AOR®

TETRA | P25 | D-CR | DMR
NXDN | dPMR | D-STAR | YAESU
ALINCO | GSSI* | COSPAS-SARSAT* | *Optional

COSPAS-SARSAT
DISTRESS BEACON DECODER

NEW

DIGITAL VOICE RECEIVER

AR-DV3

100 KHZ – 3000 MHZ
ANALOG & DIGITAL MODES
CYBER SEARCH – 600 STEPS/SEC
IMPROVED RF STAGE
IMPROVED AUDIO QUALITY
OPTIONAL 10.7 MHZ I.F. OUTPUT
OPTIONAL DIGITAL I/Q OUTPUT
USB AUDIO OUTPUT
ON-SCREEN AUDIO EQUALIZER
USB PD COMPATIBLE

AOR® AR-DV3 DIGITAL VOICE RECEIVER 100kHz – 3000MHz

Compact wideband receiver for analog & digital signals

Highlights

■Newly Developed RF Front End

The newly developed RF front end employs a 14-segment HF/VHF/UHF bandpass filter, improving out-of-band interference suppression. The IF stage uses a SAW filter, enabling more accurate rejection of adjacent interference signals.

■Analog Modes

Supports CW, SSB, AM, synchronous AM, FM, and WFM.

■Digital Modes

Supports various amateur radio digital modes and popular commercial digital systems such as TETRA.
With an optional activation, it also supports TETRA's GSSI user group filtering.

■Auto Mode (Analog & Digital)

For analog signals, the receiver automatically selects the appropriate demodulation mode, IF bandwidth and channel step size based on the tuned frequency.
For digital signals, it automatically detects the modulation type and configures the mode (TETRA and COSPAS excluded).
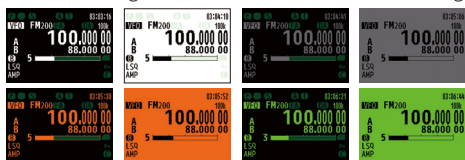
■Two Selectable High-Speed Search Modes

High-speed search: Up to 100 steps/sec (FM mode)
Ultra-high-speed CYBER SEARCH: Up to 600 steps/sec (speed varies with tuning step)

■High-Visibility Color Display

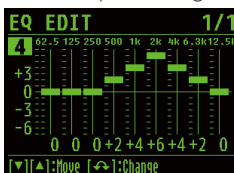Text and background colors can be selected from eight themes.

■Audio Performance

A dedicated audio DAC and low-noise headphone amplifier provide remarkably clear audio with very low background hiss, complemented by a wide-band flat-response speaker for natural and detailed sound. The built-in audio equalizer allows flexible tone adjustment, and AM reception benefits from an effective noise-reduction function for improved clarity in weak-signal conditions.

High-quality VISATON speaker   Configurable audio equalizer

■USB PD Power Support

Power the AR-DV3 from a USB-PD 15V (30W or higher) wall adapter or a USB-PD mobile battery. Perfect for station setups or outdoor field operation. (Standard 5V USB chargers are not compatible.)

■USB Audio Support

Plug-and-play USB audio that is instantly recognized by Windows, providing crystal-clear digital audio, and offering direct compatibility with decoding software without the need for virtual cables or audio-routing setups.

■SDHC Card Slot

Can be used for audio recording with logs, memory data backup, and firmware updates. Access recording logs and playback audio files on PC with our free utility AR-DV3 LOGEXTRACT.

■Digital I/Q Output (Optional)

Upgrade with the optional digital I/Q output module to control the AR-DV3 using Airspy's SDR# software. Visualize the spectrum, demodulate signals, and take full advantage of SDR#'s complete set of features.

■Easy Frequency Data Management

Conveniently manage memory channels, memory banks, search banks, scan groups, and search groups with our free "AR-DV3 DataUtility" software.

- Specifications and appearance may change without notice. Images and colors may differ from the actual product.
- D-STAR is a registered trademark of the Japan Amateur Radio League. NXDN is a registered trademark of Icom Inc. and JVCKENWOOD Corporation. Other company and product names are trademarks of their respective owners.
- The mark of the Japan Amateur Radio Industries Association (JAIA) is a registered trademark.

www.aorja.com   AOR Ltd. is a proud member of JAIA (Japan Amateur Radio Industries Association).

■AR-DV3 specifications

Spec	Sub	Value
Frequency coverage ※1		100kHz-3000MHz (Min. tuning step 10Hz)
Digital receive modes	TETRA	Direct mode and traffic channels. The GSSI user group filtering function is an optional activation.
	COSPAS-SARSAT	This function is an optional activation.
	DMR	TIER 1 and TIER 2
	NXDN/D-CR	RALCWI variant not supported
	P25	Phase 1 only
	dPMR	dPMR446 Tier 1 only
	D-STAR	DV mode only
	YAESU	C4FM V/D and Voice FR (VW) wide
	ALINCO	EJ-47U only
	On screen info	D-CR WC/UC, NXDN RAN, DMR slot/color, P25 NAC, TETRA slot, D-STAR CAL/RPT
	User configurable	D-CR 15-bit code/WC, NXDN RAN, DMR slot/color, P25 NAC, Tetra slot
Analog receive modes	FM	6kHz/15kHz/30kHz/100kHz/200kHz
	FM SQL	CTCSS, DCS, reverse tone, analog voice inversion descrambler ※1
	AM	3.8kHz/5.6kHz/8kHz/15kHz
	SAH/SAL	3.8kHz/5.6kHz
	SSB(USB/LSB)	1.8kHz/2.6kHz
	CW	200Hz/500Hz (pitch fixed at 600Hz)
Digital auto-mode selection		For all digital modes, except TETRA and COSPAS.
Receiver architecture		100kHz-18MHz Direct sampling / 18MHz-3000MHz Double superheterodyne
Frequency stability		±1ppm(0～50℃, after 5 min. warm-up)
Sensitivity (Typical values) ※2	SSB (10dB S/N)	<0.3µV
	AM (10dB S/N)	<1.0µV
	FM (12dB SINAD)	0.1MHz-18MHz <0.5µV / 18MHz-1500MHz <0.3µV / 1500MHz-3000MHz <0.5µV
	WFM (12dB SINAD)	60MHz-108MHz <1.0µV
Memories	VFOs	3 (A/B/Z)
	MEMORY CHANNELS	2000 (50 channels × 40 banks)
	SEARCH BANKS	40
	PASS FREQUENCIES	Up to 50 per BANK or per VFO
Attenuator		0dB / 20dB
RF Preamp		Approx.14 dB (above 18 MHz)
Power requirements		DC 12V (10.7–16V) via 5.5–2.1 mm plug, or USB-PD 15V (30W or higher) via USB Type-C
Current draw		<1A
Audio output		1.5W into 8Ω load
Dimensions		178(W)×50(H)×180(D)mm (excluding projections)
Weight		Approx 1.5kg
Operating temperature		0–50℃
I/O connectors		Antenna: BNC 50Ω
		PHONES: 3.5 mm stereo mini jack (mono audio)
		SP OUT: 3.5 mm stereo mini jack (mono audio)
		LINE OUT: 3.5 mm stereo mini jack (mono), or 12 kHz-offset analog IF (selectable)
		DC input: 12V (10.7–16V), 5.5–2.1 mm
		Rear USB: USB-PD Type-C power input, DC 15 V (30 W or higher)
		Front USB (Type-C): PC control and "USB audio class 1" or 12 kHz-offset analog IF (selectable)
		SD Card Slot: For full-size SDHC (max 32 GB, FAT32). Used for audio recording with logs, memory data backup, and firmware updates.
Supplied accessories		User manual only. The international model does not include the AC power supply or telescopic rod antenna; these items are sold separately.

※1 As per FCC rules, the US consumer version has cellular frequencies blocked and the analog voice descrambler function deactivated by hardware. These restrictions are final and cannot be reversed by firmware change nor command input
※2 Sensitivity Measurement Conditions:
FM :   1 kHz tone, 3 kHz deviation, IFBW 15 kHz
WFM : 1 kHz tone, 50 kHz deviation, IFBW 100 kHz
AM :   1 kHz tone, 60% modulation, IFBW 8 kHz, AGC=ON
SSB :   1 kHz tone, 60% modulation, IFBW 2.6 kHz, AGC=OFF

Options:

(Some options may not be available at the time of the receiver's release.)

- AC power supply 100-240V "ATM024T-W120V" (supplied with pins for EUR/UK/US/AUS), providing a 12V DC output.
- Telescopic rod antenna "RA8600"
- 10.7 MHz IF output unit (bandwidth +/-2MHz) "IFDV3"
- Digital I/Q output module (bandwidth 300kHz) "IQDV3"
- TETRA GSSI user group filtering activation key "AKTT-0003"
- COSPAS-SARSAT beacon decoder activation key "AKCS-0003"
- Mobile mounting bracket "MMDV3"
- Galvanic Isolation Transformer "GT-1MK2"

Link to AR-DV3 page