Permanent Station Enclosures - Pelican Case (small)

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Pelican case enclosure as used in the Afar network, Ethiopia.



Inside of a Pelican case enclosure as used in the Afar network.

Like the larger Pelican cases, the smaller Pelican case is weatherproof and can be used to transport equipment; it is, of course, even more portable than the larger styles. A smaller case is ideal if space is not an issue--specifically, if the requirement for amount of power stored is small (e.g. in a year-round sunny environment, as is common near the equator). The case is difficult to destroy and can be locked with padlocks. Networks utilizing small Pelican cases include Afar, Ethiopia, and Sierra Negra, Galapagos. Cost for the case shown here (Pelican 1600) is approximately $125 (as of February 2009).

To customize the case for the Afar network, UNAVCO drilled a hole in either side for air vents, consisting of 90-degree PVC elbows, to reduce heat; installed a plug for solar power wires; installed a port for the GPS antenna cable; and mounted a solar panel on the lid using PVC pipe and bolts. There was no need for lightning protection as the occurrence of lightning in the Afar region is minimal.

Parts list for the Afar network, as shown here:

- Trimble NetRS GPS receiver and dongle
- Trimble NetRS DC power cable
- charge controller
- GPS antenna cable pigtail (0.5 m)
- GPS antenna cable port (bulkhead connector)

- PV power plug
- air vents (2)
- sealed 18 Amphr battery
- ethernet cable (optional) - needed when downloading only
- serial cable (optional) - needed when downloading or troubleshooting only

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