NoizzOff
the ultimate noise filter

powered by

CandyVoice
GLOBAL VOICE SOLUTIONS

Voice Clarity in Extreme Acoustic Environments

Advanced AI-powered noise reduction technology designed for mission-critical environments.

NoizzOff restores intelligible speech in extreme acoustic conditions without altering voice identity, combining controlled latency with fully embedded execution.

Real-Time Speech Intelligibility for Mission-Critical Communications

Operational Benefits

- Eliminates extreme background noise (engines, rotors, wind, industrial environments)
- Isolates the target voice in multi-speaker scenarios
- Preserves voice timbre, identity, and prosodic cues
- Improves comprehension, coordination, and decision-making
- Reduces cognitive load and auditory fatigue for operators
- Fully edge-based operation (no network or cloud dependency)
- Designed for real-time mission-critical communications

Designed For

- Tactical radios
- Soldier systems and headsets
- Armoured vehicles and command posts
- 3GPP Mission Critical Services (MCX) terminals
- Public safety communications
- Rugged smartphones and field devices
- Industrial and hazardous environments
- Air, land and maritime operations

Proven Technical Performance

- Adaptive noise reduction: **>32 dB**
- Speech intelligibility improvement: **up to +14.3 dB** (MOS-equivalent)
- End-to-end latency: **24 ms**
- Real-time **processing with 5 ms frame size**
- Single-microphone architecture (simplified integration)
- **16 kHz** sampling rate – optimized for operational voice
- Robust AGC: +18 dB (stable performance under dynamic conditions)
- Compute footprint: **1 GOPS**
- Compact model: 375K parameters
- Optimized for embedded processors (ARM, DSP, NPU):

Plateforme (NEON/	INT8	FP16	FP32
M55 @ 250MHz	64 %	—	—
Cortex-A76 @ 2.0GHz	4 %	8 %	16 %

Integration Options

- Embedded deployment (MCU, DSP, SoC)
- Secure edge deployment (on-device AI)
- Integration into tactical terminals and radio systems
- Integration into critical infrastructure and gateways
- Containerization (Docker) and server deployment
- API and cross-platform integration

Why CandyVoice

- European sovereign deep-tech company specialised in real-time voice processing
- Combined expertise in voice DSP and embedded AI applied to speech intelligibility enhancement
- Noise reduction technologies designed for extreme acoustic environments
- Edge-native technologies with no cloud dependency
- Proprietary datasets derived from real operational environments

Selected Defence Experience

- Contribution to military radio communication programs (TRT, Thales…)
- Expertise in tactical communication environments
- Experience with secure communication architectures
- Previous eligibility for classified defence projects (France / NATO)

Ideal Use Cases

- **Defence:** maintain intelligible communications in extreme conditions, including vehicles, urban combat, rotary-wing operations, and highly noisy or degraded environments.
- **Public Safety:** enhanced voice clarity for firefighters, law enforcement, emergency responders, and crisis coordination centres.
- **Critical Infrastructure:** reliable communications in noisy industrial environments (transport, energy, manufacturing).

Performance demo: www.candyvoice.com

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