



AR8200 SERIES-2

THE SUPERIOR CONCEPT

NEVER BEFORE HAS ONE HAND PORTABLE OFFERED SO MUCH

The AR8200 represented a beacon when first released building on the successful recipe of the AR8000 and technology developed for the award winning AR5000 base receiver. Technology marches forward with the AR8200 SERIES-2 keeping the innovative concept and forward thinking alive and bright. It has not been easy improving on what many thought to be the ultimate, however the AR8200 SERIES-2 does provide even more with nothing taken away.

A Temperature Compensated Crystal Oscillator (TCXO) now forms the heart of the AR8200 SERIES-2, this ensures **high stability with minimal internal spuri...** the TCXO replaces a crystal reference as commonly employed in other receivers and is usually only seen in top of the range (more expensive) table-top models such as the AR5000 and AR7030. Performance too has seen the AOR R&D team fine tuning the design for **best sensitivity and strong signal handling** over the extremely wide coverage of 530kHz to 2040MHz (all mode receive without gaps). The standard aerial has been replaced by a **telescopic whip** on a swivel base, this ensures the best results, a medium wave bar aerial is also provided as standard. The design team have certainly been taking account of customers wishes, the keyboard ZERO key has been swapped in position with the DECIMAL to match the telephone layout, LCD illumination has been increased (for improved visibility) and following requests for longer operation between charges, the **4 x AA size NiCads have been increased in capacity**, again reflecting improvements in modern technology.

The obvious change has been left for last... the **cabinet colour** has been changed from green to **black** ! The list of features is vast, large multi-section backlit LCD, side mounted navigation keys and rotary tuning control, alpha-numeric text comments.

The all important **8.33 kHz airband channel step** is **correctly implemented** (eight-and-one-third, 33, 66, 00). Channel steps are provided in a menu and may be programmed. Step may be programmed by the operator in any receive mode using multiples of 50 Hz in any mode (i.e. 5 kHz, 12.5 kHz or even 1.25 kHz). Extensive **step-adjust** and **frequency offset** facilities are also provided (as per AR5000) to ensure tracking of the most obscure band plans, **AFC** (Automatic Frequency Control) is included for spot on tuning ensuring that nothing is missed. A wide frequency coverage is available from 530 kHz to 2040 MHz (no gaps) with actual minimum acceptable frequency of 100 kHz.

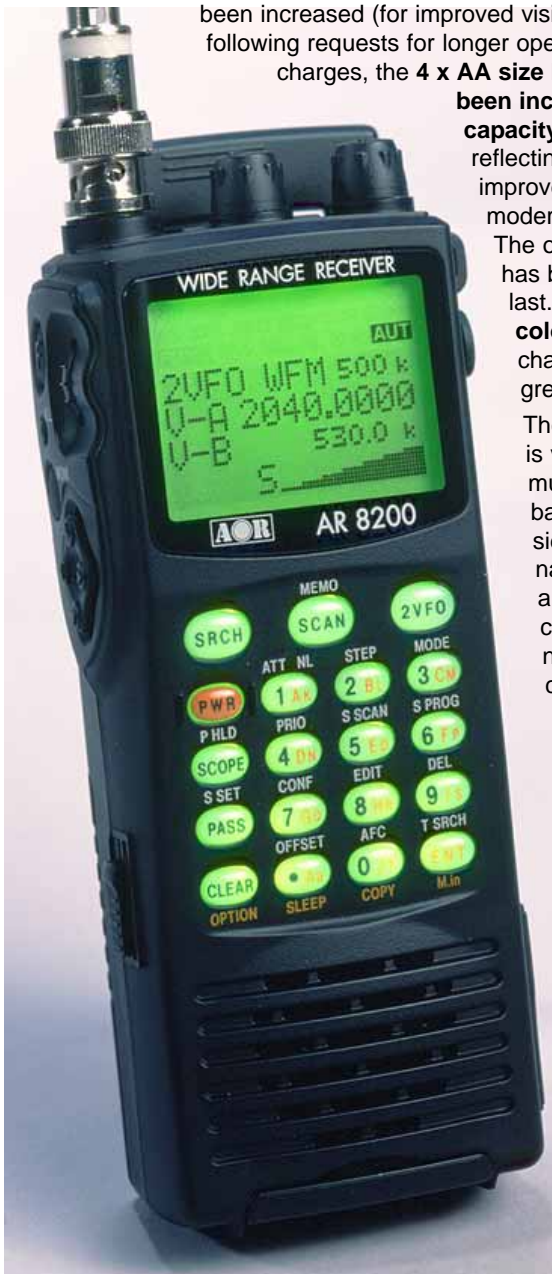
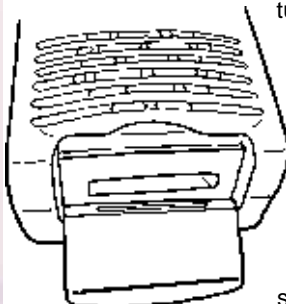
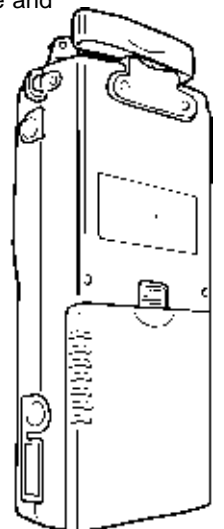
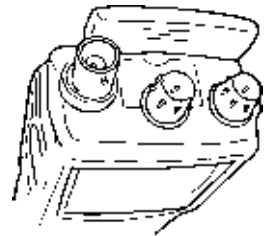
The RF front-end is preselected around VHF to ensure the highest levels of adjacent channel rejection with software spuri cancellation. The short wave bands are converted directly to an IF of 45 MHz to remove compromise and the AR8200 SERIES-2 is supplied with a **detachable plug in medium wave bar aerial** for localised monitoring with a negative feedback circuit employed.

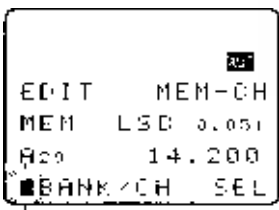
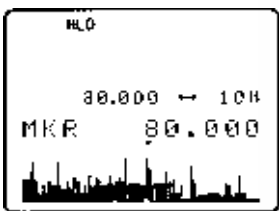
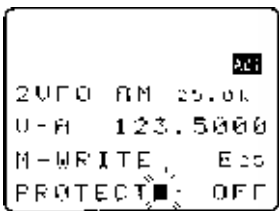
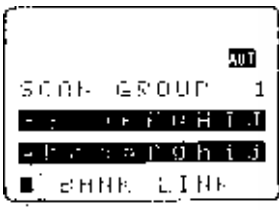
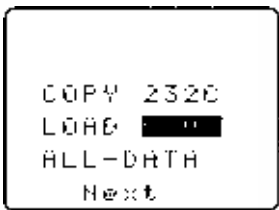
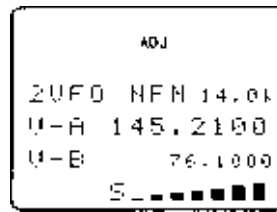
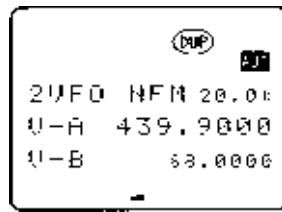
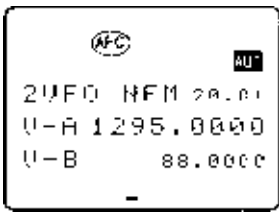
All mode receive: WFM, NFM, SFM (Super Narrow FM), WAM, AM, NAM (Wide, standard, Narrow AM), USB, LSB & CW. A 3.0 kHz SSB filter is employed with true carrier re-insertion resulting in non-offset frequency readout for easy tuning of SSB transmissions. An attenuator and noise blanker are also featured. A meaningful band plan is factory programmed specific to market area, this ensures that the AR8200 SERIES-2 automatically selects the correct receive mode and tuning step (although mode and tuning step may be manually selected at any time), the band plan may be edited via computer control.

The **side keypad provides four arrow keys presented as a single 'rocker'** resulting in more natural and intuitive navigation through the on-screen menus. Tuning is accomplished via a variety of controls including a side panel indented main tuning dial, arrow keys and keypad.

A larger than average back lit LCD with contrast control provides operational data with the ability to add **12 character text comments** to each memory channel, memory bank and search bank, a text search feature simplifies identification and recall of stored information.

Many text prompts aid operation making programming of search banks etc straight forward. Two frequencies may be displayed along with operating legends and high resolution signal meter and **multi-function band scope**. The band scope provides adjustable span width from 10 MHz to 100 kHz, you can move the marker, operate peak hold, transfer the marker frequency to VFO and **save trace** for later recall. The stylish black cabinet has a quality feel with an excellent rear-illuminated keypad with a hard wearing finish.





Flexible dynamic memory bank layout is provided (memory banks may be varied in size between 10 and 90 channels each *i.e.* bank 'A' 80 channels / bank 'a' 20 channels with bank 'B' 40 channels / bank 'b' 60 channels etc). A total of 1,000 memories are provided in 20 memory banks, lockout, select scan, priority and auto store are also provided. In addition 40 search banks are provided with 50 pass channels per search bank and a further 50 for VFO search lockout. Comprehensive edit, move, swap and delete facilities are provided, it is possible to move whole memory & search banks. In addition you may write **PROTECT** memories, banks and search banks to prevent accidental over-writing of stored data including protection of the entire receiver! Scan & search rates provide a maximum of approximately 37 increments per second. Flash-ROM memory storage ensures that data is automatically saved without the need for a backup battery or capacitor.

Computer control is available via a metallic side mounted robust connector and optional lead, an extensive RS232 command list is supported. A **FREE software package** is available as a download from the AOR web sites, this provides frequency control & management, searching, scanning, logging with support for geographic data from a GPS and audio recording to disk. This connector also supports clone of data between two AR8200 SERIES-2 along with tape output, detector output, mute and AGC.

The AR8200 SERIES-2 is powered from **4 x AA internally fitted high capacity NiCad cells** (supplied), dry cells may be used. External power may also be connected to the charge socket for extended periods of operation (9 - 16V d.c.).

'As if this was not enough', **optional internal SLOT CARDS** (which fit into the AR8200 SERIES-2 base) extend the capabilities even further:

- **Memory slot card** (increase storage to 4,000 memories, 160 search banks).
- **CTCSS slot card** squelch & search.
- **Record chip slot card** (records up to 20 seconds of audio).
- **Tone eliminator slot card**,
- **Voice inverter card**.

All this in a cabinet which weighs just 217g (excl. NiCads & aerial, 311g with NiCads fitted) with dimensions of 61(W) x 143(H) x 39(D) mm (excl. projections). **Supplied with:** NiCads (heavy duty 1100mAh), charger, cigar lead, swivel base telescopic whip aerial, MW bar, belt hook & screws, strap, comprehensive illustrated operating manual (free PC software is available from the AOR web sites).

AR8200 SERIES-2 specification

| | | |
|------------------------------|--|---|
| Frequency Range: | 530 kHz to 2040 MHz * (Actual frequency input 100 kHz to 2040 MHz, performance between 100 kHz to 530 kHz is not guaranteed). * Cell blocked in the USA for FCC rules | |
| Receive Modes: | WFM, NFM, SFM, WAM, AM, NAM, USB, LSB, CW | |
| Sensitivity: | 500 kHz ~ 2.0 MHz AM: 3.50 µV (10dB S/N) 2.0 MHz ~ 30 MHz SSB: 1.50 µV (10dB S/N) AM: 2.50 µV (10dB S/N) 30 MHz ~ 470 MHz SSB: 0.30 µV (10dB S/N) AM: 0.70 µV (10dB S/N) NFM: 0.35 µV (12dB SINAD) WFM: 1.00 µV (12dB SINAD) 470 MHz ~ 1 GHz NFM: 0.50 µV (12dB SINAD) WFM: 1.50 µV (12dB SINAD) 1.0 GHz ~ 1.3 GHz NFM: 1.00 µV (12dB SINAD) 1.3 GHz ~ 2.039 GHz NFM: 2.50 µV (12dB SINAD) | |
| Selectivity: | SSB/NAM AM/SFM WAM/NFM WFM | 3kHz (-6dB), 9kHz (-6dB), 12kHz (-6dB), 150kHz (-3dB), 9kHz (-60dB), 20kHz (-40dB), 25kHz (-40dB), 380kHz (-20dB) |
| Power Consumption: | 190mA (nominal), 145mA (stand by), 25mA (power save). 4 x AA internal cells or 12V d.c. external supply | |
| Dimensions: | 61(W) x 143(H) x 39(D) mm | |
| Weight: | 217g (311g inc. NiCads, 356g inc. NiCads & aerial) | |
| Memory channels: | 1,000 (20 banks) | |
| Select scan channels: | 50 | |
| Priority channels: | 1 | |
| Search banks: | 40 | |
| PASS channels: | 50 per search bank + 50 for VFO search | |
| Scan/Search Rate: | Maximum 37.42 steps per second With auto-mode off, 10 kHz step, * lock time 2mS, * Squelch wait 15mS. (*this value is preset and varies depending upon band and step, squelch wait times of 15mS, 25mS and 30mS are employed). | |

Specifications subject to change without notice due to continuous development of the receiver. E&OE.

Optional accessories

- Slot cards:**
Five slot cards are available, only one may be fitted at a time.
- VI8200** Voice inverter (analogue) in 157 steps.
 - CT8200** CTCSS squelch & search.
 - TE8200** Tone eliminator in 256 steps.
 - RU8200** Chip based recording and playback, 20 seconds approx.
 - EM8200** External extended memory, backup 4,000 memories, 160 search banks (can hold as much data as 4 x AR8200 SERIES-2).
- Leads:**
Three leads are available for use with the option socket.
- CR8200** Tape recording lead.
 - CO8200** Data clone lead.
 - CC8200** Computer control lead with level shift (available with imperial (PC98) & metric (DOSV) screws) and supplied with RS232 protocol listing in PDF format and PC software.
- Aerials:**
There are many suitable aerials available on the market, these include.
- DA900** VHF/UHF flexible whip 245mm in length.
 - MA500** VHF/UHF whip aerial on magnetic base with 4m of coaxial cable. Base is 85mm in diameter, total height is 720mm. Coverage is 25 to 1300 MHz.
 - DA3000** 16 element discone aerial with 15 of coax. Coverage is 30 MHz to 2 GHz.
 - SA7000** Passive twin element wide band aerial with 15m of coax. Coverage is 30 kHz to 2 GHz.
 - LA320** Desktop loop aerial 1.6 MHz to 15 MHz. Optional elements available for LW & MW. Supplied with BNC lead.
 - ABF125** VHF airband filter for increased adjacent channel selectivity.
- Case:** **SC8200** Leatherette protective case.

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