HANDIKO GESANG ANUGRAH SEJATI, S.T.

RF Telemetry, Microcontroller, and Electronics Enthusiast

Jl. Cendrawasih Raya, Komp. Pondok Safari Indah B9/6, Pondok Aren, Tangerang Selatan
GitHub page: https://handiko.github.io | GitHub profile: https://github.com/handiko |
handikogesang@gmail.com | 085741249084

I am a fast learner who eager to learn new things, do the most optimal way, and present in the best way. During my study, I did a lot of development on radio telemetry projects (hardware and software), microcontroller programming, antenna design and simulation, and signal processing.

Completed Projects

1. **Atmel AVR Microcontrollers & Arduino**
   - APRS tracker using Arduino UNO & Dorji DRA818V radio module: GitHub page
   - Arduino RFpainter – Abusing FMCW to paint cats on spectrogram: GitHub page
   - Re-flashing JDY-08 bluetooth module with HM-10 firmware: GitHub page
   - iBeacon using a JDY-08 bluetooth module: GitHub page

2. **RF Telemetry & Hardware Electronics**
   - VHF telemetry shield for Arduino UNO: GitHub page
   - MMIC based VHF low noise amplifier: GitHub page
   - 4-elements VHF Yagi antenna: GitHub page
   - ESP-12E/F Eagle PCB library: GitHub page
   - Contributing to the YE2A Contest Team (Grobogan, Central Java) as a technical team and operator.

3. **Software Defined Radio (SDR) & GNU Radio**
   - Receiving and demodulating weather image from a Russian satellite using a low cost SDR dongle: Published here
   - Receiving maritime radio transmission from Seoul, South Korea, using a low cost SDR dongle and GNU Radio software: Published here
   - gr-Merapi, an SDR application on GNU Radio for receiving and decoding telemetry from Mt. Merapi: GitHub page
   - gr-APRS, an SDR application on GNU Radio for receiving and decoding APRS packets: GitHub page
   - How to stream the audio out from GNU Radio into VLC media player: GitHub page

4. **Antenna Design and Simulation**
   - 2x2 element vertical array: Published here
   - How to match an antenna: Published here
   - Inverted-V versus vertical antenna: Published here
   - Another way to get a 50 ohm match on your vertical antenna: Published here

5. **GitHub & Other Projects**
   I am using GitHub since mid-2018 and very active to host and publish my projects. GitHub profile, Other projects

Education

Bachelor of Engineering, Engineering Physics, Universitas Gadjah Mada

- GPA : **3,06**
- Final Assignment : **Design and Development of The Multi Mode Simultaneous Multi Channel Modulator Based on Software Defined Radio**

Experiences Summary

Job	Affiliation	Description	Year
Lab. Technician	Production House – PT. Datto Asia Teknologi	Building gr-Merapi and gr-APRS application on GNU Radio platform for receiving and decoding telemetry from Mt. Merapi DIY.	2018
Technical Team	YE2A Contest Team	Help Designing new antenna system as required. Designing new hardware to manage radio hardware automation.	2016 - 2018
Lab. Assistant	Sensor and Telecontrolling Systems Lab.	Create labworks modules, perform as an instructor, and coordinator. Also have done several projects on Radio Telemetry.	2013 - 2018
Student Intern	PT. Datto Asia Teknologi	Evaluating VHF/UHF RF path performances between Klaten and Ngelanggeran sites.	2017
Research Team – RHAN 122B Test Rocket	Sensor and Telecontrolling Systems Lab.	Building a telemetry receiver systems for recording the telemetry signal from the RHAN-122B Test Rocket. This event was a joint research of LAPAN, PT. Pindad, Kemenristekdikti, TNI-AD, and Universitas Gadjah Mada.	2016
KKN-PPM UGM 2015	Universitas Gadjah Mada	Public service activity at Kec. Dukun, Muntilan, Central Java.	2015
Chairman of committee	Techno Antenna Fair 2013	Coordinating the committee to host the 2013 – Techno Antenna Fair competition.	2013

Skills

- **Telemetry**
- **Arduino & AVR Microcontroller**
- **Microcontroller C programming**
- **Digital Electronics**
- **Software Defined Radio**
- **PCB Design / EAGLE CAD**
- **Signal Processing**
- **HF/VHF/UHF Radio Communication**
- **Antenna Design & Simulation**
- **GNU Radio**
- **4NEC-2**
- **MMANA-GAL**
- **GitHub**
- **RFSim99**