AR8200 MARK3 (GHz)

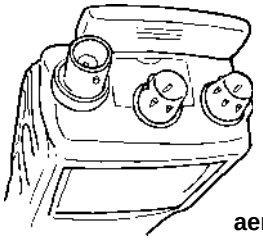
THE SUPERIOR CONCEPT

EVOLUTION PRODUCES THE VERY BEST

The AR8200 quickly established itself as the 'top notch' hand portable receiver providing unsurpassed features. As technology has advanced, so the AR8200 has evolved through the AR8200 MK2 drawing from the successful award winning AR5000 base receiver and more recently from the AR8600 MK2 transportable receiver, resulting in the **AR8200 MK3** (with 3GHz coverage). Along with an extended receive frequency coverage, the illumination has been further enhanced and high capacity NiMH batteries supplied.

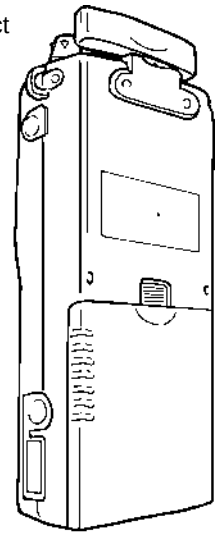
A Temperature Compensated Crystal Oscillator (**TCXO**) forms the heart of the AR8200 MK3, this ensures **high stability** with **minimal internal spurii**... the TCXO replaces a crystal reference as commonly employed in other receivers and is usually only seen in top of the range (more expensive) table-top models such as the AR5000 and AR7030. Performance too has seen the AOR R&D team fine tuning the front end switching circuitry design for **best sensitivity and strong signal handling** over the extremely wide coverage of 530kHz to 3000MHz (all mode receive without gaps). A **telescopic whip** aerial on a swivel base is supplied with a small **medium wave bar aerial**. The **illumination of the LCD and keypad is bright** and switchable in a number of ways to help conserve battery power for extended operation. This includes the ability to **AUTO switch the illumination** when the keypad is touched or **when a transmission opens the squelch**... useful for night time operation. Continuing the strive for even longer operation between charges, the AR8200 MK3 is supplied with **4 x AA size 1500mAhr NiMH (Nickel Metal Hydride) batteries**, again reflecting improvements in modern technology. The list of features is vast, large multi-section backlit LCD, side mounted 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 via 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 3000 MHz (no gaps) with actual minimum acceptable frequency of 100 kHz.

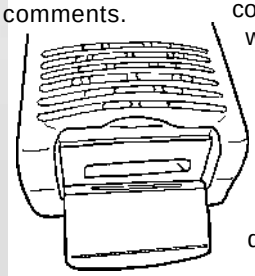


The RF front-end is preselected around VHF to ensure the highest levels of adjacent channel rejection with software spurii cancellation. The short wave bands are converted directly to an IF of 45 MHz to remove compromise and a **detachable plug in medium wave bar aerial** is provided for localised monitoring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

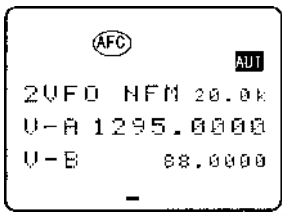
All mode receive: WFM, NFM, SFM (Super Narrow FM), WAM, AM, NAM (Wide, standard, Narrow AM), USB, LSB & CW. A 3.0 kHz SSB filter is employed with true carrier re-insertion resulting in non-offset frequency readout for easy tuning of SSB transmissions. An attenuator and noise blanker are also featured. A meaningful band plan is factory programmed specific to market area, this ensures that the AR8200 MK3 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.

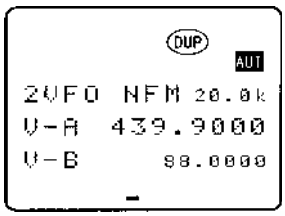


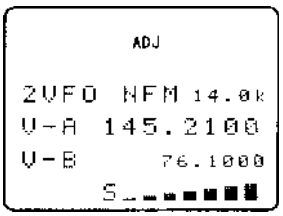
The **side keypad provides four arrow keys presented as a single 'rocker'** resulting in more natural and intuitive navigation through the on-screen menus. Tuning is accomplished via a variety of controls including a side panel indented main tuning dial, arrow keys and keypad. A larger than average back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

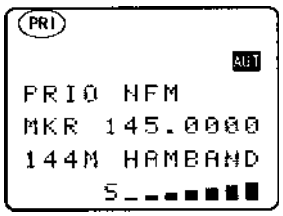


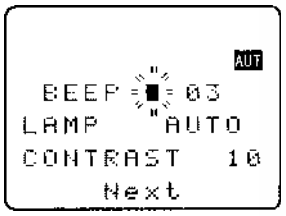
Many text prompts aid operation making programming of search banks etc straight forward. Two frequencies may be displayed along with operating legends and high resolution signal meter and **multi-function band scope.** The band scope provides adjustable span width from 10 MHz to 100 kHz , you can move 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.



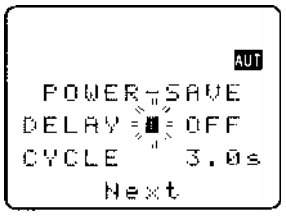








Flexible dynamic memory bank layout is provided (memory banks may be varied in size between 10 and 90 channels each *i.e. bank 'A' 80 channels / bank 'a' 20 channels with bank 'B' 40 channels / bank 'b' 60 channels etc*). A total of 1,000 memories are provided in 20 memory banks, lockout, select scan, 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.

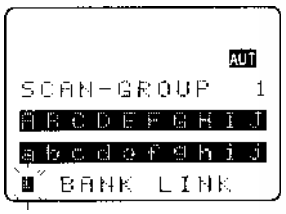


Computer control is available via a metallic side mounted robust connector and optional lead, an extensive RS232 command list is supported. A **FREE software package** is available as a download from the AOR web sites, this provides frequency control & management, searching, scanning, logging with support for geographic data from a GPS and audio recording to disk. This connector also supports clone of data between two AR8200 MK3 along with tape output, detector output and AGC.

The AR8200 MK3 is powered from **4 x AA internally fitted high capacity NiMH 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 MK3 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.***

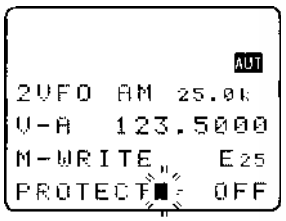
All this in a cabinet which weighs a little over 200g (excl. batteries & aerials) with dimensions of 61(W) x 143(H) x 39(D) mm (excl. projections). **Supplied with:** NiMH batteries (1500mAhr), charger, cigar lead, swivel base telescopic whip aerial, MW bar, belt hook & screws, strap, comprehensive illustrated operating manual (free PC software is available from the AOR web sites).



AR8200 MK3 specification

Frequency Range:	530 kHz to 3000 MHz * (Actual frequency input 100 kHz to 3000 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 ~ 1.9 MHz**	AM: 3.5 µV (10dB S/N)
	1.9 MHz ~ 30 MHz	AM: 2.5 µV (10dB S/N)
	30 MHz ~ 470 MHz	AM: 1.5 µV (10dB S/N)
		NFM: 0.85 µV (12dB SINAD)
		WFM: 1.5 µV (12dB SINAD)
	470 MHz ~ 1040 MHz	NFM: 0.9 µV (12dB SINAD)
	1040 MHz ~ 2040 MHz	NFM: 9.0 µV (12dB SINAD)
	2040 MHz ~ 3000 MHz	NFM: 25 µV (12dB SINAD)
Selectivity:	**SSB/NAM**	3kHz (-6dB) / 9kHz (-40dB)
	AM/SFM	9kHz (-6dB) / 20kHz (-40dB)
	WAM/NFM	12kHz (-6dB) / 25kHz (-40dB)
	WFM	150kHz (-3dB) / 360kHz (-20dB)
Power requirements:	4 x AA internal batteries or 12V to 16V d.c. external supply 190mA (nominal) consumption	
Dimensions:	61(W) x 143(H) x 39(D) mm approx excluding projections	
Weight:	340g approx including batteries and aerial	
Operating temperature:	-5°C to + 50°C	
Audio output:	120mW (8 OHM) THD 10%	
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:	37 steps per second (nominal)	

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 MK3).

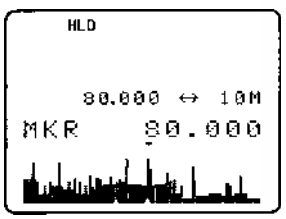
Leads:
Four leads are available for use with the option socket.

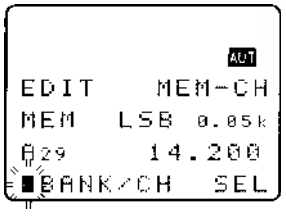
8200PC	Computer control lead with level shift in 9-pin plug housing. *PC software and RS232 protocol listing available from the AOR web sites.*
CR8200	Tape recording lead & interface.
CO8200	Data clone lead (to order).
OS8200	AUX lead - open ended.

Aerials:
There are many suitable aerials available on the market, these include.

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.
LA350	Desktop loop aerial 3.0MHz to 30MHz. Optional elements available for LW & MW. Supplied with BNC lead.
ABF125	VHF airband filter for increased adjacent channel selectivity.

Soft case: **SC8200** Leatherette protective case, grey in colour with clear plastic windows over LCD and keypad.





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