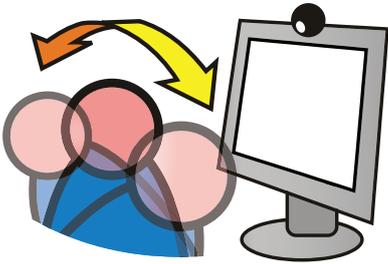


# HEAD TRACKER

WORLDS FIRST PASSIVE INFRARED HEADTRACKING DEVICE



Ambiplex' Head Tracker is a novel device capable of tracking the movements of a person's head in front of a computer display. The device is mounted on top of the monitor and connected to the PC via the USB interface. The Windows driver software translates detected head motions into appropriate system commands that can in turn be fed into applications in realtime.

This device lifts 3D gaming to a new level by exploiting the player's natural head movements. As a result, people can dive into the virtual world in a way that has until now only been reached with expensive equipment.

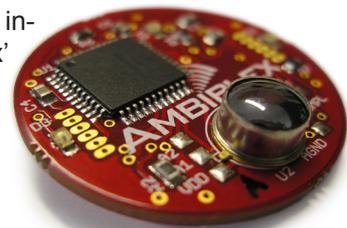
## Technical Details

Ambiplex' Head Tracker detects heat radiated by the user's face. Hence, it does not depend on ambient illumination – it even operates in darkness. Furthermore, the user need not wear any equipment attached to his or her head or body. This greatly boosts ease of use, making the Head Tracker not only a powerful but also a convenient device.

The hardware detects heat sources within a range of approximately 1.5 m distance from the monitor. It can precisely measure the distance and horizontal position of the head with respect to the monitor due to Ambiplex' smart signal processing algorithms. The location information is locally calculated by the device and then sent to the PC via USB. Due to the local processing, no significant load is created on the PC, preserving all PC resources to the actual application. This is an important aspect for 3D gaming where all available processing power is needed to run the application.

The PC driver software creates a set of virtual devices: a mouse, a keyboard and a joystick. During operation, the head movements are translated into corresponding keyboard strokes, mouse or joystick movements. The actual translation can be assigned by the user or controlled by an application specific profile. It can be even changed on-line. Due to this mechanism each game or application can make use of the Head Tracker by using the appropriate virtual devices as input.

Because of a careful selection of inexpensive components, Ambiplex' Head Tracker can be manufactured at extremely low costs, making it suitable for the mass market.



## Benefits of Ambiplex' Head Tracker

The Headtracker's benefits can be summarized as follows:

- ▶ Opens up an additional dimension of user input by exploiting natural head movements of the user
- ▶ Lifts 3D gaming to a new level
- ▶ Is easy to install and to operate
- ▶ Does not force the user to attach any device or tag to his or her body
- ▶ Can generate input to any PC application
- ▶ Works independent from ambient light – even in darkness
- ▶ Has a very high responsiveness
- ▶ Does not add any significant load to the PC
- ▶ Can be manufactured at low cost due to consistent use of inexpensive components

### Want to know more?

Ambiplex produced a demo video showing the Head Tracker in action. Download it from Ambiplex' website.



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