



providing pinpoint accuracy



USERS MANUAL

TABLE OF CONTENTS

WELCOME	3
Important Operator Instructions	3
Unpacking	3
Getting acquainted with your system	4
Smart Pins	4
Pinpoint Units	7
Smartpin Gang Charger	8
Batteries	9
Pinpoint Unit Gang Charger	9
Preparing for use	10
Charging the Smartpin batteries	10
Assemble Smartpins	11
Charging the Pinpoint Unit batteries	12
Testing and Installation	13
System Maintenance	13
Pinpoint Maintenance	13
SmartPin Maintenance	14
Changing Pin Address	16
Changing Batteries At the “Green”	17
Battery Charger Maintenance	18
Battery Maintenance	19
Storage	20
Trouble Shooting Checklist	20
Warranty	23
Claims Procedure	24

Welcome

Congratulations. You're minutes away from becoming one of a growing number of Pinpoint Systems enabled golf courses around the world. Pinpoint Systems by Signal Golf produces immediate yardage calculations accurate up to the pin position on any hole. These simple instructions will help you install the Pinpoint system and provide operating instructions.

IMPORTANT OPERATOR INSTRUCTIONS

The Handheld Pinpoint Unit should be used in the following manner:

1. Operator should select correct hole number using up or down cursor.
2. Operator should hold handheld at arms length, with antennae pointing straight up. Ensure no major obstructions or people are in direct line of sight with the pin.
3. Holding the Handheld steady, press send button and release immediately. Continue to hold handheld steady until reading appears on the LCD display.
4. Additional information on changing LCD display readings can be found later in this manual.

Caution!

The Pinpoint distance measuring device is required to comply with FCC RF exposure requirements for mobile transmitting devices. A separation of 20 cm (8 inches) or more must be maintained between the antenna and all persons during device operations to satisfy RF exposure compliance.

FCC Notice

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.

Unpacking:

Conduct your component inventory.

1. Carefully remove all items from their boxes and discard packing material.
2. Match items to your packing slip and order form to ensure you have received the appropriate number of handheld Pinpoint units, Smartpins, flags, batteries and charging units.

Getting Acquainted with your System

SmartPins

SmartPins are pre-coded at the factory and labeled 1-18. Spare pins are not labeled. Each Smartpin 1-18 is identified with sticker indicating the hole number each Smartpin should be placed in. The two spares are not marked, but can be adjusted to read which ever hole is desired.

SmartPins consist of three distinct parts.

1. Base

The “base” is the bottom portion of the SmartPin. The base houses the battery pack.



2. Mast

The mast is the top portion of the SmartPin. The mast houses the electronics of the flagstick. Do not access the electronics inside the mast without good reason. The only reason to access the electronics is to change the pin address, and this is done by removing the top cap. See section on Changing Pin Address for instructions.



Smartpin mast with top cap removed and the electronics partially out

3. Flag assembly

The flag assembly is similar to the industry norm with a slightly larger diameter. The flag assembly is fitted over the mast and secured with an acorn nut.



Pinpoint Units



Pinpoint unit



Pinpoint unit with leather case



Pinpoint unit battery pack

Pinpoint units are the hand held “pager” like units that communicate with the SmartPins to provide the distance in yards or meters to the golfer. Each Pinpoint comes complete with a leather carrying case. Pinpoints are powered by rechargeable batteries. They are recharged by placing the Pinpoint units in the gang charger.

There are only 3 buttons on the Pinpoint. The arrow shaped buttons are used to “cursor” up and down to the selected hole. Pressing the SEND button activates the yardage calculation and the yardage then appears on the screen.

Pinpoint units are factory programmed to operate at golf courses with different numbers of holes, from 9 to 54 holes and more, and to display distances in yards or metres.

To change display between Courses:

1. Press and hold the send button until the menu appears, then release the send button.
2. Use the up and down cursors to change to Course A, B, C and so on.
3. Press and release the send button twice to return to normal operation.

To change display units from metres to yards or vice versa:

1. Press and hold the send button until the menu appears, then release the send button.
2. Press send again. Use the cursor to select between yards and metres.
3. Press send again to return to normal operation.

SmartPin Gang Charger

The battery gang charger has been specifically designed to charge 10 SmartPin battery packs. It is to be placed on a flat surface and protected from excessive dust, dirt and other contaminants. A minimum clearance of 5 cm (2 inches) must be maintained on both sides of the charging unit for proper cooling and ventilation.

The battery gang charger includes 1 (one) desktop power supply that can be plugged into a standard wall outlet. Power supply input voltage is from 100Vac to 240Vac and employs auto-switching technology. Output voltage and current rating is 13Vdc \pm 5% regulation and 10Amps respectively. Using another power supply beyond its rating would result to malfunction or damage the charger.

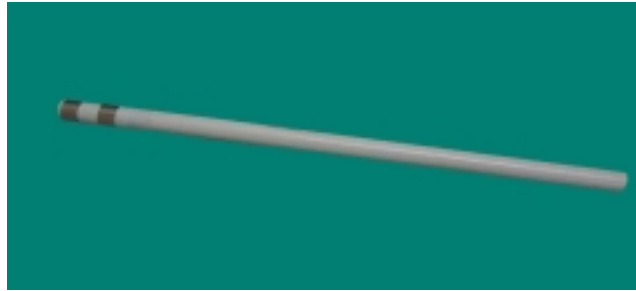
A discharge button is provided on the gang charger to discharge the battery packs to minimize “memory” effects. **Once per week, fully discharge each battery** by pushing the discharge button. Discharging time is about six hours. Use care not to bend the packs unnecessarily as the battery tube can be damaged. It is recommended to use two hands to insert and remove the battery. This charger is configured to insert or remove any of the 10 packs being charged independently (without having to remove other packs or covers to gain access, for example).



Smartpin gang charger and power supply unit

Batteries

The battery packs have been specifically designed to fit both the SmartPins and the charger. They consist of a pack of six-nickel-metal-hydride batteries that may be repeatedly charged for the life of your system. The batteries have been shrink-wrapped into a tube that also houses the necessary contacts. This battery pack has a capacity of 4500mAHr and must be carefully handled with care.



Smartpin battery pack

Pinpoint Unit Gang Charger

Pinpoint Unit battery packs are mounted inside the Handheld units. This gang charger is designed to charge 10 Pinpoint units and to should be placed on a flat surface and protected from excessive dust, dirt and contaminants. The gang charger also includes 1 (one) desktop power supply that can be plugged into a standard wall outlet. Power supply input voltage is from 100Vac to 240Vac and also employs auto-switching technology. Output voltage rating is 13Vdc \pm 5% regulation and has a 6.15Amps of current rating. Using then power supply beyond its rating would result in malfunction or damage to the charger.



Pinpoint unit gang charger and power supply unit

Handheld Batteries

The Handheld battery pack is designed to fit inside the back of the Pinpoint unit. It consists of a pack of three-nickel-metal-hydrate batteries that may be repeatedly charged for the life of your system. The batteries have been shrink-wrapped into a tube that also houses the necessary contacts. This battery pack has a capacity of 650mAh and **should be only charged with a Signal Golf supplied charger**. This charger is configured to insert or remove any of the 10 handheld Pinpoint units being charged independently (without having to remove other units or covers to gain access, for example).

Preparing the system for use

Charging the Smartpin Batteries

1. The Smartpin battery charger is ready for use when it is hooked up to the power supply unit plugged on to a standard wall outlet (100vac to 240 vac).
2. Battery and charger contacts should be clean before charging the batteries in the gang charger. When no battery pack is inserted, the LED indication is OFF.
3. When inserting the battery pack into the charger, its respective RED color LED will flash and then glows steadily. The charging cycle is started. If RED color LED does not stop flashing, it means that either there is no contact between the battery and the charger or the respective battery pack is not within the allowable temperature limits.
4. For new a battery pack, press the discharge button to discharge the battery before new cycle charging begins. Discharge buttons are provided on the charger and discharging time is about 2 - 4 hours depending on the state of battery. Orange color LED indicates that the battery is in the process of discharging.
5. Green indication shows that the pack is fully charged. It takes about five hours to charge up from a fully discharge state. Normal charging should be less than four hours.
6. **The Smartpin batteries should be discharged, on the charger, once a week.** This will minimize the “memory” effects and prolong the lifespan and efficiency of the battery.
7. Smartpin batteries are to be charged on a daily basis.



Charging Smartpin battery packs

Assemble Smartpins

1. Place charged battery packs into the top portion of the SmartPin “base” section with the metal contact rings up.
2. Screw the “mast” section of the SmartPin onto the base. **DO NOT OVERTIGHTEN**, the seal is watertight when hand tightened using just moderate pressure.
3. Place the appropriate flag over the mast section. Screw the acorn nut to the threading located at the top of the mast. Again **DO NOT OVERTIGHTEN**, hand tighten using moderate pressure.
4. Repeat this procedure for all of the SmartPins.
5. Each time you insert a new battery pack, check that the Smartpin has power. When screwing in the mask, look into the top cap, a red LED should light up momentary when contact is made. Alternatively, you can also select the correct pin number on a Pinpoint unit and while looking into the top cap of the Smartpin, press send. The small red LED light should light up.

Charging Pinpoint Unit Batteries

1. The Pinpoint unit batteries charger is ready for use when it is hooked up to the power supply unit plugged into to a standard wall outlet (100vac to 240 vac).
2. Unlike the Smartpin batteries, the Pinpoint unit batteries are charged without having to remove them from the handheld. Battery and charger contacts should be clean before docking the units into the gang charger. When no pinpoint unit is inserted, LED indication is OFF.
3. When docking the units into the charger, its respective RED color LED will flash and then glows steadily. Charging cycle is started. If RED color LED does not stop flashing, it means that either there is no contact between the battery and the charger or the respective battery pack is not within the allowable temperature limits.
4. Green indication shows that the pinpoint unit battery pack is fully charged. It takes approximately 2 hours or less to fully charge a handheld battery.
5. Pinpoint batteries should be charged when “LOW BATT” appears on the LCD, or every 2-3 days. Note: Fully charged handhelds will slowly discharge over time. It is advisable to fully charge handhelds before issuing them whenever possible.



Charging Pinpoint units

Testing and Installation

Simply place the SmartPins in their corresponding holes, test and you are ready to go! There are no on/off buttons on either the SmartPins or the Pinpoint. The SmartPin automatically activates when a battery pack is inserted. The Pinpoint automatically activates when the “Send” button is pressed and shut off once the yardage information has been transmitted and displayed.

1. Insert the correct Smartpin into the correct golf hole.
2. Be at least 75 metres away from the pin and, with the correct hole showing on the display of the Handheld, push the send button.
3. You should get a reading displayed on the LCD display on the Handheld.
4. If you do not get a reading, ensure the handheld is selected to the proper hole, that it is held upright and steady with the antennae straight up, all batteries (Smartpin and Handheld) are charged and making proper contact and try again. If you still do not get a reading, refer to the troubleshooting section in this manual.

System Maintenance

Pinpoint Unit Maintenance:

The Pinpoint is an electronic device, not dissimilar to a portable phone, radio, or other piece of electronic equipment. As such, it has been designed for ruggedness under normal use and wear conditions. It is recommended that the Pinpoint unit be used and stored in the leather pouch provided in order to receive the best possible protection and longevity. Like any device it is potentially breakable and must be properly cared for. The following care is recommended:

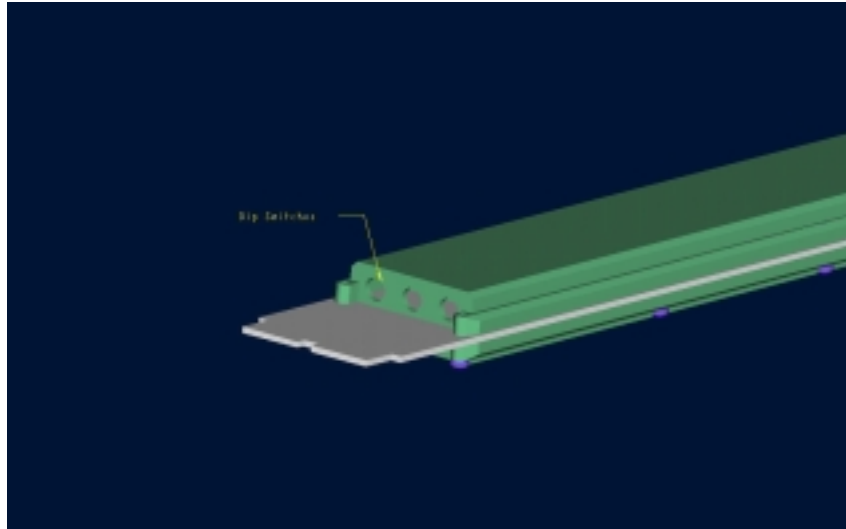
1. **Cleaning the Exterior.** The exterior may be cleaned periodically with a soft damp cloth, if required. (DO NOT OVERWET). The use of detergents is discouraged and should not be necessary. Special care should be given to the LCD screen, which may be scratched or etched by the use of rough cloths and/or detergents.

- 2. Water Resistance.** The Pinpoint unit is designed to be water-resistant if used with the leather pouch provided. This means that it may be used in rainy or snowy conditions as long as it is reasonably protected from the elements. Should the Pinpoint become wet, dry it off with a soft cloth. Do not allow the Pinpoint unit to ever be completely immersed in water.

Smartpin Maintenance:

The SmartPin is a durable unit that contains sensitive electronic components. It is designed to stand up to conditions it will face on a golf course and most treatment it will receive from golfers. However, like most electronic equipment, excessive jarring, dropping on concrete, or exposure to extreme elements can damage it. The following care is recommended:

- 1. Cleaning.** The SmartPin may be cleaned occasionally by using a gentle detergent and a soft cloth. Care should be taken to limit the amount of moisture used in the cleaning process.
- 2. Water resistance.** When assembled as a complete flagstick unit, the SmartPin is designed to be virtually waterproof. It will withstand continual exposure to the sun, rain, high-pressure sprinkler systems, as well as a variety of temperature and humidity ranges. However, it should not ever be intentionally completely immersed in water.
- 3. DIP switches.** Each SmartPin is equipped with three white wheels inside the mast called DIP switches. These DIP switches instruct the SmartPin as to which hole number and course number it represents. Care should be taken not to inadvertently jar or change these switches or allow them to become misstated. This will cause the SmartPin to respond incorrectly.



View of the Smartpin PCB showing the DIP switches

4. Mast/Base coupling. The coupling is designed using materials that create a rugged waterproof seal when properly assembled. Care should be taken to properly start the threading process when the mast is affixed to the shaft. In addition the best waterproofing is achieved when the coupling is moderately hand tightened. **NEVER TIGHTEN WITH TOOLS, OR OVERTIGHTEN BY HAND.** The “softness of these materials contributes to its weather resistance and can be damaged when over-tightened or when the threads are stripped due to misalignment.
5. When changing out the Smartpin battery packs, use the battery pack carry case to protect the batteries. Batteries may be color coded with colored tape to help identify and keep separate a set.



Battery carrier case

Changing the Pin's Address

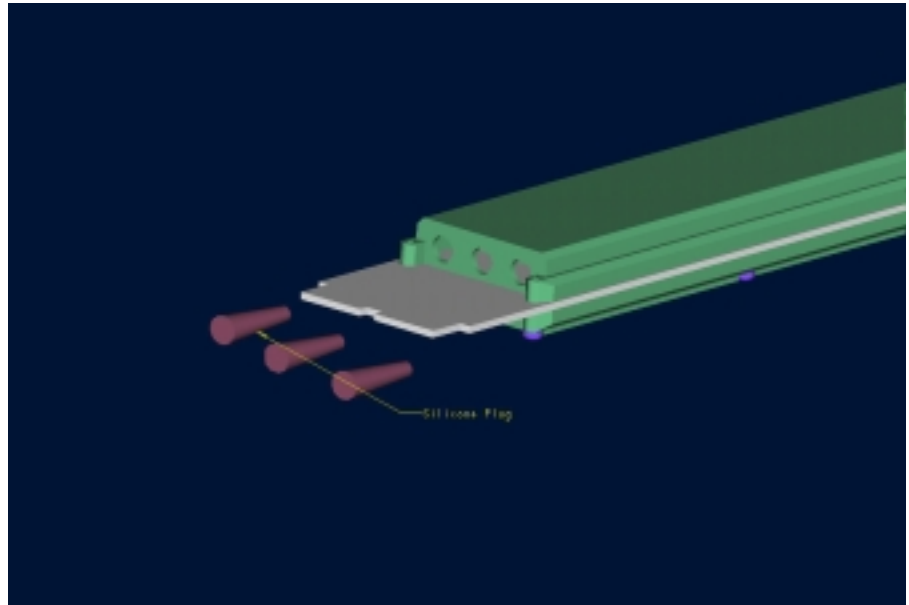
All Smartpin addresses are pre-set at the factory prior to shipping. If for some reason the address has to be changed or if using the spare units, please follow the instruction below:

1. First remove the top nut on the mast, pull off flag sleeve and unscrew the mast from the base.
2. Using a screw driver, remove the four screws at the side of the mast housing and carefully remove clear plastic cap by pulling directly up.
3. Carefully pull the electronic board out of the mast housing and remove the three silicon plugs covering the dip switches.
4. Hold board so that the "0"s are facing upward. Set the dip switches with a small screwdriver as follows:
For hole number one: 0 0 1
For hole number two: 0 0 2
And so on....
For hole number ten: 010
For hole number 18: 018

For more than 18 holes:

For Course B hole number one: 1 0 1
For Course B hole number two: 1 0 2
And so on...

For Course C hole number one: 2 0 1
For Course C hole number two: 2 0 2
And so on....
5. To reassemble, replace back the three silicon plugs by pushing firmly on to the dip switches and carefully slide electronic board back on to the housing. **Note** : The two bottom holes should fit nicely with the housing screw holes if board is correctly seated.
6. Apply some clear silicon gel on to the bottom two holes and tighten screws back.
7. Replace top plastic cap, apply clear silicon gel and put screws back.
8. Reassemble the Smartpin on to the base together with flag assembly.



Silicone plugs are use to cover and sealed openings of DIP switches

Changing Smartpin Batteries at the “Green”

Care must be taken when changing Smartpin batteries at the green.

1. Use battery carrier case provided to transport newly charged batteries. Placed them in the slots No. 1 – 18 in the case.
2. Please ensure that batteries are not dropped or bent in anyway to prevent internal damage.
3. At the green, remove the top nut and carefully unscrewed the mast from the base. Remove spent battery and replace with newly charged battery.
4. Do not place batteries on the green grass as the chemical elements of the grass can be quite corrosive. Do not bend the pack tubes as they can be damaged.
5. Put spent battery immediately back in the respective slot of the case. We recommend that the case be brought along to the green when changing batteries out in the course.
6. After replacing with a fresh battery, assemble the Smartpin and check that there is power (by checking for a flashing red LED in the top cap) and in working mode.



Carrier case with slots for batteries

Battery charger maintenance (Smartpin & Pinpoint Unit)

The battery charger is a durable unit that contains sensitive electronic components. It is designed to be rugged but like most electronic equipment, can be damaged by jarring, dropping, or exposure to extreme elements. The following care is recommended:

- 1. Location.** The battery charger is intended to be located indoors. The Handheld gang charger may be wall mounted or rest on its foot pegs on a level surface. The Smartpin charger should be on a level surface with at least 5 cm (2 inches) clearance on each side to ensure proper cooling and ventilation.
Ensure dust, dirt, grass and other contaminants are kept out of the charger contacts and housing.
- 2. Cleaning.** The battery charger may be cleaned periodically to eliminate dust. To clean, unplug the unit, then use a soft damp cloth to wipe away any dust and/or dirt.

3. **Battery Slots.** When placing a Smartpin battery into a slot to be charged **do not press the middle of the battery.** Apply pressure at the metal connectors until the battery snaps into place. Pressing the middle of the battery may cause warping and therefore an improper fit into the Smartpin or damage the internal connections of the battery.
4. **Spillage.** Do not expose the battery charger to liquids. If liquid has been spilled into the charging ports unplug the charger, wipe clean then allow the area to dry before attempting to charge.
5. **Battery Contacts.** A clean electrical contact ensures proper power transfer. Occasionally it may be necessary to clean the contacts gently with steel wool or light grade sandpaper. Do not over clean the charger contacts.
6. **Primary Power.** Charger should be operated within specification for any AC input voltage in the minimum ranges 100V to 240VAC, with a line frequency of between 47 and 63 Hz.

Battery maintenance

Both battery packs will provide an ample supply of consistent power to the Smartpin and Pinpoint unit.

1. **Battery Life.** Under normal conditions a battery packs for the Smartpin and Pinpoint unit will last a minimum of 500 charging cycles.
2. **Memory.** The battery packs are subject to the “memory” effect, but not to the extent of other types of rechargeable batteries. To minimize memory effect, Smartpin batteries should be discharged fully **once per week.** Handhelds should be rotated occasionally to ensure that all battery packs have approximately the same number of discharges and recharges. This will add to the overall life of the battery.
3. **Contacts.** The battery contacts must be kept clean, dry and corrosion free. If corrosion forms, you may need to clean them to restore their full ability to transmit power. This may be done with steel wool, or VERY light sandpaper. **DO NOT OVERCLEAN THE TERMINALS.**

4. **Battery pack sleeves (Smartpin).** There are actually 6-batteries in each battery pack. They are combined in a double shrink-wrapped industrial sleeve. This adds the rigidity that makes replacement easy. Care should be taken not to stress the battery pack horizontally, or the sleeve may bend, break, or lose contact between batteries. The most likely opportunity for the battery packs to be subjected to stress is during transportation and changing of the batteries of the SmartPin between the maintenance shop and on the “green”. Therefore it is highly recommended that the Battery Carrier Case be used when performing this task. Additionally, when inserting or removing battery packs from the charger be sure to exert pressure near the ends of the battery packs, **not the center**. **DO NOT JAR or PLACE OTHER EQUIPMENT WHERE IT MAY DAMAGE A BATTERY PACK.**

Storage

Important: Do not store Smartpins and Handhelds and batteries in locations that will fall below 32 degrees Fahrenheit (0 degrees Celsius) and 120 degrees Fahrenheit (49 degrees Celsius).

Trouble shooting checklists

Scan the list below to find the area that best describes your problem

Pinpoint Unit

Occurrence	Possible Cause	Solution
Blank Screen	Pinpoint not activated	Press any of the buttons on the front of the Pinpoint.
	Batteries Out of Power	Recharge Handheld unit. Check the battery contacts.
Incorrect yardage feedback	Holding the Pinpoint Incorrectly	Make sure that the Pinpoint is held steady, straight up and down (parallel to the SmartPin).

	Incorrect Flagstick	The flagpole may be in the wrong green. Notify golf shop.
	Incorrect Hole No.	Change Pinpoint unit to read correct hole.
	Interference	Large object/objects directly in front of path of measurement or radio interference. Step aside or move a few feet left or right and try again.

SmartPin

Occurrence	Possible Cause	Solution
No Response	Battery sleeve drained or battery lost contact with Smartpin contacts	Remove and replace battery. Try again. If still no response, replace battery pack with a fully charged pack.
	Dirt or corrosion on battery contacts	Open SmartPin and gently clean battery contacts with steel wool. Remove and reseal battery pack.
	Handheld malfunction	Try several Pinpoints to ensure that the problem is with the SmartPin
	SmartPin identification error	Check the Dip switch in the mast to make sure it is set to the desired hole location

Battery Charger

Occurrence	Possible Cause	Solution
Not Charging Battery pack(s)	Not plugged in wall outlet	Check to see that power cord is correctly inserted into wall electrical outlet
	Wall electrical Outlet not working	Try plugging in another electrical appliance into the same outlet to ensure power flow
	Batteries inserted incorrectly	Batteries must be inserted with the metal rings touching the metal battery contacts of the charger.
	Charger Slot Malfunction	Try the same slot with several batteries. If the problem remains only with one slot contact Signal Golf for an immediate replacement.
	Charger not turned on	There should be a red light illuminated to indicate that the charger has been turned on and that there is power flow.
	Bad Battery	Try another Battery in the same slot. If the new battery charges contact Signal Golf for a replacement battery.

Warranty Pinpoint Components

Pinpoint components including the SmartPins and battery chargers are subject to a full Lifetime warranty under the yearly lease agreement. Signal Golf will repair or replace, including related labor and travel, any of these components, which prove to be defective as to workmanship or materials. Upon notification of inoperative product, Signal Golf will immediately send replacement product to the customer at its own expense. The customer agrees to return ship the defective product to Signal Golf, in the prepaid shipping container provided by Signal Golf.

OWNERS RESPONSIBILITIES:

- Provide any defective part to Signal Golf
- Provide proof of purchase
- Provide normal care and maintenance, including cleaning as instructed by the user manual
- Make product accessible for service

WARRANTY LIMITATIONS:

- Begins at date of purchase.
- Applies to product used within the United States or Canada.

WARRANTY IS VOID IF:

- Serial plate is defaced
- Products are altered by customer
- Product is not installed or used according to manufacturers instructions (see User Manual)

ITEMS NOT COVERED:

- Consumables such as batteries and flags
- Pinpoint (see Pinpoint Warranty)
- Damages which occur in shipment
- Normal product maintenance and cleaning
- Failures caused by:
 - Unauthorized service
 - Material buildup due to improper cleaning or maintenance (rust, dirt, etc.)
 - Accidental or intentional damage
 - Acts of God
 - Reception problems unless related to materials or workmanship

IN NO EVENT SHALL SIGNAL GOLF PRODUCTS BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES

Signal Golf makes no other warranties or representations in terms of the Pinpoint components. Signal Golf employees, agents or distributors may not amend the terms of this warranty agreement. The remedies outlined in this agreement are the sole and exclusive remedies for breach of the warranty.

For answers to questions regarding any part of this warranty or to locate a Signal Golf sales representative contact:

For Europe:
Signal Golf International Pte. Ltd.
Abbey House Wellington Way
Weybridge Surrey KT13 OTT

United Kingdom
Tel: 01932 268335
Fax: 01932 268500

For USA :
Signal Golf International
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Indianapolis, IN 46236
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For Asia Pacific:
Signal Golf International Pte. Ltd.
750D Chai Chee Road #03-03
Technopark@ Chai Chee
Singapore 469004
Tel: 65 244 5715
Fax: 65 242 4555

Or Visit our Website at:
www.signalgolf.com

Claims Procedure

This section will outline the steps that need to be taken to ensure that a defective unit is replaced.

Defective SmartPin

1. Refer the Trouble Shooting guide first to identify and then to confirm a defective unit.
2. Replace defective SmartPin with spare unit, changing address on DIP Switches.
3. Notify Signal Golf of the defective unit and arrange for replacement unit.
4. Return defective unit to Signal Golf.

Defective Pinpoint

1. Refer to the Trouble Shooting guide first to identify and then to confirm a defective unit.
2. Notify Signal Golf of the defective unit and arrange for replacement unit.
3. Return defective unit to Signal Golf.

Battery Charger

1. Refer to the Trouble Shooting guide first to identify and then to confirm a defective unit.
2. Notify Signal Golf of the defective unit and arrange for replacement unit.
3. Return defective unit to Signal Golf.