Who is M17?

Ham radio operators, and non-hams all around the world.

Main Contributors:

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... and 2000+ other great people in our online communities across Discord, Matrix, Facebook and Twitter.

What is M17?

The M17 Project is focused on research and development around digital voice and data modes, culminating in the M17 Protocol and related work, such as open hardware designs and open software packages. Protocol development revolves around Internet traffic routing, digital signal processing, both speech and RF. We love working with Software Defined Radios and GNU Radio. We also enjoy the hardware side of things — hacking chips to transmit and/or receive M17.

Why M17?

Digital radio modes have stagnated since the early 1990s due to the use of a proprietary voice encoder, the software or chip that converts analog voice from the microphone into a low-bitrate data stream and back. Development, and experimentation are all limited by the patent encumbered voice codecs, preventing average hams from building, and working on their own radios. M17 uses a fully-open ham-developed voice encoder called Codec2, which is patent free and has no royalties or licensing costs — and is about on-par with AMBE2+ used in other commercially available digital voice modes in terms of voice quality. M17 is more fun to work on, we already have all the cool developers (except for you, dear reader). See also all our cool demos that you would never see on a for-profit radio design. Ham radio was meant to be fun, meant to be 'free', and meant to be exploratory.

Where is M17?

M17 can be found worldwide (start a group in your local club!), and online:

m17project.org The M17 main Project page

openrtx.org Open-Source radio firmware

m17.club M17 users' group

opencollective.org M17's 501(c)(3) Fiscal Host

When is M17?

24/7, thanks to being global across all time zones, for the last four years. Started in 2019, M17 currently has active developers involved daily!

I am glad that M17 supports IPv6 properly. To my knowledge, it's the only ham radio linking system that does.
— A satisfied customer

Ik [sic] it's old news but seeing it makes me so excited that digital voice is hackable now.
— A Discord User, referencing M17

Contact and Get Involved

Discord and Matrix for M17 main development and discussion. Weekly voice chat on Fridays at 1700 UTC on the M17-M17 Reflector, Module C.
GitHub and occasionally other code forges for code sharing. Chat with us on DroidStar, mvoice, or M17Client via the M17-M17 C Reflector!
M17 is autonomous, self-driven and self-selected. There is no strong hierarchy by default, but the community is happy to provide guidance if desired!
ARDC grant allows for equipment purchases. M17 is looking for future grants and donations for continuing and sustaining work.

M17 Technical Basics

4FSK modulation at 4800 symbols per second
9600 bits per second gross bitrate
3200 bits per second voice payload rate
Channel bandwidth of 9kHz
Convolutional coding and bit interleaving for error protection

Feed / Media

Mastodon: @m17_project@mastodon.radio
Twitter: @m17_project
Facebook Group: M17 Project (ham radio)
YouTube Channel: M17 Project

M17 Activity Day

Every Friday

RF: 433.475 MHz (70cm), 144.875 MHz (2m)

Internet: most of the traffic is on M17-M17 C

Links and Other Information

M17 Protocol Specification (a work in progress):
https://spec.m17project.org

M17 Project Website: https://m17project.org

Discord: https://discord.gg/G8zGphypf6

Matrix Space:
https://matrix.to/#/#m17-project:matrix.org

GitHub: https://github.com/M17-Project

YouTube: https://youtube.com/c/M17Project

Twitter: https://twitter.com/m17_project

Mastodon: @m17_project@mastodon.radio

Facebook:
https://www.facebook.com/groups/m17project

OpenRTX: https://openrtx.org

mvoice by N7TAE: https://github.com/n7tae/mvoice

DroidStar by AD8DP:
https://github.com/nostar/DroidStar

M17Client by G4KLX:
https://github.com/g4klx/M17Client

Mobilinkd TNC4: http://www.mobilinkd.com/

Special Thanks to:

ARDC (https://ardc.net)

Open Collective Foundation (https://opencollective.com/m17-project)

Ettus Research (https://www.ettus.com)

ZUMRadio (https://zumradio.com)

DARC (https://www.darc.de)

EURAO (https://www.eurao.org)