HIDEKI ELECTRONICS LTD.

Technical Description of TE219W-EL-NL

TE219W is operated by single micro-controller. The MCU provides the

features of Indoor Thermo (by sensing the thermistor RT1), the

communication of the remote thermo module and Radio Controlled Clock

in US. For the remote thermo part, it is simply a UHF (Ultra High

Frequency) receiver and its center frequency is 433.92 MHz. It employs the

super-regenerative receiver technique. The LC circuitry L3, C8, C9 and C6

provides frequency selection and it is set to 433.92 MHz.

Signal is received by an antenna and amplified by Q1. By extracting the

collector output of the transistor Q2 a regenerated signal is obtained. The

circuitry R11 and C14 acts as a low-pass filter that extracts the envelope of

the regenerated signal. Demodulated signal is obtained from the output port

of the operational amplifier, pin 1 of U1-A. The other part of U1 composes

a schmitter-trigger circuitry that converts the demodulated signal into

pulses that can be read by micro-controller.

On the other hand, U1 also provides a Radio Controlled alarm clock

function to receive the time automatically by the low-frequency receiver U2.

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User can adjust the clock by setting keys.