

## **Beginners' Corner**

*by Walt Wilson*

Frequently people want to get started flying radio-controlled aircraft, but don't know what equipment to get. Hopefully, this column will help answer some of their questions. There are literally hundreds of toy-like electric powered aircraft on the market. Generally they're called park flyers. In our area the City of St. Charles, Missouri has a law prohibiting the operation of radio-controlled vehicles in public parks. In the hands of an experienced pilot, most will fly as advertised, but they frequently differ in control functions from larger, gas-powered aircraft. Because of their small size, light weight and low power, generally, they're less stable and harder to fly than larger aircraft. Frequently, smaller planes may be skittish and require more advanced flying skills than larger ones, even when gas-powered. Bigger is better!

The most popular size training aircraft have wingspans between five and seven feet. Most use engines in the .40 to .50 cubic inch displacement range. You have to decide whether you want to build your planes or just buy something and go fly. There are several Ready To Fly (RTF) kits available. One with which I'm familiar is the [Hobbico NexStar](#). Links to items are provided for the beginner to see what we are talking about. It's well-built and comes with all the "good stuff"; an [O.S. 46 Engine](#), a Futaba 4YBF radio, and an Active Flight Stabilization unit. All are quality products and will perform well. You'll still need a starter, starting battery, fuel, a glow plug igniter, and basic hand tools. Never try to fly your first RC plane without assistance from an experienced instructor. If you do, your first flight will be brief, and possibly the only one with that plane! You'll need a capable flight instructor to check the plane over, before flight, and assist you with learning to fly it. Contact [Bob Gizzie or one of the other Spirits' instructors](#), listed on our web site. If you have limited building skills, but want to put your own plane together, there are dozens of Almost Ready to Fly (ARF) trainers available. They aren't really almost ready to fly, just mostly pre-built and covered, and can be completed with only modest building skills. A good example of an ARF is the Sig Kadet LT-40 ARF. It's well-built, tough, affordable, and much of the required hardware is included in the kit. The wing halves must be joined together and the tail surfaces installed. The control surfaces have to be installed, as well as the fuel tank, landing gear, engine (not included), and radio components (also not included) with all linkages. The Sig Senior Kadet ARF is a fine airplane, too, but more fragile and expensive. The line of engines are fine engines for most types of radio-control flying and will be useful for many

projects beyond training. If funds are limited, a [Super Tigre GS-40](#) is also a great engine. There are many other good engines available, but any without ball bearings on the crankshaft should be avoided.

There are probably more Futaba radios used by the Spirits than any other brand. I would recommend a Futaba 6EX as a first radio. It's a six-channel computer-programmed radio (don't let that scare you) with dual rates, servo reversing, adjustable servo throws, and it can keep adjustments for up to six aircraft in memory. The six channels will serve you in the future when you may want to fly planes with retracts and/or flaps or other functions. [Other Futaba radios](#) are also available. There are other fine radios, such as [JR](#), [Hitec](#), and [Airtronics](#) (at various prices, depending upon what you want), some of which may be preferred by advanced flyers.

Most, not all, hobby shops will match Tower Hobbies prices. When your order directly from Tower Hobbies you have to pay shipping costs, so it comes out about the same as buying locally from your hobby dealer. If you're interested in building your first R/C plane yourself, there are kits available, too. While scale and aerobatic models are very attractive, your first airplane, whether you build it yourself or use a RTF, should always be a trainer. Build-It-Yourself (BIY) kits are available for the [Sig Kadet LT-40](#) and Sig Senior Kadet as well as any other types. Most quality kits have die-cut or sawn parts, speeding construction. There is a great deal of satisfaction to be derived from building a plane from a pile of lumber and flying it.

In the Beginners' Corner we discuss various recommended products. We know they're good from personal experience. There are other planes, engines, radios and ground support equipment that will do the job, in addition to the ones mentioned. The brands recommended there are simply the ones we consider to be the best. Again, engines without ball bearings on the crankshaft should be avoided! They are usually the bottom of the line and frequently do not have features that make good performing, durable engines. The important thing in an airplane for a beginner is to get a high-wing trainer with tricycle landing gear. Tail-draggers are more difficult for the trainee to control while taking off. Low-wing planes generally require more pilot input to fly steadily and are less forgiving of pilot error than those with high wings. Now that you've picked out your plane, engine, radio, and the necessary parts to make it complete, you need to think about ground support equipment.

Glass fiber reinforced plastic or glass fiber reinforced nylon propellers are

the current state of the art, so we'll assume you've selected one for your plane. You'll note that the edges are quite sharp. Model airplane engines can frequently be started by hand, by flipping the prop, but that's not recommended. The edges of the prop are sharp and, even with gloves; a difficult engine can do a lot of damage to your fingers. For the preservation of your hands, I suggest you get an electric starter. It'll save some grief, too, if you ever have trouble getting your engine started. Starters are available with self-contained batteries, if that's your choice. Most modelers choose one with cables and a separate 12-volt battery, which can be used for other purposes, too, like driving an electric fuel pump and/or power panel. A power panel can be used to light up your glow plug, too, but really isn't necessary. Self-contained glow plug igniters are available and preferred by many flyers.

I recommend you get a flying box to transport all your equipment and make flying more convenient. You can build your own, or kits are available starting at about \$20. The sky's the limit for pre-built boxes, which sometimes include part of the ground support equipment you'll need.

The following by Ralph Amelung is well thought-out and all his recommendations are good.

## **Ground Support Equipment**

**Fuel:** Consult your owner's manual for the best fuel for your engine. [Cool Power 10%](#) is a popular fuel. Also, review your manual for the proper "run-in" procedure. Your fuel jug will need "fittings" to extract the contents and fill the fuel tank in your plane. A [Dubro "Fillin Station" #908](#) is one choice and contains a hand-crank pump, plus fittings. Other crank pumps are available separately such as a [Hobbico HCAP3015](#). The fittings sold separately are [Dubro 807](#). Electric fuel pumps are also available. Fuel tubing might be needed depending on the fuel delivery system you choose. [Dubro #197](#) or [Prather Super Fuel Line # 7080](#) are good choices. Get a couple of extra feet. It is a good idea to store some fuel line in your field box for other uses.

**Ignition:** Consult your owner's manual for the proper Glow Plugs. [OS A-3](#) and [OS No. 8](#) are very common. To "light-up" the glow plug you will need a Glo-Plug Igniter. Many are available. Some come with an enclosed Ni-Cad battery and wall charger. A [Dubro DUB666](#) is an example. Other igniters

require "C" batteries (NiCd or NiMh) that are purchased separately. A "four-way" wrench, part number [HCAP 2550](#), designed for changing the glo-plug and as a prop wrench is available.

**Starter:** Starting your engine will require a device to turn the propeller rapidly. A medium range grade starter is the [Hobbico TorqueMaster 180](#). A 12-volt battery will be required to power-up your starter. A [Hobbico battery HCAP0800](#) or any 12-volt garden/motorcycle type battery will work. You will need to charge your battery. The [Hobbico HCAP0200 12-volt charger](#) will do the job.

**Other:** A spare propeller is also a very valuable item to carry with you. A [Master AirScrew 10 x 6](#) will work with many models. Consult your manual for the best prop for your engine. A [Hobbico Deluxe Field Box Combo](#), that contains a lot of equipment, is available and includes almost everything that a beginner would need. However, differences in the quality of the components are readily apparent. You will have to decide what grade of equipment best suits your needs. As always, ask questions and watch other modelers before spending a lot of money on equipment that might not be necessary. Every hobby has its price.