HANDIKO GESANG ANUGRAH SEJATI

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PERSONAL SUMMARY

Seeking a challenging career with a progressive company that provides an opportunity to develop, capitalize my technical skills, and abilities in the field of engineering in general.

PROJECTS

RF NOISE CANCELLER NCL-100

I create, produce, and sell RF Noise Canceller which functions as an accessories to help reduce high frequency man-made noise for amateur radio needs on HF (High Frequency) band. Works with the principle of signal phaser and signal cancelation.

AMPLIFIER RELAY BUFFER RB-1

I create, produce, and sell Amplifier Relay Buffer which functions as an interface to bridge the HF Radio Transceiver and high power linear amplifier. This relay buffer works as high voltage buffer circuit to protect HF Radio Transceiver's output from the linear amplifier's back-EMF voltages.

DEVELOPMENT BOARD (MINI CONTROL BOX) FOR FIRMWARE AND APPS DEVELOPMENT

Creating a mini development board (control box) which consists of a microcontroller, WiFi module, RTC, SDCard, and I/O Interface to design and develop new firmware and apps for eFishery.

ALGORITHM DEVELOPMENT TO PROCESS SENSOR DATA

Developing a new Set of Algorithms to process and extract useful sensor data from the eFishery power path current sensor. These data will be used to improve feeding accuracy and support bussiness aspects of the company.

USB FLASHER

Creating a USB Flasher to download test firmware into eFishery control box (Atmel uC and ESP SoC).

APRS TRACKER USING AN ARDUINO & DORJI VHF MODULE

Creating APRS (Automatic Packet Reporting System) for sending GPS telemetry from a moving vehicle using Arduino & Dorji VHF radio module. The vehicle moving paths are received by an internet gateway and displayed on www.aprs.fi

MMIC VHF LOW NOISE AMPLIFIER

Creating a VHF Low Noise Amplifier module which offers Transmit bypass capability (up to 1 kW of transmitting power), input protection by means of a Bandpass Filter, and Low Noise Figure MMIC PGA-103.

RECEIVING AND DEMODULATING RUSSIAN WEATHER SATELLITE SIGNAL

Performs a reception, demodulation, and decode Russian weather satellite signal (Meteor-M2 Low Rate Picture Transponder) using a low-cost Software Defined Radio dongle and GNU Radio Software.

GR-MERAPI - AN SDR APPLICATION FOR DECODING MT. MERAPI TELEMETRY

Create an SDR (Software Defined Radio) application for receiving, decoding, and uploading UHF Radio Telemetry from Mt. Merapi, DIY, using a low-cost SDR dongle and GNU Radio software.

EXPERIENCES

JULY 2019 - 2020

ELECTRICAL HARDWARE ENGINEER, PT. MULTIDAYA TEKNOLOGI NUSANTARA (EFISHERY)

Have done some research and development for the power path current sensor of the smart feeder hardware to improve the accuracy of the feeding action and to help develop the bussiness aspect of the company. Developing a set of algorithms to process sensor data to extract the useful information.

FEBRUARY – APRIL 2019

ENGINEERING INTERNSHIP, PROJECT HELION

Analyze and calculate the feasibility aspect of the Project Helion, the new concept of BTS (Base Transceiver Station) which is lifted using low altitude advertisement balloon.

JANUARY – MAY 2018

STUDENT INTERNSHIP & LAB. TECHNICIAN, PRODUCTION HOUSE, PT. DATTO ASIA TEKNOLOGI

Evaluating VHF/UHF radio performances and building Software Defined Radio platform for receiving Mt. Merapi telemetry. Processing radio telemetry signal to get the remote sensor data.

2016

STUDENT RESEARCH, LAB. SENSOR AND TELECONTROLLING SYSTEMS, UNIVERSITAS GADJAH MADA

Join research of PT. Pindad, LAPAN, RISTEK-DIKTI, TNI-AD, and Universtas Gadjah Mada. Building a Software Defined Radio receiver to receive telemetry from RHAN-122B test rocket.

2013 - 2018

LAB. ASSISTANT, LAB. SENSOR AND TELECONTROLLING SYSTEMS, UNIVERSITAS GADJAH MADA

Participated to some research activities, being the chairman of the committee of the 2013 Techno Antenna Fair, and help to plan the labworks activities for the student. Mentoring the Basic Electronic and Sensor related subjects.

EDUCATION

2010 - 2017

BACHELOR OF ENGINEERING, ENGINEERING PHYSICS, UNIVERSITAS GADJAH MADA

3,06 GPA. Final assingment: Design and Development of the Multi Mode Simultaneous Multi Channel Modulator based on Software Defined Radio.

SKILLS

- Software Defined Radio
- PCB Design & Manufacturing
- RF Electronics
- Electronics and Microcontroller
- Antenna Design & Simulation
- Radio Telemetry
- Engineering troubleshooting
- Research & Scientific method