

# DAMTRONICS

## DT-3K Hybrid Head-tracker for Futaba / Hitec / ESky Transmitters



DT-3K is the first hybrid (magneto-gravity) tracking device on the market. It supports Basic or Pro level transmitters with our revolutionary PPM-INJECT and PPMC-REATE technologies.

### **The Features are:**

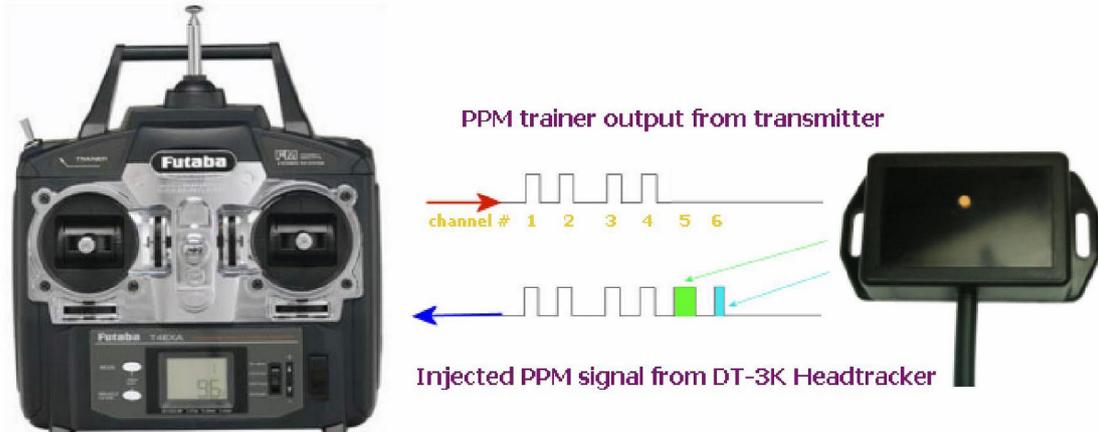
- Compatible with all 2-6 channel Basic transmitters with PPM-INJECT technology
- Compatible with all 7+ channel Pro transmitters with PPM-CREATE technology
- Easy to use with 1 button and 1 led interface.
- Selectable channels from 1 to 9
- Extra (2) channel generator on the PPM-INJECT mode
- 6 to 24v voltage range
- Rock solid zero drift system with high repeatability
- Pan/Tilt reverse for different pan/tilt mechanisms
- Futaba Micro trainer connector

## **Scenarios for Different Type Transmitters**

### **Scenario 1: FUTABA 4EXA or HITEC Laser 4**

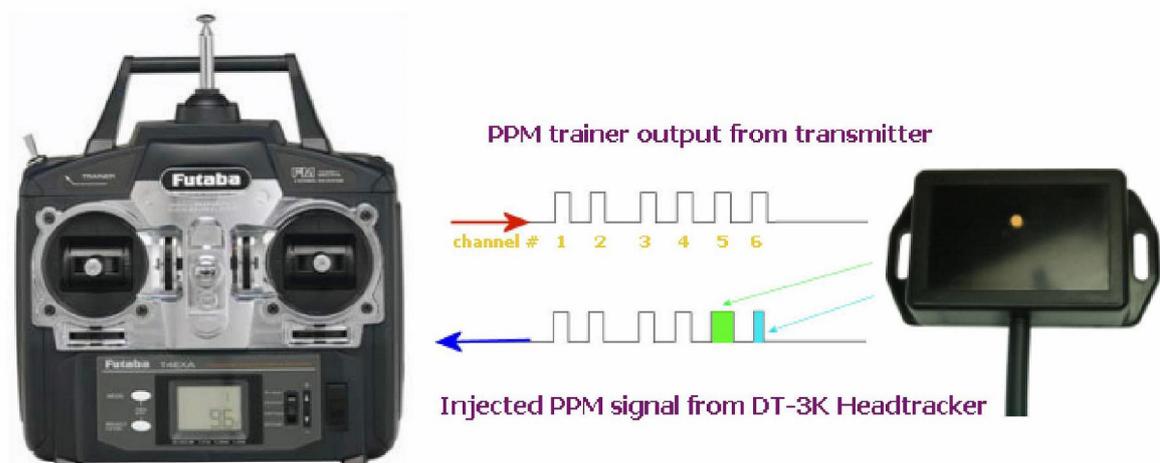
If you are using a 4 channel transmitter, you can configure the DT-3K to add an extra 2 tracking channels with PPM-INJECT. You can use your transmitter with a 6 channel receiver.

You can also use your 6 channel transmitter with an 8 channel receiver.



### **Scenario 2: FUTABA 6EXAP or HITEC Laser 6 or Esky**

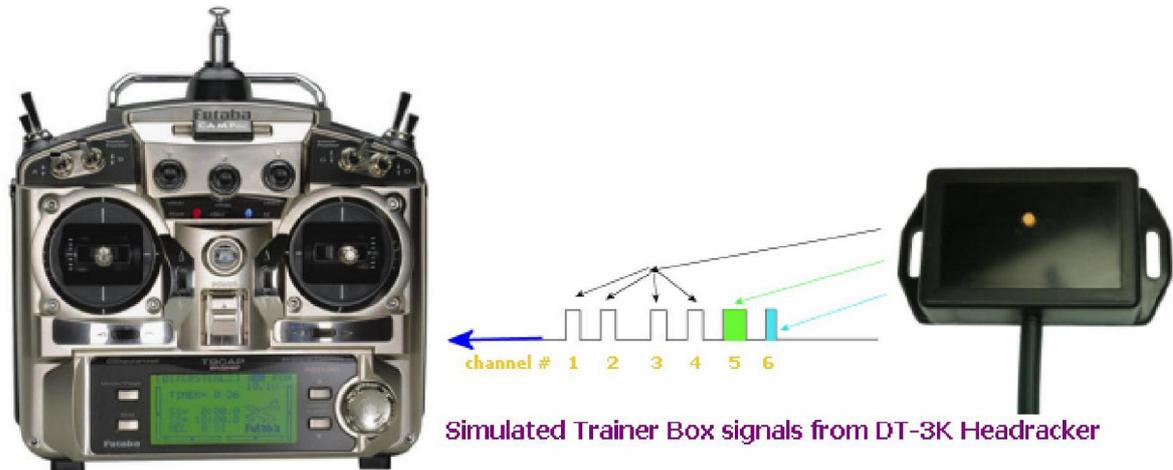
If you are using a 6 channel transmitter, you can configure the DT-3K to insert 2 tracking channels with PPM-INJECT. It will erase the last 2 channels to insert further tracking channels.



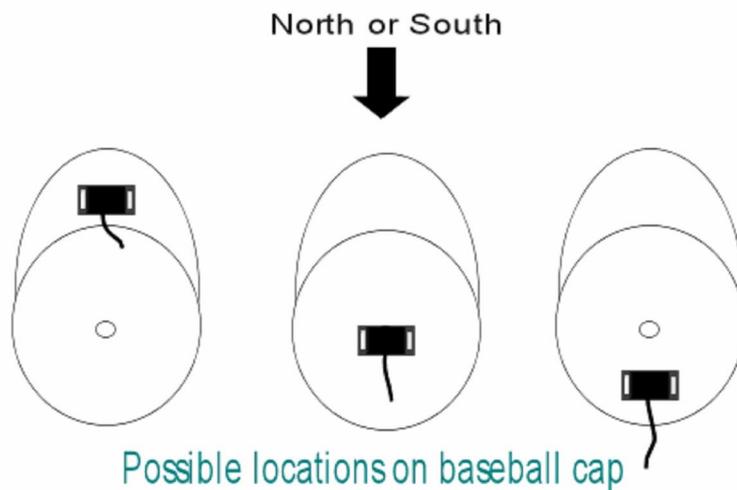
### Scenario 3: FUTABA 9CAP / 7CAP

If you are using Pro Transmitters, you can configure the DT-3K to simulate the Trainer Box.

It uses a PPM-CREATE system in this mode, and sends blank (centred) channels before the tracking channels. You can ignore the blank channels from your transmitter's trainer Configuration Menu.



### USING WITH A BASEBALL CAP



## **CONFIGURATION PROCEDURE**

- 1- Power Off your transmitter.
- 2- Plug the Head-tracker to your transmitter.
- 3- Press & Hold the yellow button on top of the Head-tracker.
- 4- Power On the transmitter.
- 5- Release the button.
- 6- The Red LED will fast blink 10 times.

### **CHANNEL SELECTING**

- 7- Press & Hold the button Wait for 1 second and
- 8- The LED will blink every second. Count the blinks and release the button when the blinks equal to your selected channel numbers. (For example, if you want to use channel 5 and channel 6 on the Head-tracker, release the button after 5 blinks)
- 9- After you release the button, the LED will fast blink 10 times.

### **PPM Mode**

- 10- Press & Hold the button Wait for 1 second and.
- 11- The LED will blink every second. If you release after 1 blink, the tracker will work on the PPM-INJECT mode, and after 2 blinks will work on the PPM-CREATE mode.
- 12- After you release the button, the LED will fast blink 10 times.

### **PAN Servo Direction**

- 13- Press & Hold the button Wait for 1 second and.
- 14- The LED will blink every second. If you release after 1 blink, the Pan servo will work on the normal mode, and after 2 blinks will work on reversed mode.
- 15- After you release the button, the LED will fast blink 10 times.

### **TILT Servo Direction**

- 16- Press & Hold the button Wait for 1 second and.
- 17- The LED will blink every second. If you release after 1 blink, the Tilt servo will work on the normal mode, and after 2 blinks will work on reversed mode.
- 18- After you release the button, the LED will fast blink 10 times.
- 19- The tracker will record the configuration and reboot automatically after 2 seconds.

## **CENTERING & GAIN PROCEDURE**

- 1- Put the Head-tracker on your baseball cap.
- 2- Turn your face to North or South and look at the horizon.
- 3- While holding the trainer switch in the ON position,
- 4- Press the button and release.
- 5- Turn your head to the left, then to the right, then look skyward and finally to the ground.
- 6- The Head-tracker will sense the maximum & minimum positions for Servo gain & centre.
- 7- Press the button and release for recording. Remember you will need to be facing North or South while you fly. Go Fly.

### **Important notice:**

**If you move your head in a 60 degree circle(30 degrees left and 30 degrees right), the gain will be 100% because the standard Servo travel is 60 degrees.**

*Special Thanks to Lance Njoroge for translation of this document*