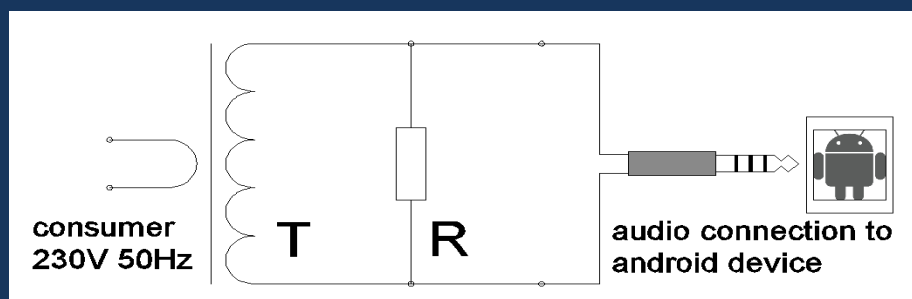


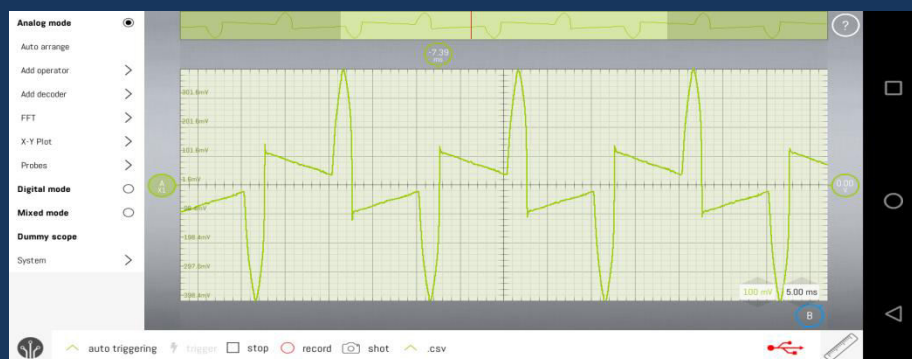
Wireless Android power consumer monitoring system

Đorđe Kocić

Faculty of Electronic Engineering, University of Niš, Serbia



This system, based on Android smart devices, allows acquisition, processing and subsequent transmission of a single-phase consumer power (current) consumption data to a local Wi-Fi network, which can then be accessed by network clients. It enables the user to wirelessly monitor the consumers power consumption, using any kind of personal computer.



Data acquisition

Measurement data (signal) is acquired via clamp current transformer (50A/1V), connected to smart device through 3.5mm jack. A/D signal conversion is done by smart device's audio system (soundcard).

Data processing

Signal is processed by SmartScope app (FFT algorithm), displaying frequency, amplitude and waveform. Signal is treated as standard sound signal input.

Data transmission

Displayed app data is transmitted by Screen Stream app over local Wi-Fi network. Clients connected to the network and to the measurement device can access and view streamed data of current measurement.

