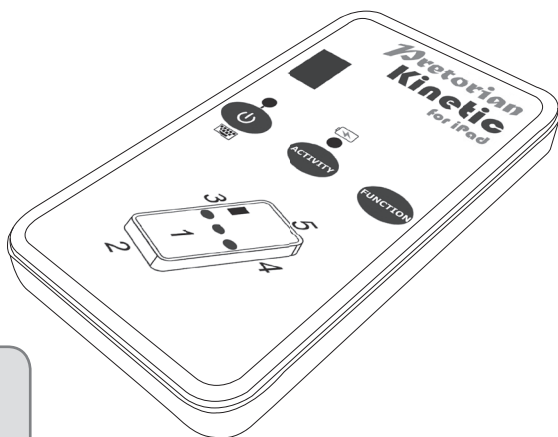# Pretorian
TECHNOLOGIES LTD.

INSTRUCTIONS
KINETIC for iPad

Pack Contents
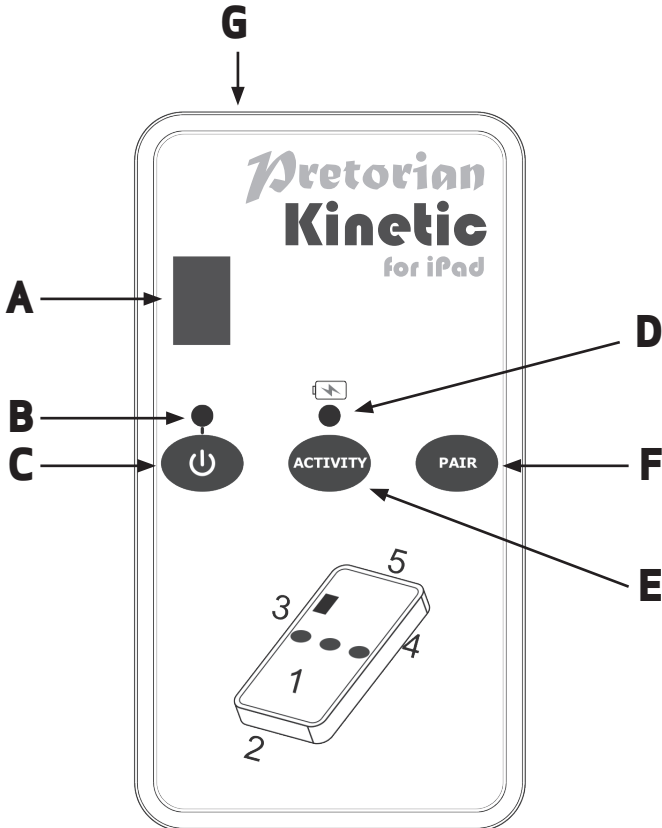**Carefully check the contents of the box, which are:**

Kinetic for iPad unit
USB charging cable
These instructions

Product Description

KINETIC for iPad is a fun kinesthetic learning aid which will engage users of all ages and abilities. It is able to determine its orientation in free space and also detect being tapped or tilted, allowing many kinesthetic learning activities to be devised. For example, the unit may be placed inside a soft play cube (available separately) to allow different outcomes as the user turns it from face to face. It may also operate as a soft switch (soft outer shell also available separately), ideal for switches in sensory rooms. When KINETIC is placed inside a waterproof box it may be used as a floating switch, using its tilt feature to detect a significant movement away from its normal floating position. KINETIC is simple to set up and loaded with features but to ensure you get the best experience from it, please take time to read this instruction booklet.

Features

- **Many built-in activities- makes KINETIC highly versatile.**
- **Dice, Dice-as-a-Switch, Find Me and Find-Me-Sequence activities for soft play cube.**
- **Tap activity for use as a soft switch.**
- **Tilt activity for use as a floating switch.**
- **Pairs directly with your iPad/iPhone/iPod without PIN entry.**
- **20m (64') operating range.**
- **Integral lithium-ion rechargeable battery.**
- **Charged from any USB socket.**

Compatibility

KINETIC is compatible with the following Apple products:

iPad- all models
iPod Touch 3rd generation onwards
iPhone 3GS onwards

KINETIC is also compatible with most computers and laptops which have a Bluetooth capability, such as MacBooks. Android tablets vary enormously in specification so compatibility with these products is dependent upon the specific tablet. Please contact Pretorian Technologies or your local distributor for guidance. When using KINETIC with products other than iPad/iPhone/iPod, there are some features of KINETIC which may not function- in particular the on-screen keyboard button.

Throughout these instructions, all references to iPad should be taken as meaning any of the above Apple products.

Charging your KINETIC

Ensure that the internal battery is fully charged by plugging the charging cable into the USB mini socket [G] and then into any USB port, for example on a PC, Mac or a wall charging unit. The charging LED [D] will illuminate green to show that charging is taking place. Once charged, the charging light is extinguished.

If the charge in the battery begins to run low the charging LED [D] will begin to flash red. This is an indication that it should be charged soon.

Turning the unit on and off

Press the on/off button [C] briefly to turn the unit on. The power LED [B] lights. To turn it off again, press and hold the on/off button until the power LED is extinguished. Note that the unit automatically powers down to conserve battery life after one hour of non-use. Press the power button briefly again to awaken it.

Connecting to your iPad/iPhone/iPod

Ensure that KINETIC is powered on by observing the power LED [B]. If it is asleep, press the on/off button [C] briefly. The LED display [A] will begin to show a rotating pattern to indicate that it is searching for a device to connect with. If the rotating pattern is extinguished after a few seconds, refer to the 'Re-Connecting your KINETIC' section of these instructions.

Go to the Bluetooth menu on your iPad (Settings ➤ Bluetooth). First of all ensure Bluetooth is turned on using the slider at the top of the screen.

After a few seconds KINETIC should appear as a 'discoverable' device. It will appear something similar to:

Pretorian-V68.0-ABC1

Tap on the name and the pairing process with begin. Typically it takes around 20 seconds to connect, after which the iPad will state that it is 'Connected'.

Choosing an Activity

Before you can begin using **KINETIC**, you need to choose an Activity. There are six Activities in all, and they can be categorised as follows:

Number	Activity	Category
1	Dice	Soft Play Cube
2	Dice-as-a-Switch	Soft Play Cube
3	Find-Me	Soft Play Cube
4	Find-Me-Sequence	Soft Play Cube
5	Tilt	Soft Play Cube or Floating Switch
6	Tap/ Catch	Soft Switch for computer or toy/appliance control

Beginning with the LED display [A] off, press the Activity button [E] and the display will show the current Activity. To change it, press the Activity button repeatedly until you see the required setting on the LED display. A table of settings is provided on the rear of **KINETIC**. The display is extinguished approximately four seconds after the last press of the Activity button and the setting is saved.

Although the LED display will remain off in normal use to conserve battery power, it should be noted that the decimal point blinks whenever the unit is triggered. This is useful when first setting up the unit.

Note that all settings are preserved in memory even if the battery is completely flattened.

The following is a summary of how each Activity operates. Each has at least one link to a video which demonstrates that particular Activity.

Activity 1
Dice
Each time the soft play cube into which **KINETIC** is inserted is turned to a new face, it sends data to the iPad to indicate which face is now uppermost. This may be used with Smooth Talker AAC app from Pretorian to play a particular message, depending which face is uppermost. By way of example, faces 1-6 could have pictures of farmyard animals inserted and messages 1-6 could play corresponding animal sounds. Or attach six different textures to the cube faces and have a message to describe each. Or simply attach dots and use it as a speaking dice! [QR1 on printed version- link on web version]

Activity 2
Dice-as-a-Switch
Each time the soft play cube into which **KINETIC** is inserted is turned to a new face, it sends a switch activation to the iPad, just as if a normal accessible switch had been pressed. This may be used to scan or select an item, for example, to play a piece of music or even to take a photograph. The exact function being sent to the iPad is set by the Function setting- see later.

[QR2 on printed version- link on web version]

Activity 3
Find-Me
KINETIC triggers only when face number 1 of the soft play cube is turned uppermost- the other five faces having no effect. This enables the device to be used as a 'find-me' game. For example, insert differently coloured cards into the pockets on each face of the soft play cube and then ask the user to find the colour blue, which has been deliberately inserted into the pocket on face number 1. If the user turns up any other face, nothing occurs and they are asked to try again. Only when face number 1 is turned uppermost does **KINETIC** trigger. Again, the iPad can be made to play a piece of music, play a message in the Smooth Talker AAC app or take a photo. If you are using iOS Switch Control, it may also be used to select an item. Generally speaking, the outcome will be some kind of reward or reinforcement.

[QR3 on printed version- link on web version]

Activity 4
Find-Me-Sequence

This activity builds on the Find-Me activity and can be a progressive step for users who have mastered Find-Me. Find-Me-Sequence triggers when face number 1 is turned uppermost and then when face 2, 3, 4, 5 and 6 are turned up one by one in turn, such that the user must find the items in the correct sequence. Turning up any face which is out of sequence will not result in any output. The teacher/therapist/carer prepares a list of the items depicted on each of the six sides in the correct order 1-6 and then asks for them in turn. Each time the user turns up the correct face, they get a reward or reinforcement from the receiving device. Note that the sequence can be set back to 1 at any time by pressing the Activity/Function button briefly.

[QR4 on printed version- link on web version]

Activity 5
Tilt

This Activity can find application in many ways. An output is triggered whenever KINETIC is tilted off its normal position by an angle of more than 30°. Once triggered, it will not output data again for at least one second to prevent multiple triggers occurring. It is important that KINETIC is placed with face 1 uppermost (the face which has the buttons and display). If placed inside the soft play cube the unit will detect the cube being tilted without the need for it to be turned to a new face (unlike Dice-as-a-Switch Activity). This can be beneficial for users who do not have the motor skills or strength to easily turn a cube onto a new face. Alternatively, if KINETIC is placed inside a waterproof box* and allowed to float in a body of water such as a hydrotherapy pool, it may be used as a switch if it is tapped or struck.

[QR5 on printed version- link on web version]

Activity 6
Tap/Catch

This Activity allows KINETIC to be used as a switch simply by tapping it. If the unit is placed in a cushion or the (separately available) soft switch shell, simply tapping its surface is sufficient to trigger it. Alternatively, for higher motor skill users, it can be used to detect a catch or the cushion striking a hard surface[+]. Once triggered, it will not output data again for at least one second to prevent multiple triggers occurring. As before, the iPad can be made to play a piece of music, play a message in the Smooth Talker AAC app or take a photo. If you are using iOS Switch Control, it may also be used to scan or select an item.

[QR6 on printed version- link on web version]

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*KINETIC is not a waterproof product. If using it on or near water, you are responsible for placing it in an outer, waterproof enclosure. Water damage is excluded from the product warranty. Placing the unit in a grip-seal polythene bag and then in a high quality waterproof food container with a rubber seal between base and lid is recommended, although it is advisable to test this configuration for water ingress before placing the product in it.

[+]KINETIC is not a shock resistant product. It is essential that it is placed in an adequately padded shell to protect it from damage due to it being stuck or it striking a surface.

Setting the Function

The device's Function setting defines the character or event that is sent to the iPad when triggered. To view the current Function setting, press the Function button [F] until the LED display [A] illuminates. The current Function setting is now shown on the display. Note that the display blinks when setting the Function to help differentiate it from setting the Activity. Refer to the table below for a full list of available Function settings.

To change the Function, press Function repeatedly until the required setting is shown on the display. A table of settings is also provided on the rear of KINETIC. The display is extinguished approximately four seconds after the last press of the Activity button and the setting is saved.

There are different considerations for the Function settings depending on the Activity and the receiving SimplyWorks device you are using. The following describes some of these considerations:

Dice

In Dice Activity, **KINETIC** always outputs numbers 1-6 to correspond to faces 1-6, irrespective of the Function setting. This enables it to interface directly with the Smooth Talker AAC app and other forthcoming Pretorian apps. Therefore you do not need to set up the Function setting when in Dice Activity.

Dice-as-a-Switch, Find-Me, Find-Me-Sequence, Tilt, Tap/Catch

The choice of Function depends largely on what you wish to achieve when **KINETIC** is triggered. It is almost impossible to describe all the possibilities, but here are a few popular configurations:

- If you are using switch adapted apps, most use Space/Enter or ~1/~3 to scan and select.

- If you would like to play music when **KINETIC** is triggered, this may be achieved in several ways. You can simply use Play/Pause to toggle the music on and off each time **KINETIC** is triggered, or you could use the Timed Play settings to give a burst of music of a pre-determined length. Note that Timed Play can be cancelled by pressing either Activity or Function during playback.

- iOS Switch Control may also be used and it is recommended that Space and Enter be used as the switch settings, although other keyboard settings may equally be used. You should avoid using -1 and -3 for Switch Control since they begin with the same character. Media functions cannot be used for iOS Switch Control.

- Using the camera is an ideal way to engage children, whether it is still or video photography. The Volume Up setting acts as the shutter release for still photography and also for Record/Pause for video.

Function Setting	Class	Function	Notes
0	Keyboard	Numeral 0	Used in Smooth Talker AAC app to play specific messages
1	Keyboard	Numeral 1	
2	Keyboard	Numeral 2	
3	Keyboard	Numeral 3	
4	Keyboard	Numeral 4	
5	Keyboard	Numeral 5	
6	Keyboard	Numeral 6	
7	Keyboard	Space	Widely used in switch adapted apps (including Smooth Talker AAC). May also be used in iOS Switch Control for scanning, selecting etc.
8	Keyboard	Enter	
9	Keyboard	~1	
A	Keyboard	~3	
B	Keyboard	Tab	
C	Media	Play/Pause	Toggles music on/off
D	Media	Skip Forward	Select tracks
E	Media	Skip Back	
F	Media	Volume Up	Also used for camera shutter/ video record
G	Media	Volume Down	
H	Media	Mute	
J	Media	Timed Play 5s	Gives a timed period of music. Often used as a reward. Note music must be paused before these functions are triggered. May be cancelled by pressing either Function or Activity
L	Media	Timed Play 10s	
P	Media	Timed Play 20s	
R	Media	Timed Play 30s	

Placing KINETIC in a soft play shape

To get the most from **KINETIC**, you will most likely place it in some sort of soft play shape. Pretorian Technologies provides a soft play cube and a soft switch shell as accessories for **KINETIC** although the product will work in any suitably adapted enclosure. The most important thing is to ensure that **KINETIC**'s sides remain parallel with all flat sides of the outer enclosure, otherwise it will not be able to determine its orientation. If you are using Pretorian's soft play shapes there are recesses in the foam to accommodate the product and keep it parallel. If you are not using Pretorian accessories, we recommend you either produce a similar recess in the foam or provide some other means to keep it in position.

If using Dice, Find-Me or Find-Me-Sequence Activities, it is also vitally important to know the number of each face of the dice. On the front panel of **KINETIC** a picture of the product shows the face numbers of the first five sides, face number 6 being the back of the product (opposite side to the display and buttons). Note that as with a conventional dice, the sum of opposing sides is 7. When you insert **KINETIC** into the soft play shape, it is essential that you note the number of each outer face so that you know which pocket to insert each visual prompt into.

On-Screen Keyboard

Because **KINETIC** appears to the iPad as a keyboard, the iPad automatically turns off the on-screen keyboard. This can cause difficulties in some apps which require a typed input. To overcome this, **KINETIC** allows you to deploy the on-screen keyboard manually whenever a text box is selected. Simply press the Power button[C] **briefly** and the keyboard will be deployed. To turn it off again, **briefly** press the Power button again.

Re-Connecting KINETIC

If, when waking up your **KINETIC**, the rotating pattern appears only briefly and is then extinguished, this indicates that the unit is already connected to another iPad in the vicinity. In this case you will need to 'forget' this connection before you can re-connect with another unit.

Go to the Bluetooth menu on the iPad with which **KINETIC** is connected (Settings ➔ Bluetooth) and tap the blue information icon adjacent to the unit name, then tap on 'Forget this device'. At this point **KINETIC** is no longer connected and will appear as a 'discoverable' device on all iPads in the vicinity. You can then re-connect to the iPad of your choice.

Battery Life and Battery Charging

A fully charged battery gives approximately 50 hours of use. When the battery is getting low, the charging LED [D] begins to blink red. This is an indication that you should charge the battery soon.

Plug the charging cable into the charging socket [G] and then into a USB socket on a computer or wall charger. The charging LED will be illuminated green. Once charging is complete (a matter of a few hours if fully discharged) the charging LED will be extinguished. You can then unplug the cable.

Should you mislay the charging cable, replacements can be purchased by asking your local electrical retailer for a camera connection lead. It has a USB type A plug at one end and a mini-USB plug at the other.

Note that KINETIC plugs into a computer USB port for charging purposes only and no functional connection is made between the two devices.

Maintenance

Your **KINETIC** has no user serviceable parts. Should repair become necessary the unit should be returned to Pretorian Technologies or an authorised distributor. **KINETIC** contains a lithium ion battery that isn't replaceable by the user. Although the unit uses the very latest battery technology, it may eventually need to be replaced. Please return the unit to Pretorian Technologies for such replacement.

Disposal of batteries is often subject to local laws. Please consult your local authorities for information relating to your locale. Never dispose of a battery in fire.

Troubleshooting

In your **KINETIC** doesn't operate correctly please use the following guide to determine the cause. If, after following this guide, your unit still does not operate as you expect, please contact your supplier or email Pretorian for support before returning it.

Symptom	Possible Cause/ Remedy
My **KINETIC** is not discoverable on my iPad.	• Ensure battery is charged • Ensure unit is awake by pressing Power button • Unit may be connected to another iPad which is in range. Use 'forget this device' in Bluetooth menu of the device to which it is connected to make unit available again.
My **KINETIC** has been connected to this iPad but won't connect now.	• Re-connection should be automatic but if **KINETIC** has been paired with another iPad in the meantime, the connection is lost. Use 'forget this device' and then re-connect.
I am using **KINETIC** in Dice Activity but all the messages are in the wrong order.	• The unit has not been inserted into the soft play cube in the correct orientation. Refer to the orientation guide on the front panel of **KINETIC** and ensure that the visual prompts correspond to each of the faces 1-6.
I am using **KINETIC** in Find-Me or Find-Me-Sequence Activity but the unit triggers on the wrong face.	• The unit has not been inserted into the soft play cube in the correct orientation. Refer to the orientation guide on the front panel of KINETIC and ensure that the visual prompts correspond to each of the faces 1-6.
I am using **KINETIC** in Dice-as-a-Switch/ Tilt/ Tap Activity but nothing happens when the unit is triggered.	• The Function is not set correctly for the task you wish the unit to carry out. Please refer to 'Setting the Function' for more details.
Sometimes my **KINETIC** isn't triggered when the soft play cube is turned onto a new face.	• Ensure that the surface that the soft play cube rests upon is flat. If the cube remains tilted when resting on the surface, it may be unable to detect that its status has changed.
I'm using Tap Activity but sometimes the unit doesn't trigger when tapped.	• Try to increase the mechanical 'coupling' between the tap source and the unit by reducing the amount of padding in the cushion or using stiffer padding.

Warranty

Your **KINETIC** is warranted against defects in manufacture and component failure. The unit is designed for domestic and educational applications only. Use outside these areas will invalidate the warranty. Unauthorised repair or modification, mechanical abuse, immersion in any liquid or connection to incompatible equipment will also invalidate the warranty.

The Apple brand name and iOS trademark are used for identification purposes only and are acknowledged.

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