Digital Signal Processing (DSP) and integrated technologies do more for thousands less.

ATS has combined Digital Signal Processing (DSP) technology, GPS, a field proven scanning receiver, and datalogger into one compact, easy-to-use unit.

At the heart of the R4500SD is its innovative Digital Signal Processing (DSP) technology. Simply put, DSP technology enhances sensitivity, improves noise rejection, and significantly increases tag detection range when datalogging.

The R4500SD also has a GPS receiver onboard to accurately document the position of transmitters while aerial tracking. There is no need to record GPS separately. Signal level output improves location precision.

Interactive tables can be uploaded from a PC or cloned to another receiver saving considerable time in the field. There’s even a digital port to control antenna switching, a GOES transmitter, etc.

Add the capability to store 100k non-volatile data blocks and a price that is thousands less than competitors’ combination units, it’s clear the R4500SD is a “must have” for today’s data-intensive fisheries and wildlife research.

The ATS R4500SD receiver/datalogger with DSP represents a big step forward in capturing and recording the data you need in order to ensure a successful research project.
**ATS R4500SD Receiver/Datalogger**

**GENERAL**
- **Frequency range:** Any specified 4 MHz range from 140 to 220 MHz
- **Channel spacing:** 1 kHz
- **Input impedance:** 50 ohms
- **Minimum discernible signal (MDS):** -150 dBm (0.007 µv into 50 ohms)
- **Noise figure:** 3 dB maximum
- **Speaker:** 8 ohms
- **DSP signal detection range:** ± 2 kHz
- **DSP signal detection level:** -133 dBm minimum
- **Frequency stability:** ± 1 kHz -20°C to +50°C
- **IF frequency:** 10.7 kHz
- **IF bandwidth:** 6 dB ± 2 kHz; 80 dB ± 7 kHz
- **Image rejection:** >150 dB
- **RF gain control range:** >150 dB
- **Operating voltage range:** 9 to 18 V DC
- **Dwell time (scan rate):** 1 second to 5 minutes

**MODES & OPERATOR INPUTS**

- **Aerial Mode:**
  - Frequency
  - Table # (1-12)
  - Pulse rate filter (1-4 pulse rates)
  - Scan rate
  - GPS (On/Off)

- **PC Mode:**
  - Off-load data
  - Upload and download frequency tables (Excel format)

- **Clone Mode:**
  - Transfer tables from one R4500SD (Master) to another R4500SD

- **Stationary Mode:**
  - Frequency
  - Table # (1-12)
  - Pulse rate filter (1-4 pulse rates)
  - Scan time
  - Time out
  - Store rate
  - Antennas scanned (1-8)
  - Goes (On/Off)
  - Reference transmitter (Yes/No)
  - Reference transmitter store rate

- **Manual Mode:**
  - Manual operation

**DISPLAY (4 line by 20 characters)**

- **Aerial Mode:**
  - Channel # and frequency
  - Period/pulse rate
  - GPS status
  - Signal strength
  - Battery status

- **Stationary Mode:**
  - Channel # and frequency
  - Date and time
  - Antenna #
  - Pulse rate
  - Signal strength

**CONNECTIONS**

- **Antenna:** BNC socket
- **Headset:** Receptacle for 0.25” phone plug
- **Computer interface:** USB connector
- **GPS:** SMA socket
- **Aux. Port:** DB15 for external digital control
- **External power/recharge receptacle:** 4-pin circular

**POWER**

- **12 volts DC nominal:**
- **Internal:** 200 mA (GPS off); 350 mA (GPS on)
- **External:** 4Ah Nickel-Metal Hydride; 8-hours operating time with GPS on
- **10 to 18 V DC external**

**PHYSICAL**

- **Size:** 13 cm wide x 20 cm long x 21 cm high
- **Weight:** 2.5 kg (5.6 lbs)
- **Accessories (included):**
  - External power cord, battery charger,
  - Win Rec off-load software,
  - PC download cable, instruction manual

- **Accessories (optional):**
  - Headset, GPS antenna, clone cable, padded case,
  - External battery pack

**ENVIRONMENTAL**

- **Operating temperature:** -20°C to +50°C
- **Storage temperature:** -70°C to +60°C
- **Humidity:** 95% non-condensing

**WARRANTY**

- One year parts and labor on materials and workmanship

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