Appendix H: User Manual

Please refer to the following pages.

FlightScope® Strike

User Manual

Document Number E19-89070 Issue 3

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FCC Statements: Changes or modifications not expressly approved by FlightScope (Pty) Ltd could void the user's authority to operate the equipment.

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 this 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 the 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.

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.

(2) This device must accept any interference received, including interference that may cause undesired operation.

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Introduction

FlightScope® Strike is an electronic baseball measuring system featuring

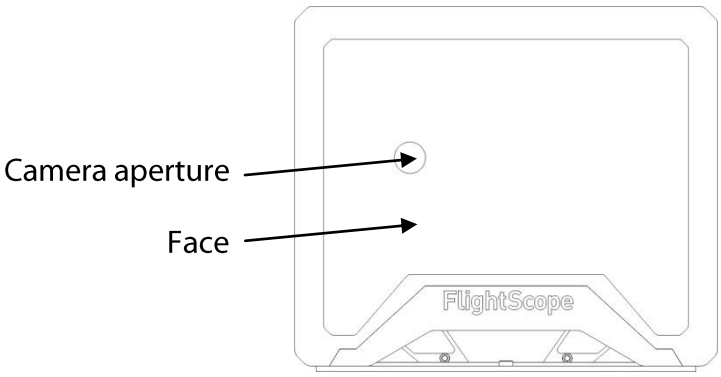
- Practice Batting and Pitching
- Pitcher, batter, and catcher performance
- Pitching speeds, directions, spin, trajectories, movement and break
- Hit speeds, directions, and distance
- Release point, extension, and strike zone statistics
- Measurements synchronized with video clips
- Store /review historic data
- Upload data to myflightscope.com for on-line analysis and sharing

Features:

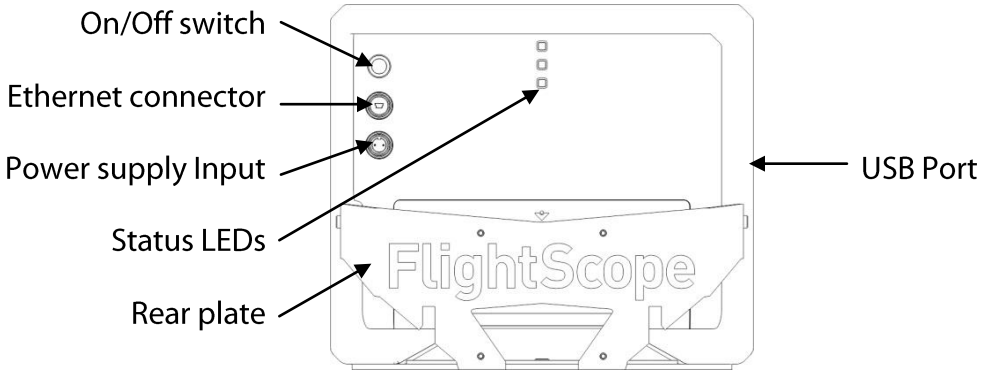
- Secure adjustable mounting for hands-free operation
- Built-in camera for alignment and video clip capture
- Battery or mains power supply
- Ethernet and USB connections to software
- Software for PC's (Windows®) and Tablets (iOS®)

Sensor Description

Front



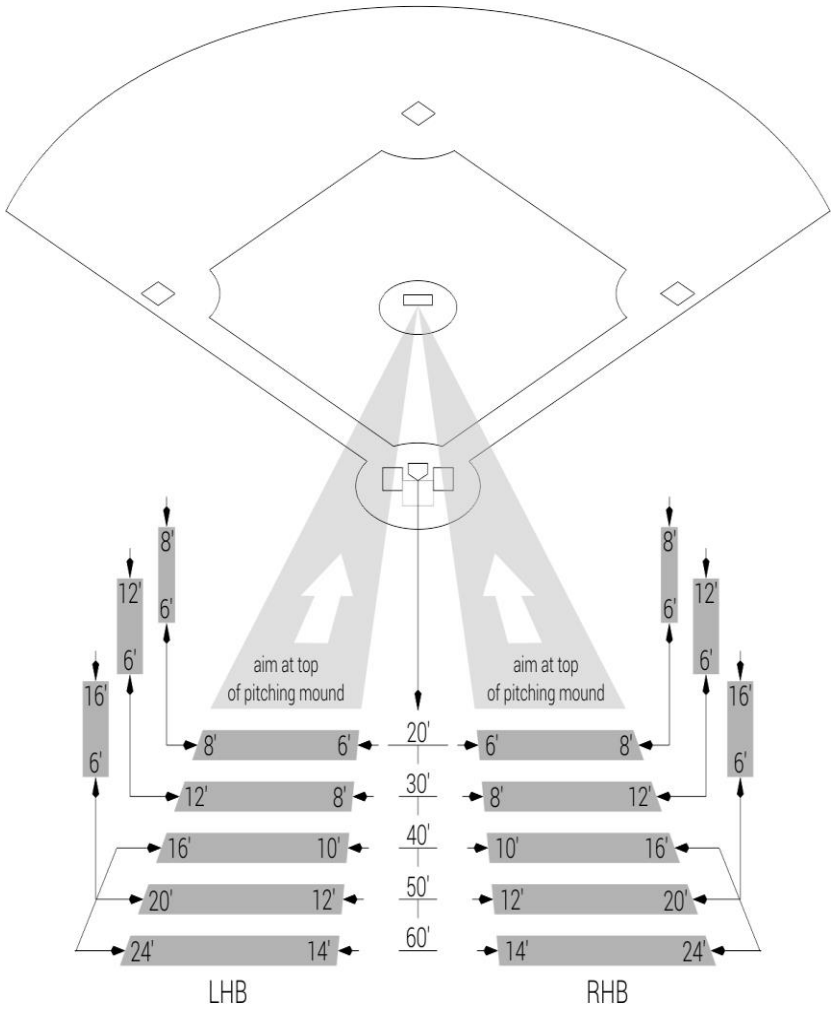
Rear



Setting Up

CAUTION
Take precautions to prevent the sensor from being struck by a ball. For example, place the sensor behind a screen or erect a non-metallic deflector in front of the sensor for protection.

Choose a position for the sensor. It must be set back between 20 and 60 ft. behind the home plate, and laterally offset within the corresponding minimum and maximum bounds illustrated in the adjacent figure. The lateral offset is needed to avoid players blocking the sensor's view of the ball.
The sensor can be mounted on a vertical or horizontal pole structure using the pole mount bracket or on a heavy duty tripod (not supplied).
The sensor must aim at the top of the pitcher's mound.
The height of the sensor must be between 6 and 16 feet depending on its distance behind the home plate, as shown in the diagram.



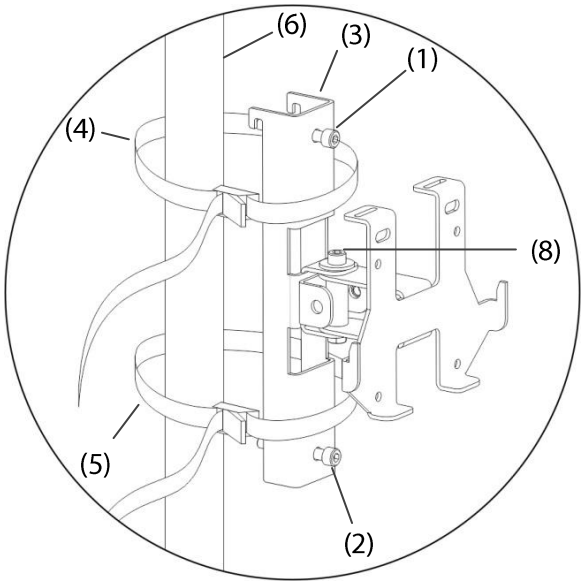
NOTE
Take care that the sensor does not block spectators' view, if applicable.

Pole Mount Bracket

The pole mount bracket can be strapped to a pole of at least 1½ inch diameter. The bracket is factory configured for mounting against a vertical pole. The mounting can be changed for a horizontal pole – see below.

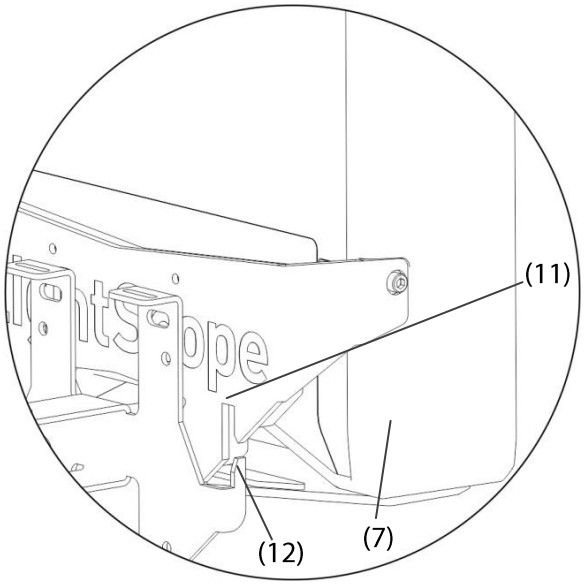
Mounting on a Vertical Pole

Screw the clamping screws (1) and (2) partly out (turning anticlockwise).
Place the mount (3) against the chosen pole (6) at a suitable height from where the sensor will have a clear view of the pitcher and batter.
Use the cambuckle straps (4) and (5) to tie the mount to the pole. Orientate the bracket so that it is approximately in the direction of the Pitcher's Mound against the pole.
Pull the straps tight enough around the pole to hold the bracket in position against the pole.
Tighten the clamping screws (1) and (2) lightly by turning them clockwise using the Allen key (included).



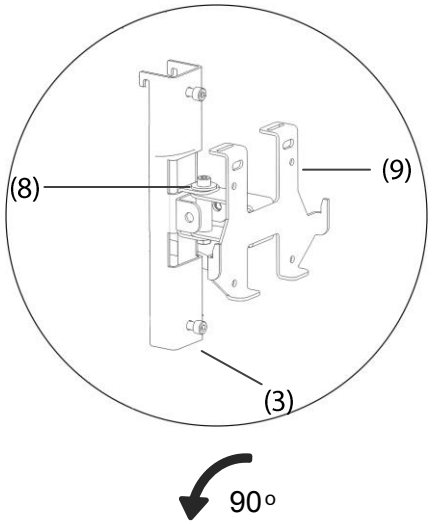
Raise the Strike Sensor (7) and hook the slots (11) in the Mounting Plate over the Strike Plate hooks (12).
If needed, apply down pressure to push the sensor unit completely down to engage slots securely on the hooks.
Without disturbing the sensor direction, fasten the clamping screws (1) and (2) firmly to lock the mount securely to the pole.
Now pivot the Sensor Unit on the pole mount to point the sensor face towards the pitcher's mound, using your best estimate of direction. It may be necessary to loosen the pivot screw (8) slightly to allow movement. When the pointing direction is good, firmly tighten the pivot screw (8).

The mounting is now complete and the Unit can be connected for use.



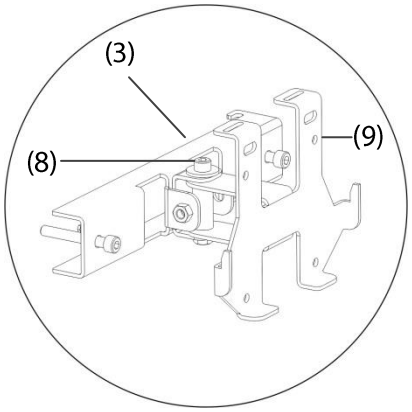
Changing the pole mount from Vertical to Horizontal

Remove the pivot screw (8) and washer to free the Strike Plate (9) from the rear mount (3).



Rotate the rear mount (3) by 90 degrees, and attach the Strike Plate (9) again using the removed pivot screw (8) and washer in the rotated position.

The mount can now be attached to a horizontal structure.

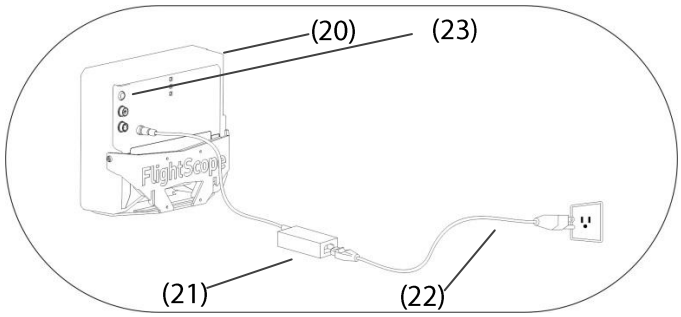


Power Supply

FlightScope Strike can be powered from a rechargeable external 12 V DC battery, or from a mains-powered AC adapter (both included).

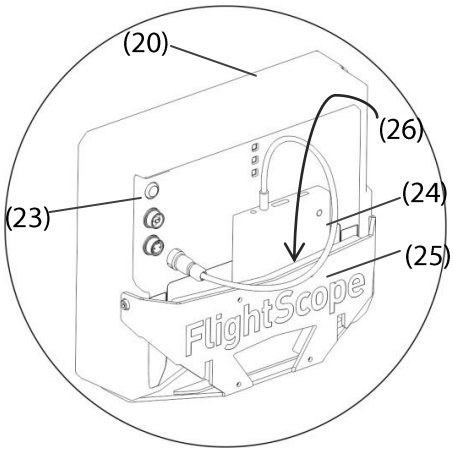
Mains Power Connection

Connect the supplied AC adapter (21) to the Strike unit (20).
Connect the AC adapter to a wall socket using the supplied mains power cord (22).
Switch the Strike unit on with the Power switch (23).



Battery Connection

NOTE: Make sure the battery has sufficient charge before using, so that operation can be uninterrupted.
Connect the battery (24) to the Strike unit (20) using the supplied battery cable (25).
Place the battery in the compartment (26) behind the Strike unit.
Switch the Strike unit on with the Power switch (23).



Charging the Battery

The supplied battery is a 20,000 mAH capacity rechargeable Li-Ion technology battery pack. The original manufacturer's specifications and instructions apply. The original battery charger/adapter is included.

To charge, connect the charger to the battery, and insert the charger into a wall socket. Follow the original manufacturer's charging directions.

Installing the Software

The FlightScope Baseball Host application for PC (for Microsoft Windows 7 and later) can be downloaded at the following link:

http://downloads.flightscope.com/download.php?file=/Software/FlightScopeBaseball/BaseballHost_Setup_v4.13.28.exe

The FlightScope Strike App for tablet computers (iPad Pro; iPad Mini 2, 3 & 4; iPad Air & Air 2; iPad 3rd & 4th generation with operating system iOS 7.0 or higher) can be obtained at itunes.apple.com, category Sports.

NOTE: The following tablet computers are NOT supported: iPad (1st generation), iPad 2, iPad Mini (1st generation); non-Apple tablets.

User Accounts

Creating an Account

FlightScope Strike allows coaches, players, and scouts to create and operate on-line accounts on myflightscope.com where session data are stored, and from where reports, history, trends, and other useful analyses can be made. Registration of an account that provides basic on-line data storage and access to view and share data on myflightscope.com is free. FlightScope provides additional value added services for a nominal charge.

A new user will use Create Account, specifying a role as Coach, Player, or Scout. Minimal data are required to create an account for coach or scout such as first and last names, gender, location, and email address. For players, additional biographical information and handedness completes the entry.

Logging In

The user, typically a coach or scout, must log in using his email address and password on startup.

When logged in a coach can utilize functions such as “Build a Team” or “Join a Team” to create predefined lists of players.

If a team of players already exists, the coach can select a team of players for e.g. a batting or pitching practice session. The Strike App allows easy selection of teams, and of players in positions such as pitcher or batter.

Historical session data of individual players can be viewed using the Review function.

Using the Software

Setup

Set mound to home plate distance, if non-standard

Set Sensor positions:

- Distance behind home plate
- Lateral offset (Left/right)
- Height above ground

Align Sensor

- Open the camera view, and follow the guide to point the sensor at the Pitcher's Mound.
- Fasten the mounting bracket pivot screws to fix the sensor pointing.

Settings

Connect	Connect the Computer to the Sensor. Find Sensor, select mode (pitch & hit, or hit only, and press OK
Units	Choose to work in Imperial or Metric units

Connecting Listeners

Server	Start the Server to enable one or more secondary devices nearby (such as Tablets with the iOS Strike App) to connect to the computer as "Listeners". Server is Off by default. This feature is useful to allow multiple persons to view data during practice. Stop the Server to end Listener participation.

Using the System

Session Types

The FlightScope Strike Tablet App allows the following session types:

- Pitching and Hitting Session
- Hitting-only session

Sessions

1. Create a new Session.

2. Set up data for the session, including:
- Add or remove players
- Set pitcher and batter handedness
- Set or adjust the Strike Zone

3. Start the session.

4. In the session:
- Choose display format (3D, Top, or Side view of ball trajectories)
- The 3D display can be zoomed in or rotated to provide different perspectives of ball trajectories relative to the field.
- Measured pitched and hit ball data are displayed on the right hand side of the display.

Ending a Session

Press QUIT to end a session.

All session measured data are stored “per session” on the computer for later viewing, reporting and analysis.

Technical Specifications

Rear LED Displays

None	Off
Blue blink fast	Starting
Blue blink slow	Sleeping
Blue solid	Error
Green blink fast	Processor starting
Green blink slow	Processor on/Idle
Green/Red alt	Ready to measure

None	Off
Blue blinking	Communications idle, not connected to a PC/device
Blue solid	Communications active, connected to a PC/device

None	Off
Amber solid	Transmitter on

Electrical Specifications

Power supply: 12V dc @ 1A (12W)

FCC Class 18

Physical Specifications

Dimensions – sensor unit:	13½ x 11½ x 5½ Inches (wide x high x deep)
Dimensions – pole mount:	11 x 7½ x 5¼ Inches (wide x high x deep)
Mass – sensor unit:	10 lbs
Mass – pole mount:	2.5 lbs
Ingress protection:	NEMA 3S / IP54

Inside back cover

Help and Support

Visit www.flightscope.com/support

Call FlightScope Customer Support at:

+1 407 - 412 - 9400 USA

Email us at support@flightscope.com