If phone service is not available, Short-Haul Modems (SHM) can be very useful for extending RS-232 distances from the limit of the 50 foot RS-232 cable up to 4 miles. (Please see manufacturer specifications for connections and actual distances).

There are two SHMs which the UNAVCO facility has in use at permanent stations, and which transmit asynchronous data up to 4 miles depending upon wire specifications and data speed.

A Short-haul modem might be required if the base computer is located at a distance greater than the practical limit of 50 feet for standard serial RS-232 cables. However, the requirement for a physical wire connecting the computer and receiver limits the usefulness of using a short-haul modem to distances usually shorter than their intended limit of approximately 4 miles. A reason for this is that the transmission rate is a function of distance with maximum data rates of 19200 bps being achieved over distances of 1 mile or less.

**RAD modems**

- How to configure a RAD modem pair
- Configuration of a RAD Communications ASMi-52 G.SHDSL T1 modems for site NSSP
- RAD ASMi-52 2/4-Wire SHDSL Modem Installation and Operation Manual V. 2.5b (.pdf)

**Black Box Corporation**

There are two SHMs which the UNAVCO facility has in use at permanent stations, and which transmit asynchronous data up to 4 miles depending upon wire specifications and data speed.

- SHM-B Async
- SHM-NPR/RJ

Send questions or comments to Support (support@unavco.org).

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