

## **How to Modify an American Flyer Uncoupler for Yard Control?**

When the standard American Flyer switches are used, the centerline distance is five (5) inches. With a 5-inch centerline, the standard AF uncoupler will fit between the tracks. In order to fit more tracks in my freight yard in the same amount of space, I modified my AF switches to have track centerline reduced to two and one half (2 ½) inches. This modification increased my yard from six (6) to eleven (11) tracks. The success in adding tracks to my yard create another problem. This new problem was how am I going to un-couple my box cars in the freight yard?

My first plan was to build an L-shaped tool that would allow me to reach between the box cars and uncouple them. The system worked; however, the system was manual. Being a control freak, I decided to modify an AF uncoupler to be used with my new freight yard. I wanted to have a remote controlled automate operating uncoupler system.

The AF uncoupler is a very simple device. It works on two principles. One is the electromagnetic coil and the other is that of a seesaw. When the coil is energized, the metal seesaw is pulled down on one end and the uncoupler bar is lifted up on the other end. As we know, when the bar is lifted up, the knuckle coupler on the freight car is opened.

To modify the uncoupler, the coil needs to be removed and turned upside-down. This allows the uncoupler to fit between the reduced tracks centerlines. In order to fit the modified uncoupler between the tracks, we will need to cut a hole in the table. I will describe the hole pattern later in the text.

## **How to Modify the American Flyer706 Remote Uncoupler**

For this project, when I made the measurement, all dimensions are measured from the side of the uncoupler with the track clamp. Let's go step-by-step on "How to modify the American Flyer uncoupler".

- 1) Drill out the four corner rivets which hold the uncoupler together.
- 2) Separate all the parts.
- 3) With the coil to the right and the track clamp to the left, measure 2-3/8 inches from the clamp side and cut the top piece at this mark. Please refer to Figure 1.
- 4) With the coil to the right and the clamp to the left, measure 2-11/16 inches from the clamp side and cut the bottom piece at this mark. Please refer to Figure 1. The piece which you have cut will be referred to as the "coil piece".
- 5) From the clamp side of the bottom piece, measure 2-¼ inches along both long sides and make a mark 1/8 in from each side. At this mark, drill a 1/8 inch hole. Please refer to Figure 1.
- 6) With a hammer, flatten the two stamped metal corners on the coil piece.
- 7) Using tin snips, cut on an angle an opening in the front of the coil piece. This will allow the metal seesaw to rest in front of the upside-down coil. Please refer to Figure 2.
- 8) Next with pop rivets, re-secure the top and bottom pieces of the modified uncoupler from the clamp side of the uncoupler with the uncoupler bar in place using the original holes.
- 9) Line up the holes in the coil piece with the two new holes which you drill in step 5 and drill a 1/8 inch hole through the top, bottom, and coil pieces.
- 10) Place the seesaw upside-down under the uncoupler bar.
- 11) Leave a 3/16 inch spacer between the top and bottom piece and the upside-down coil and pop rivet all the pieces together using the "new" 1/8" holes that you made in step 9.

12) The modified American Flyer uncoupler is complete.

### How to install the new modified American Flyer Uncoupler?

- 1) To install the new uncoupler on your layout you will be required to cut a square hole for the modified American Flyer upside-down coil to fit into. Measure from the track centerline on your layout  $1\frac{1}{4}$ " and  $2\frac{3}{8}$ " and make a  $1\frac{1}{8}$  inch square hole between these two marks. Please refer to figure 3 for a final view.
- 2) Sometimes you will have to slide the metal AF ties in order to get the new uncoupler to fit under the adjacent track.
- 3) Run the wires under the layout to your push button control panel.

### Optional Modification

With some of the new American Model boxcars, the uncoupler shoes do not operate properly with the AF uncoupler. This can be corrected by inserting a small piece of wood strip in between the uncoupler bar. Paint the wood strip black or brown/black and you will have a good looking uncoupler that works.

For my layout, I have an east and west end; therefore, I needed twenty-two (22) modified AF automatic uncouplers. After installing the new uncouplers, it is nice not seeing all the uncoupler coils. If you have any improvements on my suggested design, please feel free to send me a copy of your improvements.

Happy Modeling

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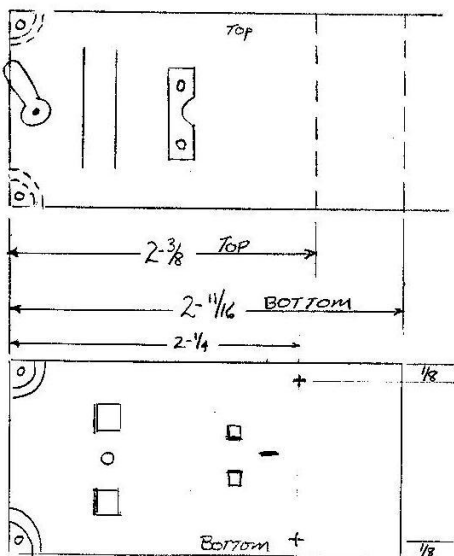


Figure 1

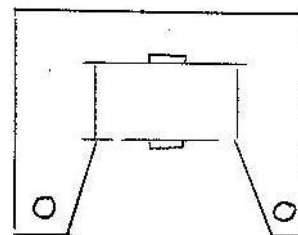


Figure 2



Figure 3