

## **PRODUCT OPERATION OVERVIEW AUTOTRAK BPU DEVICE**

**5-28-10**

- Device U3 monitors incoming DC voltage and current from the 4 AA batteries.
- Device U9 regulates the incoming DC voltage to 4.5vdc for IR LED illumination.
- Device U8 regulates the incoming DC voltage to 3.3vdc for all ICs on the device.
- Device U12 regulates the incoming DC voltage to 3.3vdc for bias voltage to the microphone.
- Device U4 is a PIC microprocessor which will monitor device U3 via an I2C bus, read status of mic switch, control power and mic LEDs and control Q3 which turns IR LEDs on or off.
- Device U10 is the 903-922 mhz transmitter chip. It is supplied 3.3vdc, analog audio from the mic input, and can be put into power down mode via the mic control switch.
- The antenna is a ¼ wave monopole design attached to the PCB via a reverse polarity SMA connector. The RP-SMA connector is fed from device U10 thru a 5db attenuation T-pad for FCC compliance.
- Bits 1, 2 and 3 of SW3 control the transmit frequency (channel) of device U10, as per instruction manual. Bit 6 of SW3 may be set to disable IR LEDs if desired.
- Jack J2 connects the external IR LED lanyard and microphone to the BPU device.
- There are no provisions for charging the 4 AA cells. Batteries must be removed from unit and replaced or recharged.

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