

# AR-DV10



A new standard for  
hand-held receivers!

## DIGITAL RECEIVER

# AR-DV10

Actual size

- 100kHz~1300MHz Analog & digital modes.
- TETRA, DMR, NXDN, dPMR, APC025, D-STAR, Yaesu C4FM, Alinco EJ47U, D-CR
- Digital modes auto-detect
- Optional COSPAS-SARSAT beacon decoder.
- Lithium-ion battery
- IPX5 water resistant.



Authority On Radio Communications

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# AR-D

## BROADBAND RECEPTION

100kHz~1300MHz

Large coverage from longwave all the way up to 1200MHz amateur bands, including airband and a variety of digital modes.

## TRADITIONAL ANALOG MODES

Full support of WFM, NFM, AM, USB, LSB, CW. A multitude of signals to monitor on the go, such as longwave, mediumwave, shortwave and FM radio broadcasting, CW and SSB ham radio, VHF/UHF airband and wireless bugs.

## DIGITAL MODES AUTO-DETECT

Monitoring the new digital modes can be quite challenging, as it is very difficult to know in advance which modes you might meet in a particular band. This is why we developed a unique detection algorithm which does all the work for you. Just set the digital AUTO-MODE and even while scanning the bands at high speed, the AR-DV10 will automatically switch to the correct mode and decode the digital signal.

Only AOR technology allows automatic detection of DMR(Tier1/2/Mototrbo), NXDN(6.25k), dPMR(446 Tier1), APCO25 (Phase 1), D-STAR, Yaesu(C4FM), Alinco (EJ47U) and Japanese D-CR.

## VARIETY OF DIGITAL MODES TO ENJOY

AR-DV10 is compatible with GMSK and C4FM amateur digital modes, as well as pro-oriented DMR and NXDN modes.

D-STAR	Ham radio
ALINCO	Ham radio
YAESU	Ham radio
D-CR	Convenience radio (Japan)
NXDN	Public / business
DMR	General business
dPMR	Small business
P25	Public / business / US military
TETRA	Business / transportation / government

## ADVANCED SIGNAL SELECT FUNCTIONS

Advanced digital mode settings give access to NXDN/D-CR scramble code, RAN, NAC, color codes and slot selection. For analog modes, the "VFO edit" menu controls tone/reverse tone/CTCSS/DCS squelch types and analog voice descrambler functions.

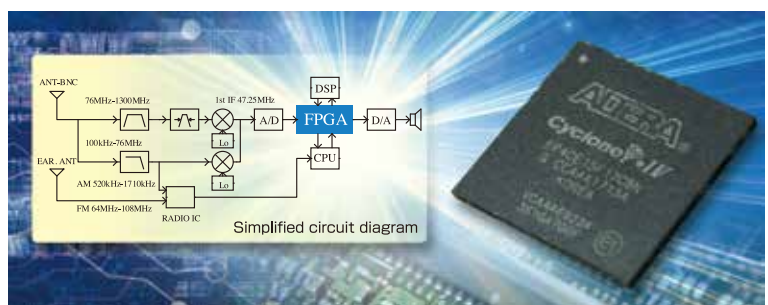


[DIGITAL CONFIGURATION]

## THE POWER OF SOFTWARE DEFINED RADIO (SDR)

The 100kHz-1300MHz signals are converted to a super heterodyne 47.25 MHz I.F signal and then digitized with an A/D converter. FM and AM broadcasts are digitized after direct conversion I/Q. Digitized signals are then processed by an Altera Cyclone IV FPGA and an Analog Devices Blackfin DSP for demodulation.

The AR-DV10 revolutionary features such as multi-digital modes reception and auto-detection of digital modes have been made possible thanks to these latest digital processing technologies and the AOR engineer's knowhow.



# V10



## DIGITAL SIGNAL INFORMATION

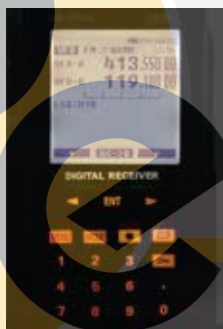
Displays the "From/to" and repeater call sign information for D-STAR signals, as well as user codes for D-CR signals.



[DIGITAL INFORMATION]

## 2.4" LARGE LCD DISPLAY

The oversize 160x160 full-dot matrix displays easy to read information about the received frequency, VFOs, memories, numerous settings and digital signal information. The LCD features a white LED backlight whereas the keypad is back-lit in orange, for convenient operation in the dark.



## EARPHONE ANTENNA SUPPORT

Earphones antenna reception can be convenient when listening to FM broadcasting, while on the move such as for example in the train where the flexible rubber antenna would not be convenient. The earphone antenna can operate from 64MHz to 107.99999MHz.

(Please note that the receiver does not feature an internal AM antenna)

## IPX5 WATER PROTECTION\*

The receiver is water resistant as per IPX5 rating. No need to worry about water splashes or sudden rain.

(\*Battery pack must be attached)



## COSPAS-SARSAT

### COSPAS-SARSAT DISTRESS BEACON DECODER



Soon to come a revolutionary optional feature which will empower your AR-DV10 to receive the distress signals of COSPAS-SARSAT distress beacons! Such beacons are activated by persons, aircrafts or vessels in distress. AR-DV10 is the world's first hand-held radio receiver to feature this unique function. It allows the AR-DV10 users to receive both the beacon's analog 121.5MHz homing signal, as well as the digital 406MHz signal which indicates the GPS location and ID of the beacon owner. The AR-DV10 can of course display the GPS and ID details on its LCD.

The Cospas-Sarsat feature is provided under license by PRO-S.I.C in France. To enable this feature on your receiver, please purchase an unlock key at [www.pro-sic.fr](http://www.pro-sic.fr).

## MICROSD CARD SLOT

MicroSD card support for audio recording, memory data input/output, backup and firmware updates.

## EASY FIRMWARE UPDATES\*

Stay up to date! Conveniently update the AR-DV10 firmware with though the SD card. Firmware data available at <http://www.aorja.com/receivers/ar-dv10.html>

(\*There is no guarantee for updates at regular intervals)

## HIGH CAPACITY LI-ION BATTERY & POWER SUPPLIES

Supplied high-capacity lithium-ion battery pack of 2000mAh for extended outdoor operation. Charging is possible either with the supplied AC power adapter, fast charger cradle or cigarette lighter DC/DC converter.

We also supply an alkaline battery tray which will be very handy in case your battery pack runs out of power while you are on the go.

## SPECIFICATIONS

Frequency range	100kHz~1300MHz (Cellular frequencies blocked for US consumer version)
Operation modes	VFO, memory channel, program search, scan
Digital receive modes	TETRA(Direct mode, mobile to mobile), DMR(Tier1/2/Mototrbo), NXDN(6.25k), dPMR(446 Tier1), APCO25(Phase1), D-STAR, Yaesu(C4FM), Alinco(EJ47U), Japanese D-CR.
Analog receive modes	WFM, NFM, AM, USB, LSB, CW
Circuit type	100kHz~1300MHz Single super heterodyne IF 47.25MHz SDR direct sampling WFM (64MHz~108MHz) SDR direct conversion AM (520kHz~1710kHz) SDR direct conversion
IF filter bandwidths	Analog modes: 100kHz, 30kHz, 15kHz, 8kHz, 6kHz, 5.5kHz, 3.8kHz, 2.6kHz, 1.8kHz, 500Hz, 200Hz (choice is mode dependent) Digital modes: 6kHz, 15kHz, 30kHz (auto-select)
Assisted functions	AGC, step-adjust, offset and priority receive. Analog voice descrambler (not available for US consumer version).
Signal attenuator	Approx. 10dB ON/OFF
Squelch modes	Noise squelch, level squelch, reverse tone, digital voice detection.
Frequency stability	±5ppm (-10°C~+50°C)
Sensitivity (typical values)	SSB (10dB S/N) 0.3μV AM (10dB S/N) 1.6μV FM (12dB SINAD) 0.3μV WFM (12dB SINAD) 2.6μV
Number of VFO's	3 (A / B / Z)
Memory channels	2000
Memory banks	40
Search banks	40
Priority channel	1
Pass frequencies	50 per bank or VFO
Audio outputs	Internal speaker min.700mW (@16Ω,10.5V,10%THD), earphone jack min. 200mW (@8Ω,10.5V,10%THD)
Antenna	BNC 50Ω
Max. antenna input	0dBm
Power requirements	7.4V 2000mAh Lithium-ion battery pack (BP-10) External input 6.5V~10.5V
Current consumption	240mA (typ), 500mA(max) (excluding battery pack charge current)
Case size	65(W)×137(H)×41(D)mm (Including battery pack, excluding projections)
Weight	Approx. 420g (including battery pack, antenna and belt clip)
Temperature range	-10°C~+50°C
Supplied accessories	AC power adapter, lithium-ion battery pack, fast charger cradle, belt clip, antenna, cigarette lighter DC/DC converter, alkaline battery tray, microSD card, operating manual.

Specifications are subject to change without notice or obligation.

Other company and product names mentioned are the property of their respective owners. Product and brand names used are for identification purposes only.

As per FCC rules, the US consumer version has cellular frequencies blocked and analog voice descrambler function deactivated by hardware. These restrictions are final and cannot be reversed by firmware change nor command input.

## CONTROLS & CONNECTORS



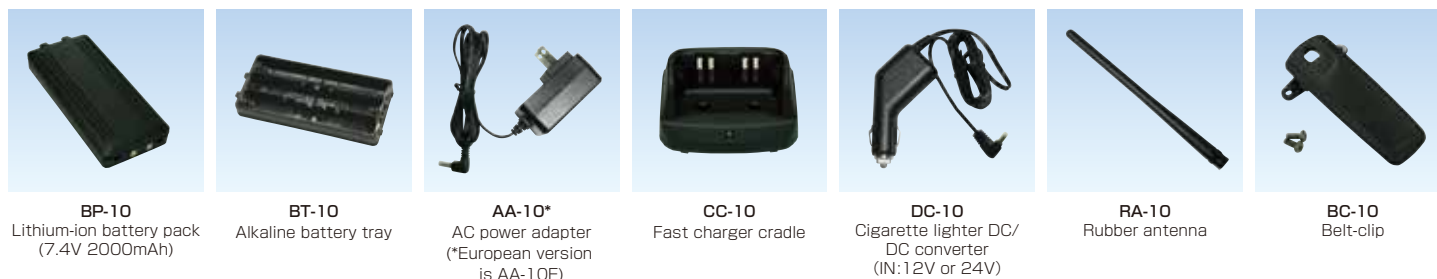
## OPTIONAL ANTENNAS



**MA500**  
Mobile whip  
(25MHz-1.3GHz)  
Magnetic mount,  
4m coaxial cable

**SA7000**  
Twin element  
(30kHz-2GHz)  
15m coaxial cable

## SUPPLIED ACCESSORIES



## The Serious Choice in Advanced Technology Receivers



Authority On Radio Communications

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