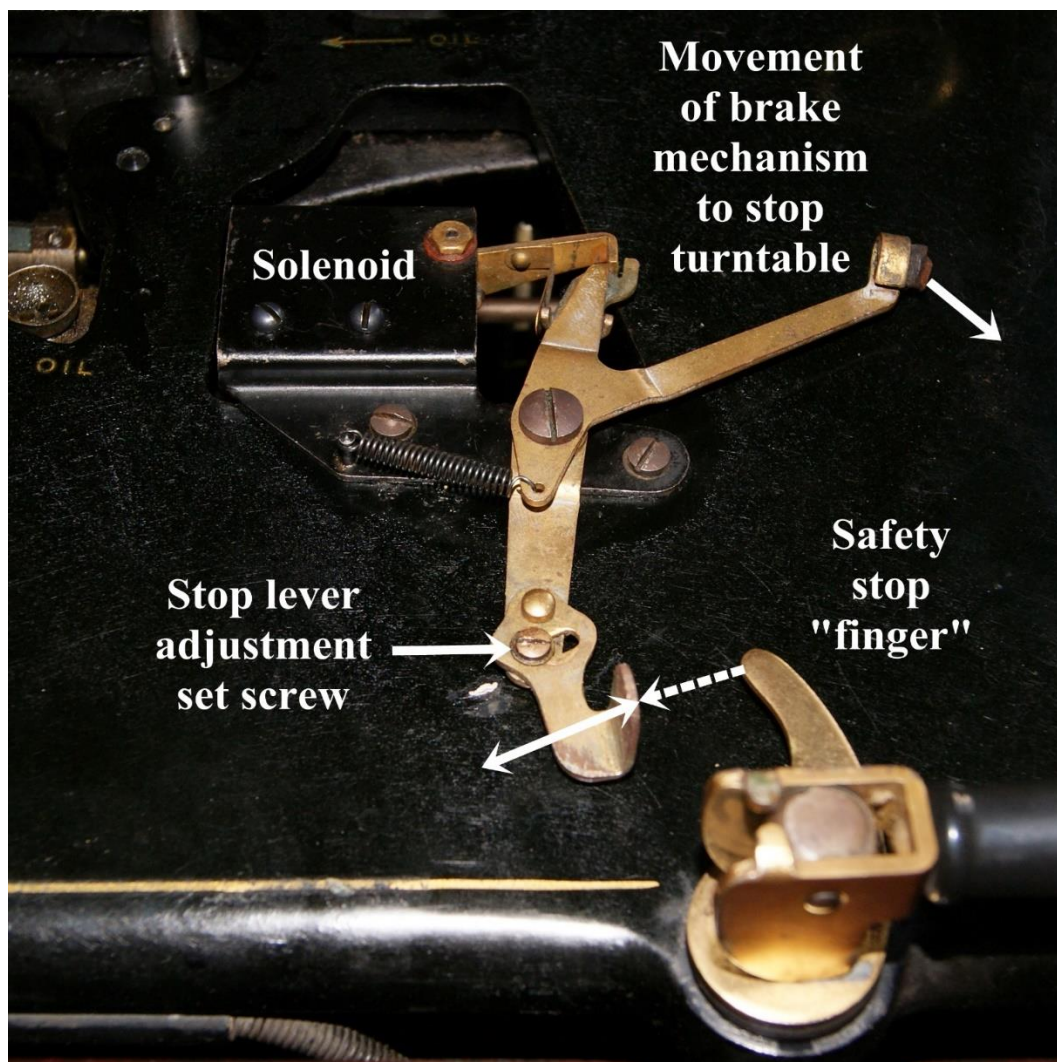
place, and require a little squirt of penetrating oil to loosen, **be careful, as the screw head is easily broken off**).

10. Determine which way the lever needs to be moved so that it will make contact at the desired point as previously observed in steps 3 and 4.

Perform either of the next two steps, depending on the adjustment desired:

11. If the stop is being actuated too soon (before the end of the record), loosen the set screw and move the lever to the left, so the safety finger contacts it later, and re-tighten the set screw. **Do not over-tighten this screw, as the head can be easily broken off.**
12. If the stop is being actuated too late (past the outer circumference of the label), loosen the set screw and move the lever to the right so the finger contacts it sooner, and re-tighten the set screw. **Do not over-tighten this screw, as the head can be easily broken off.**
13. Replace the turntable and reproducer, and note the **OPERATION OF THE SAFETY STOP** as in steps 3 through 8.
14. Repeat steps 12 and 13 as necessary until the desired reproducer stop location is achieved.
15. Be sure to turn the speed control back to the proper speed. (I use a simple RPM app installed on my smartphone.)

NOTE: Some selections have more – or less – material between the label edge and the end of the record grooves, so it's advisable to choose a record with the most playing time to make this adjustment.



RESTORATION OF THE E.A.S.

If the owner should wish to restore their Electric Automatic Stop so that it functions correctly with the use of electricity, then all of the contact points and insulation in the electrical circuit need to be properly cleaned and restored to ensure proper conductivity/isolation for the electric circuit to be adequately energized and de-energized. **THE CIRCUIT IS DESIGNED FOR DC VOLTAGE ONLY.**

There must be adequate insulation provided to the solenoid and reproducer as shown in my article on the *Antique Phonograph Society* website: <http://www.antiquephono.org/edison-automatic-electric-stop/>

I do not know what the original insulating material used was; likely it was a type of rubber. Examine the solenoid and reproducer for broken or missing insulation, and replace as necessary with a suitable common material, such as: rubber, plastic, neoprene or phenolic.

The original Edison documentation I have examined does not specify an exact voltage/amperage for the circuit, but it has been reported in modern times that a 6V lantern battery is more than sufficient for operation. The original “common” No.6 battery cell that was likely used had a voltage of about 1.5V. Reproduction No.6 battery cells can be found on eBay, and radio enthusiast supply sites/stores.

The reproducer limit pin and loop relationship is critical to the proper function of the stop, and if records are played in which the grooves are very much out of concentricity to the spindle, the stop may be actuated at any point during play. This is a commonly reported occurrence, and many people reportedly choose to disconnect the power supply to avoid this, and just use the stop manually.

A simple “wall wart” can also be utilized as a power supply, provided that it is of the correct voltage/amperage. At this point, I have not conducted research to determine a minimum/maximum voltage/amperage for this application. I know of at least one person who has had success using a variable DC transformer power supply as can be found used with model train sets, and had set the output of it through trial and error.

ONE FINAL NOTE: I urge those whom use the electric stop to disconnect any power supply to the unit when it is not in use to prevent “accidental” malfunctions and possible damage to the solenoid coils.

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