Merry Christmas and a Happy New Year!!

December 2022

BCMA

CARTERSVILLE GA

Upcoming Events:
1st Annual Chili Pot Fly-in
Saturday, January 14th
11 AM

Editor Comments

Hello Everyone, Christmas is just about here. I want to wish everyone of you and your families a very Merry Christmas and Happy Holidays. Club meeting was held on December 3rd. The election is complete. The club merger is complete. It was decided to continue with the BCMA charter. NWGA charter has been dissolved. Your new officers for 2023:

Jeff Holland-President
Richard LeClaire- Vice President
Keith Schevling- Treasurer
Duane Knight – Secretary
Paul Napier- Field Safety Officer

1st Annual Chili Pot Fly-In: Saturday, Jan. 14th

Chili and flying. Sounds like good times to me @ **11AM**

If you would like to participate, we are asking those who can cook a good bowl of chili to bring your best recipe! We now have electricity, so bring your crock pots. Let's have us some chili and enjoy some RC flying.
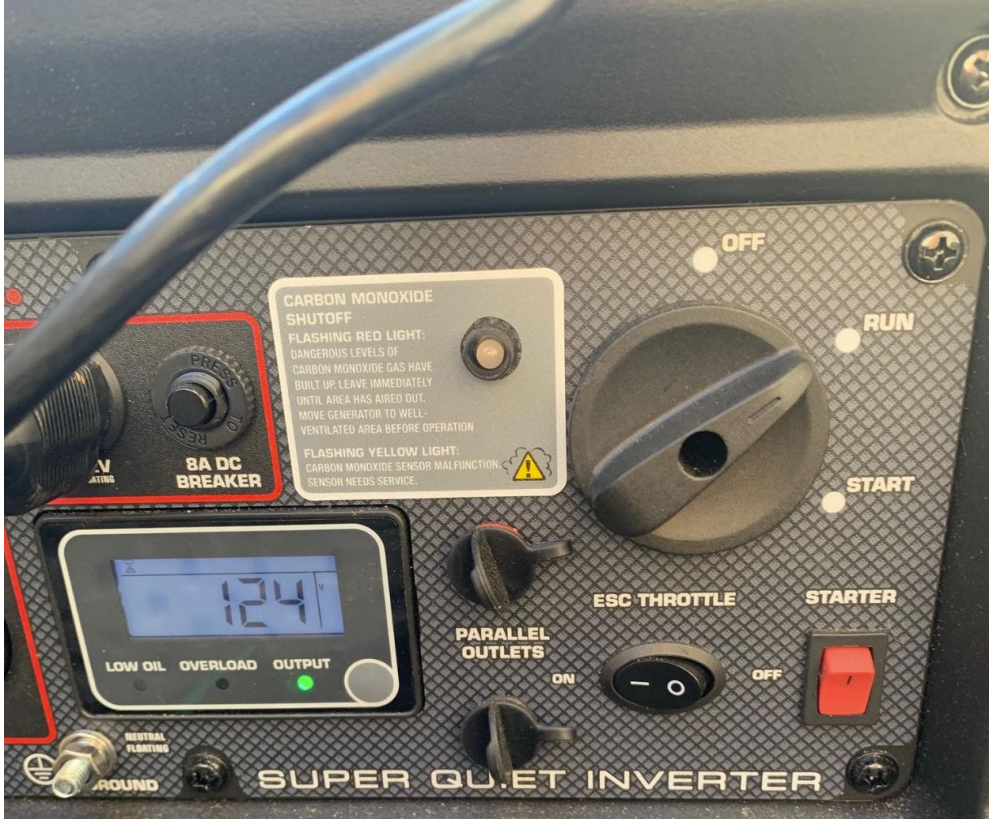
See you then!

President's Corner

What an awesome year in the club's history it has been - 2022 is now almost a wrap! Thank you to everyone who has contributed or helped out in our transformation this year with the merging of the two clubs into one. We have seen considerable field improvement activities as well at the field for your modeling enjoyment.
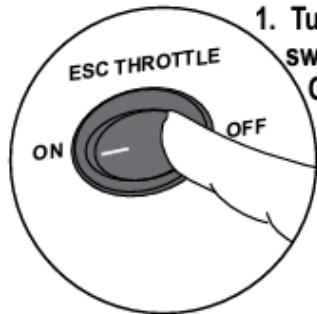
The new incoming officers for 2023 have been elected and are very excited for what the new year holds. Be on the lookout in 2023 for new / additional events such as fun flys, a weekend, regional and AMA accredited event (maybe warbirds, jets, giant scale, etc...) and the addition of a control line site. See you at the field soon!

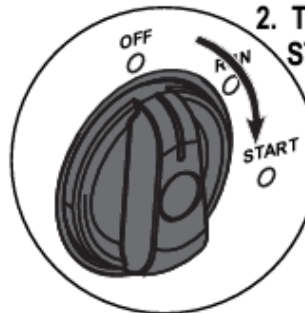*Jeff Holland*– BCMA President

How to start the club generator

CARBON MONOXIDE SHUTOFF
FLASHING RED LIGHT: DANGEROUS LEVELS OF CARBON MONOXIDE GAS HAVE BUILT UP. LEAVE IMMEDIATELY UNTIL AREA HAS AIRED OUT. MOVE GENERATOR TO WELL-VENTILATED AREA BEFORE OPERATION

FLASHING YELLOW LIGHT: CARBON MONOXIDE SENSOR MALFUNCTION. SENSOR NEEDS SERVICE.

OFF

RUN

START

8A DC BREAKER

124 V

LOW OIL   OVERLOAD   OUTPUT

NEUTRAL FLOATING

GROUND

ESC THROTTLE   STARTER

PARALLEL OUTLETS
ON   OFF

SUPER QUIET INVERTER

PREDATOR.
START GUIDE

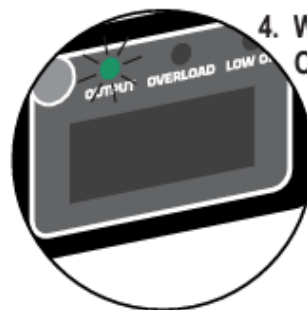**ESC THROTTLE** ON — OFF

1. Turn economy switch (ESC) OFF.

Check oil level and air filter before starting!

OFF   RUN   START
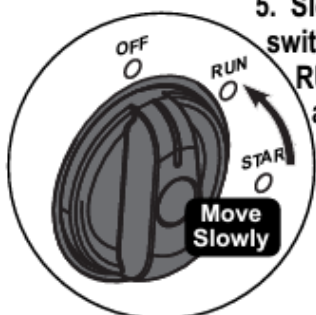
2. Turn switch to START for cold engine. or Turn to RUN for warm engine.
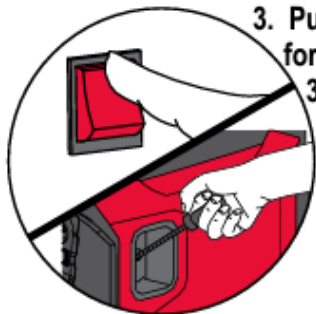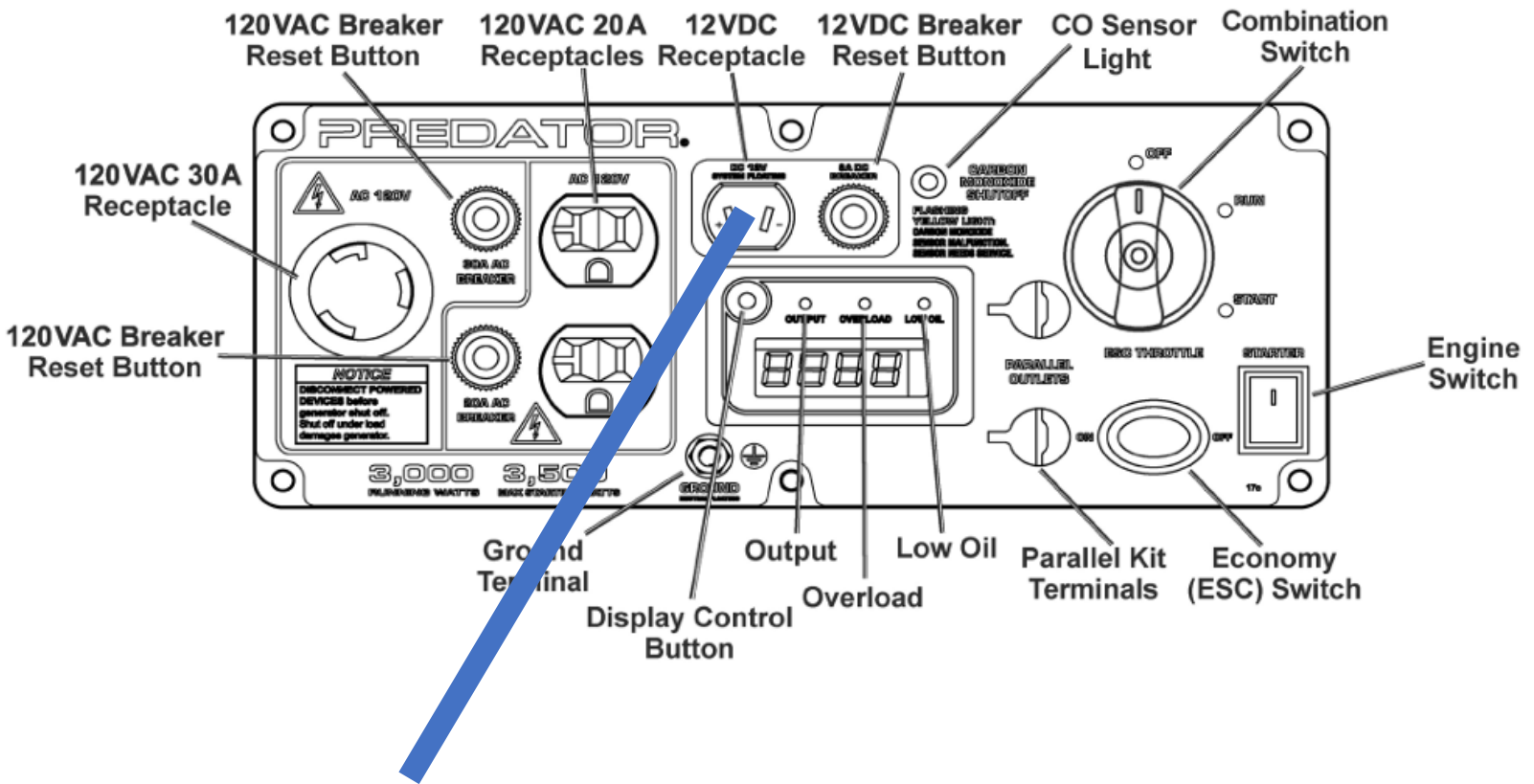
3. Push Start for up to 3 seconds. or Pull starter handle.

OUTPUT   OVERLOAD   LOW O.

4. Wait for OUTPUT light.

OFF   RUN   START
Move Slowly

5. Slowly turn switch to RUN before attaching loads.

6. Turn the ESC throttle back on

120VAC Breaker Reset Button 120VAC 20A Receptacles 12VDC Receptacle 12VDC Breaker Reset Button CO Sensor Light Combination Switch

120VAC 30A Receptacle

120VAC Breaker Reset Button

PREDATOR.
AC 120V
20A AC BREAKER
NOTICE
DISCONNECT POWERED DEVICES before generator shut off. Shut off under load damages generator.
20A AC BREAKER
3,000 RUNNING WATTS 3,500 MAX STARTING WATTS

AC 120V

DC 12V SYSTEM FLOATER 8A DC BREAKER

CARBON MONOXIDE SHUTOFF
FLASHING YELLOW LIGHT CARBON MONOXIDE SENSOR MALFUNCTION SENSOR NEEDS SERVICE

OFF
RUN
START
ESC THROTTLE STARTER

OUTPUT OVERLOAD LOW OIL
8888

PARALLEL OUTLETS
ON OFF 17s

GROUND

Engine Switch

Ground Terminal
Display Control Button
Output
Overload
Low Oil
Parallel Kit Terminals
Economy (ESC) Switch

The cooling fan is plugged into the 12 volt receptacle , do not unplug the fan.

Before you leave, make sure the generator is turned off.
The red light on the shed should be off.
The main combination switch should be turned to off.
Turn the Economy (ESC) switch to off.

Combination is 1945, make sure the lock is put back.

Generator Install at the Field

For Sale:

Futaba 14SG transmitter and R7008SB receiver.

Nearly new excellent condition. I got it several years ago when I bought a quad copter from someone.

PRICE: $200.00 or reasonable offer.

I can bring to Kingston Downs field if there is any interest.

James Grebe: jgrebe@cioblueprint.com
972-261-4377

CARF 104" Extra with 3W106 TOC motor and 3W Canisters

More pictures on request or I can bring to Kingston Downs.

Motor pulls strong and all servos work
The plane is not going to win any beauty contests, but it might be a good option for someone looking to get into large scale gas planes

Includes: Velocity stack, Carbon fiber 28x10 prop and carbon fiber spinner. Smart-Fly Competition 12 Turbo Plus with fan-cooled regulator, Spektrum AR12020 receiver with two satellites. Fiber optic ignition kill. Hitec high torque digital servos (HS-5645MG) with titanium pushrods on all surfaces (pull-pull cables on rudder), SWB dual servo self-centering rudder tray, White Rose Engineering carbon fiber and CNC aluminum tail wheel assembly upgraded to the milled wheel/urethane tire option. Mylar wing bags.

Priced to sell so I can make room for other projects.

Price: $1,000 firm

James Grebe: jgrebe@cioblueprint.com
972-261-4377

Various Spektrum receivers
6 channel
7 channel x 2
8 channel
9 channel

Contact Jeff Holland
jaholland35@gmail.com

Open Source Radios and Firmware

By Gene Maurice

As you may or may not know I fly with a Radiomaster transmitter. What, not a Spektrum or Futaba? No, not anymore. I formerly used Spektrum for a bunch of years and before that JR for more years that I like to admit. When I decided I wanted to move on from the Spektrum DX7 (Gen 1) I hunted for something that gave me the functionality I wanted at a price I could afford on a fixed income.

At the time, "Open Source" transmitters could be had for between $150 - $400. Which, when compared to other "brand name" radios, was, and still is, a WHOLE bunch cheaper! But do they work??

Why are they so inexpensive you ask? One of the primary reasons is that they use Open Source firmware, OpenTX or EdgeTX. That means the manufacturer doesn't have to develop the operating system, saving a huge chunk of R&D investment. The manufacturer only has to follow the guidelines for configuring the hardware so that it supports the underlying software. Given that the firmware runs on specific hardware the manufacture doesn't even have to determine what chips to use. Which, again, adds up to big savings.

I have gone through a couple of different flavors of these "open source" transmitters. I started with a Taranis X9D and graduated to a Jumper T16. This has recently been demoted to my backup radio and I am currently using a Radiomaster TX16S MkII as my primary radio. This radio was $219 on Amazon and has hall effect gimbles, 4.3" full color touch screen and a carbon fiber finished case. The Radiomaster uses EdgeTX because EdgeTX supports the touch screen, OpenTX does not. EdgeTX started its life as OpenTX and shares much of its functionality. EdgeTX is rapidly becoming the replacement for OpenTX. So far, after about seven years of using these various radios as the primary plane/drone driver, I have never had a radio hardware or software failure. And in total, I still have not spent what a Spektrum NX10 or a Futaba T16Z cost.

The Radiomaster, and the Jumper, both come with an internal "4 in 1 Multi-module". This module allows the transmitter to "talk" to just about any 2.4Ghz receiver. The big exception to this is the highly proprietary protocols such as Futaba FASST and Frsky ACCESS. I use a variety of DSMX receivers and some Frsky receivers. Once setup in the radio, simply switching models automatically sets the multi module to the proper protocol. The protocols supported can be found at DIY-Multiprotocol-TX-Module/Protocols_Details.md at master · pascallanger/DIY-Multiprotocol-TX-Module · GitHub.

In discussions I've had with folks at the field, the jump to the open-source firmware seems daunting to some. I won't try to oversimplify the process, there is lot to learn. But, consider this, if I figured it out, can it really be rocket science? The upside is: there isn't anything that can't be done. The good news / bad news is that nothing is predefined. The bad news is you have to define it. The good news is you are not locked to something the manufacturers engineers thought you needed to have but will never use. The basic processes are to define "Inputs", what stick or switch does what, create "Mixes" like add a little elevator to rudder input, and define "Outputs" as in the Aileron goes to Channel 1 etc. To these basic processes you can add "Flight Modes", "Logical Switches" and "Special Functions". Once you have gotten one model configured the rest become a lot easier.

To aid in the set-up and maintenance of the model configuration, is a PC based application, "TX Companion". This program allows you to download the Radio and Model settings from the radio to the PC. Once the data is downloaded to the PC all of the settings can be modified and manipulated through a user interface that allows input via the keyboard and mouse. When done the data is uploaded back to the radio overwriting the existing data with the changes. This program also allows you to facilitate the upgrade to new versions of the firmware and backup the data to off-line storage.

Open Source Radios and Firmware
Continued…

As an example of how extensive the functions can be, I have a single switch that performs a Landing Mode set-up using the following functions: If Switch A is in the down position and the throttle is less that 20% go to low idle and deploy the spoilers and announce "Landing Mode". Another is a Snap Roll Function: If Switch E is up and Switch G is down announce "Positive Snap", set Elevator to 100% up, Ailerons to 100% right and Rudder to 100% right: or if Switch E is down and Switch G is down announce "Negative Snap", set Elevator to 100% down, Ailerons to 100% right and Rudder to 100% left.
There are literally hundreds of tutorial videos on YouTube describing the functionality and use of Radiomaster, OpenTX and EdgeTX. If you are going to take this route, I would suggest using EdgeTX. The developers working on this project are dedicated and have been turning out releases with new functionality at a fairly rapid rate. Just do a Google search for "EdgeTX" and you will get over 200K hits.
If I were to suggest a radio it would be the Radiomaster TX16S because of the functionality (touch screen), price, support and, duh I own one. Information on the radio can be found at
https://www.radiomasterrc.com/products/tx16s-mark-ii-radio-controller
If you're not bored to death and this article generated any interest or you would like more information, please let me know. I will be more than happy to give a one-on-one tutorial or demonstration.

Gene Maurice
gene.maurice@sgmservice.com
678-910-2298

Covering Techniques
Tips and tricks for using iron-on covering

(Jerry gave permission to use his article this month, thanks Jerry!)

Written by Jerry Smith
Tips and tricks for using iron-on covering
How-to
As seen in the February 2014 issue of Model Aviation.

After you have built your airplane, it's time to cover it. Some builders prefer to stick to cloth and paint it. That is a lot of work and takes a different skill. The modern, iron-on covering material I am going to discuss takes only one skill: to properly apply it. Color and finish are included!

To some, covering an airplane is a daunting task, although others enjoy it. The completed job, depending on your level of perfection, differs between builders.

The covering we have available today is a marvelous technology, requiring less work to achieve a beautiful model.

Covering materials have different features with which to become acquainted. MonoKote is a Mylar-based material, glossy in finish, and it shrinks during heating.

UltraCote, a polyester-based material, is less glossy and better resembles a painted finish. It shrinks as heat is applied and is more flexible. Lighter films such as Solite for smaller models are thinner, weigh less, and take less heat with different handling techniques. There are plenty of covering materials from which to choose, but all have different application characteristics.


Tools of the trade

After you choose your covering material, if you are new to covering, read the instructions that come with the material. You will find some helpful information on its use including the temperatures to set your iron for sealing and shrinking. If you are using an iron sock on your covering iron as I always do, it will be necessary to elevate the temperature to improve heat transfer to the covering. It will also keep you from scratching and marring the finish.

Before covering the airframe, I spend time shaping, filling cracks, and sanding. I actually spend more time doing this than building. I use 150-grit sandpaper for shaping, 220 grit for general sanding, and I finish sanding with 400-grit paper. This pays off when I apply the covering and the results will show in how nice it looks. It's time well spent! I also vacuum the work surface and dust the part to be covered with a brush to remove any loose dirt and dust particles before covering.

After shaping and sanding the airframe, dust it off using a vacuum with a brush. Make sure your work area is clean. Lay the part on the backside of the covering, trace around it with a magic marker, then cut it out leaving a 1-inch margin for gripping and arranging.

Covering materials are not cheap, so spend some time planning the use of your covering. I lay the part to be covered on the back side of the covering and draw around it with a marker. I trim it out, leaving a 1-inch margin for gripping and arranging during application. When doing this, keep in mind that the surface of the airframe that comes in contact with the material is the side of that part you are covering. If you get mixed up, the glue on the covering will be on the wrong side.
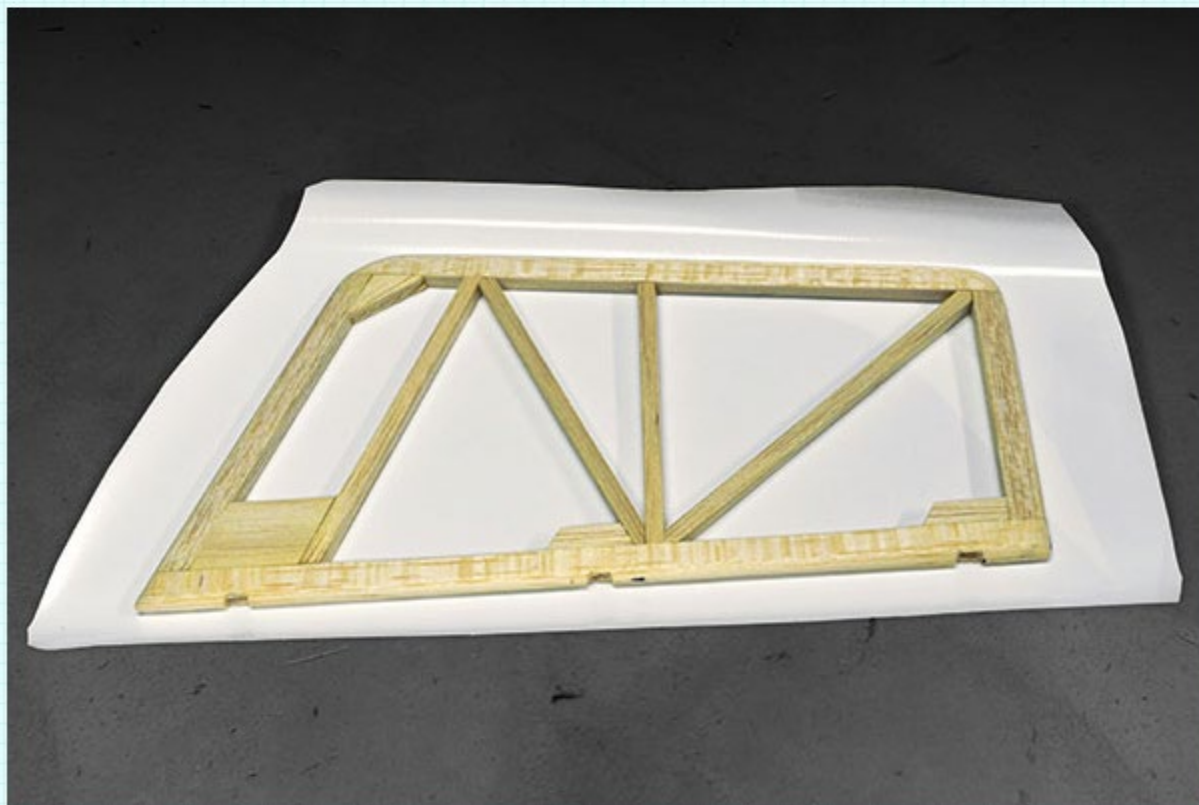
Lay the part to be covered on the covering and center it. Note that the glue side of the covering is against the airframe.

Spend time figuring out how to get the most out of your roll of material with the parts you are covering. Before covering my model, I choose a flat, easy-to-cover part such as a rudder or fin. This gives me a chance to get up to speed on what is involved and how to go about it.

Tack the covering to the airframe according to the number of steps shown. Pull the covering taunt in the direction of each number as you go. This will arrange the covering with the fewest wrinkles.

With your iron set at the sealing temperature, lay the material on the airframe and tack it in place on one corner, pulling it flat and then diagonally to the other corner and tacking it. Do the same for the other two corners and then in the middle on both sides. Then start from the center and seal the film to the edges. When it is sealed, trim off the excess material. Now seal the trimmed edges with a rolling action, ironing it down and around the edges. Make sure it is sealed well before you shrink the covering
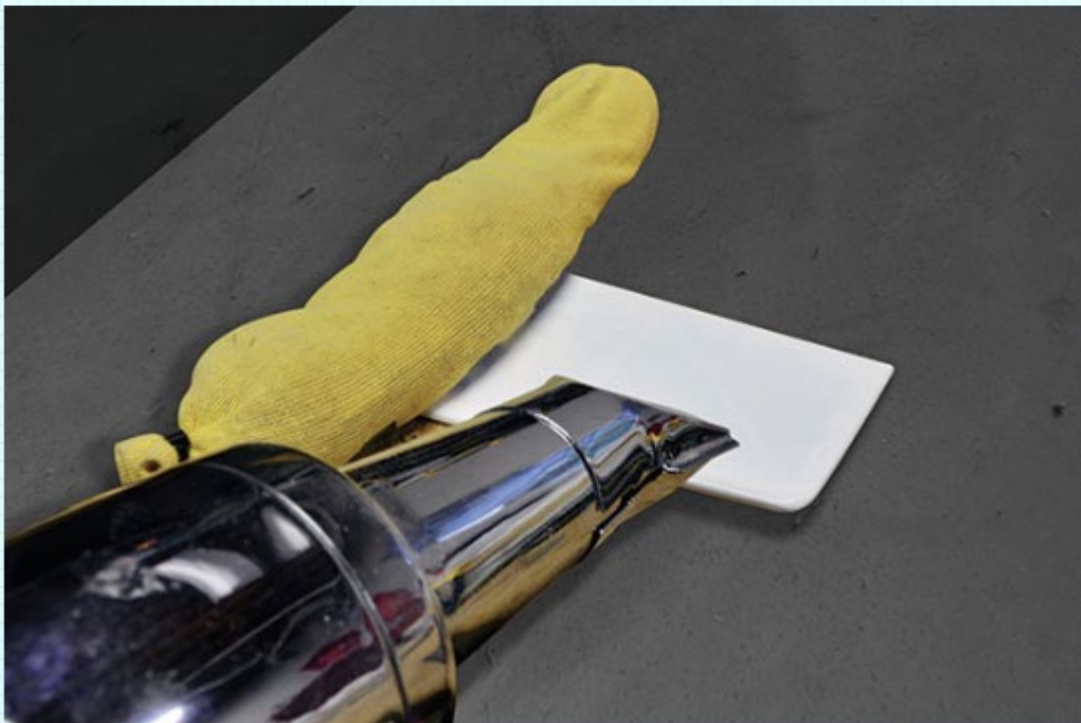
After the flat part is trimmed and sealed around the edges, weigh it down on a flat surface to keep it from warping. Use a heat gun blowing the air over the surface, not into it. To control the heat, tip the gun at a downward angle for more heat and up for less heat.

Before shrinking, I cover both sides of the part. I lay the part on a flat surface and weigh it down to keep it from warping during shrinking. Using a heat gun, I direct the heated air over the surface of the film, not directly into it. By tipping the gun down and up I can control the heat applied. Down is for more heat and up is for less heat. After the covering is tight and smooth, I turn my covering iron up to shrinking temperature.

Lay the part on a flat surface and weigh it down. Turn the heat on your iron up to shrinking temperature. Now iron the covering to the airframe, guiding the iron in a circular motion over the covering. Seal and trim the edges, shrink it with a heat gun, then iron it down again using the same circular motion.

Leaving the part weighed down on the flat surface, I go over the covering, sticking it down to the airframe. This is where that good sanding job will show up. Do the same on sheeted surfaces. The benefit will be a surface that is less likely to wrinkle in the sun. Sometimes I set the covered model out in the sun and leave it for a while. If any wrinkles occur, I iron them out.

Right: When covering a sharp corner, iron the flange of covering from both directions leaving a tab at the corner. Trim off the tab flush with the corner with scissors. Then iron it down in both directions.

Compound curves present a problem. You will often run into this on wingtips. The easier route is to cover the tips separately. If you do this and make the seam on the end rib neat, it will be difficult to see from 5 feet away. Other compound curves, such as around the nose of the model, can be handled by laying the covering on in sections and not doing it all at once and consider painting it another color.

When you encounter a moderate radius corner, place the part on the workbench with the end hanging over. Weigh it down and use a heat gun to pull the covering around the corner. Use a glove to protect your fingers from the heat.

Putting covering over covering presents a problem if the iron is too hot. The adhesive will begin to emit gas and cause bubbles. Do not try to do this in large areas.
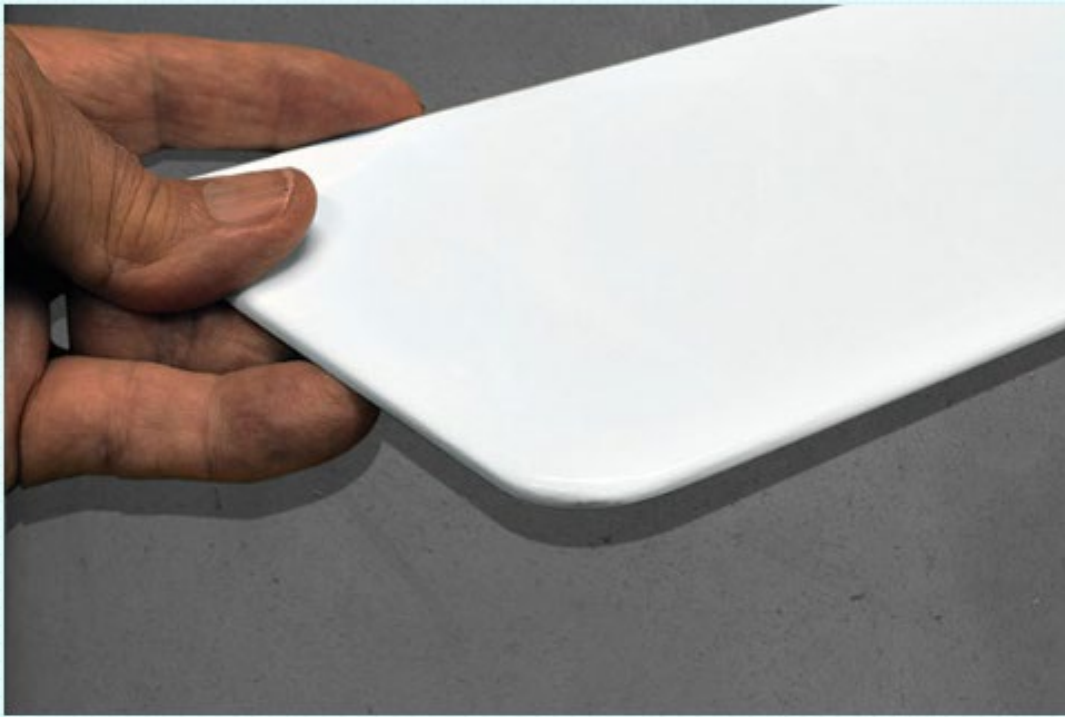
After shrinking the covering with a heat gun, it looks great, but you are not through. Note how nice the round corner looks.

The graphics I put on my models are uncomplicated. I tend to stick to simple ones and not get carried away.

I lay out the pattern on the back side of the covering and cut it out with a razor. I clean off the area where I am going to place the graphic with alcohol, and then spray on some Windex. I lay the trim in the Windex, sliding it around until it is aligned. I call this floating on the trim.

Here is my recently finished Top Flight Contender. I covered it with UltraCote and panel lines in 1/16-inch black tape. Although it is a 1970 design, it is still one of my favorite flying airplanes.

When I'm satisfied with its position, I squeegee off the excess Windex under the trim with a credit card, soaking it up with a paper towel as I go, getting rid of the air bubbles. I do this several times, removing all of the moisture, letting it set for a while, and then I seal it with a low-temperature iron—approximately 200°. I have had the best luck with this method of adding trim.

Covering your model takes time. Don't be impatient.

I hope I have imparted some information on this subject that will stick with you and help you achieve a better covering on your next model. Happy covering!

—Jerry Smith
jerry.smith875@gmail.com

Reminders

Have an article you want share? Send it in.

Something you want sell? send it in.

Have a new plane? want to share pictures? Send it, tell us what you think about it.

Send me your stuff: roneadams2@gmail.com

Get your Trust # and FAA # to Keith Schevling : keithschevling@gmail.com

If the club doesn't have a record of your Trust # and FAA# you are going to lose flying privileges. Get it done folks.

See you at the Field.