



Du-Bro Fillin' Station

By Frank Granelli



Du-Bro Products has long had a reputation for imaginative products featuring high quality and dependability. Du-Bro was producing products model pilots didn't even know they needed until they saw them, and then couldn't live without, even before I was infected by the Hobby Pox back in 1970. Just about every hobby shop has free Du-Bro accessory catalogs and I suggest you get one and see what you may have been missing.

One of Du-Bro's cleverest ideas is their new Fillin' Station pictured above next to my Balsa USA Swizzle Stik, ole' number 52. Built back in 1982 for my club's Combat Contest, this aircraft, my 52nd model at the time, now serves as a test airplane for new receivers, batteries and servos. It is better to spot potential airborne radio system problems flying an aircraft that, while not expendable, doesn't hurt as much to lose as would an expensive new competition airplane. You might want to keep your old trainer around for this purpose after you have moved on to higher performance aircraft.

In fact, competition and fun-fly's are one good reason to have a Fillin' Station. Flight line starting and fueling is the rule at most fun-fly's. It is difficult to lug a big flight box out to the flightline every time you need to refuel for a quick turnaround. The Fillin' Station has everything you need, except for the electric starter, in one light, easy to carry, package.

The 8-pound Fillin' Station (full can) is also a welcome accessory when the parking area is located 40+ miles, (or so it seems when you are carrying a 50 pound flight box), away from the pits where you need to setup. With the Fillin' Station, the only other items you carry those long miles to the pits are your airplane, transmitter and electric starter.



Photo 1 Photo 2

Everything you need for flightline service is here. Fuel of course, but also the fuel pump, glow plug ignitor, spare glow plugs and wrench plus some ball or screw drivers. Photo 1 shows what the assembled Fillin' Station contains (fuel can not included). The complete kit also contains a wall charger for the glow plug ignitor.

In photo 2, two extra glow plugs, a screwdriver for attaching nylon wing bolts, a 4-40 ball driver and two smaller screwdrivers for tuning were added. The glow plugs and wrench are important as one of the most strictly enforced competition rules is that your glow plug will only fail on the flightline, just minutes before you are to start your engine. When the "clock" is running, it is nice to have a replacement plug and wrench handy. (Note: the handle is installed *backwards* in photo 2, see photo 15 for more information.)

The Fillin' Station is also proving convenient for regular flying sessions. I can use it instead of loading and lugging a heavy flight box around everyday. In fact, when I intend to fly one airplane for a few flights and know I won't need a lot of tools, the Fillin' Station is making my life easier.

Assembly

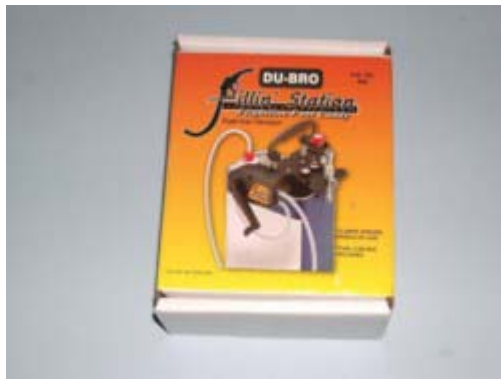


Photo 3 Photo 4



Photo 5

The Fillin' Station kit contained inside the box in photo 3 is designed to fit around the handle of most metal fuel cans. There is another Fillin' Station model available that is designed for most plastic fuel jugs (photo 5). The plastic bottle version contains the same accessories. Pick the one that fits your usual fuel container.

Everything required is already in the box (photo 4). The Fillin' Station reviewed here is the "Complete" version that includes the glow plug wrench, glow ignitor and its charger. If you already have these items, you can save money by ordering the regular version without the added accessories. The regular version retains the built-in storage areas for these items.

As photo 4 shows, complete instructions are included. However, hang on to the box photo as it does serve to clear up a few assembly points. Assembly is rather easy using a good set of metric Allen wrenches, needle nose pliers, hobby knife and drill bits from 1/8 to 1/2 inches. All parts seem to be constructed of heavy-duty, reinforced nylon.



Photo 6 Photo 7

The first assembly step is to drill the fuel can cap for the supplied fuel pick-up assembly. Do this carefully to prevent leaks.



Photo 8



Photo 9

Use a punch to make an indentation in the exact center of the cap (photo 6). This “dent” keeps the drill bit centered while making the first hole. Make this first hole small, about 1/8 inch in diameter (photo 7). Then use progressively larger drill bits, rotating by hand, to enlarge the hole (photo 8) until the pick-up assembly can be just screwed into the can’s cap (photo 9). The final size should be a tight 1/2 inch diameter hole.



Photo 10



Photo 11



Photo 12



Photo 13

Screw the pick-up into the cap until it is tight against the top. Then insert the seal (photo 10) and secure the entire assembly using the supplied nylon nut (photo 11). Cut a 9 in. long piece from the reinforced silicone fuel tubing. Attach one end to the cap assembly and the other to the fuel can pick-up (photo 12). A nice feature is the filter contained in the in-can pick-up (photo 13). This could eliminate the need for an in-line filter. However, you may want to use this filter to protect the pump and still use an additional filter in the fuel transfer line to your airplane. Du-Bro makes a fine one used by many competitive pilots. Screw the final assembly onto your fuel can.

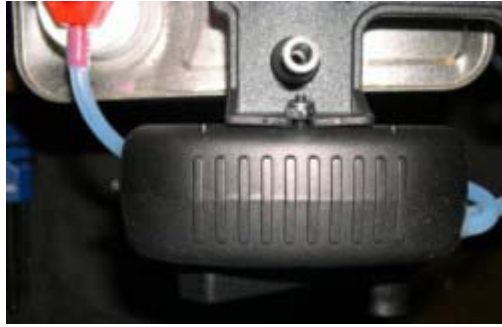


Photo 14 Photo 15

Mount the pump to the main bracket plate using the bolts and lock nuts supplied (photo 14). Make sure the label is upright and the two fuel nozzles are pointed away from the fuel can cap. Next, mount the handle to the bracket, again using the bolts and lock nuts supplied. Except for the pump attachment, all the lock nuts fit into recessed pockets making it unnecessary to hold them in place while tightening. The handle is offset to counter-balance the weight of the fuel can, allowing it to be carried level. Make sure the handle is offset towards the fuel cap (photo 15).



Photo 16 Photo 17



Photo 18

The assembly work is nearly completed. The “cup holder” for the glow ignitor (photo 18) slips into the slot on the main bracket. It can be easily removed and used as a belt clip if the need arises. When mounted to the Fillin’ Station, the belt clip portion holds the cup in place.

Attach a 9 in. long piece of fuel tubing between the fuel can output, the red plastic piece, and the lower port on the fuel pump. Using the lower port allows pumping fuel into the airplane with a clockwise handle rotation. If you prefer, use the top port for counter-clockwise rotation filling. Left-handers may prefer this as it eliminates working cross-handed.

Attach the remaining fuel line, about 30 in. long, to the lower pump port and insert the aluminum filling nozzle. This nozzle fits securely inside the metal ring on the cap pick-up assembly as shown in photo 15. It forms a tight, leak-proof seal, fitting into a gasket inside the cap assembly.

That's it. You are ready to head out to the flightline. The pump, which is also compatible with gasoline if the proper fuel tubing is used, fills a 10 oz. tank in less than 20 seconds using 29 turns of the handle. It empties the tank slightly faster, using just 26 handle rotations. That's pretty quick. Turning the handle is almost effortless and no real force is required. Your arm will not feel any strain at all.

I have been using the Fillin' Station for a few weeks now and have really appreciated the convenience and light weight. So if your club requires engine starting on the flightline, or you don't like carrying a heavy flight box around, you should really consider this innovation. Suggested retail is about \$60 for the complete package and around \$37 for the basic one. But most hobby stores offer both for less.

For more information about the Fillin' Station, check out Du-Bro Products' website at <http://dubro.com/DUBRO2005CATALOG/index.htm>

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