GoalMax Flow

GMX-F3

Making Wearable Sports Science accessible to every player

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• Overview

GoalMax Flow wearable tracker is a multi-sensor solution developed for performance determination of individual players or whole team sports. The GoalMax Flow solution hardware, components, and software will be explained in this document.

GoalMax Flow sends live data of the player and device statuses over the GoalMax-WIFI network to the GoalMax Hub.
Besides sending live data, the device stores this data in its memory and sends it later after practice ends.

The GoalMax Hub collects live data from all devices, and then after practice ends the collected data is uploaded to the GoalMax cloud over an internet connection, and any missed data is backfilled via data stored on the Teams device.

Users can access live data monitoring using the mobile/tablet GoalMax app over the GoalMax-WIFI network.

• Player unit

The player unit is equipped with a set of precise and cutting-edge sensors to determine the performance of the player, in both real-time and post-practice. The GMX-F3 contains the following sensors and components:

- Built-in Heart Rate sensor
- GNSS 10 Hz.
- WIFI.
- Tri-axial Accelerometer.
- Tri-axial Gyroscope.
- Tri-axial Magnetometer.
- Device status LEDs

Figure (1) GoalMax Flow Player unit

Indicates GNSS status.

Indicates Heart Rate status.

Indicates the state of the battery (charging, discharging, etc.)

Indicates WIFI status.

Player unit inputs:

- Power Button

The power button has been placed in the middle of the top surface of the device, simple click to power on the device, but one needs to press the button for 5 seconds to power off the device if the device is not assigned to a player if the device was assigned to the player, it needs 15 seconds of pressing the button to power off, these delays are required to prevent accidental power off.

- HR built-in sensor

Users can connect the heart rate built-in sensor to the smart vest through heart rate connectors.

- Charger

The player unit can be charged with the GoalMax charging station or GoalMax single charger.

Player Unit Operation Overview:

- Device Status

The Player unit is configured to connect to the GoalMax-WIFI network automatically, once it is connected to the network, users can monitor the device status, or configure the device settings wirelessly.

- Player assignment

Users can easily assign a player unit to practice and player by using the GoalMax app over GoalMax-WiFi.

- Live data

Once the device is assigned to the player, it collects data, sends it to the GoalMax Hub, and saves the practice data in the device's internal memory.

➢ Data collection

When the practice ends the GoalMax Hub will get the practice data that was saved on player units wirelessly without any hard-wired connection, to ensure backfilling any losses of data during online practice.

➢ Charging

The Player unit is charged via the GoalMax charging station or GoalMax single charger, the battery led indicates the charging status as follows:

- Solid red: charging
- Solid blue: discharging
- Solid white: fully charged.

➢ Firmware update

Users can update the firmware of the player unit wirelessly without any hard-wired connection.

• Charging station

The charging station contains 30 slots for 30 devices to be charged simultaneously.

The charging station is powered from any universal outlet (220V/110V AC) to charge devices.

• GoalMax Hub

GoalMax Hub is the core of the GoalMax solution which provides the GoalMax-WIFI network, and it collects live data and post-practice data and does the backfilling process on data.

Users can connect to GoalMax Hub through the GoalMax app for live data monitoring and post-practice summary.

GoalMax Hub has GSM global coverage to ensure connection to the internet everywhere whatever country you game in.

• GoalMax software

GoalMax software is individualized Data-driven software developed for coaches to optimize every aspect of player performance. Built-in analytics that present data, charts, and KPIs in dashboards and reports provide quick access to real-time, actionable KPIs and educated decisions based on data.

The main objective is to produce a position tracking system for field soccer players to provide their on-field positioning, with a data map and the distance they move during a training session, including a second-by-second heart rate monitor. Through monitoring the exact movement of an individual player on the field, data can be gathered to determine whether the player is maximizing his or her performance.

During a training session or game, each player will have a location recognition device attached to a specially designed wearable vest. After the session, the software can then provide a data map of all the players indicating where each player was located over the course of their particular play. In higher-level competitions and professional soccer, having this clear-cut data can be the difference between a win and a loss as coaches can better match players' strengths to their position, it comes through three main applications:

- **CloudMax Application**
  CloudMax Application provides advanced tools for managing the team's technical, medical, and administrative staff, managing games and training sessions schedule, Club field and its locations, managing players, and

managing game settings such as player positions. View and compare player summary after the training. View advanced reporting.

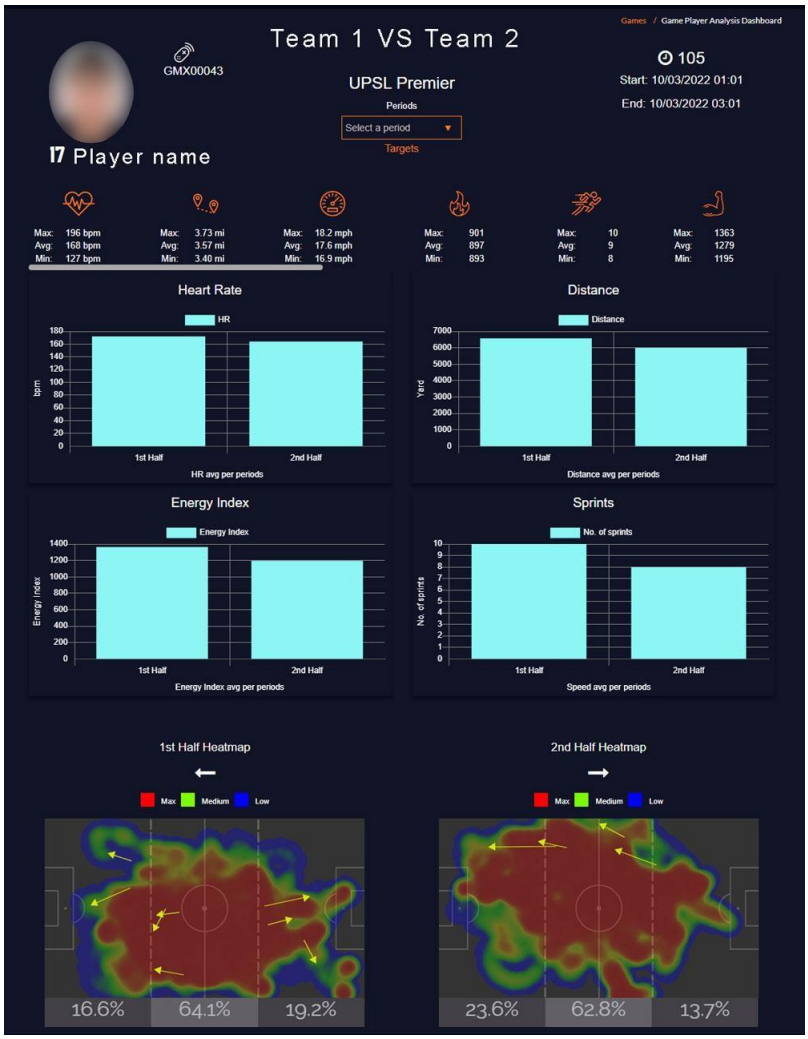

Figure (2) Player summary on practice level [Cloud platform]

➢ CoachMax Mobile Application

CoachMax Mobile Application provides advanced tools for managing and viewing sessions in real-time. Provide the coach the ability to monitor player logs such as water, weight, and sleep. View player baseline and summary metrics. view and monitor player states such as fatigue and

mood, injury, medical, medication, and Coaching notes like coaching points and events.

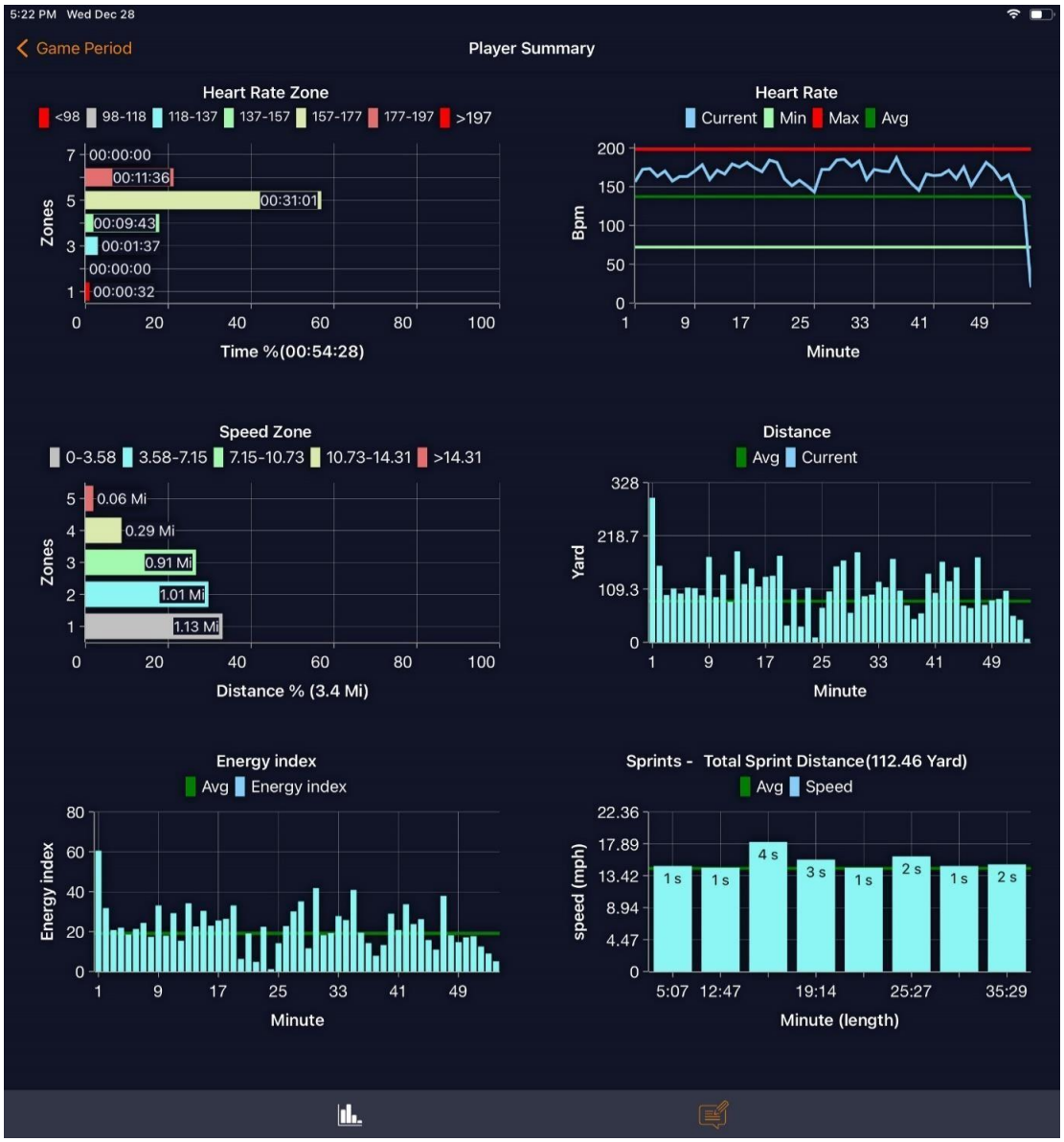

Figure (3) Player summary on session level [Coach App platform]

➢ PlayerMax Mobile Application

PlayerMax Mobile Application is designed for players' individual use. The player can log weight, water, and sleep. Run individual

training sessions. Track his performance and compare his data against other teammates.

Figure (4) Player summary on session level [Player App platform]

• Data analysis

GoalMax Hub is the core of the GoalMax solution which provides the GoalMax-WIFI network, and it collects live data and post-practice data and does the backfilling process on data.
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GoalMax Hub has GSM global coverage to ensure connection to the internet everywhere whatever country you game in.

Meanwhile, powerful data analysis can assist managers and coaches to summarize the behavior pattern of each player and his or her position on the team. With statistics regarding each player, calculated predictions can be made and an individual's weaknesses can be identified. Having specific data allows coaches to come up with precise strategies for individual athletes to improve themselves, as well as game plans to maximize the strength of the team to counter their opponents.

GoalMax mobile application in turn provides real-time summary analytics during a session. As soon as a session ends, it automatically syncs the data to the cloud for deeper reporting and analytics. So, the end users can monitor the players' performance, compare, and identify historical trends, better manage player load and recovery, and identify players' injury risk.

In addition, it allows the players and coaches to easily visualize the data to gain insights into the performances, make informed decisions, and predict future events.

• Online monitoring (Real-time monitoring)

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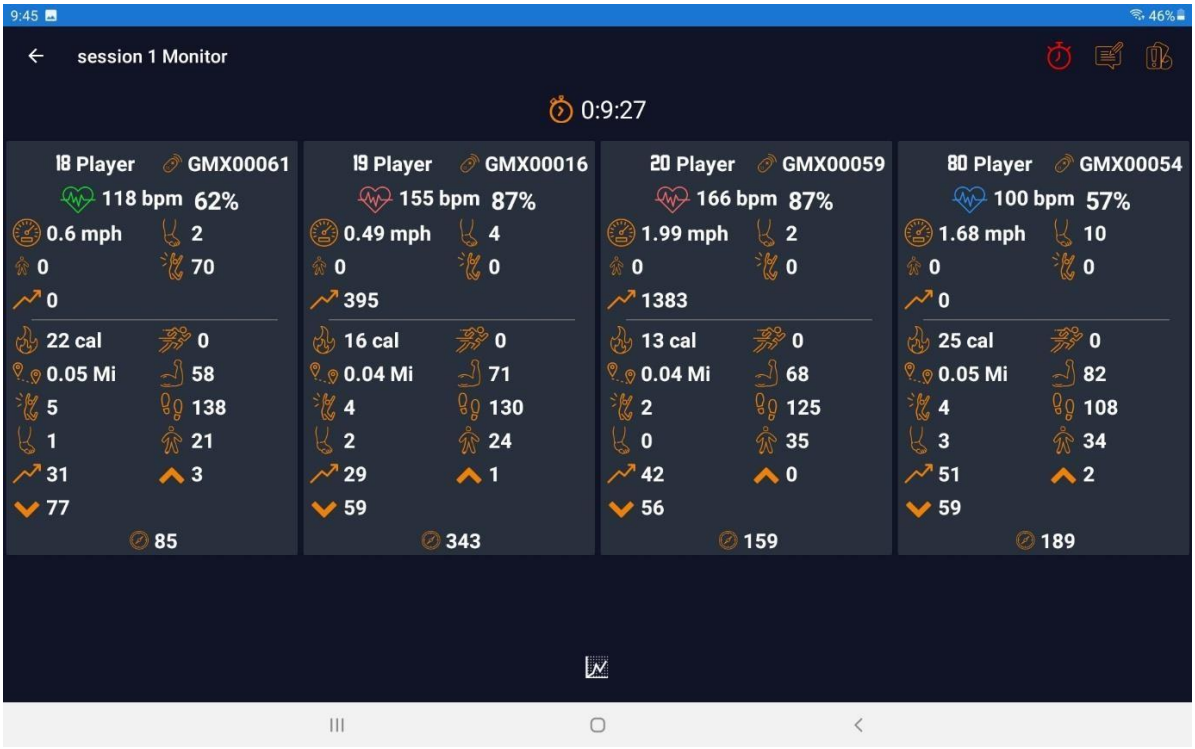

Figure (5) Real-Time monitor

• Caution and notes

FCC Caution:
Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.

IMPORTANT NOTE:
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.

FCC Radiation Exposure Statement:
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

FCC ID: 2BA8U-23FL0332