



The New Classic

AR3030 General Coverage Receiver *Collins mechanical filter inside



The AR3030 presents a classical appearance on the outside with high performance high tech DDS circuitry & Collins mechanical filter on the inside. DDS is probably the best method available today to produce the cleanest signals, absolutely essential for high performance receive capability especially on crowded bands containing many strong signals. As a listener you too can enjoy the experience of this very special marriage of high technology and classical styling.

The AR3030 boasts a wide frequency coverage from 30kHz to 30MHz and all mode reception 'as standard': AM, S.AM (synchronous), NFM, USB, LSB, CW & FAX. Tuning is via a silky smooth rotary tuning knob with a minimum step of 5Hz (selectable for faster / slower tuning), there are two VFOs and dial lock to prevent accidental loss of frequency while listening.

Most receivers employ ceramic filters, such filters offer good performance and reasonable cost. However the "best" kind of filter is the mechanical resonator filter, pioneered and still manufactured by the *Collins Division of Rockwell International. In contrast to ceramic filters, *Collins mechanical I.F. filters are more expensive and rarely used in any but the very top of the range and

professional equipment. For this reason, the AR3030 is fitted as standard with the *Collins 6kHz AM 8 resonator mechanical filter as standard, it is very easy to appreciate the true effectiveness of the *Collins AM mechanical filter when tuning the AR3030 on today's crowded medium and shortwave bands especially in Europe after dark. Our "Collins inside" logo and use of name has been fully approved by Collins Rockwell and we are proud of that fact.

There are two other filters fitted as standard, these being 2.4kHz for SSB/FAX/CW and narrow AM/S.AM & 15kHz for NFM. Additional filter options include a *Collins 7 resonator mechanical 500Hz filter for narrow CW operation, a *Collins 8 resonator mechanical 2.5kHz filter for even better selectivity on SSB and a substitute *Collins mechanical 4.0kHz filter for AM.

The AR3030 offers excellent frequency stability through use of a standard fitted Temperature Compensated Crystal Oscillator (TCXO). High stability is particularly important for ECSS reception where an AM broadcast station may be monitored while using USB or LSB under adverse reception conditions. Data modes such as FAX also greatly benefit from high stability.

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The AR3030 has a number of unique facilities to offer. In particular the BFO (Beat Frequency Oscillator) is switchable on USB/LSB/CW and FAX modes.

During 'normal' operation the AR3030 uses **true carrier re-insertion** techniques for SSB reception, this ensures ease of use and good audio quality. However should adjacent interference be encountered, the BFO may be switched On so that the main rotary tuning control can be used to tune away from interference and the BFO used to recover readable audio thus provide a simple but effective manual form of passband tuning.

Another useful facility is the [mtr] key. As well as being able to enter frequencies in MHz or kHz, the [mtr] key allows easy access to popular Broadcast and Amateur bands. For example, to quickly access the 31m Broadcast band while in VFO mode type [3] [1] [mtr] and start listening / tuning... easy. For the 20m 14MHz Amateur band type [2] [0] [mtr].

There are 100 memory channels which allow data to be transferred into and out of memory for greatest flexibility. Memory channels retain frequency, mode, bandwidth, AGC, attenuator and tone etc. Memory channels may also be scanned in whole or part and unwanted channels may be locked out. Memory channel is indicated as a number (00 to 99) on the main LCD.

A separate all mode squelch circuit is provided on the front panel to help with scanning and to increase listening pleasure when monitoring a noisy channel. A large high contrast green backlit LCD presents frequency up to the nearest 10Hz (not 1kHz as some receivers) for accurate tuning. All relevant information is displayed on the LCD. A large colour coordinated backlit green analogue S-meter provides signal strength indication.

A standard 6.3mm (1/4 inch) headphone socket is conveniently provided on the front panel with a separate 3.5mm jack socket on the rear case for external speaker connection. There are rear panel connections for low level audio output and tape recorder remote switching. I.F. output and AGC is also available through a rear panel connector. Computer control is

possible through the standard factory fitted RS232 rear panel port.

Aerial input is via a high quality 50 OHM commercial standard BNC connector, this has been chosen in preference to the cheaper SO239 socket. Of course a large range of coaxial adaptors are available so connection to any aerial setup should not present a problem. High and Low impedance wire aerial input is also possible via the terminal strip which includes an external earth point.

Operation is from a nominal 13.8V DC input or from internally fitted dry batteries for short duration use to provide greatest flexibility while operating from a fixed or portable location.

Two optional internally fitted VHF all mode converters are available and a separate BNC aerial input connector is provided on the rear cabinet. The **first** option is an airband converter covering from 108 MHz to 146.99999 MHz (so covering the 2m Amateur Radio band as well). The **second** option covers from 147 - 164.99999 MHz (also 108 - 146.99999 MHz with reduced performance), which is most of the VHF Marine band. Only one converter may be fitted to the receiver at any time.

Options:

- *Collins 500 Hz CW mechanical filter
- *Collins 2.5 kHz SSB mechanical filter
- *Collins 4.0 kHz AM mechanical filter
- VHF VHF AIR converter 108 -146.99999 MHz
- VHF converter 147 - 164.99999 MHz (108 - 146.99999 MHz with reduced performance)
- DC3000 DC lead
- CR400 tape control lead
- WA7000 wide band aerial 30 kHz ~ 2000 MHz
- DA3000 VHF-UHF discone aerial 25 - 2000 MHz
- LA320 active desktop loop aerial
- Optional LW / MW elements for LA320
- WX2000 facsimile decoder & printer
- CONCERTO PC Windows control software

Specification:

| | | | |
|------------------------------|---|---|--|
| Receiver coverage... | 30 kHz ~ 30MHz | Image / spurious rejection... | 70dB |
| Tuning selection... | MHz, kHz, 100Hz, 10Hz (5Hz minimum step) | Dynamic range... | 100dB @ 25kHz spacing (with 500Hz CW filter fitted) |
| Receiving modes... | AM, S.AM, USB, LSB, CW, FAX & NFM | Aerial connection... | LW - HF 50 OHMS nominal BNC LW - HF 450 OHMS for wire terminals LW - HF High impedance whip on BNC (slide switch selection) |
| Frequency stability... | 5 ppm -10 to +50 degrees C | VHF 50 OHM nominal BNC for optional VHF adaptor installation | 1.8 WATTS 8 OHM load @ 10% distortion |
| Number of memory channels... | 100 total (00 - 99) | Audio output... | Internal dry batteries (8 x AA) or external 12V DC @ 0.8A (nominal 13.8V) negative ground |
| Receiver sensitivity... | | Power requirement... | Size... |
| SSB, FAX, CW (10dB S+N/N) | 1uV 30 -50 kHz 5uV 540 - 1800 kHz 0.5uV 1.8 - 30 MHz | | 250mm (W) x 88mm (H) x 240mm (D) Approx excluding projections |
| AM (10dB S+N/N) | 3uV 30 - 50 kHz 15uV 540 - 1800 kHz 1.5uV 1.8 - 30 MHz | Weight... | 2.2kgs without batteries fitted |
| Narrow FM (12dB SINAD) | 0.5uV 1.8 - 30 MHz | | |
| Selectivity... | SSB/FAX 2.4 kHz -6dB AM 6.0 kHz -3dB AM narrow 2.4 kHz -6dB CW 500 Hz -3dB * (* with optional filter) FM 15 kHz -6dB | | |

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For further information
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