Seaplane Rating Add-On

Even sport pilots qualify

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A business trip left me in Milan, Italy, for a weekend. With no plans, I looked at a map and noticed that Lake Como was not very far. An impromptu mini vacation began once I found the early train that departed for the city of Como. ➜

Not sure what to expect, I stepped off the train and my eye was immediately drawn to a seaplane pushing its way into the sky about a mile away. I never expected to see airplane activity. I made a beeline down the hill from the station, barely taking notice of the beautiful city and all of its lakeside attractions. A huge airplane hangar came into view. It was separated from the lake by a busy two-lane street lined with cars and bustling pedestrian traffic. Floatplanes sitting along the street didn't get a passing glance from the locals, but I was in awe.

What was this place? I soon learned all about Aero Club Como, the oldest continuously operating seaplane base in Europe. I walked into the club's office and asked if floatplane tours were available. I didn't get very far, since neither I nor the young man at the counter knew the other's language. Sergio, a kindly gentleman, interrupted. He explained that tours were available, and the young man nodded eagerly while presenting a menu of options and prices. When he realized I was a pilot, he offered, "Take a lesson, it's cheaper than a tour."

They couldn't find an instructor on short notice, so Sergio offered to take me on the tour at the price of a lesson. We flew in one of the club's float-equipped Cessna 172s for about an hour, taking off in a sea lane reserved exclusively for the club. This allowed us to see the lower fork of the lake between the towns of Como and Bellagio. Sergio explained each procedure that was unique to seaplanes from the time we rolled off the ramp and lowered the water-rudders to when we touched back down on the lake. I got to see beautiful, ancient villas along the lake; hear stories about activities around and on the lake during World War II; and take the controls for about 30 minutes.

Before parting, I offered to buy Sergio lunch. He said it wasn't necessary, but instead asked me to promise him something. "When you took control of the airplane, you looked very happy," he said. "Bring that face back here soon to get a seaplane rating, or go home, get one, and then come back and fly me to lunch at one of the fantastic restaurants here on the lake."

Erik von Kaenel, John, and Will Hickman (L to R) celebrate John's successful ASES add-on.

For two months my thoughts were filled with seaplanes. At EAA AirVenture Oshkosh 2008, I took a bus down to the seaplane base. I asked lots of questions, filled my digital camera with photos, and just soaked up the beauty of it all.

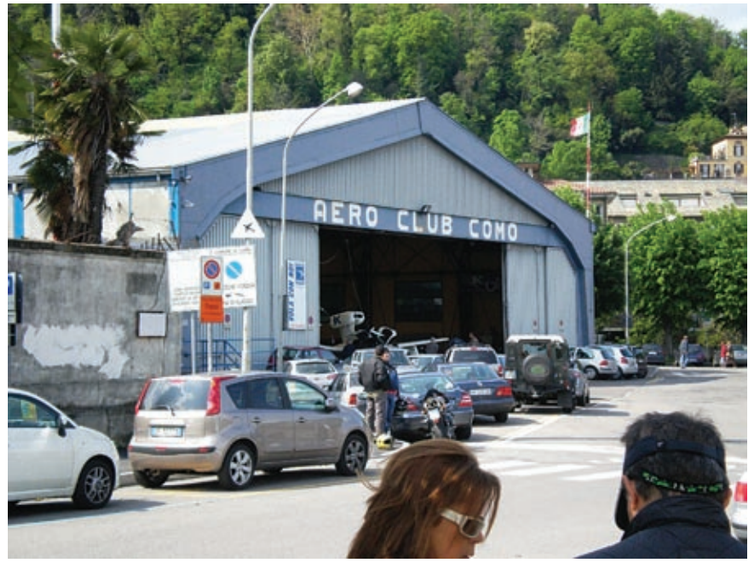
Training Begins

Sergio had mentioned Jack Brown's Seaplane Base (F57) in Winter Haven, Florida. Its website said the airplane single-engine sea (ASES) rating could be completed as an add-on to a private pilot certificate with five hours of training and a checkride. As a sport pilot I wondered if that was true for me. What kind of airplane equipped with floats can be operated as a light-sport aircraft? EAA's SportPilot.org website provided the answer. The site lists the standard category airplanes that can be flown by sport pilots. Brown's instructs in the Piper J3C-65 Cub. It's on the list!

The J3 is a fairly simple and stable 100-hp flapless tandem two-seater. The pilot in command flies from the backseat with or without a passenger up front. The instruments are located on the panel in front of the passenger seat. They consist of a wet compass, slip indicator, tachometer, airspeed indicator, and vertical speed indicator—no brakes and no radios, just an intercom and lightweight headsets. The windows and door are kept open during flight,

A call to Brown's (Seaplane Base) confirmed that it offers instruction that leads to the addition of ASES to my sport pilot certificate.


John quickly aimed his cell phone camera toward this seaplane as he stepped off the train in Como, Italy.



The main hangar of Aero Club Como suddenly appears in the middle of a crowded street.

providing great views and plenty of fresh airflow. Dual sticks, throttles, and rudder pedals (for control of both the air rudders and water rudders) are provided. There is also easy access to the magneto switch from the roomy backseat.

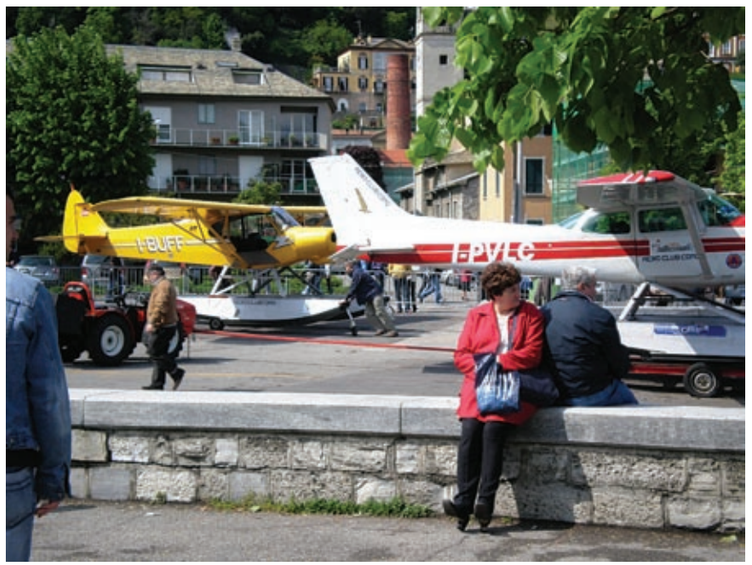
A call to Brown's confirmed that it offers instruction that leads to the addition of ASES to my sport pilot certificate. Under the current sport pilot rule, I would not take the checkride with a designated pilot examiner, but would take a proficiency flight with a certified flight instructor other than the one who gave me instruction. Both instructors would give me logbook endorsements, and the school would submit FAA Form 8710-11 to Oklahoma City. The proficiency flight would include all of the elements required by the Sport Pilot Practical Test Standards (FAA-S-8081-29).

Before arriving at Brown's, I read the book *Step Up to Floats* by John Rennie. It's billed as the official training manual of Jack Brown's Seaplane Base. I also watched Sporty's DVD transition primer, *So You Want to Fly Seaplanes,* much of which was produced at Brown's. Both were of value to me, especially when it came to illustrating and explaining new terms (see sidebar).

I met my instructor, Will Hickman, a young man with an aviation degree and 2,000 hours of flight time, shortly after arriving at Brown's. He took me through a short but comprehensive ground school that consisted of one-on-one instruction aided by a model float plane and a large whiteboard in a comfortable air-conditioned classroom. This is not primary flight training; previous airplane single-engine land (ASEL) training is the foundation for the Jack Brown course. Will and I covered seven major topics: taxiing on water, traffic pattern, rough-water operations, glassy-water operations, docking, sailing, and floats. I was also given a 44-question exam to complete by the next morning.

The Flights Begin

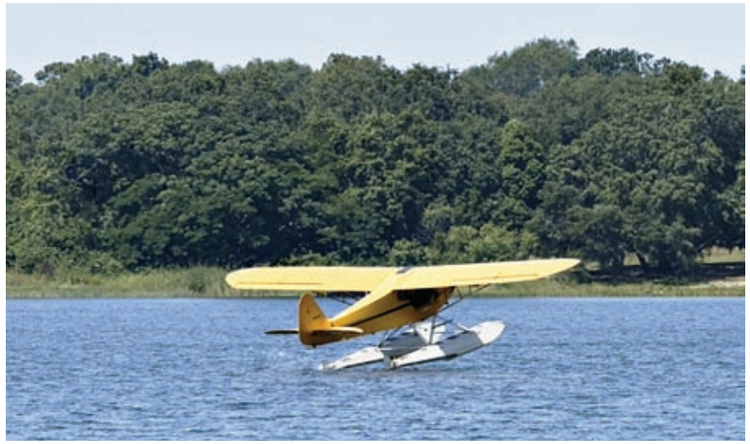
Preflight checklist items unique to seaplanes and seaplane operations were carefully explained, demonstrated, and later tested. Some of the preflight tasks expected of the student pilot, like pumping out the floats, were performed by the line boys or the instructor, due to the fast-paced training schedule. Once underway, Will and I taxied onto the lake and checked the wind. Wind direction can be interpreted by standard methods such as watching windsocks, trees, smoke, or dust, but on the water there are two other means available—the surface of the water and the tendency for the air-


The beautifully maintained floatplanes barely draw a second glance from the locals.

craft to weathervane, or automatically turning into the wind due to the center of buoyancy being forward on the airplane.

Now it was time for takeoff. Following CARS (carburetor heat off, area clear, rudder up, and stick back), I advanced the throttle full forward and the aircraft began to rumble. Some right rudder was needed, and the machine's nose rose noticeably once, then twice, as the floats slapped against the water's surface. I relaxed the stick slightly, causing the Cub to settle on the step. The rumble quieted, the slapping stopped, and the aircraft's speed across the surface of the lake increased. "Okay, just keep it there, John," Will called to me from the front seat. "We'll be airborne in a few seconds."

That first flight got us up to 2,000 feet above ground level (AGL). Will asked me to perform some turns, stalls, and Dutch rolls as I got acquainted with the plane, and he checked my skills. When he was satisfied, we dropped down to 500 feet AGL, where we continued the training for the next day and a half. We practiced docking and sailing techniques, and I especially enjoyed gently pulling alongside a jetty of rubber tires and finding that turning one magneto on and off during the procedure offered much more precision than use of the throttle alone.



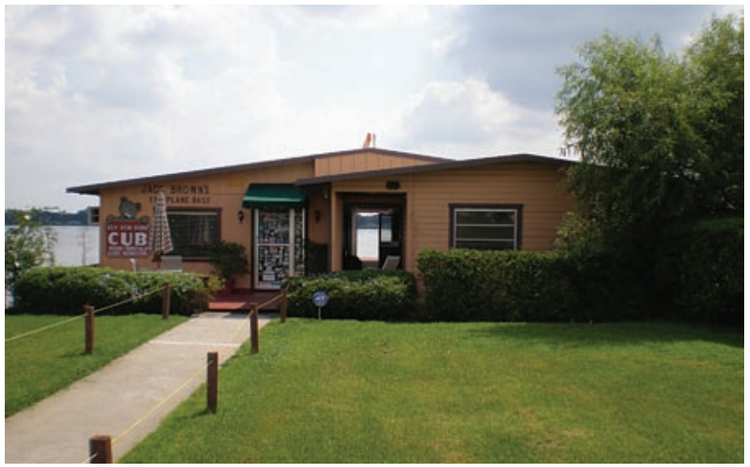
John throttles up to 1400 rpm before leveling off while practicing the rough-water landing technique.

Exciting Transition

Wow! is the best way to describe landing in a Cub. Pattern altitude is 500 feet AGL, and a tighter standard traffic pattern is used. The three techniques I learned were the normal-, rough-, and glassy-water landings. The NT OWLS checklist is employed prior to landing: Noise abatement, Terrain, Obstacles, Wind, Landing lane, and Safety. A thorough flyover of the water-landing area must be done during the obstacles portion of the checklist. Among other things like looking for people, boats, and debris, the wind direction is double-checked. One way to do this in any aircraft is to look for a glass band of water along the shoreline. This indicates the direction the wind is coming from.

With an extra hour of practice after lunch on day two at Brown's, Will handed me off for my proficiency flight. While I was successful in receiving my new privileges in ASES, the oral examination and flight turned out to be very instructive. As I worked through and explained each of the required elements of the practical examination, Erik von Kaenel would push me for further explanation of a concept or more fully instruct me on techniques, such as the plow taxi, better choices for the last visual reference, and the importance of ensuring a chosen landing area is clear of debris or sandbars barely visible just below the water's surface.

The short transition course at Brown's was a wonderful experience that introduced me to a new dimension of flight and flying technique. The sport pilot certificate proves itself as a versatile flying credential. Note that my new rating also counts as a biennial flight review. I have a Luscombe 8A waiting for restoration, and the final product might just end up with a pair of floats on which to perch. Of course, the ICON A5 is pretty nifty, too... But first, that lunch with Sergio.



The entrance to Jack Brown's Seaplane Base—a portal to adventure!

Describing Seaplane Taxiing, Takeoffs, and Landings

Rough-water takeoff: The stick is held full back, and instead of relaxing the plane onto the step, the plane is kept on the back of the float. This keeps the front of the float from being caught in a wave that may cause the craft to capsize.

Glassy-water takeoff: The floats tend to stick to the surface of the water. The antidote is to follow the normal takeoff procedure, but once on the step the stick is moved to the left and one float is popped off the surface of the water while holding right rudder. The prying action causes the aircraft to become airborne within seconds, and the stick is moved back to neutral, avoiding right stick, which can cause the high float to contact the water again.

Confined-area takeoff: Used if there is limited distance available for a takeoff directly into the wind. Here the pilot starts the taxi at full throttle but perpendicular to the headwind. Once on the step, a turn into the wind is executed. The aircraft is now at take-off speed and the aircraft becomes airborne. The pilot keeps the airplane over the water and continues turning while establishing positive climb until reaching 300 feet AGL.

Idle taxi: The water rudders are used to steer the airplane. This type of taxi, undertaken at about 1000 rpm, offers the greatest visibility and creates the least amount of potential propeller-damaging spray, which can also reduce visibility through the windscreen. It also keeps the engine cooler.

The **plow taxi** is used when wind conditions prevent the aircraft from easily turning from upwind to downwind due to strong weather-vaning forces that cannot be overcome by rudder deflection alone. Here the pilot turns the aircraft approximately 10 degrees to the left with the water rudders down while adding full throttle and full left rudder with the stick back and into the wind. The throttle is brought back to 2300 rpm as the turn begins. This makes for a very tight left turn to downwind. Once pointing downwind, the throttle is brought back to idle. The plow technique is characterized by poor visibility and engine cooling with the highest potential for damaging the propeller.

The **step taxi** is nearly identical to a normal takeoff. Once the airplane is on the step, power is reduced enough to keep the airplane from becoming airborne, 2100 to 2200 rpm depending on direction of travel. Left and right air-rudder deflection can be used to induce turns while simultaneously deflecting the ailerons to account for wind acting on the airplane. The step technique allows the airplane to be moved from one place to another on the water at much higher speeds than idle taxi. It offers good visibility and is less rough on the aircraft and propeller than the plow technique.

The **normal-water landing** consists of throttling back to 1500 rpm when abeam of the touchdown point, turning base at about half the distance used for single-engine land airplanes as the craft is already at 500 feet, setting up a steeper glide than normal, then powering back to idle when the touchdown point is assured. At about 10 feet above the water, level off and let the aircraft settle on the surface while pulling the stick straight back without releasing or moving it forward, allowing the tips of the floats to stay out of the water until the aircraft comes to a complete stop.

The **rough-water landing** technique is similar to the normal with one major difference: At the point of leveling off, the engine is throttled to about 1400 rpm and kept there as the stick is eased to the full back position. This causes the back of the floats to make contact with the water while keeping the float tips as high above any waves as possible. The stick is held back until the aircraft is firmly on the water and the throttle pulled to idle. This keeps a wave from washing over the front of the floats and prevents the possibility of the aircraft to somersault.

In a **glassy-water landing**, the pilot has no clear visual altitude reference. The technique here is to locate a visual reference that is at nearly the same height as the intended landing surface. This can be a point along the shoreline, a stand of water grasses, or logs partially submerged at the threshold of your final approach. The setup for landing is the same used for the other techniques; however, the reference point you choose on final becomes your aiming point for landing, called the last visual reference (LVR). Level off at idle power just before crossing the reference point. Before passing this point the throttle is advanced to 1700 rpm with stick steady and both are held there until the aircraft settles onto the water. Once settled, the engine is brought to idle and the stick is pulled straight back simultaneously until the aircraft stops.