When it comes to your avionics installation, you need to communicate clearly to, well, communicate clearly. This goes for aviating and navigating, too.

The thing is, there’s nothing much more exciting for a pilot than upgrading the panel in his or her aircraft. But getting lost in the thrill of putting new toys in your panel can make you whiz through the process so enthusiastically that, in the end, you don’t get what you expected.

Let’s face it: Planning an avionics upgrade is a little more complicated than, say, ordering a pizza. So, don’t treat it that way. The reality is, you’ll need to communicate with your shop before, during and after the installation to get exactly what you want. The bigger the job, the more talking you’re going to have to do to ensure the work progresses smoothly.

While this might sound like work to you strong silent types, spending some time communicating your desires will ensure you get the panel of your dreams. In the end, this will make the upgrade a top-flight experience.

Planning Ahead

The process starts with drawing up the quote for the job, said Robin Howard of Howard Aviation in La Verne, Calif. It requires you to be open about your needs, your budget and your expectations as the shop builds this document — which is important because the quote not only tells you what you’re going to pay, but it also serves as the “directions” the shop uses to complete the job.

Unless you specifically know what you want, the shop staff likely will start by asking you a bunch of off-the-wall questions: how you fly the airplane, how much you fly, what the aircraft is worth, how long you plan to own the airplane, and how much you plan to spend.

It’s not always a prudent investment to put a $50,000 avionics stack in a $25,000 aircraft — especially if you plan to move up in a couple of years. So, meeting a budget might require letting go of some “wants” to get your “needs,” Howard said. Even if you’ve come with a shopping list, everything must fit, so you’re not trying to fit 10-inch pegs into 9-inch holes, so to speak.

The scope of the work depends on how complicated the quote process becomes. Pulling a nav/com radio or autopilot and replacing it with a new one is a quick job without a lot of room for misunderstanding between you and your shop, said Peter Stelzenmuller of Penn Avionics in West Chester, Pa.

On the other hand, replacing several pieces of equipment — particularly several inter-connected pieces, as just about everything is these days — introduces more opportunities for communications mix-ups. Keeping those expectations straight is one of the most important roles of the quote, Stelzenmuller said.

The most common disconnects Stelzenmuller sees are those involving the nuances of the

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equipment — that is, the customer wants optional features requiring a technician to do an installation that’s not right-out-of-the-box, such as adding an audio panel with a swap switch or a music jack. These are the things a shop normally wouldn’t install unless asked.

It even can be something as simple as a color choice. Stelzenmuller once had a customer who was disappointed to find black bezels on his new installation. He wanted gray ones — black is standard, gray is special-order — but he hadn’t expressed any color preference during the quote-building process.

“It’s because it wasn’t hammered out on the initial quote, or it wasn’t detailed,” Stelzenmuller said. “For the customer who’s done a lot of research, done a lot of reading on the options, and there are certain options that are meaningful to him that he’s read about, he needs to make sure he’s communicated to the shop that he’s expecting this or that.”

The preemptive solution is to make every preference known while you and your shop are drawing up the bid, then make sure it’s right there on paper. Same if you want, say, your new autopilot to toggle between both nav radios. The standard installation connects it only to nav 1.

“You need to make sure that detail gets in there,” Stelzenmuller said.

That’s another purpose for all that “chit-chat” about your wants and needs, and why you shouldn’t rush the process. Your shop likely has done this once or twice before, and it has its system for a reason — to draw out your particulars.

So, with all this talk to fine-tune the quote, recognize it might take some time to get it right, especially for big custom installations. Three or four calls over a week or two, and just as many revisions of the quote, aren’t unusual as you winnow it down from a ballpark estimate to the final options. Remember, time spent now saves headaches and heartaches later, and you want everything written.

OK, so your quote is done. Now, read it.

Make certain, one last time, you’re getting exactly what you want. If it’s not in the quote, it’s not going to be in the airplane when you get it back. For the shop, the signed quote is the marching orders for the technician who’s going to do the work — a person who, to date, you’ve not talked with. “Don’t assume anything,” Howard said.

Changes to the quote are easy, Stelzenmuller said. “I’d rather go through four or five revision processes on the quote to get something accurate than to get something that doesn’t quite fit, or that’s going to cause a problem on the back-end because the configuration wasn’t exactly what the owner wanted.”

Getting Going

By the time you’ve signed the quote, delivered your airplane and set your shop loose to start work, you should know exactly what they’re going to do — and what it’s going to cost. But just because you’ve signed the work order doesn’t mean you should disappear until someone calls you. Far from it.

However, this does bring us to something of a delicate subject. Sure, you can check in, say hello, see how things are going — or, in the case of a partnership or club, your designated representative can, as long as there’s only one point of contact. In fact, it’s important for you to call. If nothing else, it gives you piece of mind things are going smoothly. The shop staff appreciates it, too, because it lets them know you’re engaged in the process. They may even be able send you digital photos documenting the progress.

“I don’t care if they’ve got a lot of questions,” said Quint De Groot of Spencer Avionics in Spencer, Iowa. “But I do care if they’re going to worry: Are you sure you’re going to do this, this, this and this?”

Here’s why: Most shops don’t have a service manager like your car dealership does, Stelzenmuller said. In these cases, the technician doing the work is going to be the one who talks to you when you call. He’ll be perfectly happy to tell you he’s strung 14 more wires since you called an hour ago, but that’s slowing down the process. Every time you call, the technician has to get out of your airplane, go to his desk and talk to you. Both you and his boss are going to want him to work faster than that.

Repeatedly “reminding” your shop you wanted headset jacks in the backseat — just in case they forgot — becomes more of a hindrance than help. If it’s onContinued on following page…
the quote, they know. If it's not, recognize the effects that change might have on the process when you consider how important it really is to you.

That said, this week is a better time to tell them than next week. For one, all the components have been ordered by the time your airplane gets there. An innocent addition could set the entire process back a week or more as the shop waits for new parts to be delivered. For another, it may increase the scope of the work considerably. Requesting an engine monitor after the fact can add 30 hours to a custom-installation project, which could take 120 hours itself, Howard said.

Remember this: If there's a problem, your shop will call you. If a part is going to be late, professionals will let you know what's up, because sometimes, in spite of the best intentions, things happen and the work doesn't progress as expected.

One source for these delays could be your airplane and how much extra work has to be done to prep it for the installation. That's the problem with an old general aviation fleet — old airplanes often give surprises when you open them up.

For example, De Groot recently worked on a Piper Cheyenne, but didn't have a wiring diagram before the work started because he couldn't track one down in time.

“We spent a week and a half tracing wires,” De Groot said. “I wouldn’t have known that before. We chased down 270-some wires by the end of it.”

Think about that the next time you have a frustrating day.

As a result, your shop might wait to give you a timeline until its staff sees your aircraft. For the most part, you’re having an entire aircraft system worked on, not just a black box installed.

If you’re installing an autopilot and your control cables don’t meet minimum tension, an air-frame mechanic will need to get in there and tighten them so the autopilot can work right. Same goes for the coaxial cable and antennae to which your new box is attached. Cracked fiberglass will have to be changed out before work can even begin.

And, on top of all this, the shop might need to “undo” past work before it can do anything new. All of this takes time — which is the reason most shops tell you to keep your schedule flexible. More specifically, the shop likely will suggest you don’t plan a must-go trip immediately after you pick up the airplane.

After the Fact

It might not seem like there's a lot to talk about once the work is done, but making sure all the i's are dotted and the t's are crossed is the best way to ensure you're happy with the transaction. Indeed, there's a pick-up to schedule, a delivery and payment, and some troubleshooting might be needed to render the installation ship-shape.

So, you've probably guessed, this isn't the time to find out something wasn't done quite as you'd expected. Again, this is the reason it's so important to review the quote at the beginning, and the reason you should avoid making big changes once the work is under way.

Eventually — hopefully sooner than later — your airplane will be ready and your shop will schedule your pickup, telling you how long the hand-over will take. It could take the better part of a day to go over everything, depending
you’ve had a new custom-panel installed, it is going to take some time.

Most shops don’t suggest flying real-IFR on your way home until you’re familiar with the new equipment, especially if you’re transitioning to glass from steam gauges. At the minimum, the shop will show you enough to get started — maybe four or five button-pushing sequences to get home. Ideally, however, you’ve done some training on the equipment before picking up your airplane.

Thirdly, if there’s a problem — a dead battery, a burned-out bulb or even a lost tow bar — there’s someone there to help quickly, Stelzenmuller said. If they just leave the keys under the floor mat for you, you’re on your own until you can track down someone from the shop who can come out to help you.

Lastly, the whole world is operating on weekdays. If the shop — or you — needs something from the vendor before you take delivery, the shop can make the call.

You also should ask what its policy is in case something needs to be fixed after the fact. The shop will do normal quality-assurance tests before giving the airplane back, and someone from the shop usually will check in with you once you get home to make certain everything is working properly. Still, sometimes things don’t work right, particularly on a big job involving digging around extensively in an older airplane.

If you’re back at home with your airplane and something is not working, you’ve got to figure out how to get your airplane back in the hands of the technician who did the work. This means either bringing the technician to you or taking your airplane back to the technician — which gets more complicated if you’re aircraft is expensive to operate, like a jet or a turboprop. Which option you choose depends on the shop’s policies. If you don’t know, ask. It will save you time and trouble later.

Whether you’re drawing up your plans for your new panel, or you’re checking in to see how things are going, or you’re ready to pick up your airplane, communicating clearly with your shop will ensure you’re completely satisfied with the final result. Frankly, it’s something worth talking about — and something worth getting excited about. ■