

TEK603 Theory of Operation

The TEK 603 is tank liquid level monitor receiver with an ISM band radio. During installation, the tank settings need to be configured on the 603 receiver and a pairing procedure must be performed with a transmitter sensor. At the end of the pairing procedure, the 603 receiver sends the tank settings to the transmitter to keep the units synced. From there, the 603 receiver enters to its normal operation, where it listens and collects any data reported by the sensor transmitter. The data is used to perform some calculations and present to the users.

The 603 receiver is powered from a power supply to USB adaptor. A coin cell battery is installed on the device to keep the clock running in case of a power outage or the power supply has been unintentionally disconnected from mains.

Antenna is a resonant monopole type, tuned to operate at 915MHz and of length 72 mm

Receiving frequency is at 914.50MHz with 2FSK FM modulation, 210kHz deviation and 25kb/sec (NRZ) data rate.

Transmitting frequency is at 915.00MHz with 2GFSK FM modulation, 70kHz deviation and 128kb/sec (NRZ) data rate.