User Manual

of

PW Smart Timing Mat

PW Smart Mat-6m

FCC ID: 2AOIRPWSMARTMAT6M

FCC Section 15.19

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: 1) this device may not cause harmful interference, and 2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

    Reorient or relocate the receiving antenna.

    Increase the separation between the equipment and receiver.

    Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

    Consult the dealer or an experienced radio/TV technician for help.

Information to User

The user is cautioned that any changes or modifications not expressly approved by BEEDANCING or authorized representative could void the user's authority to operate the equipment.

The device has been evaluated to meet general RF exposure requirement, The device can be used in portable exposure condition without restriction.

CHAPTER 1
Introduction

This *User Manual* provides instructions for installing and operating the PW Smart Mat.
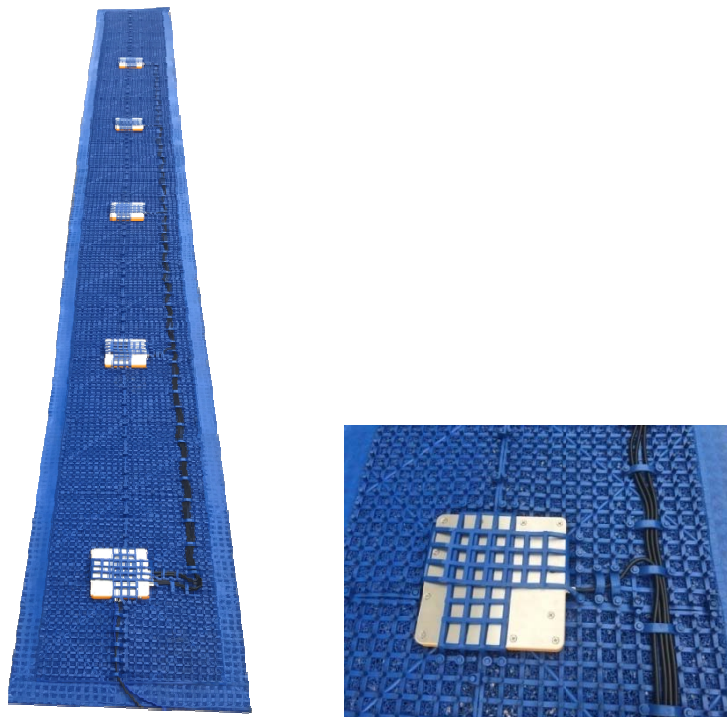

Photo of PW Smart Mat

This document is designed for use by the timekeeping system integrators and software developers – those who wish to develop extended systems that take full advantage of the sports timekeeping reader's capabilities.

The following help documents are available,

- *Quick Installation Guide*– a quick start guide for installing and running the PW Smart Mat.
- *Reader Interface Guide* – an overview of the communication interfaces for PW Smart Mat.
- *Demo Software Guide*– details installing and operating the Timekeeping Demo Software.
- *Registration Guide* – a quick reference guide to register the sports timekeeping tags.

Sports Timekeeping Mat Overview

PW Smart Mat:

Without PC or Reader, the PW Smart Mat is an intelligent full-functional sport timing system that has the leading performance in the world.

- ■ No Reader（Collect tag reads without independent timing device）
- ■ No PC（Communicate and calculate without computer）
- ■ Intelligent configuration（Flash-configure PW Smart Mat according to Splits）
- ■ Resume sending from breakpoint
- ■ Wire connection supported
- ■ Wireless& wire simultaneous connection supported
- ■ Internal data storage
- ■ Standard units, flexible layout, anti-slip, environmentally friendly, lightweight
- ■ Multi-workstation supported （Multiple workstations can simultaneously access data, process scores, update and release results）
- ■ Multi-language supported（English, Japanese, Chinese）

Specifications

Power Requirement	12V DC，2A max（External battery or certified power AC adapter）
Battery options	STANDARD (7Ah, 6 hours); EXTENDED （14Ah, 12 hours）; SUPER (30 Ah, 24 hours)
Size	6m x 0.6m
Weight	21kg
Mat Material	Blue, anti-slip, environmental PVC material called "Safe & Soft"
Communication Method	Support Ethernet
Working Frequency	903-927MHz
Real-Time Clock	Calibrate time by computer application
RTC Battery Capacity	Internal clock 3.7V@240mAH
RTC Timing Accuracy	0.01 second
Internal Storage Capacity	2.5 million pieces of data
Read Performance	Applicable PW Smart Tag，long read range of 2m
	Tag at moving speed< 80km/h
	Reading capacity 200PCS/s
Peripheral	Support three-color indicator, buzzer, and trigger button
Indicator Light	Three-color lights: Red for Error; Blue for configuration status; Green for reading status
Working Temperature	-25℃～+55℃
Storage Temperature	-40℃～+85℃

PW Smart Tag:

The system can read PW Smart Tag. Timing mats collect the tag-IDs while participants passing. All the read data are sent out and saved in the internal memory.

PW Smart Tag is designed for our PW mat. It is ultra-thin and ultra-soft, water-proof and tear-proof. The combination of bib tag and shoe tag makes it easier to wear and use.

*All the Tags are made by **BEEDANCING***. *They are based on ISO 18000-6C protocol and programmed according to DES algorithm.*

Connected with the Sports Timing Mat, the reader reads contactless all the timekeeping tags that being worn by the runners when they are running across the timing mats.

CHAPTER 2

Installation and Operation

This chapter provides the installation and operation information.

Start-up

The mat is powered by an external 12V sealed lead-acid battery. Connect the power, and then the smart LEDs will lighten ascending, the Mat start-up.

Trigger

The trigger function could be achieved "external trigger port". Press the trigger button, system re-scan the antenna ports, and record the time of pressing the button.

Read Tags

There are only one PW Smart tag pasted on each bib.
PW Smart Mat records all the bib tags that are going across the timekeeping line connected. As soon as the tags enter the reading area, the smart LEDs lighten. All the read data are sent out and saved in the internal memory.

Data transmission

PW Smart Mat is configured to be TCP Server (default IP address = 10.19.1.51; Port = 10000). Connect the Mat with PC through Ethernet cable, all the tag data and timestamps when reading them will be obtained.