

Pilot Incapacitation

by K. Truemper

Passengers in my plane almost always aren't rated pilots, but typically have some piloting experience and in principle are able to take over in case of pilot incapacitation – a very unlikely, but nevertheless possible event. It is a useful idea to discuss that scenario with the passenger. Here is a summary of the main points for that discussion. I keep a copy in the plane to be used as an expanded checklist by the passenger if the real thing happens. It is assumed that this is a VFR flight outside class B, C, and D space in a plane with tricycle gear.

1. Stabilize the airplane to straight and level before undertaking anything else. Get the pilot away from the control stick, but otherwise do not try to help the pilot. Just focus on action to get the plane safely on the ground.
2. Check fuel gauge(s) and estimate endurance. If the plane has a complicated fuel management system, do not try to master it, but estimate endurance if no fuel management decisions are made.
3. Use “Nearest Goto” or similar function of the GPS unit to find out where you are relative to the nearest VOR. The information is given by the
 - VOR identifier,
 - the radial of the VOR, and
 - the distance from the VOR.Caution: The GPS unit may give the radial directly by the degrees FROM the VOR, or indirectly via the degrees TO the VOR. In the second case, subtract/add 180 degrees to get the radial.
4. Change the transponder code to 7700 and press “ident”. This will emphasize your plane on radar screens.
5. Set the radio frequency to 121.5 and listen for a moment. In all likelihood, there will be complete silence. But the frequency is now used by the military as “guard frequency”, so there could be an ongoing transmission. In that case, wait until the transmission has been completed.
6. Broadcast slowly and clearly “Mayday, Mayday. This is (aircraft type) NXXXXX (aircraft identifier). We have incapacitated pilot. We are on the (number) radial of the (identifier) VOR at (distance) miles. Altitude (read altimeter), speed (read air speed indicator) kts, endurance (give hrs).”
7. Since the military continuously monitors 121.5, there will be an immediate response. They will ask whether you are a rated pilot, and so on. Listen carefully, answer all

questions, repeat all instructions, and then carry them out. Likely instructions: Climb to higher altitude, change transponder code, and head in certain direction. Above all, make sure that altitude, airspeed, and attitude remain under control. This is generally assured by modest power settings and shallow angles for climbing, descending, and banking.

8. When coming in for the landing, reduce speed, and approach the runway on long final at a shallow descent angle using the recommended speed for landing. There is a tendency to go too fast, so make sure you know the landing speed and stabilize the plane to that speed. If you have the nerve for it, request a practice approach where instead of landing you overfly the runway at reasonably low altitude, say 100-200 ft AGL, and then go up again. In that case, you fly a large circle and come in again. The second time the view will be more familiar, and you are more likely to have the correct altitude for landing. Regardless of the case, reduce engine power to idle as you cross the threshold. Do not try to flare or attempt a pretty landing. Just raise the nose a bit as the plane slows down. The main idea is to get the plane with slightly raised nose onto the runway. Once the main wheels have touched down, gently release the elevator backpressure and let the nose gear settle on the runway. Steer with the rudder pedals so that the plane rolls straight ahead, and brake gently.
9. When the plane has stopped, turn off all switches, then turn off the ignition. This is not quite the correct procedure to shut down the engine, but it suffices. Do not attempt to taxi or anything else. Just leave the cabin.
10. Then, and only then, turn to help the pilot. Any action trying to help the pilot in flight is a major error that may endanger the entire process.