

Unit's SPAWAR-MWR Internet Café Pre-Installation Checklist v1.2

___ COMPUTERS: Construct and/or provide an appropriate number (OP=5, MD=10, LG=20) of correctly sized (3ft wide x 2ft deep) computer bays with a dual 110/220V outlet in each bay or a quad outlet between two bays accessible by the computer and monitor in each bay. Each computer and each monitor uses one 4 ft, 110V American style 3-prong American style detachable power cord. Plan for the CPUs to stand up vertically on the left side. The computer, if placed vertically on the left side of the bay, can act as the bay divider. Plexiglass works well as a surface. If the outlets are 220V, provide adapters to accommodate the computers' and monitors' 110V, American style 3-prong-plug type power cords. Provide surge suppressors for these outlets or outlets with built in surge suppression, whenever possible. The computers have a fairly robust ability to withstand surges in the input voltage, the monitors are not and can fail if exposed to repeated power surges. Please clear out any existing equipment or interference from these bays prior to the installation technician's arrival. Your system will come with Logitech webcams (MD=2, LG=3). These are highly pilferable. Please plan to develop a custody control process, i.e. ID card exchange, or some physical way to secure the webcams to the booth. If the latter seems more practical, recommend building and mounting a small box on the back wall, with a lockable hinged door containing a small 2 inch square window on the front of the box. Alternatively, drill a hole through the webcam's mounting tab (metal inside), and bolt this to the bay's horizontal shelf with the bolt extending all the way through the bay shelf and secured with a nut on the bottom side. This method is more secure than using a wood screw because it would require two pairs of pliers or wrenches to remove the bolt and nut. A wood screw requires only one leatherman.

**** WARNING: DANGER! THESE COMPUTERS DO NOT autosense input AC voltage.** Check the computers' input power switch (MANUAL slide switch located above the detachable power cord receptacle on the rear of the computer) before plugging them in. This switch has to be MANUALLY switched to the proper input AC power setting, 110V or 230V, to match your facility's power outlet prior to plugging in the computer and applying input voltage. If the computer is set to 110V and plugged into a 220V outlet, the computer power supply will be destroyed and the entire CPU rendered unusable requiring replacement. We cannot replace power supplies in the field, so you will need to send the entire computer back to the closest SPAWAR-MWR tech site for a replacement. Turn around time for this can be lengthy and dependent on your logistics support.

___ PHONES: Provide Phone bays or booths (OP=3, MD=5, LG=10). OP Phone bays do NOT require AC power. MD Phone bays require one booth with an AC 110V, American style 3-prong-plug type power outlet. LG Phone bays will require 2 booths each with an AC 110V, American style 3-prong-plug type power outlet.

NOTE: On most CE500 switches the first 4 ports provide this power POE. These ports are marked on the switch front panel as POE ports within a black boundary. The ESW 500 series switches have 24 POE ports. Consequently, the phone booths when used with this type switch require no power outlets.

___ ANTENNA: "Build" a designated area for the satellite antenna. For the antenna base we need an approx 11ft x 11ft cleared, square, and leveled/tamped area within 50 ft of the proposed modem location. To plan for several possible satellites, this area needs a clear line of site to 185-255 degrees azimuth, and a minimum 16 degrees elevation. Plan for the antenna to be within 50ft of the modem. We can run a cat 5 data cable up to 300 ft from the modem to the internet café. When the rack and switch(es) are located separately this requires another designated space within the internet café with mounting room and an AC Power outlet 110 or 220V, for each switch. Both the modem and switches require AC Power outlets. The modem and switch(es) autosense AC Input voltage. Assemble the antenna base and mast assembly. Prefer the reflector and feed assembly is left to the technician.

- For the antenna base we prefer that this area is on the ground wherever real estate and line of site to the satellite permits. Hescos and sand bags are not the best good choice for the satellite antenna foundation because they shift and settle over time due to the effects of water and freezing, and /or other external forces. Please compact (tamp) the ground when possible and cover it with a generous amount of gravel (a Bobcat works well for this job). The gravel will help with leveling the non penetrating antenna base.

- For stability of the antenna base: **NOTE: This is critical.** Any slight shift (e.g. 1/2") of the antenna base can knock the antenna alignment off enough to drop connectivity with the satellite. It can be difficult with the limited resources at the units to reposition this dish back onto the satellite and reacquire the network. Even if the dish is "on" the satellite and the computers are operating, the NOC may still shut your system down administratively if it's not operating within parameters due to errors its injecting onto the network adversely affecting other sites sharing the network. In some cases we will be able to provide a procedure to your onsite technician to perform receive pointing of the antenna by telnet receive pointing with a laptop PC. To help avoid all this hassle, its best to put our best effort into stabilizing the antenna foundation and base to the greatest degree possible during its installation. This doesn't guarantee the antenna will not move but we need to give it our best effort. Please provide a minimum of 40 sandbags stacked near the location (on pallets works best) for use in stabilizing the base. This is the best example of "do it right the first time."

___ Provide a 4ft wide x 5ft deep x 4ft high area designated for the equipment rack. The rack has an actual size of approx 2.5ft x 2.5ft x 4ft. However, the rack area needs to be clear of obstructions and provide enough room for the technician to be able to roll/move the rack out away from the wall and get to and work from the rear of the rack. The modem whether in or out of the rack, needs to be less than 50 ft away. The technician can run and terminate this RF cable upon arrival.

___ Provide a clear and safe path for the RF cable to run from the antenna to the equipment rack including drilling, chiseling, cutting all necessary holes for penetrating walls, floors, ceilings, etc...especially any exterior wall penetration. This is considered interference and not the tech's responsibility to make holes. Its impractical techs to deploy drill sets in addition to their other installation tools. Plan for any cable run holes at $\frac{3}{4}$ " diameter. When figuring cable run length, figure in the extra length for running the cable along the ceiling and then perpendicular down the wall to the rack. All runs will be horizontal and vertical only. The technician will run this cable, but remember the length from the modem to antenna needs to be less than 50 ft.

___ Set up all computers, monitors, mice, keyboards at each station (**Refer to AC INPUT Warning**). Run all CAT 5 cable professionally, preferably at the ceiling in panduit (if available), or neatly tie wrapped at 6" to 1' intervals, and held up with nails or durable clips and/or tie wraps, with perpendicular drops (horizontal and vertical) for each computer and phone bay. All cabling should be horizontal and vertical only. Make a small loop in the prefabbed end of the cable at each computer and tie wrap this loop to the computer's top rear slide at the back of each computer, allowing enough slack to plug the prefabbed RJ45 end into the computer LAN port. Plug the cable into the computer LAN port. Neatly run each cat 5 cable back to, and through the rear of the equipment rack or at the switch ending in one neat bundle, with excess extending about 10 feet beyond the switch. Leave these unterminated. Cut the excess with all cables ending in the same length, then use this excess cable for additional run(s) as necessary. Again, use the prefabbed cable ends for connecting at the computers and phones LAN switch ports. We will terminate, and test all the CAT 5 cable runs at the switch during the installation.

___ Set up all computers, monitors, keyboards, mice, and phones in the locations where they will be used. This will ensure that you have the necessary bays, space, power, CAT5, etc... for each system before we arrive. **Again, DANGER!** be careful to first check the AC Input power slide switches on the rear of all the computers are in the correct position prior to plugging in any of the computers. This is best done IMMEDIATELY upon removing the new computer from its shipping carton.

Congratulations for reaching this point. Now you are ready for an SPAWAR technician to finish your installation.