

# AOR ARD9000 Digital Voice Modem

**Hearing** is **Believing!**



**All over the world, hams have been discovering how much fun it is to work HF without background noise.**

*AOR set the pace in this breakthrough technology with its ARD9800. Now, in response to worldwide demand, AOR has developed the ARD9000 which makes digital voice communications even more affordable.*

*AOR's digital voice technology delivers audio quality you have to hear to believe. Whether you are working digital voice across state lines or across an ocean, amazing doesn't seem strong enough to describe it.*

*With an ARD9000, it's easy to convert existing HF analog transceivers to work digital voice with NO transceiver modifications. The ARD9000 automatically detects a digital signal and decodes it, so you also maintain full analog capabilities. Whether a contact comes in as digital or analog, the ARD9000 can handle it.*

**Try it yourself!**  
*You'll be amazed at how much fun it is to work ham radio in digital voice mode.*

- NO transceiver modifications necessary
- Digital voice communications using existing analog transceivers
- Amazing Audio Quality
- Works on Single Side Band (SSB) mode
- Automatic digital receive
- Optional interface cables for most popular transceivers
- Built-in high grade Vocoder (AMBE)
- Built-in FEC error correction
- Compact unit. Easy to operate.
- Utilizes a uniquely designed high performance DSP engine
- Uses the established G4GUO open protocol



**Digital voice could be the biggest revolution in HF radio since SSB!**

# AOR ARD9000 Digital Voice Modem

## Enjoy digital voice communications while maintaining analog capabilities.

The ARD9000 makes digital voice communications FUN & affordable.

Now you can use your existing analog transceiver to work digital voice on Amateur Radio bands without making any modifications to your transceiver.



## No transceiver modifications needed.

The ARD9000 uses the same audio frequencies (300 Hz ~ 2500 Hz) as microphone audio to modulate the voice signal. This allows you to use an analog radio as a digital voice radio.

## Works on Single Side Band (SSB) mode.

The Automatic frequency clarifier function adjusts frequency drift automatically in the SSB mode. (Approximately up to +/- 125 Hz). Utilizes the OFDM (Multi Carrier Modulation) circuit that is effective against Multi-path or Selective Fading.

## Automatic digital receive

Automatic voice signal detector recognizes the received signal as analog or digital, automatically switching to the appropriate mode.

## Built-in high grade Vocoder (AMBE)

Utilizing high-grade digital voice compression delivers quality digital voice communications.

## Built-in FEC error correction

A powerful error correction circuit delivers stable and reliable communications.

## Small and compact unit. Easy to operate.

Simply connect the ARD9000 between the microphone jack and microphone. No complicated modifications necessary. Optional interface cables for most popular transceivers are available or you can build your own connectors.

## Wide range of operating voltages

Operates on 10 to 16 V DC from an external power source.

## Utilizes a uniquely designed high performance DSP engine

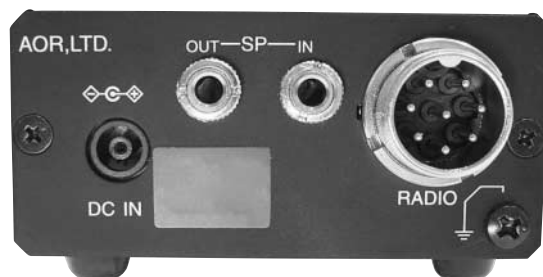
## Uses established G4GUO open protocol

The use of open digital protocol means use of the ARD9000 is permitted on US Amateur Radio bands (non-USA users should check applicable regulations).

**Discover how much fun it is to work Amateur Radio in digital voice mode using the ARD9000 and your EXISTING analog transceiver!**

## SPECIFICATIONS

Modulation method	OFDM
Band width	300 Hz ~ 2500 Hz, 36 carriers
Symbol Rate	20 mS (50 baud)
Guard interval	4mS
Tone steps	62.5 Hz
Modulation method	36 carriers: DQPSK (3.6K)
AFC	+/- 125 Hz
Error correction	Voice: Golay + Hamming
Header	1 Sec. 3 tones + BPSK training pattern for synchronization
Digital voice	AMBE coder, decoder
Signal detection	Automatic Digital detect, Automatic switching between analog mode and digital mode
Power requirements	10 ~ 16 V DC, Approximately 100 mA (@ 12 V DC)
Dimensions	70 (w) x 33 (h) x 98 (d) (mm) (Projections excluded.) 2.8"(w) x 1.3" (h) x 3.9" (d) (inches) (Projections excluded.)
Connectors	Radio: Microphone output (level adjustable), Speaker input (200 mV ~ 5 V p-p), External Speaker Output, DC Input Connectors Speaker Microphone (with PTT)
Others	Force Synchronization Switch



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Printed in USA.