

RESEARCH VESSEL WEATHERBIRD II – WHEELHOUSE BRIDGE

Professor: Teresa Greely, Ph.D

My name is Brendan Baumeister, and I'm the captain of the research vessel Weatherbird II that sails with the Florida Institute of Oceanography. The Weatherbird II is a 115-foot research vessel that serves as a platform to facilitate a wide range of marine science.

So basically our job is to be able to accomplish whatever it is a science party wants to accomplish on board, obviously within reason. So any day we could be doing some geological oceanography, chemical, physical, biological. One day we could be catching big sharks on the back deck. Next day we could be towing camera rays, doing fish assessment. The next day we could be doing water sampling, and the day after that, we could be doing sediment sampling.

So we need to be broadly skilled in different kinds of gear deployment and recovery in order to collect the data that these research scientists want to collect. Right now we're up in the wheelhouse, or the bridge, of the Weatherbird. We're at the forward station. The bridge is equipped with two stations.

The forward station, where we are now, is mostly used for navigating, transiting, towing, anytime the ship's really moving forward. There's an after station-- after, meaning a station that faces the back of the ship-- that we operate anytime we're doing any kind of gear deployment or recovery. That serves as a very good observation deck, so we can keep the ship orientated correctly to weather. So when a big, heavy piece of gear is going over or coming back on, from a ship operator standpoint, we can keep the boat perfectly orientated to keep it as calm and to keep the platform as stable as possible, so we don't lose any gear and we don't hurt any people.

It also serves as a very good safety observation point. So from up here in the wheelhouse, we can observe all operations on deck. We have PAs and microphones that pipe throughout the ship, including the back deck. So if we see something unsafe, or something we don't think is right, we can halt all operations very quickly, gives us a bird's eye view, so to speak.

We have a bevy of instrumentation up here, full navigation suite. Everything is redundant for the most part. So if you notice onboard, the first thing, there's no steering wheel. So people think about the old time ships, the big wooden wheels with the pegs, four pegs to port, five pegs to starboard. We actually don't have any of that. Actually we have what's known as a stick. We call the stick stick steering.

So that's kind of the manual way to steer the ship. It's kind of like a tiller. There's also a little joystick here that we can use. That's the only way we can steer from the aft station. And then we have auto pilot. All these instruments and all this equipment talks to each other. So once the boat's in auto pilot it'll talk to our navigation software. And we'll put those grids on the computer screen, and the ship will just drive herself on that grid.

Now, she's going to sound an alarm anytime that you have a program to turn. So the boat's just not going to turn on her own. She's going to sound an alarm, you're going to acknowledge that alarm, and turn. She can't see other traffic. She can't see reefs. She can't see weather or anything like that, so obviously we can't just put her on auto pilot and walk away. We need to be here kind of helping her out with that.

So, what can see ships and weather is radar. We have two systems, as well as our automated information system, which I'll talk about in a minute. But essentially, we're scanning the horizon at all times. We can adjust that range.

Radar is basically range in direction finding. So, if we're doing close quarter maneuvering, like in a port, we could put that range down to like a quarter mile, a half mile, something like that. If we're out in the open sea, and we're doing like a 12-hour tow, we're going to pump it out to probably at least 12 miles, maybe 24 miles. That's going to allow us to pick up ships or any other obstruction that may be out there and let them know, like, hey, right now we have a piece of equipment in the water. We're restricted in our ability to maneuver. Could you give way? Could you help us out?

We have weather information. We have a lot of weather information on board. The science party is getting pumped all kinds of weather information from what we call our Met packages, which are up on top of the wheelhouse. So they're getting barometric pressure, humidity, all kinds of things. Up here that kind of stuff is not really as important to us as is the weather and what it's doing in real time. And what it's going to be doing.

So you can see right up here, we have a map with weather overlay on it, and it's giving us sea state, wind direction, wind speed. It's showing us a weather map, so it's showing us how the high and low pressure systems are moving. In the summer it'll give us warnings and let us track tropical weather coming across the Atlantic or developing in the Gulf or in the Caribbean so we can plan our trip around that.

We have radios. Radios are for our main source of communication between ships. And also in an emergency, a radio is pretty fail safe. You don't have to worry about a, like a cellular signal or anything like that. So, we have a bunch of different radios going on. We have short wave, long wave radios, very high frequency radios, high frequency radios, probably about six or seven radios up here. Mostly we use the VHF and that's just to arrange passing agreements with other ships, or to answer calls from other ships, and whatnot.

We also have satellite communications, satellite internet, so we can email out here. We use a telephone just like you would at home, but it's satellite-based, so if the satellite's down, if the weather's bad, that equipment can all go down.

Running a ship is running a ship, for the most part. You know, it doesn't matter really what the ship's doing. There's certain common things and standards that are the same for a cruise ship,

oceanographic research vessel, offshore supply vessel, and that's just general ship operations. Now the nature of that ship's mission and what it does is a totally different thing.

So you can go out and deliver cargo from point A to point B your whole life. And while you're out on the sea, and obviously that's what kind of drew you to the job to begin with, working on boats and getting that joy in your life, there's something extra that comes along with it when you know that what the boat is actually doing is benefiting the world and people as well, all in the name of science. And the most part, that science is happening to try to further something greater and for the greater good.

So when you do come off a trip, you have a certain sense of accomplishment and well being, knowing that you weren't just out there delivering televisions from one continent to the other. You were actually out there trying to improve the world and our environment and further human beings' knowledge on the oceans.