KEY FEATURES

- Frequency Range 10kHz to 30MHz
- High performance RF circuits
- Digital Signal Processing
- User programmable digital IF filters providing up to 100 bandwidths
- Tunable IF notch plus passband tuning
- Simple to operate
- Automatic scanning of channels and frequency
- Remote control
- Controller of slave equipments
- Wide range of options
- Modular construction
- Comprehensive Built In Test Equipment (BIT) E

DESCRIPTION

This family of high performance HF receivers covers the frequency range 10kHz to 30MHz with functions such as IF filtering, I/Q and demodulation being implemented using digital signal processing techniques. The receivers use a modular design and a number of configurations are available: RA3791 Single receiver with operator's front panel RA3792 Dual receiver with operator's front panel RA3793 Single receiver for remote control RA3794 Dual receiver for remote control RA3790 Receiver remote control unit

Particular attention has been given to sensitivity, intermodulation, reciprocal mixing and spurious responses. The front panel of the receiver has been designed to provide a comprehensive range of facilities while also being easy to use. Single function push buttons select the most commonly used functions, and a menu system is provided to control the receiver's many special features.

The receivers include, as standard, a serial ASCII remote control interface with a built-in multi-addressing capability of up to 100 receivers. Slave receivers may be controlled in a number of ways, by computer using the RA3790 dedicated receiver control unit which has the same front panel as the RA3791; or by the RA3791 or RA3792 receivers which have built-in controller facilities. All receiver functions may be remotely controlled. The remote control protocol is compatible with that used in the well established RA3721/RA3722 thereby allowing RA3790 and RA3720 Series receivers to be used together in a system.
### Technical Specification

**Frequency Range:**
- 120 kHz to 999 kHz in 1 kHz steps

**Tuning:**
- For remote tripod, single sperated tuned with selected tuning rate

**Modes of operation:**
- CW, AM, SSB

**AF:**
- AM, FM, SSB

**RF:**
- LSB, USB, MIX, JB1, JB2, JB3, JB4

**Gain:**
- Variable in 10 dB steps using the main tuning knob or by keypad entry

**Chassis size:**
- 100% frequency invariable EPROM memory with automatic mode, squelch, AGC, and BFO settings. Built-in memory of position is possible from the front panel or remotely.

**Scan modes:**
- (a) Channel scan between selected channels with selected dwell time on each channel
- (b) Sweep over a number of channels determined by the user. Step range in frequencies may be programmed. This size 100 to
- 399 kHz. Sweep rate 10 kHz to 399 kHz in 0.01 kHz steps
- (c) In either mode scanning will be halted on detection of a signal above a threshold set by the operator.

**Frequency stability:**
- Less than 0.005% for the following optional frequency ranges
  - 60 kHz (20 to 270 kHz)
  - 60 kHz (270 to 290 kHz)
  - 60 kHz (290 to 300 kHz)
  - 60 kHz (300 to 399 kHz)

**Squelch sensitivity:**
- 10 dB in 0.1% of 0.005 kHz

**Selectivity:**
- 60 kHz at 10 kHz away from the receiver is 10 kHz.
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**Power Supply:**
- 100V to 240V AC and 200V to 240V DC with automatic voltage regulator (150V ± 10%)

**Power Consumption:**
- 50W (92.5%)

**Environmental:**
- Operating temperature: -10°C to +5°C
- Storage temperature: -40°C to +70°C
- Relative humidity: 95% at 40°C

**Dimensions:**
- Width: 185 mm (8.5 in)
- Height: 80 mm (3.1 in)
- Depth: 400 mm (15.7 in) behind the front panel

**Name:**
- RACAL

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