Against the Noise: The AU2M Arnala Island (AS-169) Activation

1. Mission Overview

From May 1 to May 3, 2026, the callsign AU2M pierced through a thick blanket of electromagnetic interference to put Arnala Island (IOTA AS-169) on the global airwaves. For forty-eight hours, our team operated from this rare Indian coastal reference, driven by a singular objective: providing a sought-after IOTA contact to the DX community under some of the most grueling environmental and technical conditions of the season.

The activation was led by Sarath (VU2RS) and supported by a dedicated crew of operators:

- Adersh (VU24DX)
- Anil (VU3DXA)
- Pramod (VU3OPD)
- Suyog (VU2THF)
- Anand (VU3YAY)
- Suyog (VU3OHF)

2. Logistics: The Long Road and Short Boat

The operation was a logistical gauntlet, beginning with a land transit where SUVs groaned under the weight of transceivers, heavy-duty cabling, and power supplies. As we reached the coast, the "race against the sun" intensified. The transition from asphalt to salt water required the manual hauling of every piece of gear into small, open-engine wooden boats.

The heat of the peak Indian summer was oppressive, turning the physical labor of loading the vessels into a test of endurance. Amidst the gear-laden decks, the sight of a **Yaesu FT-710 Field** box tucked into a protective plastic crate served as a reminder of the sophisticated technology we were fighting to protect. With the engine's rhythmic thrum and the spray of the Arabian Sea, the transition from the mainland to the AS-169 site was a study in logistical density, leaving barely enough room for the operators to sit among the crates.

20dB over 9 defined our strategy: we would have to fight for every decibel.

3. The Battle for the Noise Floor

Upon establishing our base at the temple site, the team was met with a technical nightmare: a constant, crushing 59+20 noise floor. This wall of static, generated by local power lines and aging transformers, threatened to silence the expedition before the first QSO was even logged.

The crisis was deepened by the discovery that our specialized receiving antennas had been lost during the chaotic transit. Without these tools to mitigate the local interference, we were effectively blind on traditional phone modes. The mission was saved by the frontline defense provided by the **National Institute of Amateur Radio (NIAR)**—their high-performance Bandpass Filters were the only reason we could maintain a signal. The frustration of watching the S-meter pin at

4. Operating Results and Statistical Breakdown

Despite the local interference, the AU2M team maintained a relentless pace for a total operating time of **50 hours and 22 minutes**.

- **Total QSOs:** 5,580
- **Distinct DXCCs:** 99

Because the noise floor made voice communication nearly impossible, we leaned heavily on the narrow-band nature of digital modes. The -24dB Signal-to-Noise Ratio (SNR) threshold of FT8 allowed us to "dig" signals out from beneath the transformer hum that would have otherwise been lost to the noise.

QSO Mode Distribution | Mode | QSOs | Percentage | | :--- | :--- | :--- | | FT8 | 5,379 | 96.4% | | CW | 144 | 2.6% | | SSB | 57 | 1.0% |

Top Band Performance

- **20m:** 23%
- **15m:** 15%
- **40m:** 15%
- **10m:** 13%
- **17m:** 10%

Note: Technical analysis of the logs shows a significant 13% of QSOs attributed to a "0.140" category; while this likely represents a logging software quirk for a specific digital sub-band, it highlights the heavy digital focus required to overcome the site's unique QRM (interference).

5. Geographic Reach

The AU2M operation was staged beside a pristine, white-domed temple, its saffron flags snapping in the sea breeze. This location became more than just a radio site; it became a classroom. The island's youth, many of whom live without reliable mobile phone service or television, gathered to watch the vertical antennas rise against the skyline.

The team hosted informal training sessions, showing the local residents how a wire and a transceiver could bridge the gap between their isolated

home and the rest of the world. Seeing the curiosity in their eyes as they heard signals from thousands of miles away reminded us that DXpeditions aren't just about the logs—they are about fostering the next generation of radio enthusiasts in the places where communication is most vital.

The activation successfully reached every major corner of the globe, with a particular emphasis on the European and Asian corridors. The continental distribution was as follows:

- **Europe:** 55%
- **Asia:** 38%
- **North America:** 6%
- **Oceania, South America, and Africa:** 1% (combined)

6. Beyond the Logs: Community and Youth Training

7. Sponsorship and Support

This activation would have been impossible without the dedicated

support of our sponsors. We extend our deepest gratitude to:

- **GDXF (German Dx Foundation)**
- **CDXC** (The UK DX Foundation)
- **IOTA Ltd** and the **RSGB**
- **NIAR** (National Institute of Amateur Radio) – Special thanks for the mission-critical Bandpass Filters.
- **DX India Foundation**
- **Ministry of Communications** (Government of India)

8. QSL Information and Administration

Charles R. Wilmott (**M0OXO**) is the QSL Manager for AU2M. Confirmations can be requested via the following pricing structure:

- **OQRS (Online QSL Request System) Direct:** $8.00
- **Express LoTW:** $5.00
- **Direct Post Mail:** $8.00
- **Bureau:** $0.50

9.The Battle for the Noise Floor: A Scientific Investigation

Upon establishing our base at the temple site, the team was met with a technical nightmare: a constant, crushing 59+20 noise floor. This wall of static, generated by

local power lines and aging transformers, threatened to silence the expedition. To

investigate this, we were honored by a visit from Government Officials from the

WPC (Wireless Planning & Coordination) and WMO.

This marks only the second time in Indian history that WPC/WMO officials have

visited an IOTA activation site to conduct technical assessments.

WPC officials utilizing a SignalShark 3310 to analyze the extreme noise floor at the site.

Using advanced handheld spectrum analyzers like the Narda SignalShark 3310, the officials performed detailed sweeps of the local RF environment. The readings

confirmed our worst fears: the noise floor was extremely high and persistent across

multiple bands. The data captured during these readings provided a scientific basis

for the interference we battled throughout the activation.