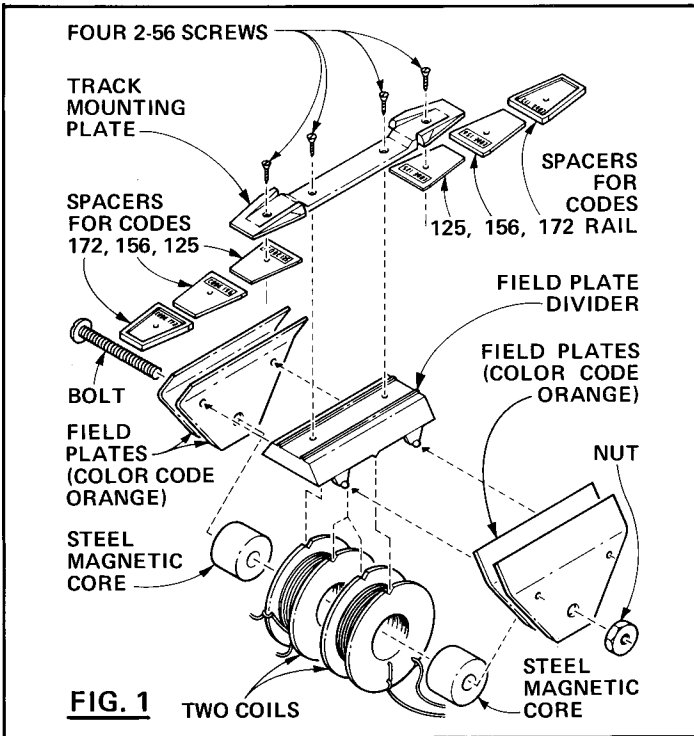




Thru-The-Track DELAYED-ACTION MAGNE-ELECTRIC UNCOUPLER

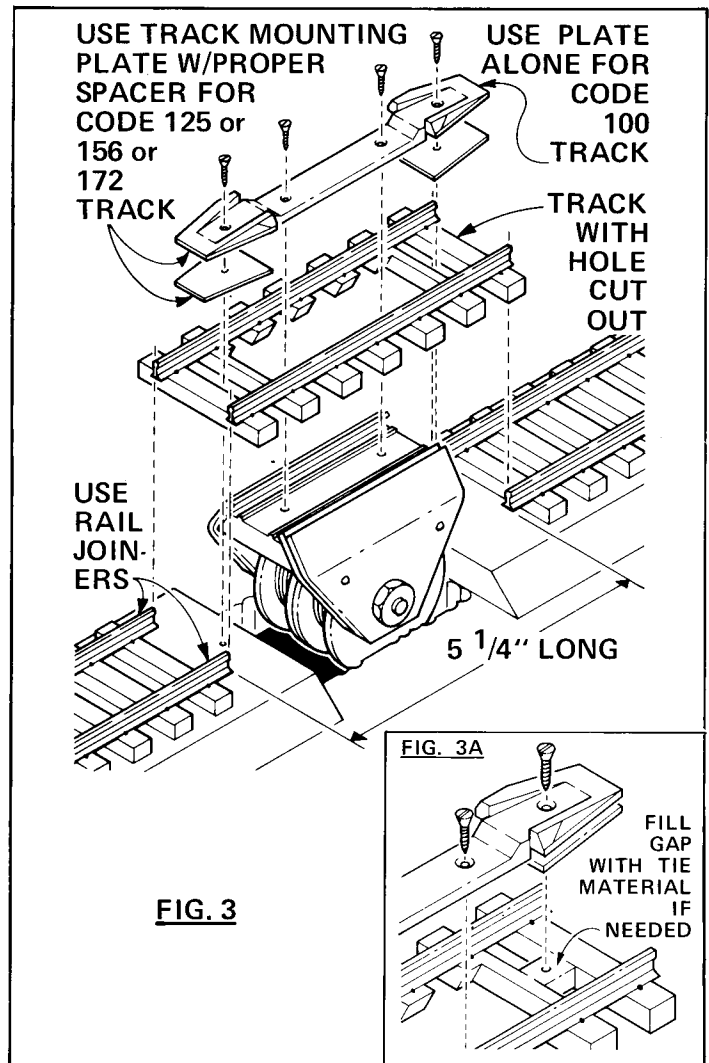
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ASSEMBLY INSTRUCTIONS



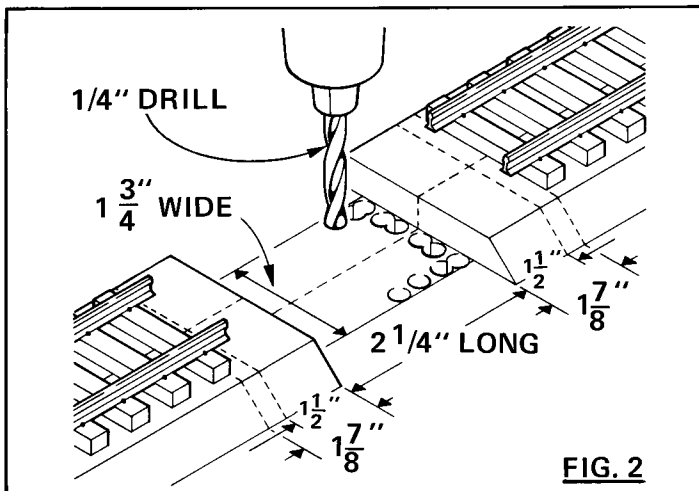
dimensions shown in Fig. 2. If you have yet to put any track down, wait until hole in layout is complete. After location of track, ties and hole are clearly marked with a pencil, take a hand or power drill with a 1/4" drill installed and make a series of holes along the dimensional lines of the hole area. Overlap these drill holes often. After drilling, take a sharp chisel and carve down thru the non-overlapping holes until center drops out. Smooth rough edges with a medium file or flat chisel.

2. We recommend flex or sectional track be used with the uncoupler for ease of application and strength, although hand laid rail can also be used. First, use a razor saw to cut the rail just over 5 1/4" long (Fig. 3) and test fit it into the gap between your layout rails. File off any excess until rails butt against each other snugly. Second, assemble the uncoupler parts (Fig. 1) and check assembly to make sure everything fits. With bolt and nut moderately secure but not real tight, turn uncoupler assembly upside down and tap on flat surface. This will set the field plates even with the track mounting plate. Now, tighten up nut and bolt firmly and unscrew the track mounting plate. Set everything aside. Third, you will need a



MAIN USES:

The Kadee Magne-Electric Uncoupler is designed primarily for use with the most common sizes of flex or sectional track and will work best on 16 volts, DC current. The Magne-Electric Uncoupler can be used anywhere our permanent magnet Delayed-Action uncouplers are installed, but its advantage on the layout is in areas where tracks are used primarily for running "thru" trains (such as a main line) and only occasionally for uncoupling. Because the electro-magnetic uncoupler is active only during uncoupling, trains that are just passing thru won't uncoupler over it by accident. For more ideas on locating uncouplers, see "Where to Place Uncoupling Ramps."



ASSEMBLY & INSTALLATION

1. After determining where you want to install the uncoupler, you will have to cut a hole in the layout, 1 3/4" wide and 2 1/4" long that is inline with the track. If you already have track down (with or without roadbed), remove a section of it down to the layout base according to the

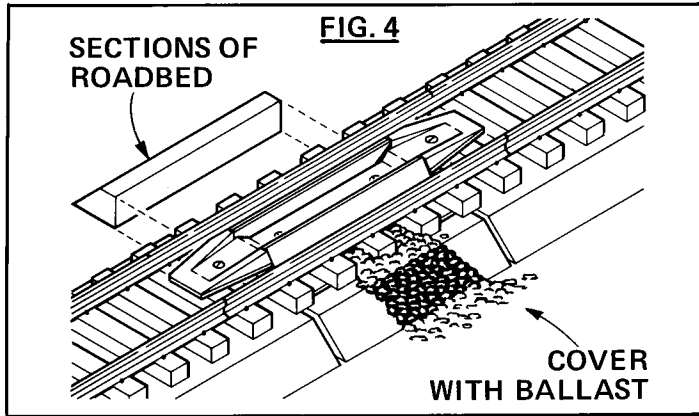
hole in the ties long enough and wide enough to accommodate the field plate/coil assembly (Fig. 3). Trim ties with a sharp knife on a hard, non-giving surface to avoid broken spikes in the case of flex/sectional track or split ties in the case of hand laid wood ties. Be sure and bevel the ties to conform to the taper of the field plates. Fourth, in the case of hand laid ties, glue, rather than spike, the sections of rail to the ties, Cyano-Acrylate works well in this situation. Be sure and gauge rail sections before adhesive sets. Fifth, it is a good idea at this point to check out whether end holes in the track mounting plate lie over ties or in between ties. If in between, fill the gap with a piece of tie material running cross-ways to the rail ties (Fig. 3A). Make sure this piece is centered between rails when gluing into place. Let glue set before proceeding.

3. Before final assembly, note that the track mounting plate, by itself, is applicable to track with code 100 rail. For code 125 or 156 or 172, use appropriately marked spacers between track plate and ties (Figs. 1 and 3).

4. After all parts have been prepared, install metal rail joiners at the ends of the layout rails and push them as far back as they'll go. Assemble un-

coupler and track components then add some glue to the underside of the ties where the track plate end holes will go. Lower uncoupler/track assembly into place and slide rail joiners over rail joints. After making sure track mounting plate and spacers are properly positioned and centered, take a pin vise with No. 50 drill installed and drill down thru track plate end holes into tie material and roadbed. Use included 2-56 screws and screw down.

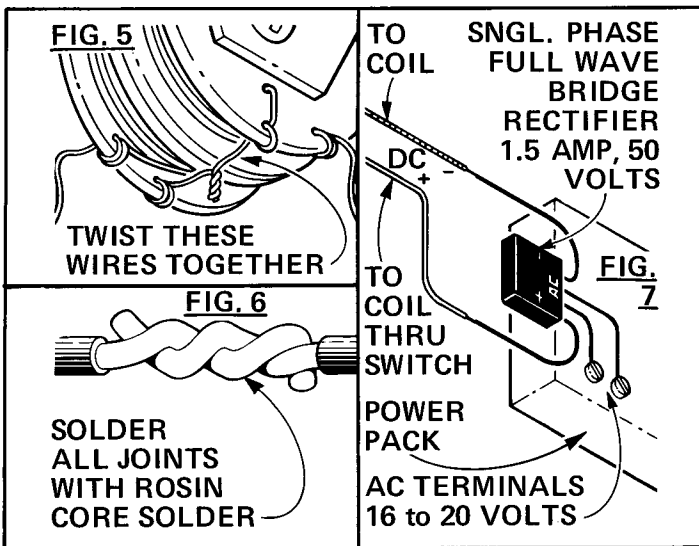
5. If you have installed uncoupler on roadbed, fill the gaps between ties and layout base with sections of roadbed trimmed to fit (Fig. 4). If uncoupler is mounted directly on layout base wedge a piece of paper between ties and base on both sides to fill any gaps. You may wish to add some glue to these pieces before insertion for rigidity. Now, cover area with ballast glued in place with white glue, see Fig. 4.



WIRING:

The O-Scale Magne-Electric Uncoupler operates best on 16-20 volts DC current using a rectifier with or without a capacitor from a 12-20 volt AC power source as explained below.

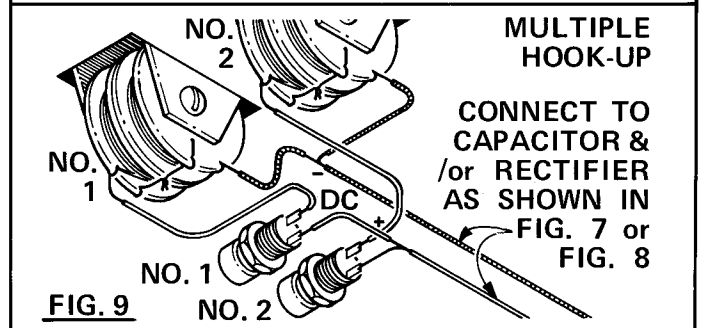
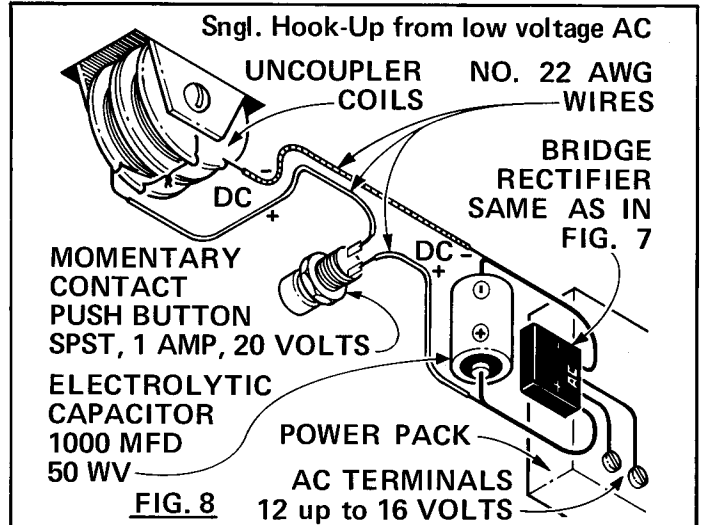
To start out, you will notice that there are four wires coming from the uncoupler, two from each coil. Scrape the ends of these wires clean and twist the two shown in Fig. 5 together and solder with 1/16" size rosin core solder (Fig. 6). You will have to connect the remaining two coil wires to the AC accessory side of your power pack, one wire thru a push button switch and both wires thru a rectifier with or without a capacitor. The push button switch (not included) that you will need is a single pole, single throw (SPST) momentary contact type and should be able to handle at least 1 amp, 20 volts DC.



If the AC terminals on your power pack are rated at 16 to 20 volts, you will also need a single phase, full wave bridge rectifier rated a 1.5 amps, 50 volts (not included). If the AC terminals are rated at 12 up to 16 volts, you will need, in addition to the rectifier, an electrolytic capacitor rated at 1000 MFD, 50 WV (not included). Push buttons, rectifiers and capacitors are available thru radio/electronics stores and, in some cases, at hobby shops. A push button is needed for each uncoupler but only one capacitor and/or rectifier is needed for any number of uncouplers. Use insulated light wire (not included) such as No. 22 awg for hook up. Get color coded wire to avoid cross wiring. Study wiring diagrams (Figs. 7, 8, 9) for connecting 1, 2, 3, or more uncouplers. Also, keep in mind that all hook-up wire must be stripped of insulation wherever it connects with another wire.

If your power pack AC terminals are rated at 12 up to 16 volts (Fig. 9), wire as follows: First, hook up the rectifier's AC wires to the power pack

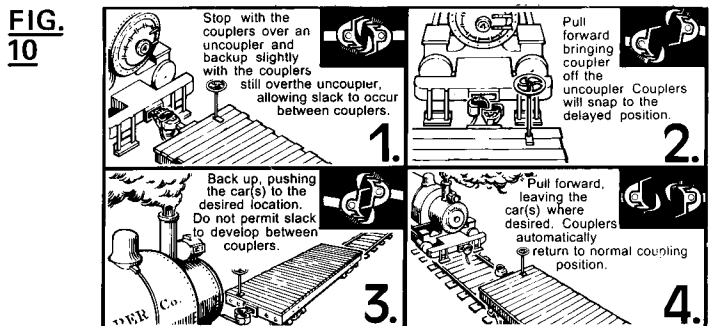
AC terminals. Second, hook up the rectifier's DC (+/-) wires to the capacitor's DC (+/-) wires. Third, run a wire from the minus end of the capacitor to one of the two wires at the uncoupler coils. Fourth, run a wire from the plus end of the capacitor to one of the two leads at the push button switch. Fifth, run a wire from the other switch lead to the remaining unconnected wire at the uncoupler coils. Be sure and double check to see that the rectifier's AC wires are not connected to any DC wires (+/-) and that the capacitor's plus (+) wire and minus (-) wire are connected properly to the rectifier's plus and minus DC wires. If your power pack AC terminals are rated at 16 to 20 volts (Fig. 7), wiring is the same as above except that the capacitor is omitted.



After making sure all wires are properly and firmly twisted together, you should now be able to operate the uncoupler by activating the push button. Try out according to "OPERATION" section and then solder all twisted wire connections with 1/16" size rosin core solder, Fig. 6.

OPERATION:

To avoid burning out uncoupler, do not use continually, but rather interject brief cooling periods between periods of activation. Don't activate uncoupler for longer than 3 minutes at any one time. To uncouple, pull or push cars to a stopped position at a point where couplers to be parted are directly over the uncoupler. Energize uncoupler. With the slightest slack occurring between the couplers, they will pop open into the delayed position, see Fig. 10. Practice makes it possible to "shoot" the cars by energizing the uncoupler and slowing the locomotive simultaneously while the car to be "cut out" passes over uncoupler.



WARNING:
CHOKING HAZARD - Small Parts
Not for children under 14 years.

Kadee Quality products co.
673 Avenue C
White City, OR 97503