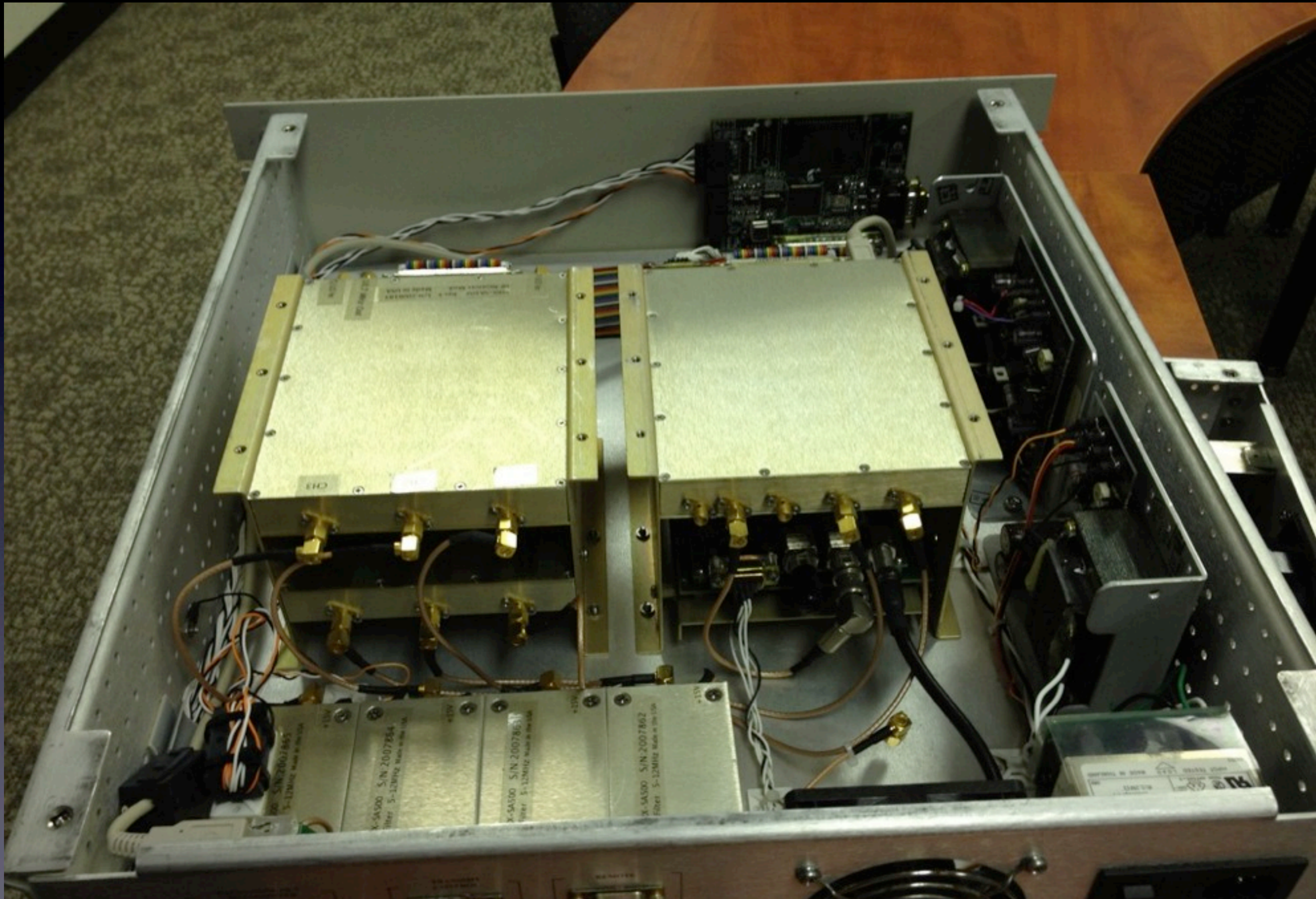


SeaSonde Receiver

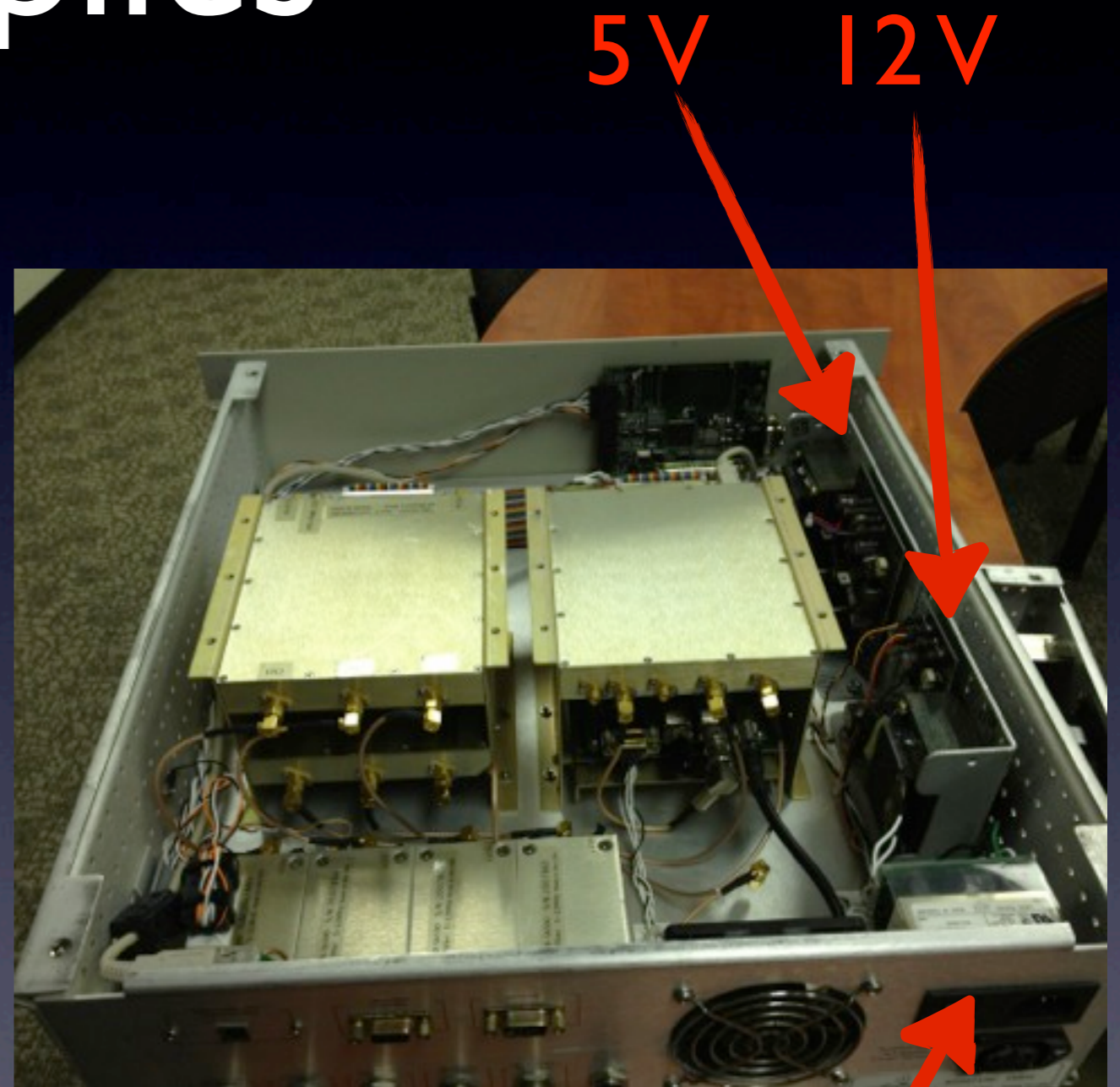


The Receiver



AC Switch and Power Supplies

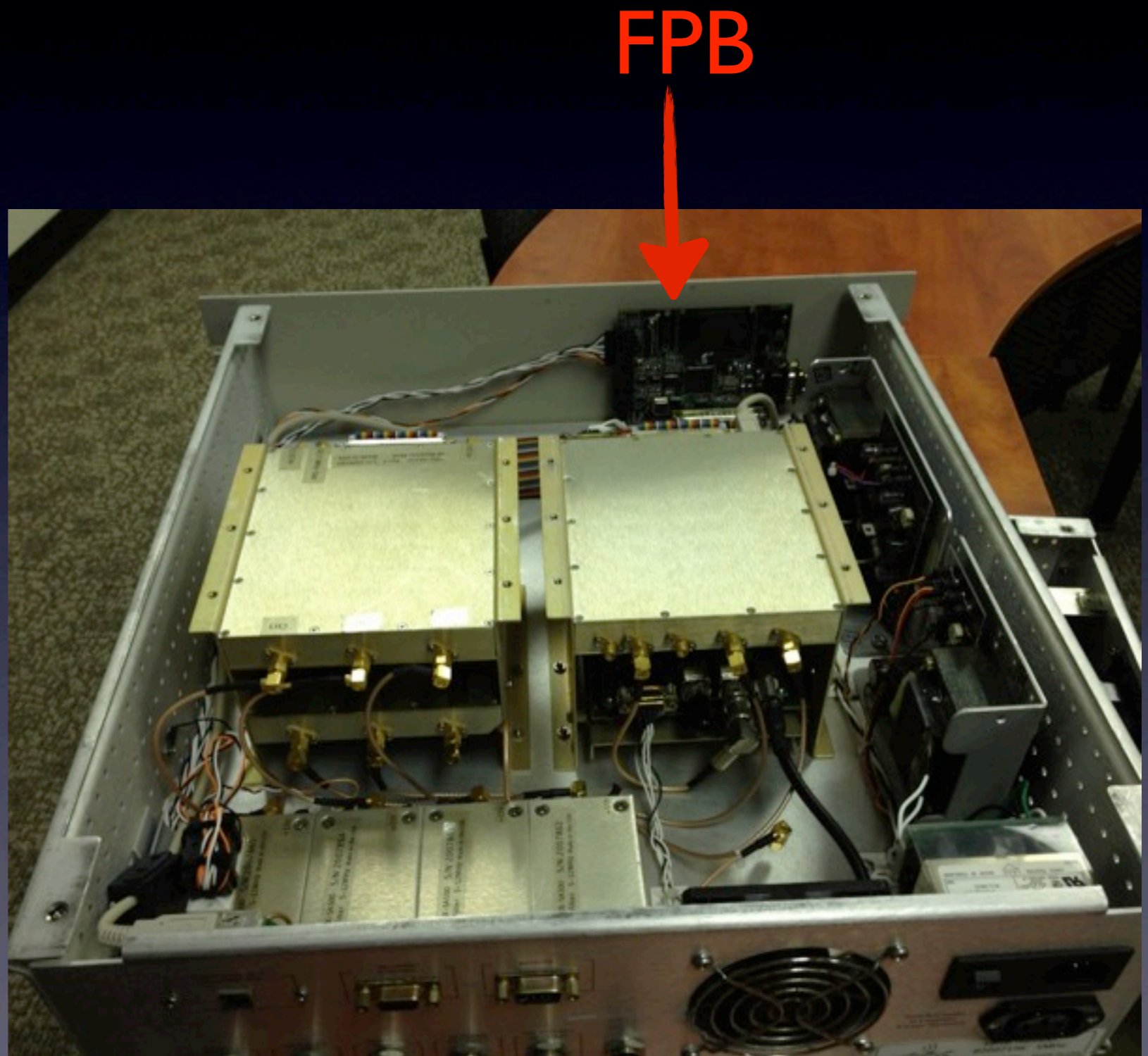
- Two fuses for protection, one on the outside of the Receiver one on the inside green filter circuit board
- AC Switch sends main power to the 5 V and 12 V power supplies
- 5 V and 12 V supplies power system electronics



Switch & Fuses

Front Panel Board

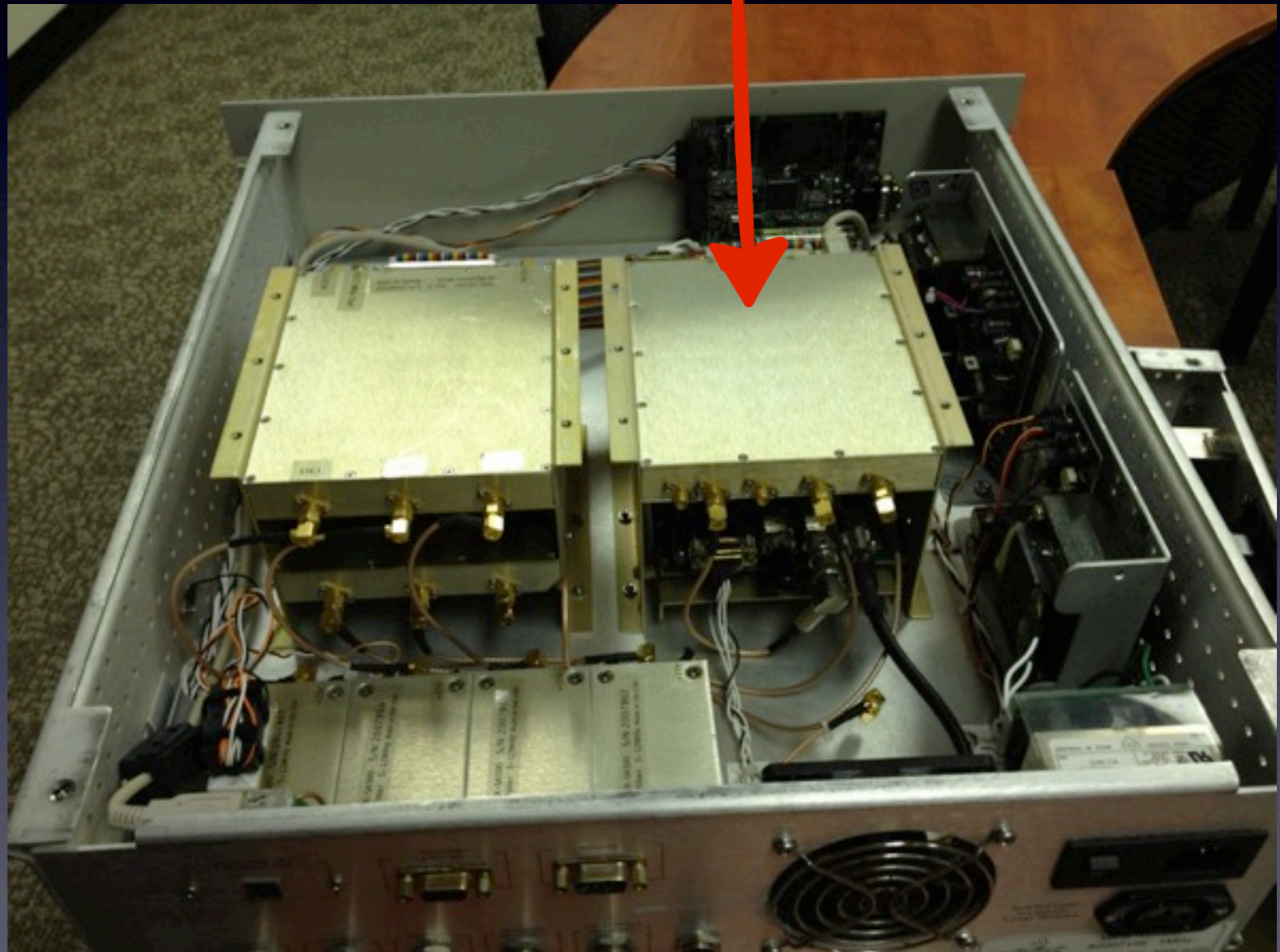
- Monitors system voltages and temperatures
- LED lights in front give visual diagnostics,
- red light = bad



AWG, Heart of the System

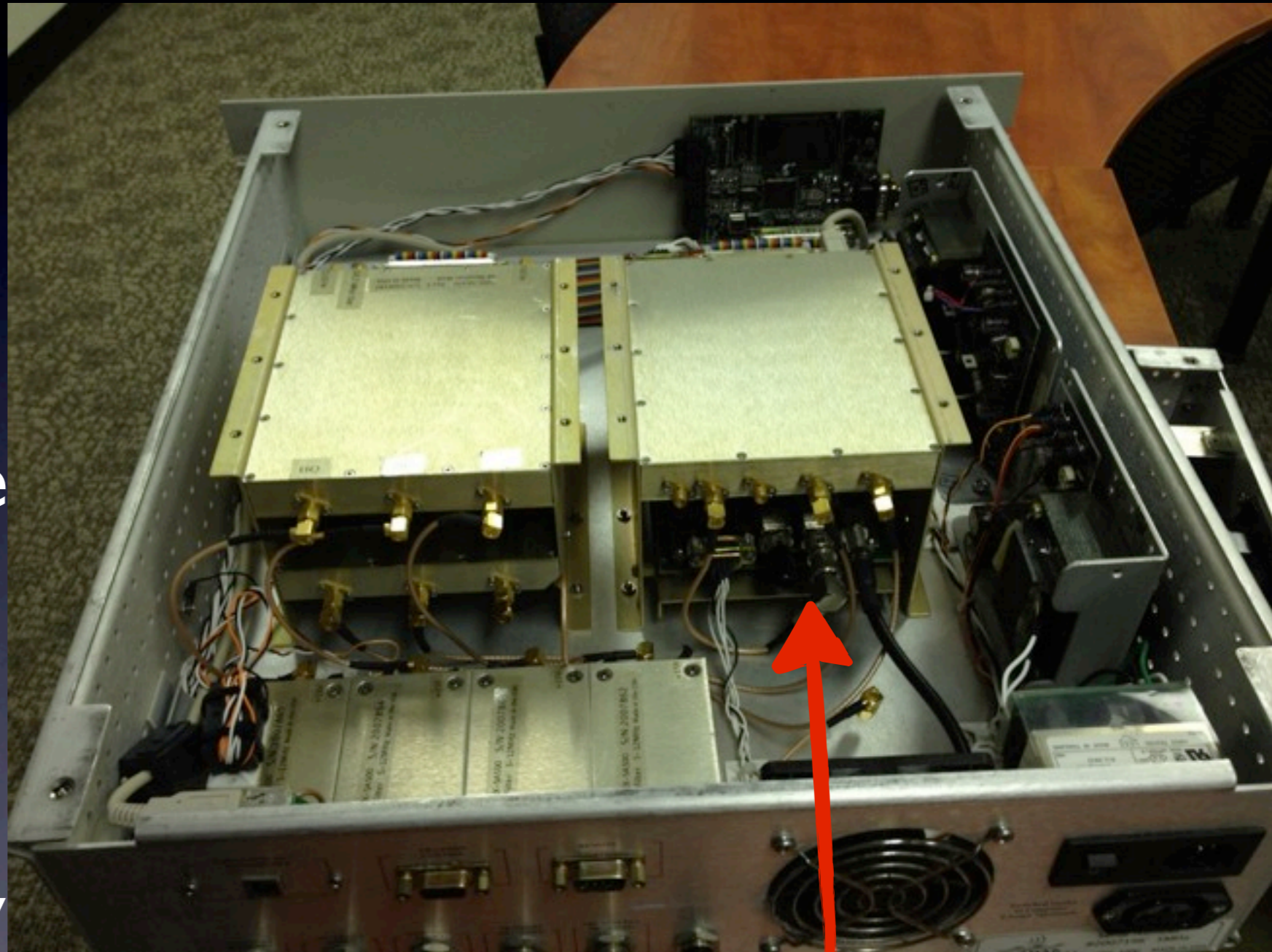
AWG

- Communicates with the computer via Micro-processor unit / **USB**
- Generates the signal that will be transmitted over the ocean surface



GPS Module

- GPS clock used for timing the start and stop of the radar sweep
- Important when operating multiple radars at the same frequency
- Provides frequency stability



GPS

T/R Module

- Receives the signal for transmission from DDS1 and DDS2 in AWG
- Filters that signal
- Sends signal to the transmitter through a Band-Pass Filter then through the TX Drive Out



T/R Module

Band-Pass Filters

- A specific band of frequency passes through to minimize interference
- Switch between high and low band
- Four total, one for transmit three for receive
- Channels 1 -3 measure 12V at the back of the chassis

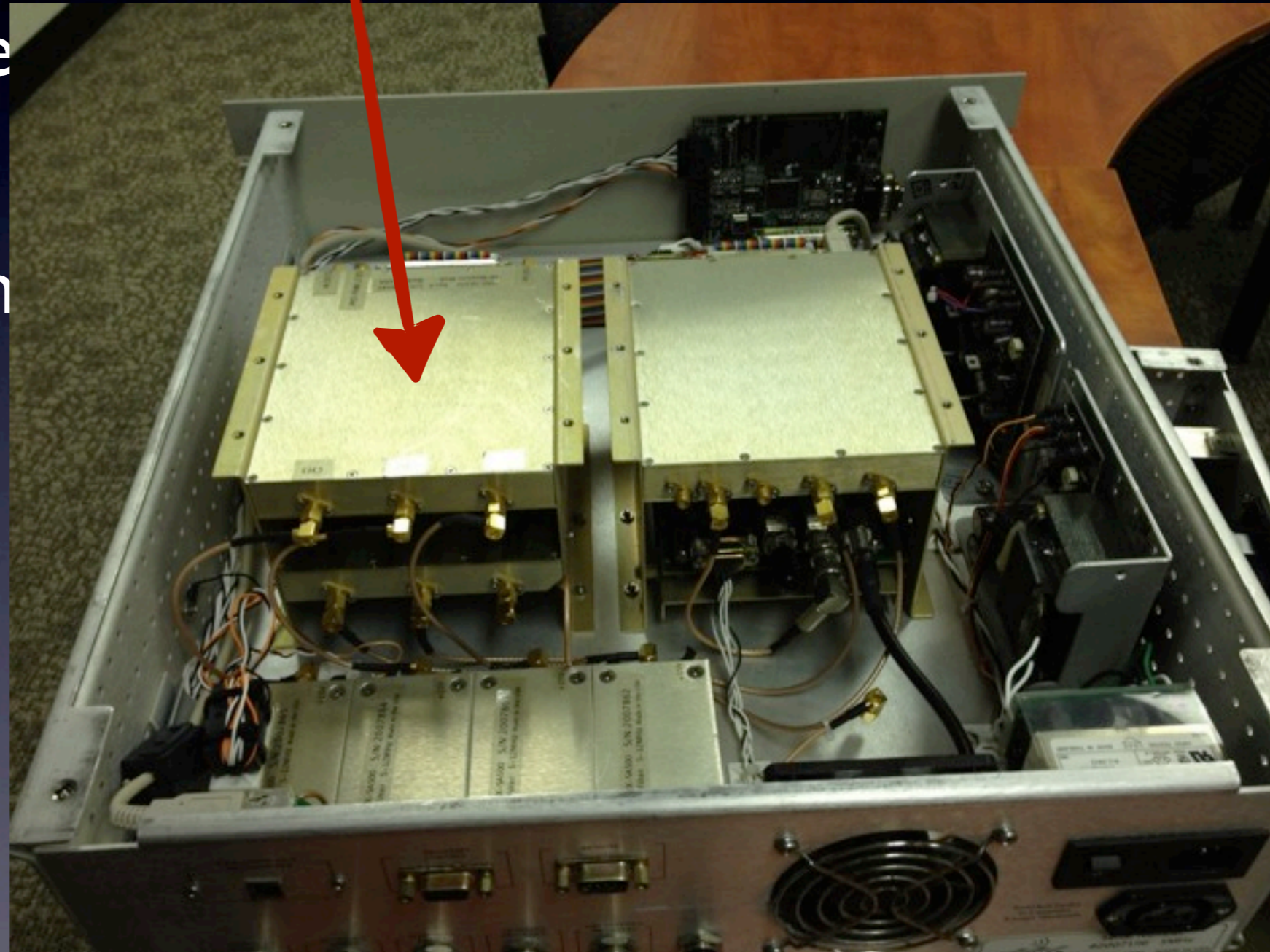


Band-Pass Filters

Receive Module

- Receives signal from the antenna / cables, through the Band-Pass Filters
- Digitizes data, then transfers the data to the AWG, which then transfers it to the computer for processing

Receive Module



One Fan for Cooling



Fan

Symptoms of Failure

- Unable to communicate between computer and AWG
- No sea-echo being received
- Can not turn on the receiver
- Incorrect voltage / temperature readings

Dont Forget About the “DEFAULT”

