

World's Smallest Voice Recorder?

by Kevin D. Murray, CPP, CISM, CFE



Voice recorders keep getting smaller and smaller. Is TileRec now The World's Smallest?

If *smallest* means *thin* to you, yes there is a thinner one, the Edic-mini Tiny16+ A75²... 1 mm thinner, 12 mm less wide, but double the length. And, at \$345, six times the price. They also make one card-key sized³ (2.7 mm).



Specifications

TileRec by ATTO Digital

Ultra-small: ≈1.53"x1.53"x.02" (≈39 x 39 x 5 mm)

Record modes: Voice activated or continuous.

Storage capacity: 145 hours.

Format: 128 kbps CD Quality MP3.

Playback: Download files to any computer.

Battery "on time": Up to 24 hours.

Battery charge time: 2 hours.

Housing: Sturdy aluminum case.

Operates with one on/off switch.

Cost: \$59.80 Amazon¹

¹ <https://amzn.to/2COYPkf>

² <https://ts-market.com/products/models/5124/>

³ <https://ts-market.com/products/models/5668/>

If by *smallest* you mean really, really thin...

You might want to consider the NAGRA Dollar Bill recorder that's being marketed to law enforcement instead—31x as expensive.

NAGRA Dollar Bill Audio Recorder



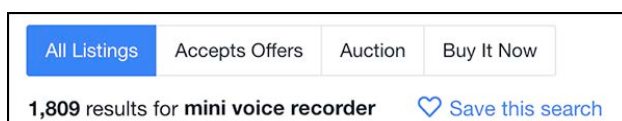
- 16 GB Memory Size
- >48 hour battery life
- PCM Linear Monophonic Recording
- Built-in Microphone
- No Docking Station Needed

ACT CCR-OEM-R (OEM Recorder - 16 GB Memory) ... \$1,875.00

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There are many slightly larger voice recorders that are still considered to be *mini* in size. Our search on eBay returned 1,809 results and over 2,000 on Amazon.



The prices on eBay ranged from \$1.45 (with free shipping from China!) to \$2,000. for the Edic-mini Tiny+ B76-150HQ.⁴ The Edic-mini Tiny+ being closest in size to the TileRec.

Jang Sung-Churl, chief executive of electronics firm Auto Jungbo Co. Ltd., told Reuters that covert recording devices “have been selling like hotcakes” ...sales of voice recorders so far this year (2019) have doubled to 80 devices per day, Jang said as he forecast sales to also double this calendar year to 1.4 billion won (\$1,172,289).⁵

Accessibility + Affordability = Big Concerns.

Who Cares?

Lots of folks, for many and varied reasons...

- Sneaky people who want to eavesdrop.
- Sneaky people who want to entrap others.
- Anyone worried about covert surveillance.
- Local law enforcement detectives and Private Investigators. They might not have the budget necessary for a covert **NAGRA Dollar Bill Recorder**, but have the smarts to slap a **TileRec** between two one-dollar bills.

- Technical Surveillance Countermeasures (TSCM) Technicians whose job it is to find illegal, electronic surveillance devices.

It all boils down to these two things:
People hiding voice recorders, and...
thwarting the people doing it.

Discovering Voice Recorders

Since the *offense* has the advantage let's concentrate on the *defense*.

The average covert voice recorder will either be carried by a person to record face to face conversations or it will be hidden within *conversations-of-interest* areas.

IN-PERSON RECORDING DETECTION TIPS

- Since frisking is probably out of the question, assume you are being recorded. Even if you could frisk, results would be iffy; these voice recorders are tiny.
- At the outset of a conversation ask the other person if they are recording you. Watch their reaction. Do they overly protest, or fake anger?

If they say *no* but record anyway, the recording's value can be challenged. They lied, so maybe they also faked, edited or doctored the recording. Also...

⁴ <https://ts-market.com/products/models/5116/>

⁵ <https://www.reuters.com/article/us-southkorea-labour/south-koreans-using-spy-gadgets-to-fight-workplace-bullying-idUSKCN1VO13I>

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- Be professional. If you would not say it in a courtroom, don't say it.

Big Red Flag – When someone tries to recreate a previous conversation with you.

COVERT RECORDING DETECTION TIPS

- Pay attention to your surroundings. Who has access and when? Voice recorders need to be retrieved: to review recordings and to recharge batteries.
- Avoid using the same area for all your sensitive conversations. Use various and unpredictable locations if possible.
- Conducting your own search for surveillance devices is futile. An experienced eavesdropper will plant one easy-to-find device. They know the search will stop at that point. The harder-to-find device *and* its back-up will still be on the job. Without proper training and instrumentation your success is unlikely.

For office and home office situations an independent **Technical Surveillance Countermeasures** (TSCM) sweep team should be employed. Have them conduct periodic due diligence [debugging inspections](#).

In addition to searching for room audio and video surveillance devices have them check your vehicles. Vehicle inspections also include a search for GPS tracking devices.



Testing Our Defenses

We conducted tests to determine the effectiveness of our detection techniques on mini voice recorders. We found the TileRec was difficult—but not impossible—to detect compared to other recorders tested.

During a professional TSCM inspection the technician's physical search is aided by an instrument called a Non-Linear Junction Detector (NLJD).⁶ It can detect electronic

⁶ <https://counterespionage.com/tscm-technology/non-linear-junction-detection-nljd/>

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surveillance devices, including mini voice recorders, active or dormant.

A distance of 3 to 4 inches was chosen to test the NLJD detection technique. This simulates the recorder being secreted within another object.

With the NLJD set at 50% power output the TileRec was barely detectable. When the power was increased to 90-100%, success. Even at this higher power operator skill in using the NLJD was critical.

Conclusions

1. The TileRec is (probably)
The World's Smallest (affordable)
Voice Recorder (as of now).
2. Size doesn't matter. Any mini recorder can be easily secreted⁷ and threaten privacy.
3. The market for mini recorders is huge.
There are a lot of them out there. Some very good ones are very inexpensive.
4. Detection is difficult, but not impossible.
5. The best self-protection tactic is watching what you say and situational awareness.
Critical situations require the assistance of a professional TSCM / counterespionage firm.

⁷ <https://counterespionage.com/voice-recorder/>

⁸ <https://counterespionage.com/about-murray-associates/electronic-eavesdropping-detection/>



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If you have any questions, or would like to schedule TSCM / information security audits, please let me know.

Kevin D. Murray CPP, CISM, CFE is a business counterespionage consultant and TSCM specialist with over four decades of experience.

Murray Associates⁸ is an independent security consulting firm, providing eavesdropping detection and counterespionage services to business, government and the at-risk individual.

Headquartered in the New York metropolitan area, a Murray Associates team can assist you quickly, anywhere in the United States, and internationally.