

From Sport Flier to Sportsman Competitor

This month I'd like to begin a two-part series about moving from sport flying to flying as a competitor in the Sportsman Class. I'm sure this topic has been covered many times in K-Factor, but here I'd like to take an approach that may be different from how that has been done in the past. Rather than discuss at length what the Sportsman class is and the equipment that is needed to compete in it, I'd like to discuss the mistakes that are most often made by Sportsman pilots. Therefore, I will not cover much of the "how to" for executing each of the maneuvers in the Sportsman sequence. Of course, it is best to set a context for this discussion, so I will begin with a brief review of the "why" and the "what".

Why become a Sportsman pattern flier?

Most pilots are attracted to pattern flying because of the grace and precision that they see when accomplished pattern pilots practice and compete. Often there is a desire to do more than simply "burn holes in the sky" in a way that usually does not progress towards any particular goal. While burning holes in the sky is certainly a legitimate recreation, the pattern pilot wants to improve his skills with benchmarks along the way to chart his progress. Competing in the Sportsman class satisfies this goal and provides the starting point for a journey that may never end. It requires mastering all of the controls on the airplane – ailerons, elevator, rudder, and throttle – and it requires doing this with repeatable precision. The seasoned pattern pilot is in total control of the airplane. This means he can lead it through a defined set of maneuvers without trying to catch up to the airplane or reacting to what has just happened. As you will read below, I say that the pattern pilot must "see" the airplane rather than simply "look" at it.

What equipment does it take to get started?

Well, obviously, it takes an airplane and the support equipment necessary to fuel it and control it in the air. Much has been written about this aspect of getting started and I simply want to stress what has been said so often: It does not take the latest and greatest, high-dollar airplane and transmitter to get started. While top-of-the-line equipment will perform better in the more challenging pattern classes, this advantage is diminished in Sportsman where the sequence is composed of very basic maneuvers that do not demand much from the airplane or the mixing capabilities found in high-end computer radios.

A good starting airplane might have a symmetrical or semi-symmetrical wing with a span of 60 inches, or so. A transmitter with a digital trimming capability, adjustable end points, and exponential smoothing will be helpful to achieve and maintain stable flight, though this is not necessary. (Budget note: transmitters with excellent capabilities are available at very reasonable prices if you are willing to purchase a used radio on the 72 MHz band.) I flew an Ultra Stick in my first year of pattern and I was satisfied with the result. My goal during that first year was to learn about pattern flying and to see if it was going to be right for me. I think that this should be your goal as well. For a much more thorough discussion of entry level equipment see "Best airplane for beginners" on the NSRCA website at <http://nsrca.us/index.php/best-airplane-for-beginners> .

What else does it take?

Pattern flying is about executing a defined set of maneuvers with precision and grace. Doing this is hard. It's that simple. Simply flying a straight and level line across the box is more difficult than it looks. Sure, flying from one end of the box to the other is easy, but it gets much more difficult when altitude must be maintained, the track of the airplane must be parallel to the runway, and the wings should remain level throughout. And if that's not enough, that nasty wind is pushing the airplane

around in the sky trying to confound your efforts to control it perfectly. And, that's just the beginning!

But before you start to fly the pattern you need to know what it is and what is expected of the pilot who wants to get the best possible score. First, you must understand that the maneuvers in the sequence are flown in an imaginary space call “the box”. This is a vertical plane that is out in front of the pilot about 150 meters away. It is centered directly in front of the pilot and extends to the left and right to a distance that creates an angle of 60 degrees on each side of the center line.

Second, you must know the maneuvers that make up the Sportsman sequence. I suggest that you take a look at “Maneuvers to fly” on the NSRCA website at <http://nsrca.us/index.php/what-maneuvers-to-fly> . You may also want to see a more detailed description of this and other sequences at <http://nsrca.us/index.php/sequences> . In addition, most NSRCA districts will hold a “judging seminar” sometime during the year (early spring is common) where the rules, sequences, judging standards, and techniques are reviewed. These seminars offer a great opportunity to meet other pattern pilots in your district and I encourage to attend one if you can.

How to get started in competition.

As just about any patten pilot will tell you, it takes a caller (who can also be your coach) to fly the pattern well. Your caller will stand behind you as you fly the Sportsman sequence and will keep you on track as you progress from one maneuver to the next. Who your caller is and how you interact with each other is completely up to the two of you. What you will need from your caller during a contest is a gentle narrative of the maneuver that you must execute next and how you are positioning the airplane in the box as you proceed through the sequence of maneuvers.

Because your caller of choice may not always be available, it's a good idea to work with someone else who can fill in when needed. In addition, each caller/coach may critique your flights a bit differently. Although some of what you hear may seem to be contradictory, in the end you will benefit from differing assessments of your progress.

To be well prepared for your first contest you need to practice. The more the better. And you'll want a coach (who may also be your caller) to help you master the sequence. You'll need to take my word on this: Your coach will have a much more accurate and critical eye than you have to evaluate how you are doing as you practice. What you think may have been a well-executed maneuver may, indeed, have left a lot of room for improvement. It's hard for you, the beginning pattern pilot, to assess how well a maneuver is executed while you're trying to keep the airplane moving through the sequence. That is where your coach/caller will be very helpful. Strange as it may seem, your coach does not even have to know how to fly an airplane. What is needed here is an understanding of what the maneuvers are, how they should look, and the downgrades that are applied as mistakes occur.

Be sure that you practice the sequence in both directions. If you only practice the sequence from, say, left-to-right, you can be sure that the wind will force you to fly right-to-left at your first contest. See “How to practice” at <http://nsrca.us/index.php/how-to-practice> .

I don't think that you can ever practice enough, but now that you've practiced as much as you can, see “How to enjoy your first contest” at <http://nsrca.us/index.php/enjoying-your-first-contest> before you make the trip.

What's needed to get good scores.

You've accepted the fact that pattern flying is about competition and, for most of us, we compete so that

we have a yardstick by which we can measure our improvement. The metric of this measurement is the scores given to us by the judges who sit behind us at a competition. While we may think that we've just executed a maneuver beautifully, the reality oftentimes is something well short of that. Learning how we are progressing towards the goal of being a better pilot is best determined by our scores at contest.

Receiving top scores for a sequence requires both knowing how to execute the maneuvers and how that execution will be evaluated by the judges. I'll assume for the purpose of this discussion that you have a good idea of how to do the maneuvers in the Sportsman sequence, so I'd like to focus more on what the judges at contest are looking for as you fly that sequence and what are the common mistakes made at the Sportsman level. What I'm saying is that I'd like to discuss getting good scores from the perspective of how flights are judged rather than how they are performed.

First, remember that you are scored on what the judges see, not on what you do. Okay, there's high degree of correlation between the two, but they are not the same. What you do is make inputs into the controls on your transmitter that affect what the airplane does. What the judges see is the track and attitude of the airplane that results from those inputs. However, what the airplane actually does is also affected by the wind in which the airplane is flying and by the anomalies and quirks of the airplane's flying characteristics. While the latter "externalities" can be minimized by having a properly trimmed airplane, they are always present to one degree or another and it's up to you overcome them. Put differently, you need to fly the airplane instead of flying the transmitter.

As you execute each maneuver in the sequence the judges will apply "downgrades" to each defect that they observe. (Again, see the Maneuver Descriptions at <http://nsrca.us/index.php/sequences> and the Schematic Diagrams at <http://nsrca.us/index.php/judging> to understand how the downgrades are applied.) Your score will be primarily determined by defects that occur at the **element** level of the maneuver. Remember, each maneuver is made up from a set of elements (rolls, lines, etc) just as the sequence is made up of a set of maneuvers.

We'll continue next month with an analysis of the things that often go wrong as you fly the Sportsman sequence. Until then, practice.