

INSAIT KS USER GUIDE

Updated January 2024





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SYSTEM COMPONENTS



HARDWARE

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HARDWARE



System Suitcase
Equipment travel suitcase



Tracker Recharging Base
Recharging trackers



Wireless Recharging Base
Recharge Smart Football

HARDWARE



Master Anchor
Data process and transmission



Anchors
Data transmission



Antenna
Data transmission antenna to be installed on
master anchor / anchor.

HARDWARE



Tracker

Measurement of position, trajectory, biometrics and other live player data



Armband

Mount trackers on upper arm



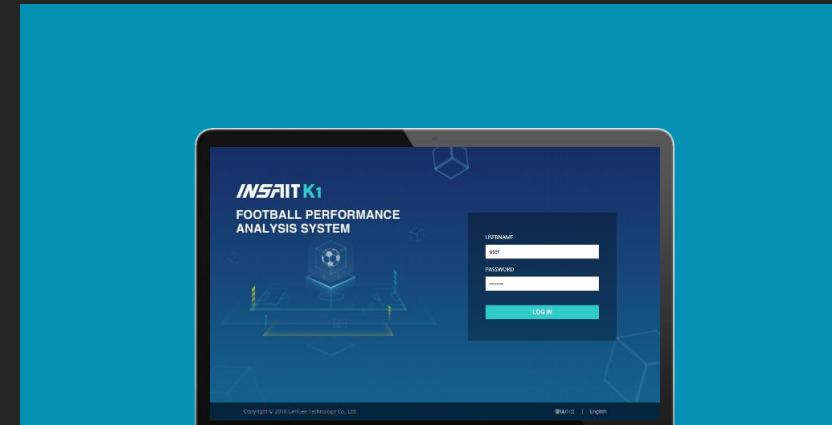
INSAIT KS Smart Football

Measurement of ball trajectory, position and other ball-related data



INSAIT KS app

Management and control, real-time session data display, access to session replay and session reports



INSAIT KS Web Portal

Database management, download session reports, access historical data and trend

iPad, PC or other computer hardware not included. iPad minimum requirement is iPad Air 2 with iOS 11 and above.

Minimum screen size supported is 9.7 inches. We recommend you use iPad with 10.2 or 11 inches screen size.

We highly recommend you use an iPad with cellular and use a sim card to upload and download data to achieve optimal user experience.

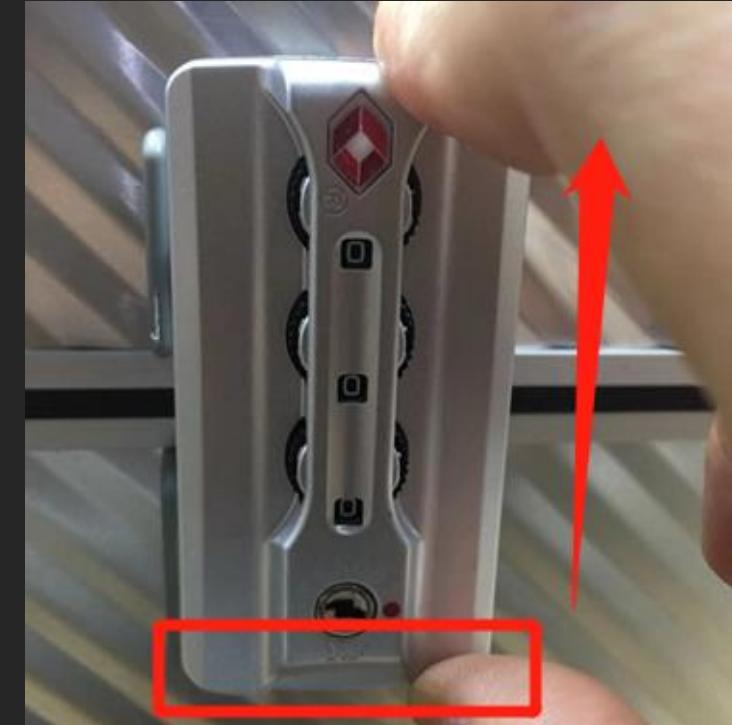
SUITCASE LOCK



OPENING SYSTEM SUITCASE

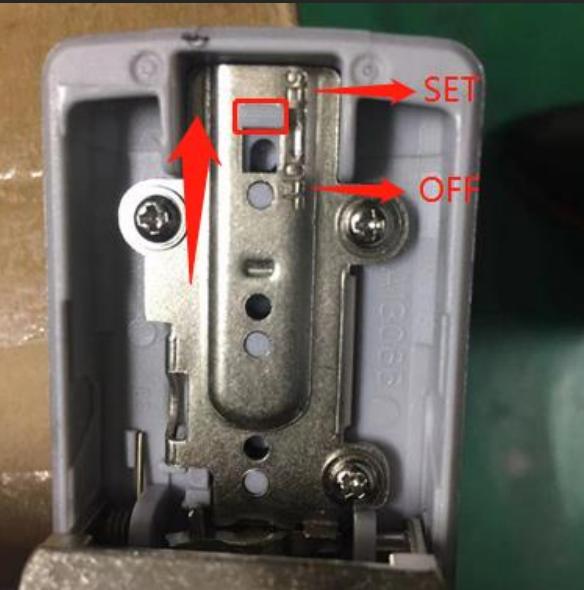


Every system suitcase comes with a default combination 000 for its suitcase lock



To open a system suitcase, adjust to the correct combination, slightly lift the bottom part of the lock, then push it upwards.

RESET COMBINATION



A reset paddle is located at the back of the combination lock

To reset combination, first push the paddle upwards to SET

Then reset the combination

Once a new combination has been set up, push the paddle downwards to OFF



RECHARGING

STEP 1 Connect adaptors and DC cables to the [Anchors / Master Anchor](#) to start recharging.

- Flickering red light indicates the Anchor / Master Anchor is recharging.
- Constant red light indicates recharging is completed.

NOTE

1. It takes 4h to fully recharge a Master Anchor or an Anchor.
2. A fully recharged Master Anchor may last for 7h and Anchors for 13h. This may vary due to weather condition such as temperature.



STEP 1 Connect adaptors and DC cables to the Tracker Recharging Base. Make sure the red-light indicator on the Tracker Recharging Base is on.

STEP 2 Insert Trackers into the Tracker Recharging Base.

- Metal plates on the Trackers must go **downward**, and the Tracker should be placed into the notch in the correct direction.
- Purple light on the Tracker indicates it is recharging.
- Constant red light on the Tracker indicates it is fully charged.

NOTE

1. It takes 2h to fully recharge a Tracker.
2. A fully recharged Tracker usually may last for around 8h. This may vary due to weather condition such as temperature.
3. Flickering light on the Tracker indicates low battery.



STEP 1 Connect [Wireless Recharging Base](#) to [adaptor](#) and [USB cable](#).

STEP 2 The indicator on the [Wireless Recharging Base](#) will flicker for a few seconds. When the red light is constantly on, place the [INSAIT KS Smart Football](#) onto the base.

- Make sure the [lightening mark](#) on the ball is facing [towards the centre](#) of the base.
- Constant blue light on the base indicates Smart Football is recharging.
- Constant red light on the base indicates recharging is completed.

NOTE

1. To ensure Wireless Recharging Bases work properly, please DO NOT place the bases in a [strong magnetic field or near metal objects](#).
2. If recharging several smart footballs at the same time, make sure the [minimum distance](#) between each 2 bases is [over 30cm](#).
3. It takes 1.5h to fully recharge an INSAIT KS Smart Football.
4. A fully recharged smart football usually may last for around 3.5h. This may vary due to weather condition such as temperature.



SUMMARY

ITEM	HOW TO RECHARGE	LIGHT INDICATOR RECHARGING	LIGHT INDICATOR FULLY RECHARGED	RECHARGING TIME	USAGE
ANCHORS MASTER ANCHOR	DC cable	Flickering red light	Constant red light	4h	7h
TRACKERS	Tracker recharging Base	Constant purple light	Constant red light	2h	8h
INSAIT KS SMART FOOTBALL	Wireless recharging base	Constant blue light	Constant red light	1.5h	3.5h

DEVICE CONTROL





TURN ON AND OFF

STEP 1 Press **Power** button to turn on or off

CHECK HARDWARE STATUS

STEP 1 Press **Function** to check device status on the screen

- Constant green light indicates power is on



TURN ON AND OFF

STEP 1 Long tap [Button](#) for [3s](#) to turn on

STEP 2 Tracker will be turned off automatically if [stay still](#) for [10 mins](#)

CHECK HARDWARE INFO

STEP 1 When displaying player info, [one short tap](#) on [Button](#) to check [Tracker ID](#) screen

- Tracker ID format: K xx, xx stands for numbers)

STEP 2 When displaying Tracker ID screen, [long tap](#) on [Button](#) to check [Tracker info](#), short tap to switch screen, and [long tap](#) to back to Tracker ID screen

NOTE

1. Fast flickering red light indicates low battery
2. Slow flickering green light indicates Tracker is not paired with a player



ACTIVATE THE INSAIT KS SMART FOOTBALL

STEP 1 Throw the INSAIT KS Smart Football up in the air. Make sure the ball is **spinning**. And let the ball fall on the ground to activate the ball.

- Repeat Step 1 for 2-3 times to ensure the ball is activated.

STEP 2 INSAIT KS Smart Football will be turned off automatically if stay still for 2 mins

NOTE To save battery, while not using the ball, please refrain from moving or spinning the ball frequently to avoid activating it accidentally

SETTING UP HARDWARE



STEP 1 Press downward the **buckle** on the stand, then slightly lift the **stand** upward to make sure the stand is fixed.

STEP 2 Open the **buckle on top** of the Anchor or Master Anchor.

STEP 3 **Insert Antenna** into the hole, make sure the **mark on Antenna** is matching with the mark on the Anchor or Master Anchor.

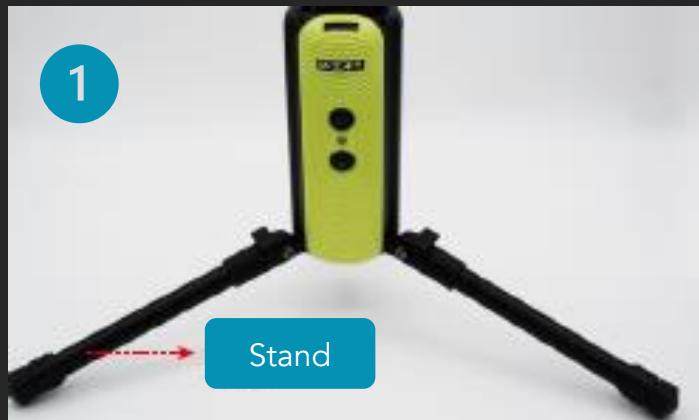
- For Master Anchor, please use the Master Anchor Antenna with a green Receiver on top.

STEP 4 Make sure the Antenna is fixed into the hole, then close the buckle.

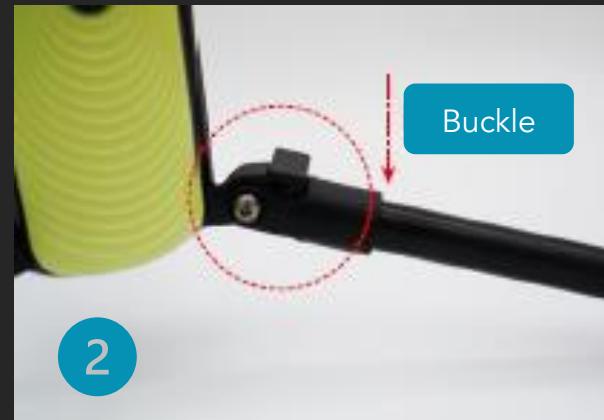
STEP 5 **Extend the Antenna** to its maximum height. **Extend the stand** of the anchor/master anchor if necessary.

INSTALL MASTER ANCHOR & ANCHORS

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Open up the stands



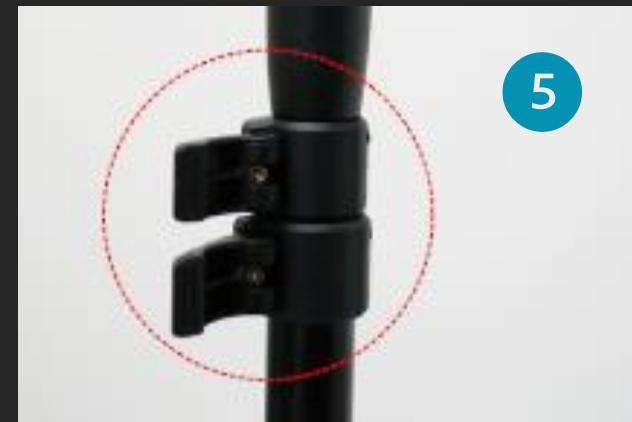
Make sure stands are fixed



Open the buckle on top



Insert antenna and match the marks



Extend antenna and stands

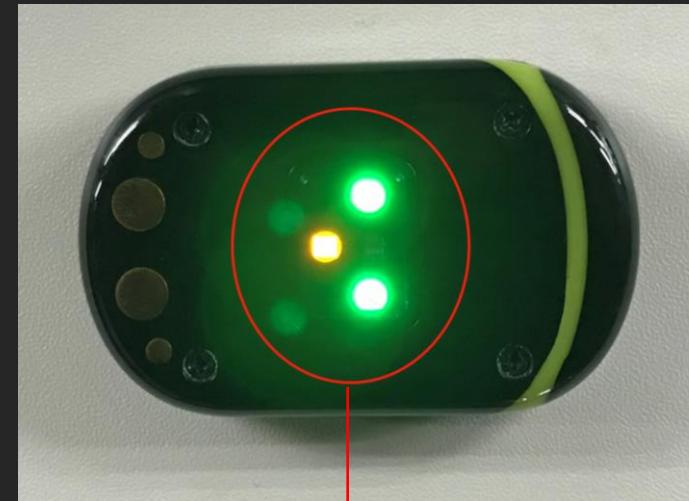
PREPARE TRACKERS

STEP 1 Turn on Trackers.

- We recommend the quantity of trackers being turned on should match the total number of players (including all subs).

STEP 2 Place Tracker into Armband, make sure light from optical HR modules are going through the hole in the inner side of the Armband.

- We recommend NOT distribute trackers to the players until you have paired all trackers with players in the INSAIT KS app.



Optical HR Module



START A SESSION



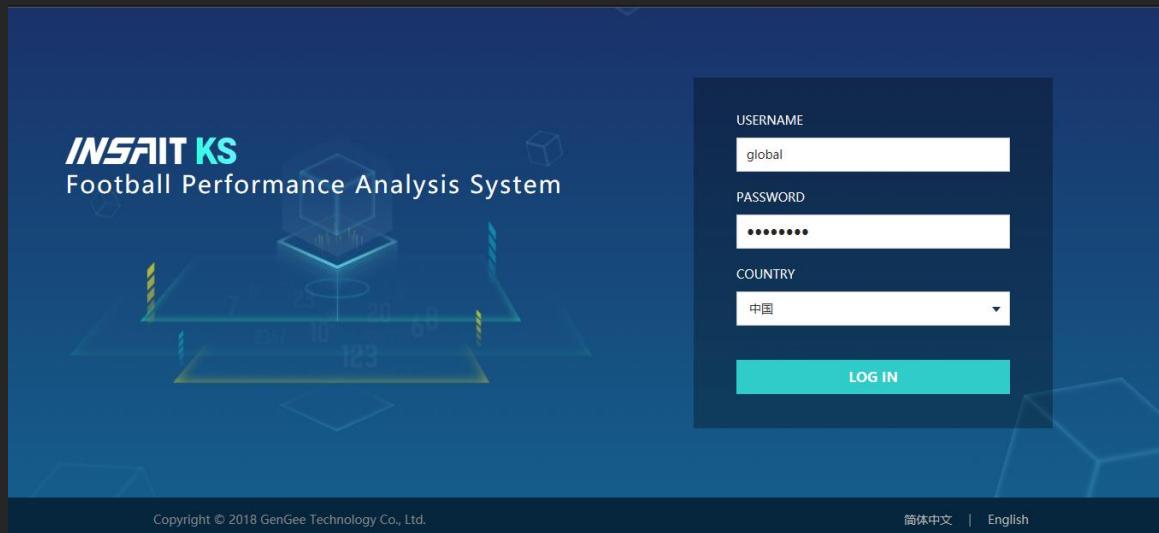
CREATE TEAMS

STEP 1 Login to [INSAIT KS Web Portal](#). Select your [country](#) or a country in your region.

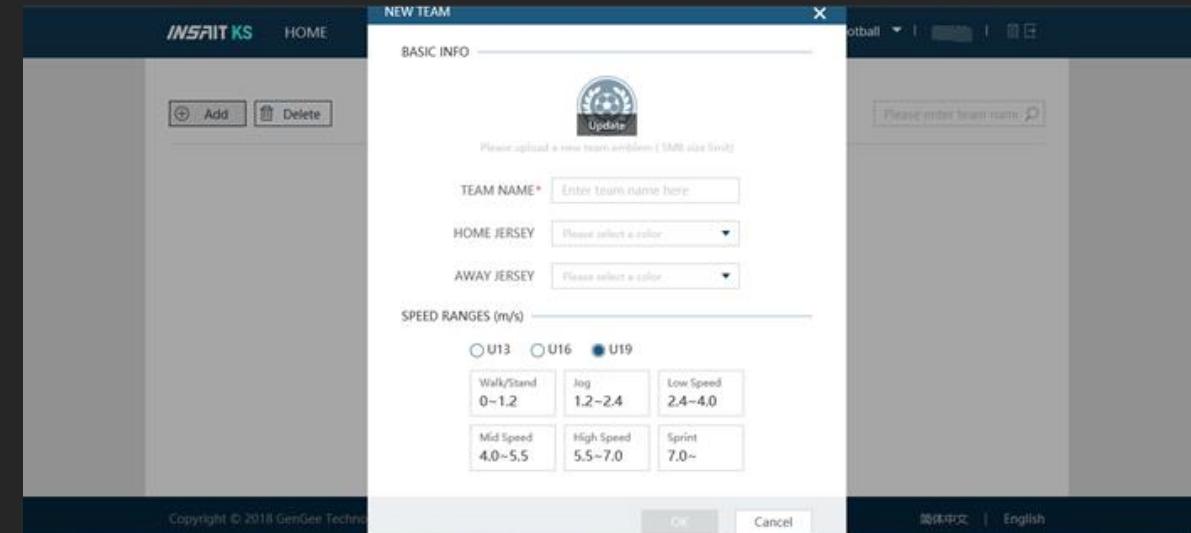
- North America & EMEA user: ks-eu.gengee.com; Asian-Pacific user: ks-ap.gengee.com; Chinese user: ks.gengee.com

STEP 2 Go to [Teams](#) and [Add a Team](#) to create a new team.

- Select a [Speed Threshold](#) for each team.
- You can also [Edit](#) your team info and settings here.



Select country and login. Account will be provided by Gengee or distributor



Create a Team, edit team info and select speed threshold

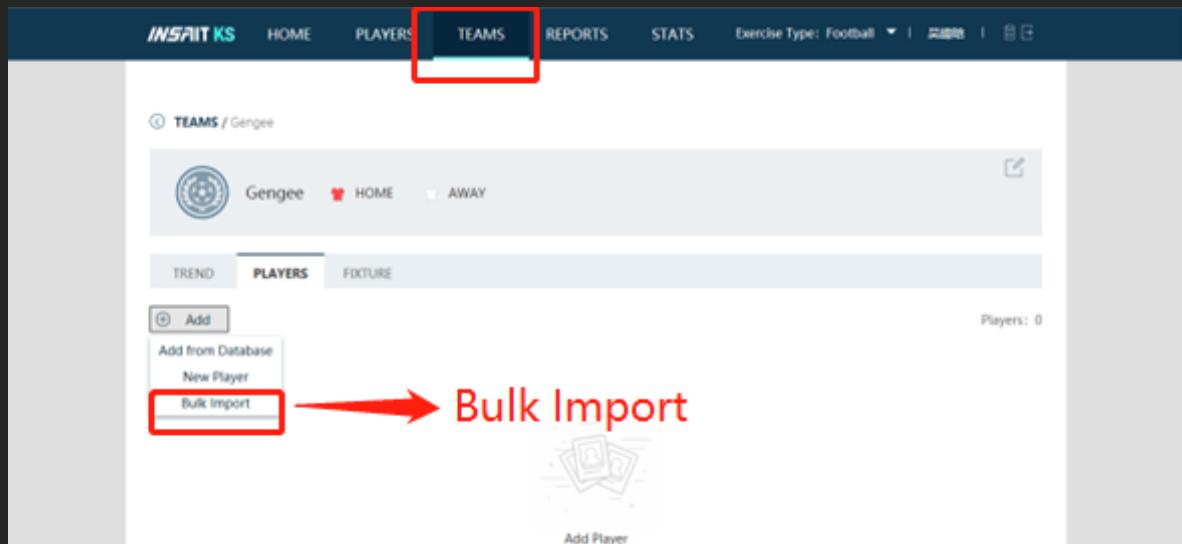
ADD PLAYERS

STEP 1 Go to the team created, select [Player](#) tab, then [Add](#) and select [Bulk Import](#) to download [Player Info Sheet](#).

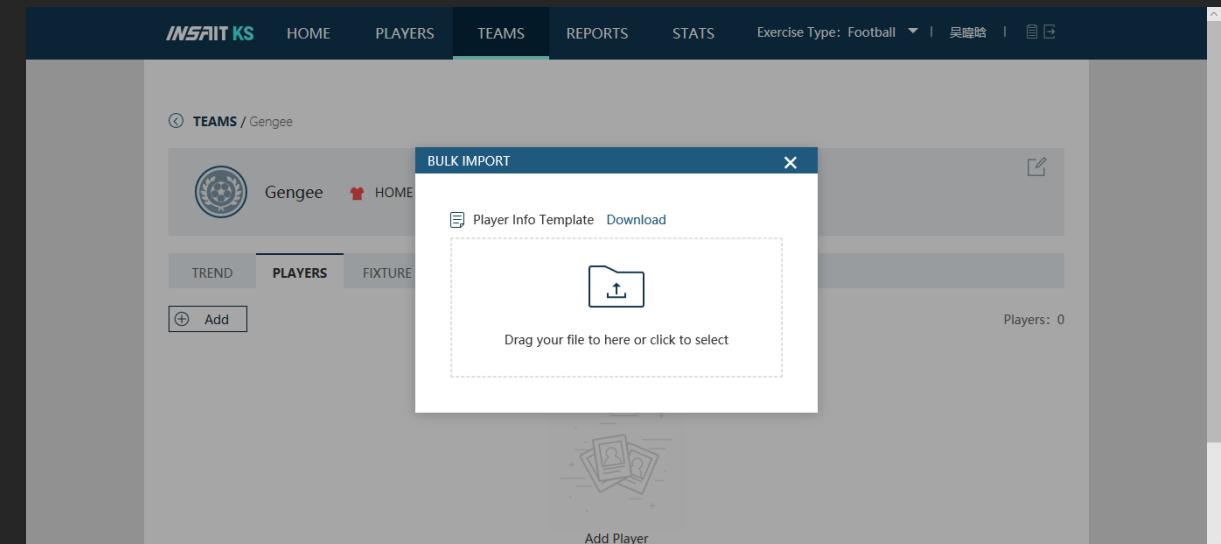
STEP 2 Fill in [Player Info Sheet](#) as instructed, then [Upload](#) the sheet follow the on-screen instructions.

- You can also go to [Players](#) to add [New Player](#) (one-by-one), [Add from Database](#) or [Edit](#) player settings.

STEP 3 Once players and teams are created, connect the iPad to internet to enable auto-sync team and player info in the INSAIT KS app.



Adding players to a team



Use bulk import to upload and add players

STEP 1 Make sure you have precise measurement of [pitch width](#), [pitch length](#) and [goal width](#). And double check if the goals are placed in the correct position.

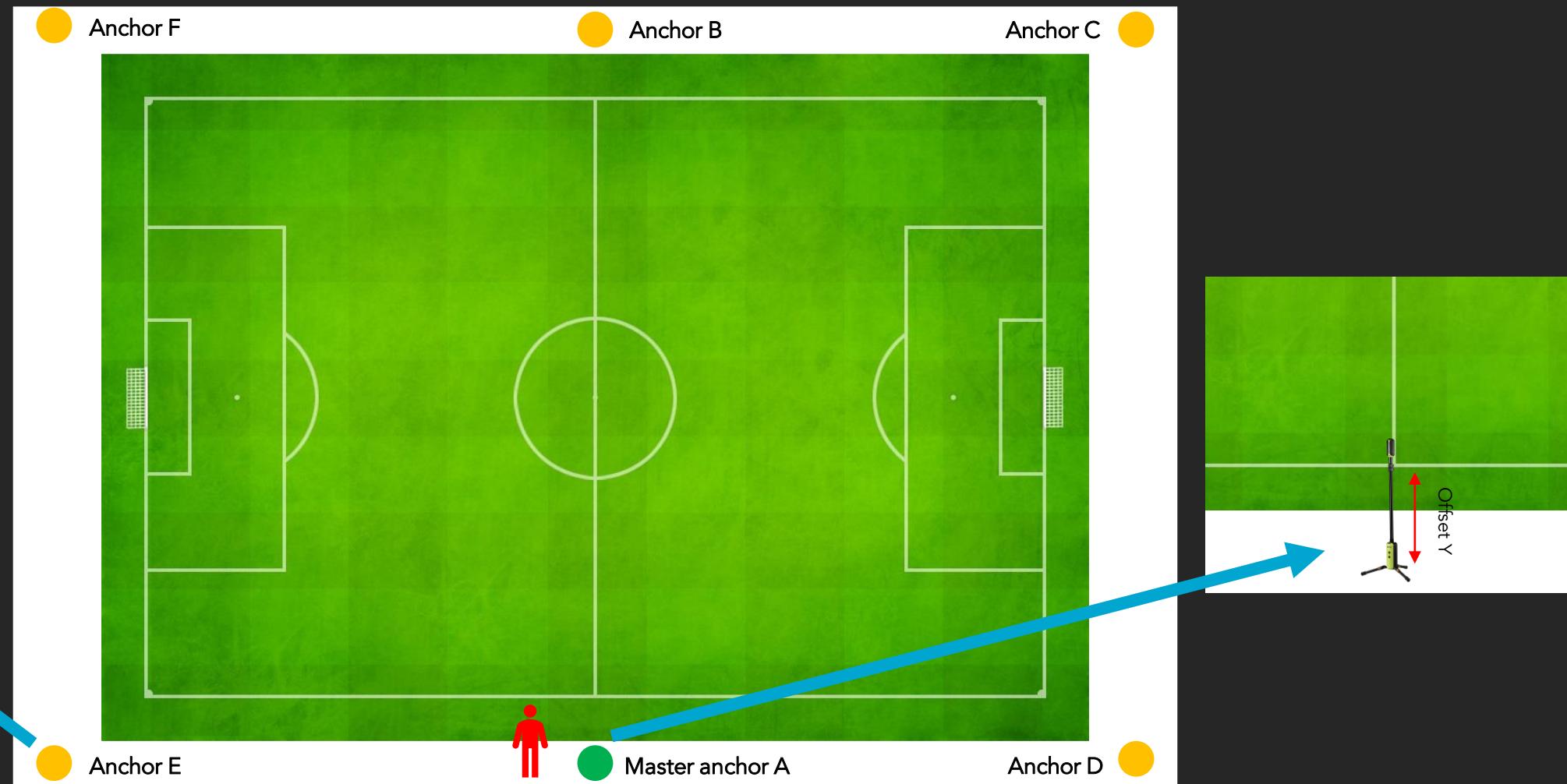
- These info will be filled in the INSAIT KS app later, and can be saved in the app as the measurements for this pitch.
- To optimise system performance and data quality, please make sure these pitch info are measured as precise as possible.

STEP 2 Turn on and set up [Anchors](#) and [Master Anchor](#).

STEP 3 Place the [Master Anchor](#) and [Anchors](#) in accordance with the sequence illustrated in the picture (in next page), with [Master Anchor](#) at the [centre line](#), [Anchor B](#) on the [opposite side](#), and [CDEF](#) at the [four corners](#).

- The letters are marked on each Antenna and displayed in the screen, indicating A-F, with Master Anchor always A.
- The Master Anchor and Anchors should be placed with a distance to the sidelines to avoid collision and to maximise signal coverage. This distance between the master anchor / anchor and the pitch sideline is called [Anchor Offset](#), with [X](#) stands for [horizontal distance](#) and [Y](#) stands for [vertical](#).
- The Offset X and Y value needs to be entered precisely into INSAIT KS app while creating or setting up the pitch. The recommended Offset X and Y is 2m. However, you may adjust your offset value depending on the actual condition of the pitch.

PLACE MASTER ANCHOR & ANCHORS



CONNECT IPAD TO SYSTEM WI-FI

STEP 1 Connect iPad to the Wi-Fi network **INSAIT** (or in other names as otherwise instructed).

- Default password is **GenGeeinsait**, or as otherwise instructed.

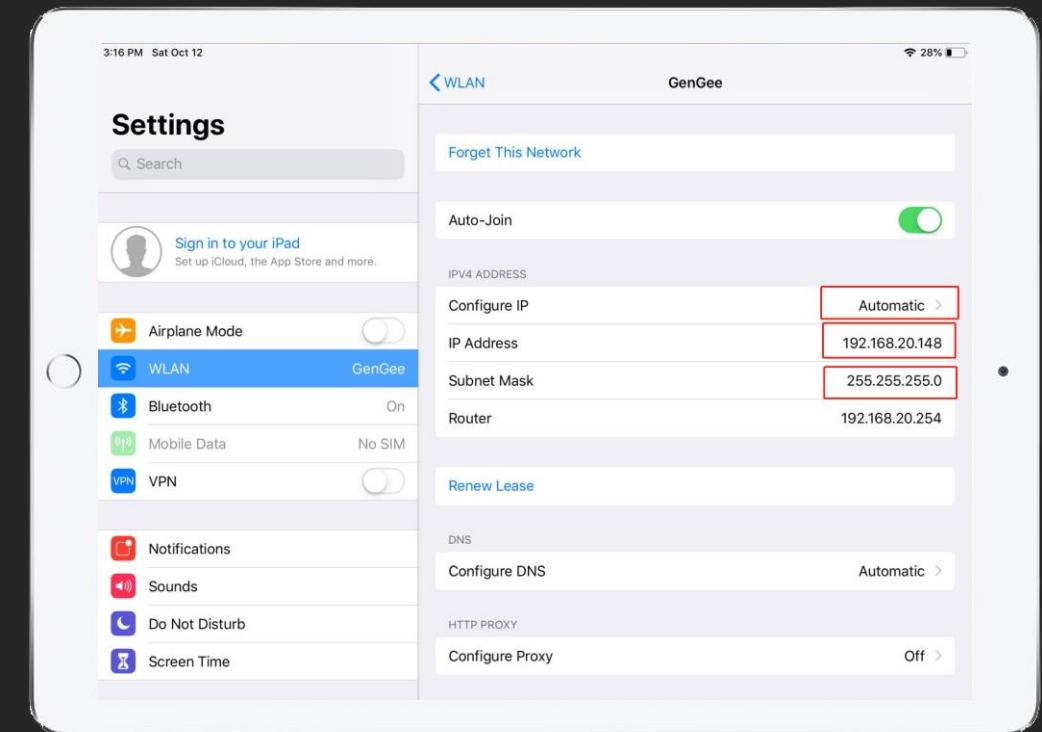
STEP 2 If:

- it is the first time you connect an iPad to the system Wi-Fi; or
- if you are unable to connect to the INSAIT Wi-Fi;

you should go through this Step 2 to set up IP address manually.

Go to iPad **Settings**, select **Manual** for **Configure IP**, and enter the following info:

- **IP Address**: 192.168.1.X (X stands for a number you can select between 120-253), and
- **Subnet Mask**: 255.255.255.0



ENABLE LOCAL NETWORK ACCESS

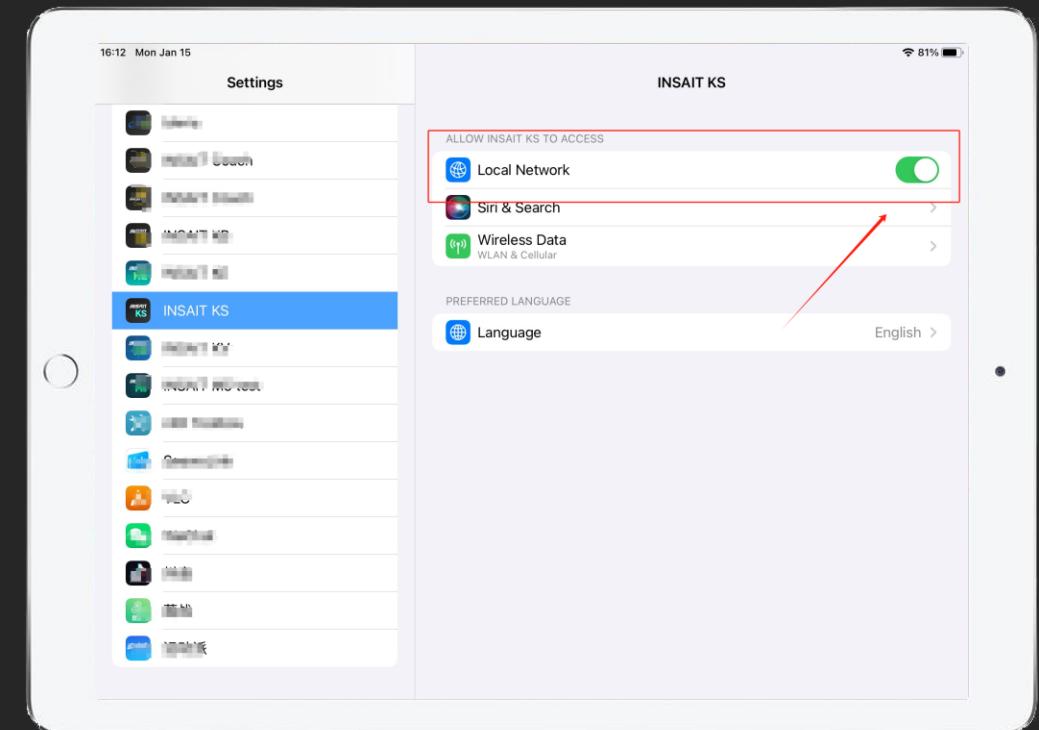
STEP 1 If:

- it is the first time you install INSAIT KS app on your iPad; or
- if you are reinstalling INSAIT KS app;

Please make sure that the INSAIT KS app is allowed to access [Local Network](#). This can be done by either:

- Allow INSAIT KS app to access Local Network in the pop-up reminder of the iPad; or
- Go to iPad [Settings](#), scroll down to [INSAIT KS](#) app, and enable [Local Network](#) access.

NOTE Please note that INSAIT KS app will not be able to connect to the system if Local Network access is not allowed.



CREATE OR SELECT A PITCH

STEP 1 Download INSAIT KS app from App Store and log in.

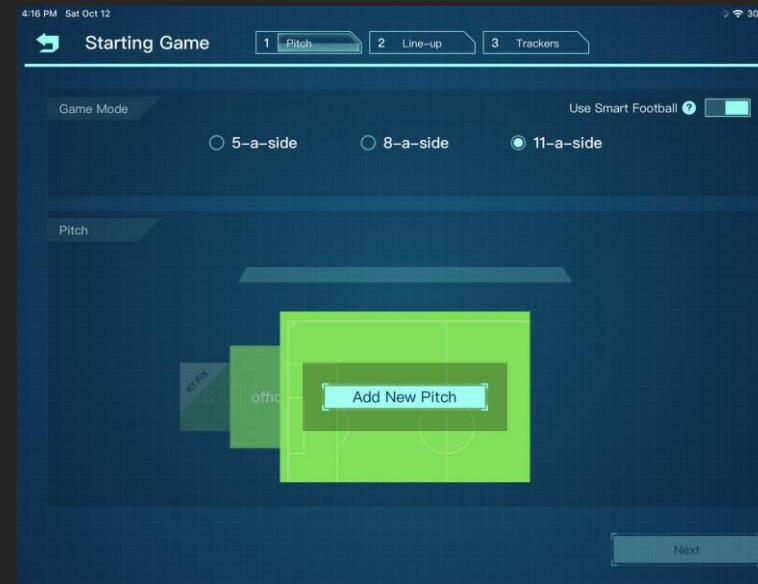
STEP 2 Select **Match**, choose a **Match Format**, and whether you **Use Smart Football** (or not).

STEP 3 **Add New Pitch** by entering pitch info (name, size, goal size, offset), or select an existing pitch.

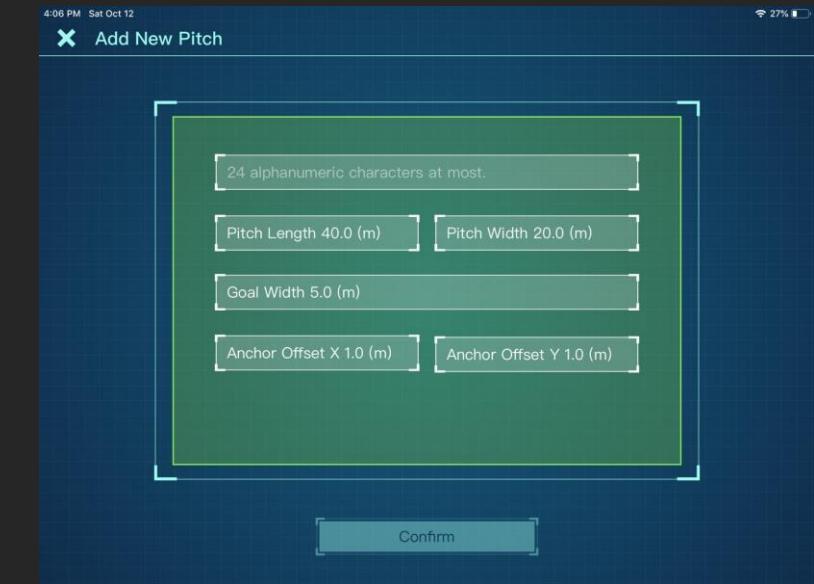
- Double check if offset value is correct.



Login via account provided



Add new pitch or select an existing pitch



Enter pitch info and offset to add new pitch

RECOMMENDED: PAIR TRACKERS WITH PLAYERS USING BATCH ALLOCATION FUNCTION

- STEP 1** Select [Teams](#) for the match. Team on the left is home team.
- STEP 2** Tap on the players to choose [starting line-up](#) for both teams.
- STEP 3** Use [Bluetooth Allocation](#) to pair Trackers. Turn on iPad [Bluetooth](#) and click [Batch Allocation](#).
 - Make sure all Trackers are within a 3m-distance with the iPad, and the iPad is connected to the INSAIT Wi-Fi.
- STEP 4** Wait until the app informs completion of batch allocation. Check if there is a [Tracker ID](#) under the name of each player in the app.
- STEP 5** Distribute each tracker to the correct player. Player's name is displayed on the Tracker screen.

ALTERNATIVE: PAIR TRACKERS WITH PLAYERS USING TRACKER ID ALLOCATION

- STEP 1** You can also pair Trackers with players using [Tracker ID Allocation](#).
To enable Tracker ID Allocation, go to [Settings](#) of INSAIT KS app, and choose [Tracker ID Allocation before](#) setting up a match.
- STEP 2** For Tracker ID Allocation, the app will auto-select a [Tracker ID](#) for each player (or you can do this manually), and distribute the trackers accordingly to the players.

PAIR TRACKERS WITH PLAYERS



Select teams and starting line-up



Pair trackers with players using batch allocation

NOTE

- When wearing Armband on the upper arm, make sure the optical HR modules are attached to the player's skin **DIRECTLY** and closely.
- Use different size options if the Armband is too tight or loose for the player.



START THE MATCH

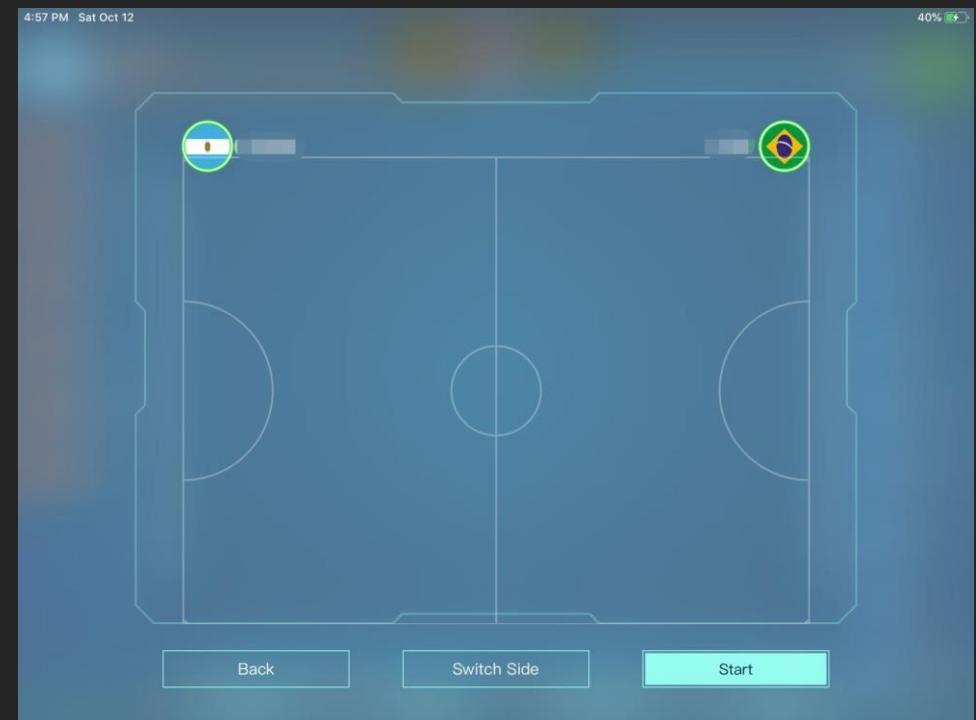
STEP 1 Make sure all Trackers are paired to the players (including subs). Tap [Done](#) to complete the tracker pairing setting.

STEP 2 When the match starts, tap [Start](#) to start measurement.

- As a default setting, the home team will appear on the left side of the pitch in the app. If the home team starts playing on the right side of the pitch, tap [Switch Sides](#).

NOTE

- To ensure auto-substitution function and data measurement is not being interfered, please keep all players (that are not playing in the game) away from the pitch. Preferably these players (and any spare trackers) **MUST NOT** enter the [Offset range](#).
- There is also a auto-detect function for the INSAIT KS Smart Football. It is also recommended to keep any spare INSAIT KS Smart Football away from the pitch (Offset range).



AUTO-SUBSTITUTION

STEP 1 If the new player is wearing a Tracker and has been paired with that Tracker, the system can automatically detect substitution. Tap [Auto-substitution](#) to start detecting substitutions.

STEP 2 Then tap [Save](#) to resume the match.

MANUAL SUBSTITUTION

STEP 1 Use [Replace](#) for manual substitution of players or replacement of Trackers.
For manual substitution: Go to [Replace Player](#).

STEP 2 Tap a player being subbed, then tap from the player list the new player.

SUBSTITUTION



To use auto-sub, go to Replace

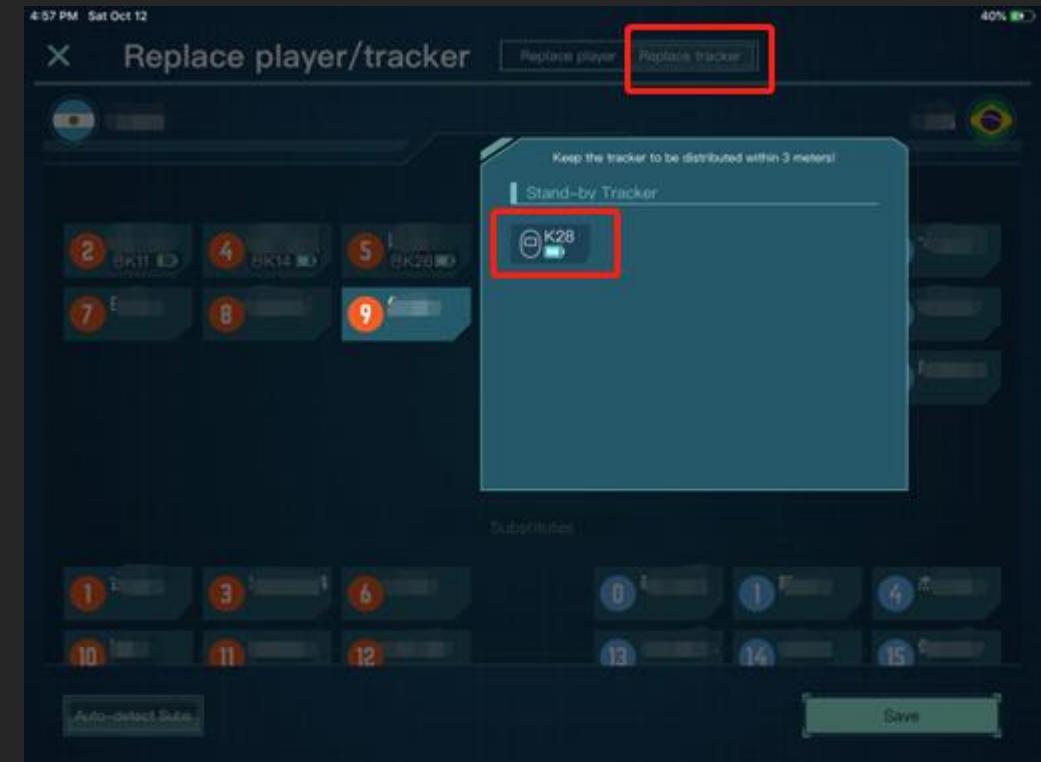


In replace player tab, tap auto-sub to detect, and save changes

REPLACE TRACKERS

STEP 1 If a new player is wearing a spare Tracker that was not paired with him / her, go to [Replace Tracker](#)

STEP 2 Pair the player with a spare Tracker using [Tracker ID](#).



VIEW LIVE DATA

STEP 1 Tap the [player](#) to view player data in details.

STEP 2 Tap [Match Stats](#) to view live team stats.

CHECK HARDWARE STATUS

STEP 1 Tap [Hardware](#) to view hardware status.

- If a hardware is malfunctioning or with low battery, a mark will appear on the Hardware tab.

GOAL DETECTION

STEP 1 Goals can be detected automatically if both team resume the match from the centre within 90s after the goal.

- If a goal is not detected properly, tap the score line to change manually.



PAUSE DATA MEASUREMENT

STEP 1 Go to [Match Control](#).

STEP 2 Tap [Pause](#) to pause data measurement.

END FIRST HALF

STEP 1 In [Match Control](#), tap [End 1st Half](#) to pause measurement and end the first half.

RESTART OR QUIT

STEP 1 Tap [Restart](#) to end and delete the current measurement and restart the match from 1st half with same settings.

STEP 2 Tap [Quit](#) to quit to end and delete the current measurement and back to home screen.



END THE MATCH

STEP 1 When the match is finished, tap **End** to end the match and stop data measurement.

STEP 2 When the system is preparing match data, **Do NOT** operate iPad (including using the home button of iPad), and **DO NOT** operate or turn off **Master Anchor**, until a reminder indicates **match data prepared**.

- Failure to follow instructions in Step 2 may result to loss of data.



Tap End when the match is finished



DO NOT operate iPad or master anchor



Until a reminder comes up

START A TRAINING SESSION USING PHYSICAL TRAINING FUNCTION

STEP 1 Tap [Training](#) to start training sessions.

- Training function only supports 1 team.

STEP 2 Select a pitch for the training session.

STEP 3 Select the team for the training session. Pair Trackers using [Bluetooth Allocation](#).

- Make sure all players participating all training sessions are paired with Trackers.
- Any player who is not paired with a Tracker will not be able to be selected.

STEP 4 Select [Physical Training](#) for a normal training session.

STEP 5 Select players participating each session and [Start Training](#). Tap [+](#) to add a new session if necessary.

- You may run up to 2 Physical Trainings sessions plus 1 Training Match at the same time.
- The maximum quantity of Trackers and INSAIT KS Smart Football being used in a training session is 50.

STEP 6 End this Session to end an ongoing training session. When all training is finished, tap [End All Sessions](#) and wait until data prepared.

START TRAINING SESSIONS



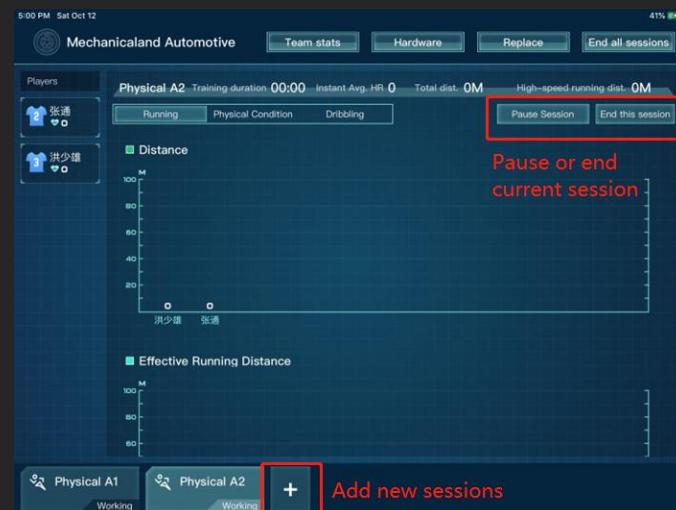
Pair trackers to all players in the sessions



Select Physical Training or Training Match

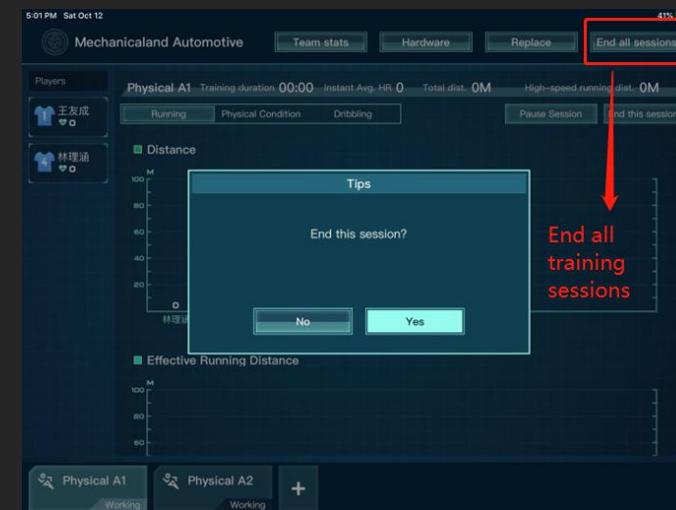


Select players for each session



Pause or end current session

Add new sessions



End all training sessions

START A TRAINING SESSION USING TRAINING MATCH FUNCTION

STEP 1 Select [Training Match](#) for a small-sided game during training.

STEP 2 Circle out an area being used for the training match.

STEP 3 In a Training Match, players will be divided into [Team A](#) and [Team B](#). Select players for each team.

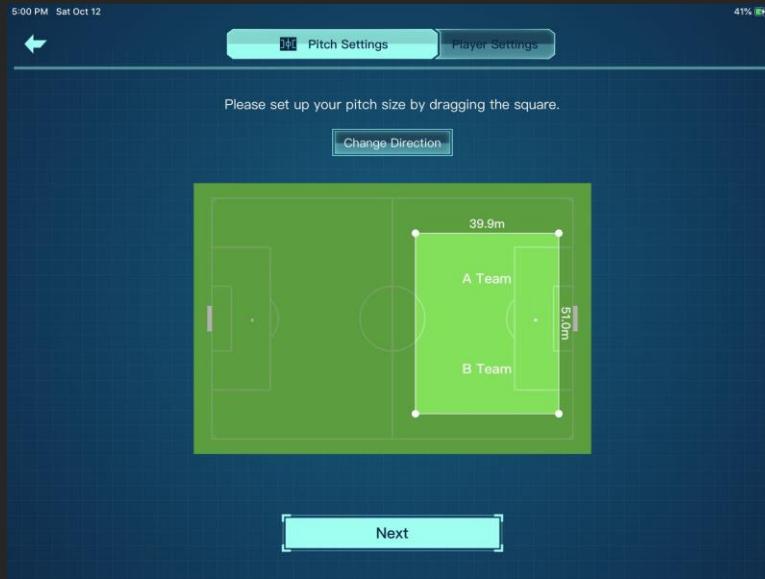
- For each team, the minimum amount of players is [2](#).
- The maximum quantity of Trackers and INSAIT KS Smart Football being used in a Training Match is 50.

STEP 4 Tap [+](#) to add a new Physical Training if necessary

- You may run up to 2 Physical Trainings sessions plus 1 Training Match at the same time.
- However, you may only run up to 1 Training Match at the same time.

STEP 5 [End this Session](#) to end an ongoing Training Match. When all training is finished, tap [End All Sessions](#) and wait until data prepared.

START TRAINING MATCH



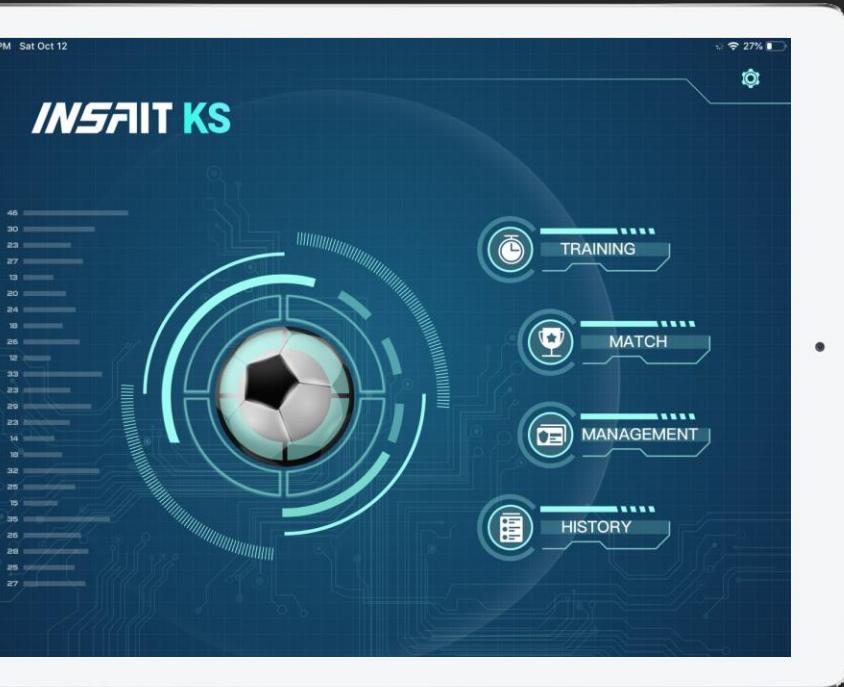
Select an area for the training match



Select players for each sides



Add new sessions or end sessions

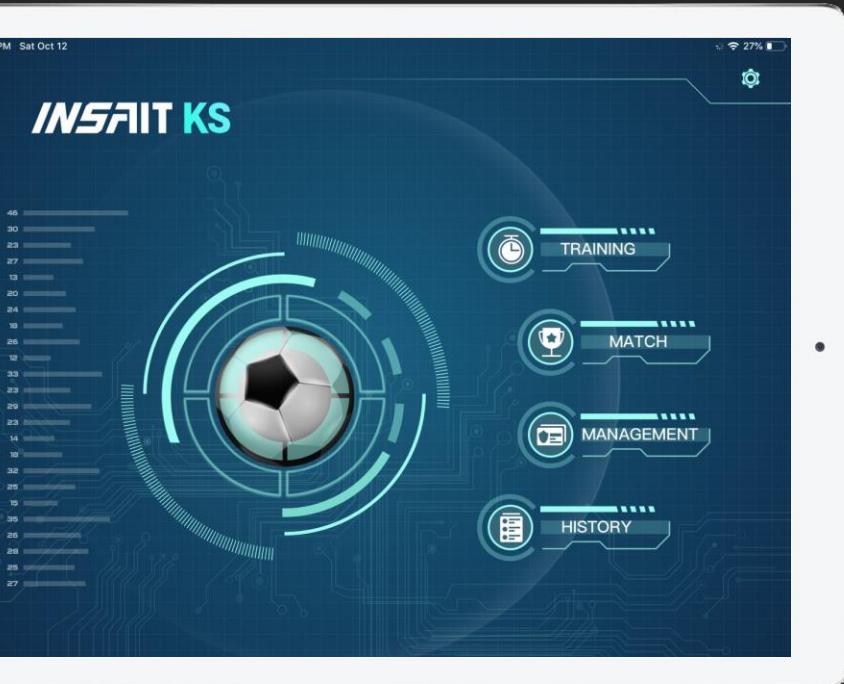


MANAGEMENT

- Add New Teams, Edit Teams or Delete Teams
- Add New Players (create a new player, or add from database), Edit Players or Delete Players

HISTORY – MATCH / TRAINING HISTORY

- Select [Match](#) or [Training](#) tab to view match or training history.
- A session will be uploaded to the Cloud server if the iPad is connected to internet (via Wi-fi or sim card). If not, tap [Upload](#) when the iPad is connected to internet.
- A match or training reports will be generated in a while after being uploaded to the Cloud server (marked as [Generated](#) in the history).
- Tap a match to view [Replay](#) to go through live session analytics.
- Use [Tactic Boards](#), [Goal Events](#) and [Team Compactness](#) in match replay for illustration.
- Tap [Match Report](#) in a match replay to view full analytics. Match Report is only available when the session is marked as [Generated](#).



PITCH MANAGEMENT

- Add New Pitches, Edit Pitches or Delete Pitches.

SERVER

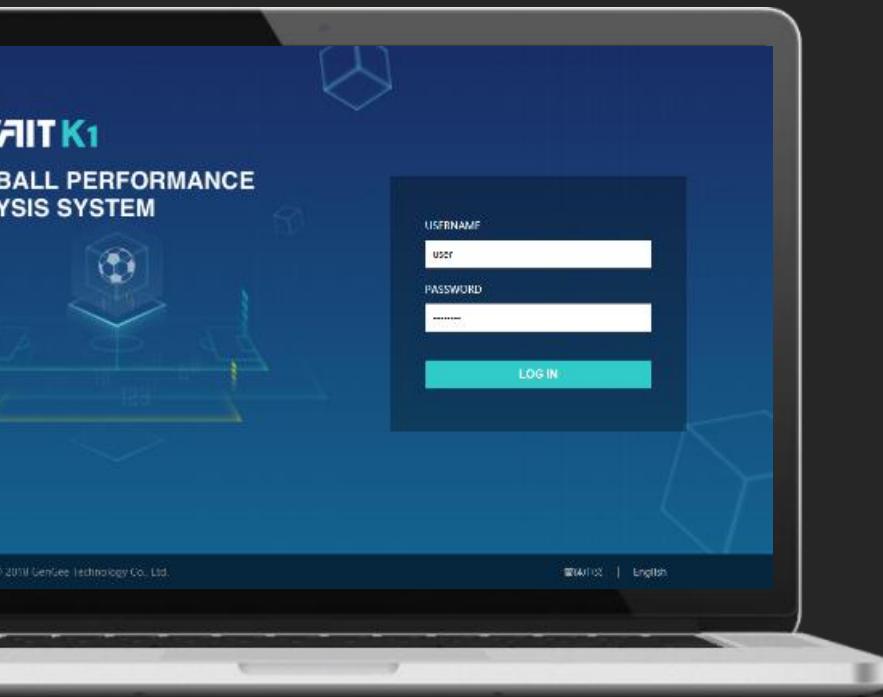
- We recommend you check server updates regularly.
- If a server update is available, turn on Master Anchor, connect iPad to the INSAIT Wi-Fi, and tap Update. Do not operate iPad or Master Anchor until the update is done.

HARDWARE

- Monitor hardware status

ALLOCATION MODES

- Select default Tracker allocation modes: Tracker ID or Batch (Bluetooth) Allocation.



DOWNLOAD REPORTS

- PDF or XLS reports can be downloaded from the INSAIT KS Web Portal
- You may download PDF match reports in various formats, including full report (default), or click ... for home / away team overview and home / away team physical reports.

FAQ



Q How to import players and team information in the INSAIT KS system?

A There are 2 ways to import player and team info. You may choose to:

- (recommended) Create teams and use bulk import in the INSAIT KS Web Portal to add teams and players, or
- Add players or teams using the Management function in the INSAIT KS app

Q How to check hardware status (are the hardware connected or functioning properly, remaining battery of the smart ball, etc.)?

A In INSAIT KS app: Settings – Device Management

Q How to create a football pitch in the INSAIT KS app?

A You may create (or edit) a pitch any time in Settings – Pitch, or create (or edit) before a match or training starts

Q How do I login to the INSAIT KS app and INSAIT KS Web Portal?

A You can login to INSAIT KS app and INSAIT KS Web Portal via the account provided by us or our partners.

Q I cannot find some players or smart football during a training session or a match.

A Please double check the following items first before reaching out for technical support :

- Pitch size (width and length) and Offset values are entered correctly;
- The Trackers are turned on and the INSAIT KS Smart Footballs are activated; and
- Master Anchor and Anchors are placed in the proper position and sequence.

Q If the referee decides to suspend the match for a while or there has been an (injury) incident on the pitch, can I suspend data measurement and resume later?

A Yes, you may go to [Match Control](#) to [Pause](#) the match to suspend data measurement and [Resume](#) later (not Restart).

Q How do I replace a Smart Football during a game or training?

A Simply remove the smart football from the pitch and replace it with a new one. The system will detect the replacement automatically. Make sure other unused footballs are kept away from the pitch (out of Offset range).

Q Is there anything I need to do when first half is finished?

A Go to [Match Control](#) to [End First Half](#). When both teams switch sides and resumes second half, tap [Start Second Half](#).

Q Where and how to synchronise and store data?

A Data is stored and processed in the Cloud server. Data will be synchronised to the cloud server automatically if you have internet connection in the iPad and at the same time keep your iPad running in the INSAIT KS app user interface.

Q I cannot start a match.

A Please make sure

- Minimum number of players in each team must be no less than 2; and
- iPad is connected to the INSAIT Wi-Fi.

Q How to check if the Antenna and Anchor / Master Anchor is connected properly?

A Antenna is connected properly with the Anchor / Master Anchor if:

- Green light appears on the indicator of the Antenna, and
- On the screen of Anchors / Master anchor showing **ready** for both UWB and Wi-Fi (press Function on the Master Anchor or Anchor to check hardware status)

Q I cannot recharge the INSAIT KS Smart Football with the Wireless Recharging Base.

A Metal or magnetic field near the Wireless Recharging Base may result to malfunctioning of the base. Please make sure:

- No metal or magnetic field near the base;
- Make sure you are not placing the base on a table made of metal;
- Minimum distance between each two bases are no less than 30cm; and
- Wait until the indicator shows constant red light before placing the ball on the base for recharging.

Q If the app warns a player has paired (or bound) with 2 Trackers, what should I do?

A Unpair the player with either one of these 2 Trackers.

- We strongly recommend recharging all hardware devices for at least once in every 3 months.
- Please do not soak INSAIT KS Smart Football into water.
- Please do not dissemble, open, penetrate, cut or use hair-dryers on INSAIT KS Smart Football, nor insert any foreign objects to the valve of the ball.
- Please do not use a damaged INSAIT KS Smart Football.
- Please do not place the INSAIT KS Smart Football in an extremely cold or hot conditions, as extremely low or high temperature may shorten the battery life or cause malfunctioning of the INSAIT KS Smart Football. Please avoid sudden temperature or humidity changes while using the INSAIT KS Smart Football, as these sudden changes may lead to condensation on the surface of or inside the INSAIT KS Smart Football.



CONTACT US

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To get in touch with Gengee for customer services or technical support:

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Contact: 86 592 5063800
Address: #303, No.14-3 Wang Hai Rd., Software Park, Siming District, Xiamen, 361000, China

Service Window 9:00 to 18:00 (GMT/UTC+8 Beijing)
Monday to Friday (except public holidays in China)

Or leave a message on our website www.gengee.com

If you receive our product through a retailer or distributor, please contact them directly or consult Gengee Global Team for how to proceed with the customer services.

WHERE
FOOTBALL
MEETS
TECHNOLOGY

