miCoach Pacer USER MANUAL

Please note: this is a DRAFT of the miCoach Pacer user manual.
All designs and images are work in progress and subject to change!

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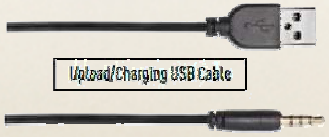
miCoach Pacer Bundle

Pacer Device

Heart Rate Monitor

Stride Sensor (SDM)



Textile Transmitter Belt

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PRODUCT DESCRIPTION

- Real time audible coaching based on physiological data received from the miCoach Heart Rate Monitor and miCoach Stride Sensor
- Stores planned personalised workouts and recorded data for each
- Web Synchronizer function allows personalised workouts to be downloaded from miCoach.com
- All recorded data can be uploaded to miCoach.com for detailed analysis
- MP3 Player compatibility
- The miCoach Pacer is a wireless receiving device that provides real time coaching for runners of all ability levels
- Connects to any PC or MAC with access to the internet to upload workout data and download additional workouts
- Attaches to clothing via a clip on the back of the unit.
- Small, lightweight, and rechargeable
- Keeps track of users performance parameters, such as heart rate, pace, and total distance
- Interfaces with the miCoach website, providing an easy and intuitive interface for workout uploads, performance evaluations based on data downloads, and preference settings

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Pacer Functionality

Slide Switch	Located on top of the unit, this switch selects between the 3 modes of operation: **Off**, **Free** and **miCoach**. During the workout, the Free switch also is a mute option.
Select Button	Located on top of the unit, this button selects one of the workouts stored on the device.
Running Man	Located on the front left of the unit; this button starts and pauses the selected workout.
Info Button	Located in the middle on the unit. This button gives the user an immediate update of up to 8 selectable performance measurements.
Volume Button	Located on the front right of the unit. This button controls the coaching volume the device will output to the headphones. This functionality does not control external device volume.

- Are there recommended locations where the Pacer should be worn for comfort, accessibility, and RF performance?

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Workout with Pacer – miCoach mode

1. Select miCoach

2. Sensor lights flash while searching (red)

3. Lights turn solid green when found

4. Select workout (1. 2. 3...)

5. Hit "START" to begin workout

•Picture → How to pause or end a work-out?
User presses the start button

There are four easy steps to get started with real time coaching. After you have chosen your goal on miCoach.com and downloaded your personalised workout routine to the device, you simply have to:

- Select miCoach to set the device to the real time coaching functionality
- The device will automatically search for your Heart Rate Monitor and Stride Sensor and confirm the pairing with a solid green light.
- You can now select your next preferred workout: just press Start to begin workout
- Hit Start to begin workout

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Workout with Pacer – FREE mode

1. Select FREE

Solid color L.E.D. green

2. Sensor lights flash while searching (red)

3. Lights turn solid green when found

•Picture → How to pause or end a work-out?
User presses the start button

4. Hit "START" to begin workout

There is also the possibility to use the miCoach Pacer as a data logging device. Simply set the Pacer to „free“ and together with the Heart Rate Monitor and Stride Sensor, tracks your Heart Rate, Speed and Distance Data and gives you updates regarding Pacer/Calories burned on demand.

Workout with Pacer – FEEDBACK INDICATORS

Lights go out after 10 seconds

Lights come back on at touch of any button

Sensor light turns to solid RED if connection is lost

-Solid Green means connected to HRM and SDM
-Solid Red means lost connection to HRM and SDM
-Flashing Red means searching for HRM and SDM
-Flashing Green means paused
-Blue means connected to computer
-Power Button flashing Red means low battery
-Flashing Blue/Red/Blue/Red means charging
-Flashing Blue/Green/Blue/Green means fully charged

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Workout with Pacer – SMART OFF

SMART OFF

Switch to OFF gives user a narrative confirmation:

Example:

"YOUR WORKOUT
HAS BEEN SAVED"

TIME: 23.12

DISTANCE: 3.01 miles

PACE: 8 minute mile

AVG. Heart Rate: 149 bpm

All collected data will be saved automatically when switching off the device

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Workout with Pacer – INTERACTION

PC Connection
The Pacer unit connects to a PC or MAC via the included USB cable. Users connect to the miCoach website to upload workout statistics, download new workouts, and receive software updates. Data is loaded on and off the unit via the USB Mass Storage Class Protocols. The USB connection recharges the lithium battery.

Interaction / Communication: miCoach.com – Product
The user is required to install a single desktop application which will be able to then identify and communicate with miCoach supported hardware devices. The sychroniser location site is found at : www.micoach.com/start/softwaredownloads

Full bi-directional synchronization of sport data (including training plans, workout results, user profile and settings) via USB cable

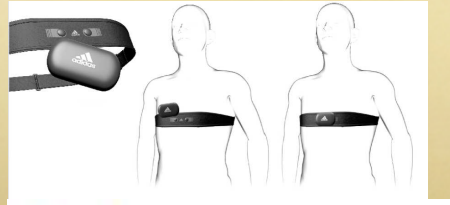
The USB connection cable provided can be used to synchronize (Up-/Download) workout information with miCoach.com and at the same time charges the battery of the Pacer device.

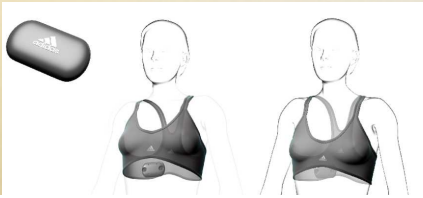
HEART RATE MONITOR

HRM

Power On: RF transmission automatically activates when heart rate monitor is clipped on to a compatible strap and is fastened around chest.

Power Off: HRM automatically stops transmitting and returns to ultra-low power mode two minutes after removal of the body.





Option 1:
Clip the Heart Rate Monitor on to the Textile Transmitter Belt.

Option 2:
The Heart Rate Monitor can also be used with compatible adidas apparel.

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STRIDE SENSOR

SDM

Power On/Off: The SDM is always on and transmits your workout data when you exercise.

Operational Characteristics

Shoe Attachment: The SDM is attached securely to the laces of any running shoe using the supplied clip, or inserted into the mid-sole cavity of 80 % of adidas running shoe range in 2010.

•On the Stride Sensor page, it would be good to clearly indicate which direction of the SDM is facing forward (users will always ask that question), and that the SDM goes in with the miCoach logo facing up when installed in-shoe. It's also worth stressing that the SDM should be secured well when used on the laces to get best accuracy and so it does not slip out while running.

Option 1:
Clip on your shoe

Option 2:
Place the Stride Sensor in to the mid-sole cavity in your compatible adidas footwear.

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CALIBRATION OF STRIDE SENSOR

Stride sensor calibration
The accuracy of the stride sensor will be >95% accuracy "out of the box" for a majority of users. Some users with certain stride characteristics may experience lower accuracy but this will improve once a simple calibration procedure is performed. The SDM provides >98% accuracy after calibration.

Additional calibration can be done on miCoach.com.

BATTERY INFO - PACER

Pacer
Non detachable rechargeable 125mAh lithium polymer battery

Battery and power
Charging via USB
Battery charged in 2 hours

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BATTERY INFO – HEART RATE MONITOR

Heart Rate Monitor

Replaceable CR2032 lithium coin cell battery

→ Open 4 screws of the back plate

The Heart Rate Monitor does not need to be re-paired after battery replacement.

Replacing the Battery on the Heart Rate Monitor

1. Use a small Philips screwdriver to remove the four screws on the back of the module.
2. Remove the cover and old battery. Do not use a sharp object to pry out the battery.
3. Wait 1 minute, or immediately place the old battery into the battery compartment upside down for approximately 10 seconds and remove it again promptly. This shorts the battery contacts and discharges the capacitors on the circuit board, to permit a fresh restart when the new battery is inserted.
4. Insert a new battery into the compartment, placing the positive side facing outward.
5. Be careful not to lose or damage the o-ring gasket.
6. Replace the door and screws. Do not over tighten the screws.

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BATTERY INFO – STRIDE SENSOR

Stride Sensor
Replaceable CR2032 lithium coin cell battery
→ Twist and turn the back plate

Simply push down and twist the back plate to open the SDM (see red arrow)

The stride sensor does not need to be re-paired after battery replacement.

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PAIRING HEART RATE MONITOR and PACER

Every device in the pacer bundle is already paired. The Heart Rate Monitor in the Pacer Bundle is pre-paired with the pacer device.

The HRM must be "paired" with an ANT+™ enabled receiver device such as miCoach Pacer.

Repairing Process
Pressing & holding the center and workout button at the same time while Pacer is off (TBD)

- Notes on pairing: The HRM must be active in order to pair it to the Pacer – instruct users to put it on the chest to activate it. The SDM is always active. Mark can confirm, but I presume both sensors must be paired at the same time (if only one sensor is present and active, only it will be paired?).

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Pacer – CONSUMER JOURNEY – Prior to workout

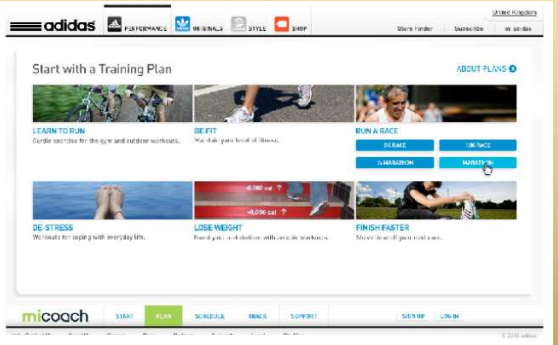
1

On the home page www.micoach.com the user is invited to explore all miCoach has to offer.

2

Log in and get directed to your personalised space within miCoach.com.

3



Choose a plan that suits your goals.

4

Connect your miCoach Pacer to your MAC or PC and download your Personalized workouts.

All you have to do is download a small synchronisation application and install it.
The next time you connect your miCoach device, it will be recognized automatically.

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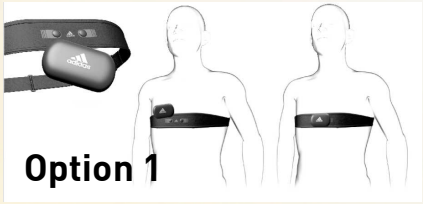
Pacer – CONSUMER JOURNEY – get ready for workout

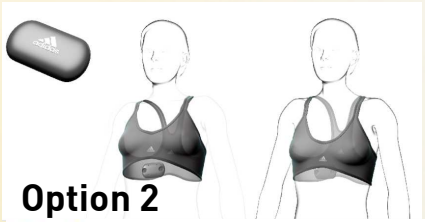
SDM

Option 1:
Clip on your shoe

Option 2:
Place the Stride Sensor in to the mid-sole cavity in your compatible adidas footwear.

HRM





Option 1:
Clip the Heart Rate Monitor on to the Textile Transmitter Belt.

Option 2:
The Heart Rate Monitor can also be used with compatible adidas apparel.

SDM and HRM are sending accuarte data to miCoach Pacer via 2.4 GHZ

Real Time Coaching starts now.

Pacer – CONSUMER JOURNEY – After the workout

1

Once you have finished your workout you can upload the collected data to miCoach.com via USB

2

You'll see everything that's important about your workout: total time, distance, calories, time per zone, and interactive graphs of heart rate, pace, and stride rate. If you did a heart rate workout, miCoach will show you what percentage of the workout you stayed in the correct zone, almost like a high score!

See your entire workout in a glance or slide the Analysis Boundaries to study an interesting section. Overlay charts to compare two stats like heart rate and pace simultaneously.

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TECHNICAL SPECIFICATION MICOACH PACER

General Specifications

Size:	56 mm x 41 mm x 16.75 mm
Weight:	22.9g
Attachment Method:	Clips to workout apparel or MP3 holder via clip on back of unit
User Interface:	4 buttons (3 front, one top), 1 Slide switch (top)
Audio Interface:	1/8" stereo headphone jacks (TRS connector)
Power:	Rechargeable 125mAh lithium polymer battery
Battery Life:	10 hours on before recharging
Sensor Communication link:	ANT+TM protocol to HRM and SDM
RF Frequency:	2.4GHZ
Sensor Com. Range:	>2.5 m
Data Received:	Averaged BPM, and stride rate data from ANT+TM transmitter
PC Connection:	1/8" TRS to USB series "A" connection (cord included)
Operating temperature:	-15 to 40 C
Non operating temperature:	<-18 or >45C
Relative humidity:	10 – 85 % non condensing
Maximum operating altitude:	TBD

Battery and power
Charging via USB
Battery charged in 2 hours

Note - Consumer Facing info:

be a bit more selective on what needs to go into technical specs in the user doc.

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TECHNICAL SPECIFICATION MICOACH HRM

HRM Module General Specifications

Ref Size:	63 mm (L) x 38 mm (W) x 10.5 mm (H)
Weight:	19.5 g (no strap)
User-interface:	Auto on/off
Power:	user-replaceable CR2032 lithium battery
Battery life:	>1.000 hours active life (2.8 years @ 1 hr/day usage at 20oC)
Communication link:	ANT+™ protocol
RF frequency:	2.4 GHz
Communication Range:	> 2.5 m
Water Resistance :	1m

*The adidas HRM is not designed to treat or diagnose any medical condition

Note - Consumer Facing info:

be a bit more selective on what needs to go into technical specs in the user doc.

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TECHNICAL SPECIFICATION MICOACH SDM

General Specifications

Ref In-Shoe Size:	34 mm (L) x 23 mm (W) x 8 mm (H)
Total In-Shoe Weight:	<8 g (including battery)
Ref Size with Shoe Clip:	45 mm (L) x 29 mm (W) x 13 mm (H)
Total Weight with Clip:	<9 g (including battery)
Foot Pod Attachment Method:	Attached to shoe using patented one-piece clip.
User-interface:	Always-on (no buttons or LED)
Power:	user-replaceable CR2032 lithium battery
Battery life:	>6 months (at 20oC) *extreme cold can effect battery life*
Battery low power indication	1 month prior
Communication link:	ANT+™ protocol
RF frequency:	2.4 GHz (unable to transmit in water environment)
Communication Range:	> 2.5 m (dependent on receiver)
Message Rate:	2 Hz
Regulatory compliance	FCC, IC, CE, ROHS
Sensor Technology:	Dynastream patented SpeedMax technology
Calibrated speed/dist accuracy:	Walk 97%, Jog 98%, Run 97%: median accuracy
Uncalibrated speed/dist accuracy:	Walk 95%, Jog 95%, Run 95%: median accuracy
Tested Speed Range:	3.6 km/hr to 19.8 km/hr (2.2 mph to 12.3 mph)
Tested Pace Range:	16:40 min/km to 3:00 min/km (26:50 min/mi to 4:50 min/mi)
Instantaneous cadence accuracy:	+/- 1 stride/min
Sensor Accuracy Range:	0oC to +40oC
Water resistance:	1m

Note - Consumer Facing info:

be a bit more selective on what needs to go into technical specs in the user doc.

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TECHNICAL SPEC MICOACH TEXTILE TRANSMITTER STRAP

Product Summary

Textile Transmitter Strap is a soft, flexible strap that is worn around the chest and must be used in conjunction with the HRM device to collect accurate heart rate data.

General Specifications

Construction:	Seamless press and bond design
Fabric Material:	EUROJERSEY Sensitive fabric. PA and EA composition. Black
Electrode:	Proprietary conductive material
Snap Life Expectancy:	At least 800 snap on/off cycles
Snap Material:	Stainless Steel
Washing:	Hand rinse at 30 degrees Celsius. Sustains at least 30 rinses.
Weight:	approximately 50g
Sizing:	One size, adjustable: 580-840mm +/10mm (Medium – XL) Torso size 29 – 39 inches

Note - Consumer Facing info:

be a bit more selective on what needs to go into technical specs in the user doc.

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STATEMENTS

As a company, adidas is committed to sustainable business practices, which are aimed to preserve, protect and improve the quality of the environment. We apply these to product technologies, design and the selection of the materials used in our products. Adhering to corresponding environmental laws, directives and guidelinesis a core element of our sustainability principles. Since the miCoach concept is equipped with electronic components, we will ensure that it complies with actual or planned directives and laws which are mandatory for electronic products and may require specific measures regarding labeling, collection and recycling.

CE

FCC

"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 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"

Note: If not disposed of properly, batteries c
Protect the enviroment by taking exhausted batteries to a

"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."

"Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment".

"This product does not contain any user-serviceable parts. Repairs should only be made by an authorized adidas miCoach center. **Unauthorized repairs or modifications could result in permanent damage to the equipment, and void your warranty and your authority to operate this device under Part 15 regulations."**

Canadian Conformity

This Category II radio-communication device complies with Industry Canada Standard RSS-310.
Ce dispositif de radio-communication de catégorie II respecte la norme CNR-310 d'Industrie Canada.

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WARRANTY INFORMATION

TBD.

TIPS & TROUBLESHOOTING

TBD.

SERVICE & SUPPORT

TBD.

SAVETY & CLEANING

TBD.

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