

INTERTEK TESTING SERVICES

1.0 General Description

1.1 Product Description

The Equipment Under Test (EUT) is a superregenerative receiver portion of pool alarm system operating at 315 MHz. The EUT is powered by an AC/DC adaptor. There are two LEDs (Green and Red) and a reset button on the panel. When the EUT is powered, the green LED stays on that indicates the EUT ready to receive signals. When the EUT receives the alarm signal, the EUT gives the alarm and the red LED flashes quickly.

The brief circuit description is attached in the following pages.

1.2 Related Submittal(s) Grants

This is an application for Certification of a receiver. The FCC ID for the transmitter associated with this receiver is NQBL102-PS08TX.

MANUTEC INDUSTRIAL LIMITED

10/F., Prosperity Centre, 77-81 Container Port Road,
Kwai Chung, New Territories, Hong Kong

Tel: 2489-9182
Fax: 2480-4640

PS-08 RECEVIER UNIT TECHNICAL DESCRIPTION

1. **RF AMPLIFIER/CONVERTER:**
The rf amplifier and converting circuit consists of Q17 and Q18 is used to amplify the rf signal and convert it back to audio signal.
2. **AUDIO AMPLIFIER:**
U3 (4069 IC) is used to amplify the audio signals and connect to the main controller signal input pin.
3. **REGULATED POWER SUPPLIES/LOW BATTERIES MONITORING CIRCUIT:**
A AC/DC power adaptor is used to supply the 12Vdc voltage. The regulated power circuit will convert the 12Vdc to VDD (around 6Vdc). If the input voltage is too low, the power supply circuit will shut down. Main components for this circuit are Q10, Q11, Q12, D8, etc.
4. **WAKE-UP TIMING CIRCUIT:**
The main controller has a power saving mode, so a wake-up circuit is needed to wake-up the main controller to check the input signals. Main components for this circuit are U4 (4011 IC), etc.
5. **ALARM OUTPUT CIRCUITS:**
When a valid signal is detected, the main controller will trigger the the buzzer circuit to sound the alarm (RED LED is flashing). Main Components for this circuit are Q15,Q16, T2 and BZ2, etc.
6. **TERMINAL BLOCK:**
If a security device (e.g. an automatic dialer device) is connected to the terminal block (S8), the terminal will activate for around 3 seconds before shut off. Main components for this circuit are Q13, S8, etc.
7. **MAIN CONTROLLER:**
The main controller (U5) is used to detect the input signal and control all the output peripheral like the LEDs, buzzer, terminal block, reset button, etc.