



# ACTIVE LOOP BOX

The stand-alone Loop Box is an innovative solution for collecting split times. A wire loop is installed at the timing point to detect the active transponders. At nearby split points, it wirelessly relays detections to the main system (Ubidium). For remote timing points, the ActivePro Transponder stores the passing times and transmits them once it reaches the next main timing system.



## Features

- No wiring needed between main system and split points
- Stand-alone with 12-20 hours of battery life
- 3.5mm input/output for audio or start impulse
- Sends data to timing systems in up to 900m range
- Smaller investment, as it replaces a full timing system at splits

| Loop Box                   |                                       |
|----------------------------|---------------------------------------|
| Maximum repeat range       | Up to 900 m with direct line of sight |
| Passings transmission      | Up to 40/second continuously          |
| Passing transmission delay | 200 ms - compensated                  |
| Internal data buffer       | 1,000 passings                        |

| Safety & Conditions Loop Box                     |                                                    |
|--------------------------------------------------|----------------------------------------------------|
| Protection class with cable / antenna screwed on | IP52 -water resistant-<br>IP54 (usage with Bumper) |
| Regulatory conformity                            | CE, RoHS, FCC                                      |
| Temperature                                      | -30°C to 70°C                                      |
| Dimensions / weight                              | 27 x 66 x 117 mm /<br>272 g                        |

| Power & Battery                |                                                                 |
|--------------------------------|-----------------------------------------------------------------|
| AC power supply<br>Loop Box V2 | 110 V-230 V<br>50-60Hz (2 A fuse)                               |
| Battery                        | LiPo, 4,000 mAh,<br>3.7 V<br>12-20 h<br>depending on loop power |

| 2.4 GHz RF & loop specification                                              |                                                                                                                                                                                                                              |
|------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Transponder 2.4 GHz channel frequencies main / backup (worldwide compliance) | 1: 2.480 MHz / 2.410 MHz<br>2: 2.405 MHz / 2.470 MHz<br>3: 2.425 MHz / 2.465 MHz<br>4: 2.475 MHz / 2.440 MHz<br>5: 2.415 MHz / 2.445 MHz<br>6: 2.460 MHz / 2.430 MHz<br>7: 2.435 MHz / 2.455 MHz<br>8: 2.450 MHz / 2.420 MHz |
| 2.4 GHz TX power                                                             | 17 dBm                                                                                                                                                                                                                       |
| 2.4 GHz Antenna                                                              | 3 dBi Gain                                                                                                                                                                                                                   |
| Loop frequency & data                                                        | 125 kHz<br>data-packet = Loop ID + channel<br>packet rate: 150 Hz<br>OOK-modulation, manchester encoded,<br>16bit anti-false-wakeup pattern                                                                                  |
| Loop length                                                                  | 5 m - 25 m, > 0.5 mm <sup>2</sup><br>standard 4 mm banana plugs                                                                                                                                                              |
| Internal data buffer                                                         | 1,000 transponders                                                                                                                                                                                                           |
| Read range<br>25% Loop power<br>100% Loop power                              | 60 cm (2 ft)<br>2 m (6 ft)                                                                                                                                                                                                   |
| Detection rate                                                               | 100%<br>> 250 chips/second burst for 4 seconds<br>> 50 chips/second continuously                                                                                                                                             |
| Read rate                                                                    |                                                                                                                                                                                                                              |

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