micoach elite

user manual

micoach elite

NOTES

NOTES

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TABLE OF CONTENTS

WARNINGS

- **Carefully read and follow the safety information, precautions, and equipment warnings below.**
- **Only trained, qualified personnel should perform repairs to this equipment.**

WARNING

Electrical voltage can cause fires, electrical shocks, burns, or other severe personal injuries.

To help prevent the risk of equipment damage and personal injuries, observe the following general precautions for using and working with your system:

- Do not block vents.
- Do not push any foreign objects into the openings of your system components.
- Doing so can cause fire or electric shock by shorting out interior components.
- Never pour liquid into the equipment openings. It can cause fire or electric shock by shorting out interior components.
- Always ensure the voltage setting of the power source is correct before connecting the equipment to a power outlet.
- Only use a power cable that has been approved for the voltage and current of this product.
- To help prevent electric shock, plug the power cable into properly grounded electrical outlets.
- Do not use adapter plugs or remove the grounding prong from a cable. If you must use an extension cord, use a three-wire cord with properly grounded adaptors.
- Observe extension cord and power strip ratings. Make sure that the total ampere rating of all products plugged into the extension cord or power strip does not exceed 80 percent of the extension cord or power strip ampere ratings limit.
- Carefully position cables and power cords. Route cables and power cords so that they cannot be stepped on or tripped over. Be sure that nothing rests on your system components' cables or power cord.
- Always disconnect the equipment from any AC outlet before performing repairs or any other work.
- Only connect the battery charger to a grounded wall socket. If your outlet does not support this type of plug, contact a qualified electrician to replace the outlet before using the product.

SYNCING CELLS

ONLINE SYNC

Online Sync is transferring data from Base Station to Central Web System.

BASE STATION STEPS

STEP 1 A

Connect Base Station to Internet, using a Ethernet Cable.

STEP 1 B

Connect Base Station to Internet, via WiFi, using the miCoach Elite iPad app.

STEP 2

In a while CWS LED will start fast blinking green. When blinking stops, online sync is completed.

SYNCING CELLS

OFFLINE SYNC

Offline Sync is transferring data from Cells to Base Station.

CHARGERS STEPS

STEP 1

Put all Cells into the chargers.

STEP 2

Connect chargers to the Base Station as on the "Connecting Components" tutorial.

BASE STATION STEPS

STEP 3

In a while, chargers LED will start fast blinking green.

STEP 4

When the chargers LED will stop fast blinking green. Offline Sync is completed.

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WARNINGS

CAUTION

If any of the following conditions occur, unplug the product from the electrical outlet and contact your authorized service provider.

- The power cable, extension cord, or plug is damaged.
- Liquid has penetrated the equipment.
- An object has fallen into the product.
- The product has been dropped or damaged and is no longer functioning.
- The product does not operate correctly when you follow the user manual.
- The equipment has visible signs of breakage.

NOTICE

To help prevent product damage, always observe the following:

- Never cover the cooling elements and the openings on the power supply housing, which allow air flow and prevent the equipment from overheating.
- Use and store the equipment only under conditions described in this user guide.
- Install the equipment only on firm, level ground. Equipment can be damaged if dropped.
- Never place heavy objects on the equipment.

IPAD APPLICATION

STARTING SESSION

Continue through the start up screens and start your session. Select "Cells" to confirm that the assigned player cells are correct and live data is streaming.

Select "Drills" to start a drill and begin associating your data with a drill.

LIVE MONITORING ON THE FIELD

Select "Grid" and "List" to monitor your live dashboards. Tap any athlete to view a detailed athlete dashboard.

ENDING A SESSION

When your training session is complete, stop the session from the "home" page.

Collect Cells and plug them into the Cells Chargers for charging and uploading.

IPAD APPLICATION

GETTING STARTED ON THE FIELD

CHECK WIFI

Make sure your iPad is connected to the Base Station WiFi network. Name of the WiFi starts with "bs2-...".

LOGGING IN

Log into the app with the user name and password you created on the miCoach web site. Each iPad must be signed in with a different user name.

CHECK THE STATUS

Check the status indicators to make sure all connections and sensors are working.

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ABOUT THE SYSTEM

OVERVIEW

miCoach Elite represents the latest advancement in performance monitoring. The state-of-the-art system gives athletes and teams a powerful, yet easy to use tool to help them achieve and maintain peak physical performance and gain an edge on their competition.

Teams can now accurately plan, monitor, analyze and report on the performance of athletes with one integrated system.

The micoach elite Team System is designed to perform tasks that aid training and coaching staff, including:

- Provide real-time insights during training
- Track total training impact and benefits
- Simplify the collection and management of data
- Add flexibility with a highly portable system

HOW IT WORKS

miCoach Elite Team system uses state of the art sensor technologies along with compact electronics, specialized fabrics/fibers and wireless communication to provide non-invasive monitoring of athletes in real-time.

adidas brings together GPS, inertial sensors, heart rate monitoring, and other technologies along with an understanding of elite athletes and their training and developmental needs. Sophisticated algorithms process millions of data points to bring simple, actionable insights.

WHAT IT MEASURES

miCoach elite was designed to take millions of data points and boil them down to simple, intelligent feedback for coaches who want to understand how training is impacting athletes and their performance.

ABOUT THE SYSTEM

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METRICS

HEART RATE

During a training session, a coach can use the live dashboard to monitor heart rate recovery making sure not to begin the next training interval until the majority of athletes are ready.

POWER

This is a precise measure of how hard the athlete is working. Power training is widely used in cycling where it has been possible to measure with a meter on the bike. Advanced sensor technology and algorithms in the miCoach elite team system will now enable power to be used in field sports.

By combining power and heart rate, coaches now have a complete picture of how hard an athlete is working and how their body is responding to the work. This combination of metrics allows coaches to look at the overall efficiency of an athlete. Athletes that are putting out more work per heart beat are in better condition.

SPEED

By monitoring speed, a coach can see if athletes are training at the level that is required to succeed in a game. When a coach plans a speed training session, he can customize the live dashboard to view speed related data including peak speed, average speed, and number of high-intensity sprints. The ability to manage speed training carefully is essential to prevent over training and risk of injury.

CENTRAL WEB SYSTEM

ENTER YOUR ATHLETES

Create an athlete profile for each player. Set threshold values for the various metrics.

CUSTOMIZE YOUR SETTINGS

Select your metric preferences.

BUILD YOUR SCHEDULE

Add games, practice and rest days. Create training session plans and add drills.

SYNC WITH THE BASE STATION

A base station sync is done by connecting the base station to the web. A confirmation of the sync can be found at the top of the web pages.

CENTRAL WEB SYSTEM

GETTING STARTED ON THE WEB

PREPARATION

Before using the miCoach system for a training session, you must perform multiple steps via the miCoach elite web app. The app is intuitive and will guide you through the following steps.

CREATE USER ACCOUNTS

Enter profiles and set up access levels for users.

DEFINE ZONES AND LOAD WEIGHTS

Enter profiles and set up access levels for users.

CUSTOMIZE FOR YOUR CLUB

Enter profiles and set up access levels for users.

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ABOUT THE SYSTEM

METRICS

DISTANCE

The distance an athlete runs during a game or scrimmage can vary. A real-time measure of distance allows a coach to set individual or team targets for distance and ensure that all athletes meet their goals. During or at the end of a scrimmage, a coach can use the live app to check distance covered. Athletes that fall short of the target will continue to train.

ACCELERATION / DECELERATION

These measures are critical in sports where rapid change of direction is required. Understanding the rate and frequency of accelerations and decelerations is an important part of overall training load.

FIELD POSITION

This allows a coach to see where the athletes have been on the field giving insight into tactical movements of the players.

COMPONENTS OVERVIEW

BASE STATION

The Base is a portable receiver that collects data from up to 30 Cells and can transmit that data in real-time to the miCoach Elite Dash via WiFi. Data from three sessions can be stored locally on the Base.

When connected to the Internet, the Base uploads data to a team's secure web server for post-session analysis and reporting. The Base also serves as a storage and charging port for the Cells used with the Team System.

The unit is portable, rugged and weather-resistant.

SHUTTING DOWN BASE

HARD RESET

Using of Hard Reset is not recommended, only when system seems stuck and not responding to normal operation.

Press the Reset Button on back of the Base Station with a long pin.

At first, Power Button will start blinking yellow.

Reset takes several minutes.

FORCE SHUTDOWN

Using of Force Shutdown is not recommended, to use only when the system is stuck.

Press the Power Button ⏻ for 5 seconds.

Base Station will start shutting down immediately.

SHUTTING DOWN BASE

NORMAL SHUTDOWN

Normal Shutdown should always be used when you want to turn off the system.

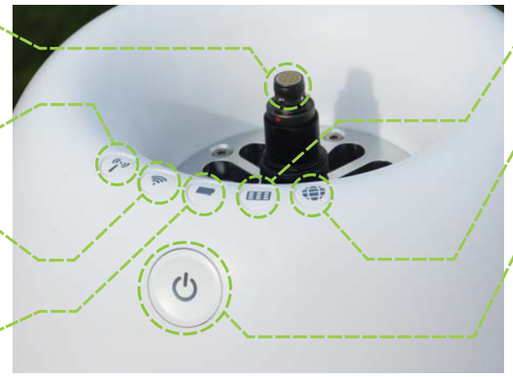
If shutdown is rejected (Power Button blinks 3 times red), you might need to wait for the training session to finish.

Short Press the Power Button ⏻, it will start blinking yellow.

Shutting down takes about a minute.

COMPONENTS OVERVIEW

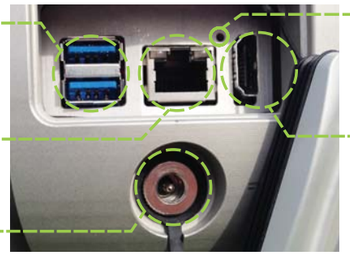
BASE STATION FRONT



COMPONENTS OVERVIEW

BASE STATION BACK AND BOTTOM

BACK SIDE



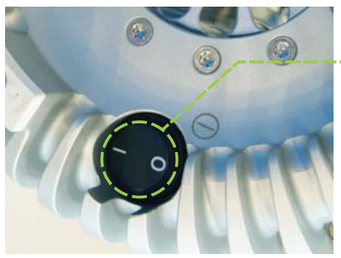
USB PORTS
For connecting Cells Chargers USB cable.

ETHERNET CABLE PORT
For connecting Ethernet cable.

POWER SUPPLY INPUT
For connecting Base Station power adapter.

RESET BUTTON
Only for the Customer Support usage.

HDMI PORT
Only for the Customer Support usage.



HARD POWER BUTTON
For turning off power completely (e.g. in Flight Mode when traveling).

BOTTOM SIDE

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BASE STATION LED'S

CELLS CHARGERS LED

OFF
DISCONNECTED
No chargers connected to the Base Station.

SOLID GREEN
2 CHARGERS
2 charger units connected to the Base Station.

SOLID RED
SYNC ERROR
An error occurred while synchronizing data from Cells. Contact Customer Support if this persists.

BLINKING GREEN
1 CHARGER
1 charger unit connected to the Base Station.

FAST BLINKING GREEN
SYNC IN PROGRESS
Data from Cells is transfered to the Base Station.

BASE STATION LED'S

PCONE ANTENNA LED

OFF

DISCONNECTED
No pCone antenna attached.

SOLID GREEN

READY
pCone antenna is attached and ready to start session.

SOLID YELLOW

SOFTWARE UPDATE
pCone antenna software update, please wait until it's finished.

SOLID RED

INVALID SOFTWARE
Invalid software version on pCone antenna, please connect Base Station to Internet.

FAST BLINKING GREEN

ONGOING SESSION
Session in progress. Data from Cells is transfered real-time to the Base Station.

FAST BLINKING YELLOW

SOFTWARE UPDATE
pCone antenna software update, please wait until it's finished.

BLINKING RED

PCONE ERROR
Please reconnect pCone antenna. Please contact Customer Suppor if this persists.

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COMPONENTS OVERVIEW

CELLS CHARGERS

CELL CHARGING INDICATOR
Yellow when charging, green when charged.

CELL SLOTS
When plugged into the slots cells are charging. Also used to transfer data via USB cable.

POWER OUTPUT
For sharing power with secondary charger.

CHARGER
For connecting secondary charger to transfer Cells data.

IPAD
For connecting iPad to charge.

BASE
For sending data from Cells to Base Station.

POWER INPUT
For connecting Cells Chargers power adapter.

POWER INDICATOR
When is green, power adapter is properly connected.

COMPONENTS OVERVIEW

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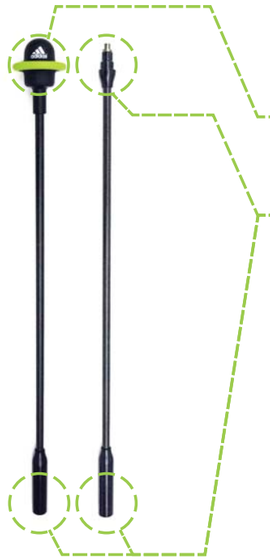
CELL

ON / OFF BUTTON
Long press for ON, and long press for OFF.

SENSOR CONNECTORS
Connectors to the t-shirt sensors, clip into the pocket of the t-shirt.

PCONE



PCONE ANTENNA
For communication with Cells.

EXTRA ROD
For extending the height of pCone antenna, for better signal reception.

BASE STATION LED'S

BASE STATION WIFI LED

OFF
WIFI IS OFF
Base Station WiFi is OFF. You cannot connect with the iPad app to the Base Station.

SOLID GREEN
WIFI IS ON
Base Station WiFi is ready to operate. You can connect to Base Station with iPad. Base Station network name starts with "bs2-...".

SOLID RED
WIFI ERROR
Base Station WiFi had a problem. Please contact Customer Support if this persists.

BASE STATION LED'S

CENTRAL WEB SYSTEM (CWS) CONNECTION LED

OFF

NO CONNECTION
No connection to CWS, you cannot synchronize data with web servers.

SOLID GREEN

READY TO SYNC
Connection with CWS established, system is ready to synchronize data with servers.

FAST BLINKING GREEN

SYNC IN PROGRESS
CWS connection active. Synchronization with web servers in progress.

BLINKING RED

CONNECTION ERROR
Limited Internet connection, CWS unreachable. Try to connect to a different Internet source, and try again. Please contact Customer Support if this persists.

COMPONENTS OVERVIEW

T-SHIRT

CELL POCKET
Pocket for a Cell.

HEART RATE SENSORS
Sensors detect and read athletes heart rate.

Each athlete is outfitted with a medium compression base layer that works with the Cell.

Specialized fibers are integrated into the base layer to transmit data to the Cell. The base layer is available in a range of sizes for optimum fit and accurate data collection. The Cell rests between the shoulder blades so it does not interfere with training or game play.

COMPONENTS OVERVIEW

T-SHIRT

SENSOR CONNECTORS

Best way to know what size to put on a player is to measure the circumference of his torso under his pectoral muscles.

If you do not have access to that measurement you can also estimate the shirt fit using height and weight. Consult the sizing chart.

FIT

The heart rate sensors on the front of the Techfit elite smart shirt must lay flat on the rib cage and not shift around as the athlete moves. This is most effectively accomplished when the smart shirt fits like a second skin.

Athletes may request a larger shirt but if the sensors do not fit flat on the chest wall, they will not collect data consistently.

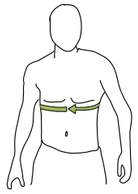
It is also important that the Techfit elite smart shirt be the base layer. The sensors must make contact with the skin to record heart rate.

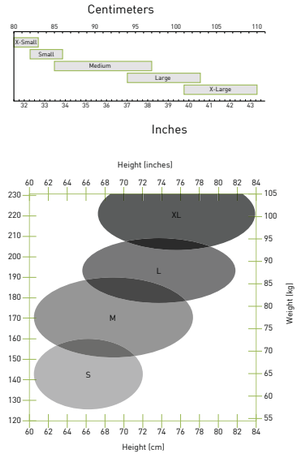
STARTUP

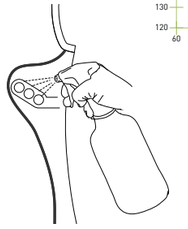
Depending on a player unique body chemistry, heart rate may be detected immediately on the Cell. However, many athletes may need a warm up period before the heart rate can be detected.

Pre wetting the sensors with tap water or electrogel can help reduce the length of the warm up period significantly.

Do not use more than fingertip-sized amount of gel to spread over the sensor. Too much will cause the sensor to slide around and give a poor signal.







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BASE STATION LED'S

BASE STATION BATTERY LED

OFF

NO CHARGING

Hard switch is on position '0', to enable power, put the hard Switch to position "I".

SOLID GREEN

DRAINING 100% - 50%

Battery is draining, the level is between 100% - 50%, or battery is fully charged.

PULSING

BATTERY CHARGING

Battery level is in accordance with the info above. Base Station power adapter is plugged in.

SOLID YELLOW

DRAINING 50% - 25%

Battery is draining, the level is between 50% - 25%.

SOLID RED

DRAINING 25% - 10%

Battery is draining, the level is between 25% - 10%.

BLINKING RED

DRAINING 10% - 0

Battery is draining, the level is lower than 10%.

FAST BLINKING RED

CHARGING ERROR

Make sure BS is in temperature between -10°C / 40°C., if it won't fix the problem, please contact Customer Support.

BASE STATION LED'S

POWER BUTTON LED

OFF

SYSTEM IS NOT STARTED
To enable power, put the hard Switch to position "I", and short press Power Button.

BLINKING GREEN

BOOTING UP
Base Station prepares the system to operate.

SOLID GREEN

BASE STATION ON
Base Station is ready to operate.

BLINKING YELLOW

SHUTTING DOWN
Base Station is closing the system.

3x BLINKS RED

ONGOING PROCESS
Rejected shutdown.
You might need to wait for the training session to finish.
If this persists please contact Customer Support.

COMPONENTS OVERVIEW

T-SHIRT

SHIRT ASSIGNMENT

A specific Techfit elite smart shirt can be assigned to a player or a different shirt can be used in each session.

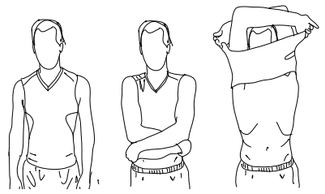
This is the kit manager's choice.There is a writable label at the back inside hem of the shirt to assign a player to a specific smart shirt or identify each garment for tracking purposes.

REMOVING THE SMART SHIRT

Since the Techfit elite smart shirt fits like a second skin, it can be more difficult to remove than a loosely fitting shirt, especially after a workout.

Do not pull from the neckline. Instead, please try one of these suggestions:

Pull up from the bottom hem of the shirt and remove, twisting the torso and shoulders as needed. Ask another player to pull the shirt over the head while pulling from the back, bottom hem.



CARE INSTRUCTIONS

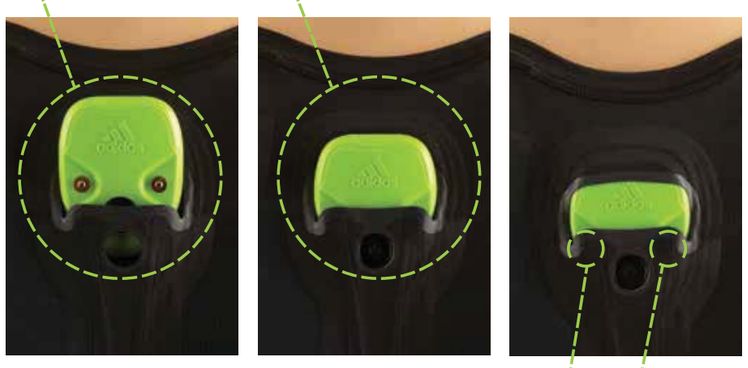
- Remove micoach elite Cell from the pocket on the back of the Techfit elite smart shirt.
- Wipe the micoach elite Cell off with a soft, dry cloth and set aside.
- Wash the Techfit elite smart shirt as soon as possible after use—at least within a few hours.
- DO NOT let it sit wet overnight.
- Machine wash with warm water, laundry detergent and hang dry.
- Do not bleach, iron the harness area or tumble dry .
- Air dry completely before packing in a bag.

CONNECTING COMPONENTS

INSERT CELL INTO T-SHIRT

INSERT CELL INTO POCKET
Insert Cell into pocket on the back of the t-shirt.

CLICK THE BUTTONS
Close the Cell in the pocket by pressing the pins.



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STARTING NEW SESSION

BASE STATION STEPS

STEP 1
Connect all components as on the "Connecting Components" tutorial.

STEP 2
Set the Hard Switch Button on bottom of Base Station to position " I "

STEP 3
Short press "Power Button" on the Base Station

STEP 4
Wait until WiFi LED is Solid Green.

IPAD STEPS

STEP 5
Connect iPad to the Base Station WiFi. Name of the Base Station WiFi starts with: "bs2-..."

STEP 6
Launch miCoach Elite application

STEP 7
Follow the instructions on iPad application.

THAT'S ALL
You are ready to launch your first training session.

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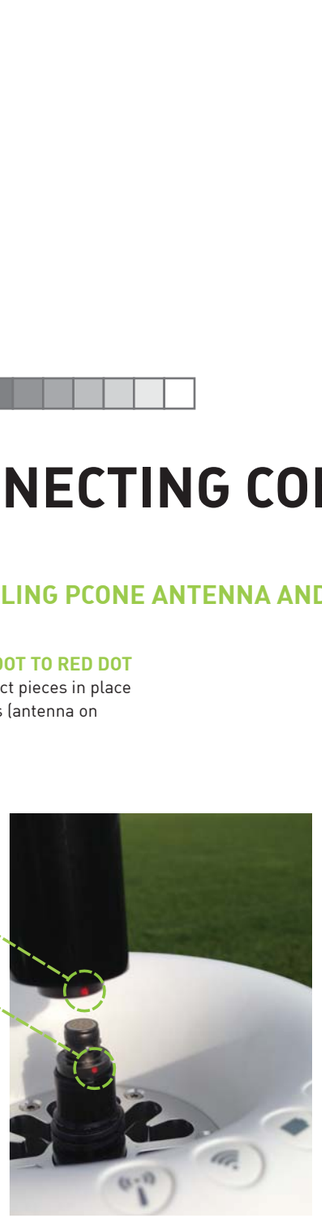
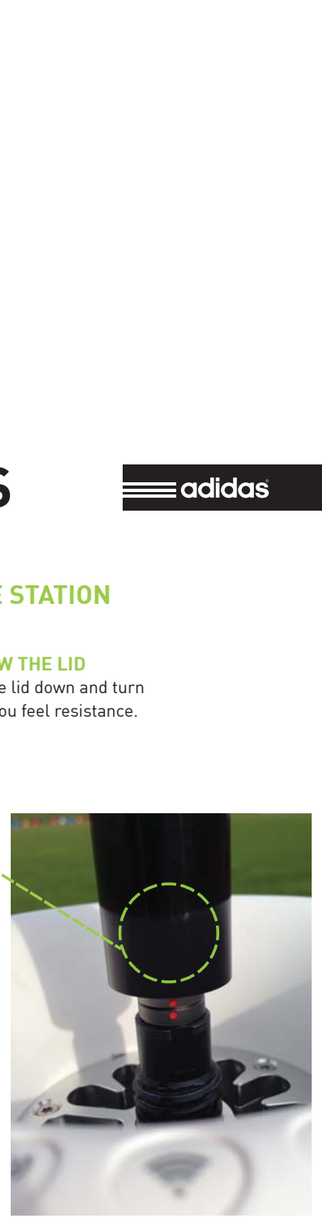
ASSEMBLING PCONE ANTENNA AND CONNECTING TO BASE STATION

RED DOT TO RED DOT
Connect pieces in place of dots (antenna on top).



SCREW THE LID
Put the lid down and turn it till you feel resistance.



INSERT CELL INTO CHARGER

PINS TO GAPS
Put the Cell into Charger, so that the pins on Cells fit to gaps on Cells Charger. Press the Cell into Cell Charger until you feel the Click.

CONNECTION INDICATOR
If Cell is properly connected, the light should appear. Green, when Cell is fully charged, amber, when Cell is charging.

CONNECTING CELL CHARGERS TOGETHER

POWER SOURCE
Connect OUT slot with IN slot in the second Charger, using the provided cable. For sharing power.

DATA TRANSFER
Connect CHARGER slot with BASE slot in the second Charger, using the provided cable. Serialize USB connection.

CONNECTING CHARGERS TO BASE STATION

SYNCING DATA
Connect BASE slot in Cells Charger with the USB slot on Base Station with the provided cable.

Specifications

Base Station		**Charger**	**Player_Cell**
Power	Input 19Vdc (+20%, -15%) 5A max	Input 19Vdc (+20%, -15%) 5A max	Input 5Vdc(+/- 5%) 0.5A max
	7.2V 8.4Ah 126Wh Lithium Ion Rechargeable Battery		3.7Vdc 0.8Ah 3.0Wh Lithium Ion Rechargeable Battery
RF Protocol	IEEE 802.15.4		IEEE 802.15.4
Frequency (MHz)	2400		2400
Technology	ZigBee®		ZigBee®
Wireless	IEEE 802.11 a / b / g / n		
Bands	Dual Band 2.4GHz / 5GHz		
Operating Frequency Range (MHz)	2402 - 2472		
	5170 - 5710 *		
Security	64 / 128 - bits WEP, WPA, WPA2, 802.1x		
Operating Temperature Range	0 °C to 40 °C	0 °C to 40 °C	0 °C to 40 °C
Input Power Requirements	AC Input 100 - 240Vac 50 / 60Hz 1.5A	AC Input 100 - 240Vac 50 / 60Hz 1.5A	
	DC Output 19.5Vdc 4.47A	19.5Vdc 4.47A	

Note: * Some Frequency Channels will be closed due to individual country regulations