



Key Features

- Compliant with USA, European, Australian, and RSA spectrum allocations when used with either the IPICO STK Lite or STK Elite Dual Frequency readers
- Suitable for use with all IPICO Sports Time-Keeping tags (shoe tag, ankle tag, bike tag)
- Robust and waterproof
- Cannot be incorrectly connected
- Supplied complete with carry bag
- Custom branding can be provided
- Can be used in groups of up to 8 with overlaps to ensure complete coverage of the track (see IPICO STK Elite Reader Manual for optimum placement of mats and cables)
- Antenna loops shielded to minimize E-field pick up from interference sources such as vehicle ignition, short-wave radio transmissions

IP-X Dual Frequency Sport Time-Keeping Mat Antenna

IPICO's Dual Frequency Sport Time-Keeping antennas are used together with the STK Elite and STK Lite readers to provide a complete solution for sport time-keeping. When the STK antenna picks up the response signal from an IPICO Dual Frequency tag, the reader records the time and participant's tag number. The mats are robust and waterproof, and can be used for timing of running and cycling events. They are hard-wearing and can even withstand being driven over by motor vehicles.

The antennas contain separate inductive loops for powering the tag (125 kHz) and receiving the tag response signal (6.8 MHz). The loop tuning can be affected by the presence of metallic objects nearby (like concrete slab reinforcing, water pipes or wire fences), with a resultant loss of reading range, but this effect has been minimised by an auto-tuning function within the reader. Electrical interference can also be a problem if severe, resulting in loss of reading range, and for this reason each antenna mat has a built-in 6.8 MHz amplifier to boost the signal before transmission to the reader.

The mats are available in a black PVC finish, or a blue semi-permeable fabric, called "Safe & Soft" made by AKO. Two lengths of connection cable are available, 5 m and 10 m so that different combinations of mats (up to 4 mats may be used on an "Elite" reader) may be optimised in terms of cable length and routes.)

Item	Specification
Power requirements	None – 6.8 MHz return signal amplifier is powered by the reader via the coaxial cable
Physical size	<u>Black mat:</u> 2.15 m x 1.15 m <u>Blue mat:</u> 2.40 m x 1.20 m
Material	Either black PVC or blue "Safe & Soft" fabric by AKO
Operating frequencies	125 kHz transmit; 6.8 MHz receive tag signal
Loop detail	4 turns for TX, 1 turn for RX
Electrical connections	<u>125 kHz tag power-up:</u> 3-core cable & Hirschmann ST Series 3-way connector <u>6.8 MHz tag return signal:</u> RG58 coaxial cable & BNC connector
Auto-tuning	Antenna TX loop has a built-in tuning capacitor. Refined tuning is effected automatically by the selection of additional capacitors within the Reader Antenna RX loop is tuned by a fixed filter circuit

Order Information	Product Code	Description
DF LR Rdr Antenna Black PVC Std Mat, 1x2m, 5m cable	IP3483	IP-X DFAnt-STK BLK-PVC-STD-5m
DF LR Rdr Antenna Black PVC Std Mat, 1x2m, 10m cable	IP3484	IP-X DFAnt-STK-BLK-PVC-STD-10m
DF LR Rdr Antenna Blue Std Mat, 1x2m, 5m cable	IP3485	IP-X DFAnt-STK-BLUE-STD-5m
DF LR Rdr Antenna Blue Std Mat, 1x2m, 10m cable	IP3486	IP-X DFAnt-STK-BLUE-STD-10m
DF LR Rdr Antenna Blue Customized Mat, 1x2m, 5m cable	IP3488	IP-X DFAnt-STK-BLUE-CUST-5m
DF LR Rdr Antenna Blue Customized Mat, 1x2m, 10m cable	IP3489	IP-X DFAnt-STK-BLUE-CUST-10m