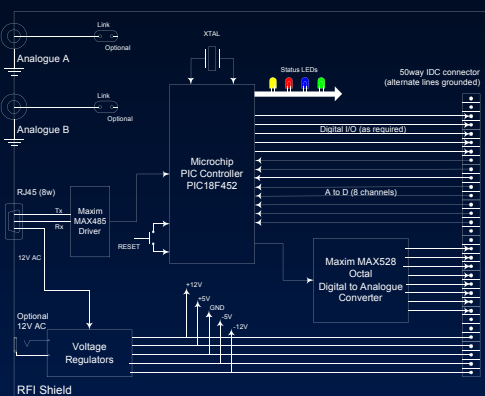


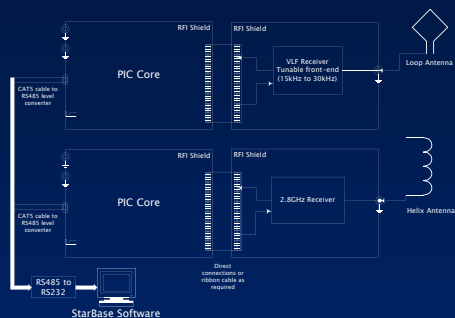
British Astronomical Association Radio Astronomy Group

Plug and Play Observatory



Phase 1

The primary goal is the production of a *PIC core* module, to which various receiver and controller designs may be connected. Each receiver assembly will be driven from a PC using the *StarBase* Java software. The communication link uses RS485 (twisted-pair, long line lengths), connected to the PC via a RS232 level converter, using readily available CAT5 network cable. The module will be built using surface mount technology, and will be supplied in a radio frequency shielded enclosure.



Group Observing Programmes

VLF monitoring of Sudden Ionospheric Disturbances (SID)

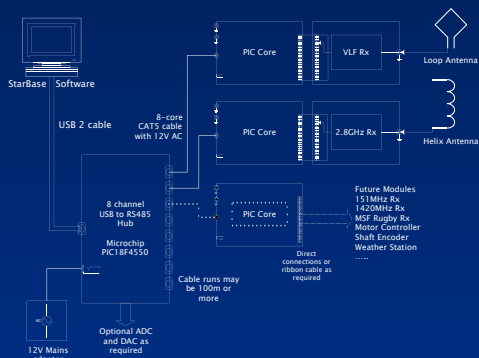
10kHz to 30kHz Receiver

Software-controlled scanning receiver planned

Solar work at 2.695Ghz

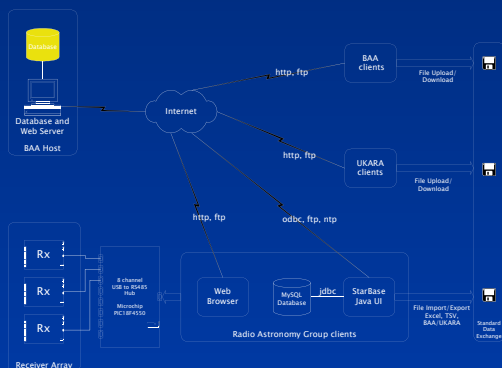
Radio Spectroheliograph (up to 1GHz bandwidth)

Interferometry and 151Mhz and 38Mhz receivers planned



Phase 2

Standard PCs are usually limited in the number of RS232 serial ports without the addition of extra hardware. Specialised RS485 expansion cards tend to be expensive, and so we aim to produce a simplified USB to 8 channel RS485 hub, to allow a range of receivers and other modules to be remotely controlled from the PC. The use of USB should avoid any hardware installation difficulties and enhance the *Plug and Play* simplicity.



Phase 3

The long-term goal of this development is the integration of members' radio observatories into a national system using a central BAA database, allowing data upload using the StarBase Java software and examination via the Internet using a web browser. Use of a standardised data storage format will allow the exchange and analysis of the observations by any BAA RAG member.



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