

The CPC 837-3510 Receiver is composed of three basic functional blocks: the power supply, the RF section, and the output communication section. The power supply is formed using a 120VAC-to-9VDC Class II transformer. The PCB has a connector on-board to allow connection of the power supply, some protection components, and a National Instruments LM340 5V voltage regulator. The RF section is composed of two antennae, a 0-degree phase power splitter, and a Linx Technologies RXM-418-LC receiver. The communication section is formed with a Motorola MC68HC705KJ1CDW, which decodes the base-band information, a Motorola MC68HSC705C8ACFN microprocessor which controls the output, an RS-485 output driver, and three LED's to supply visual status information.

Incoming transmissions are routed from the two antennae to the Linx Technologies RXM-418-LC via the power splitter, where they are converted to a base-band serial data stream. This serial data stream is decoded by the Motorola MC68HC705KJ1CDW which supplies the data via a parallel connection to the Motorola MC68HSC705C8ACFN microprocessor. The microprocessor outputs the data to the RS-485 driver (U3 on the schematic). The data flow is only in this one direction.