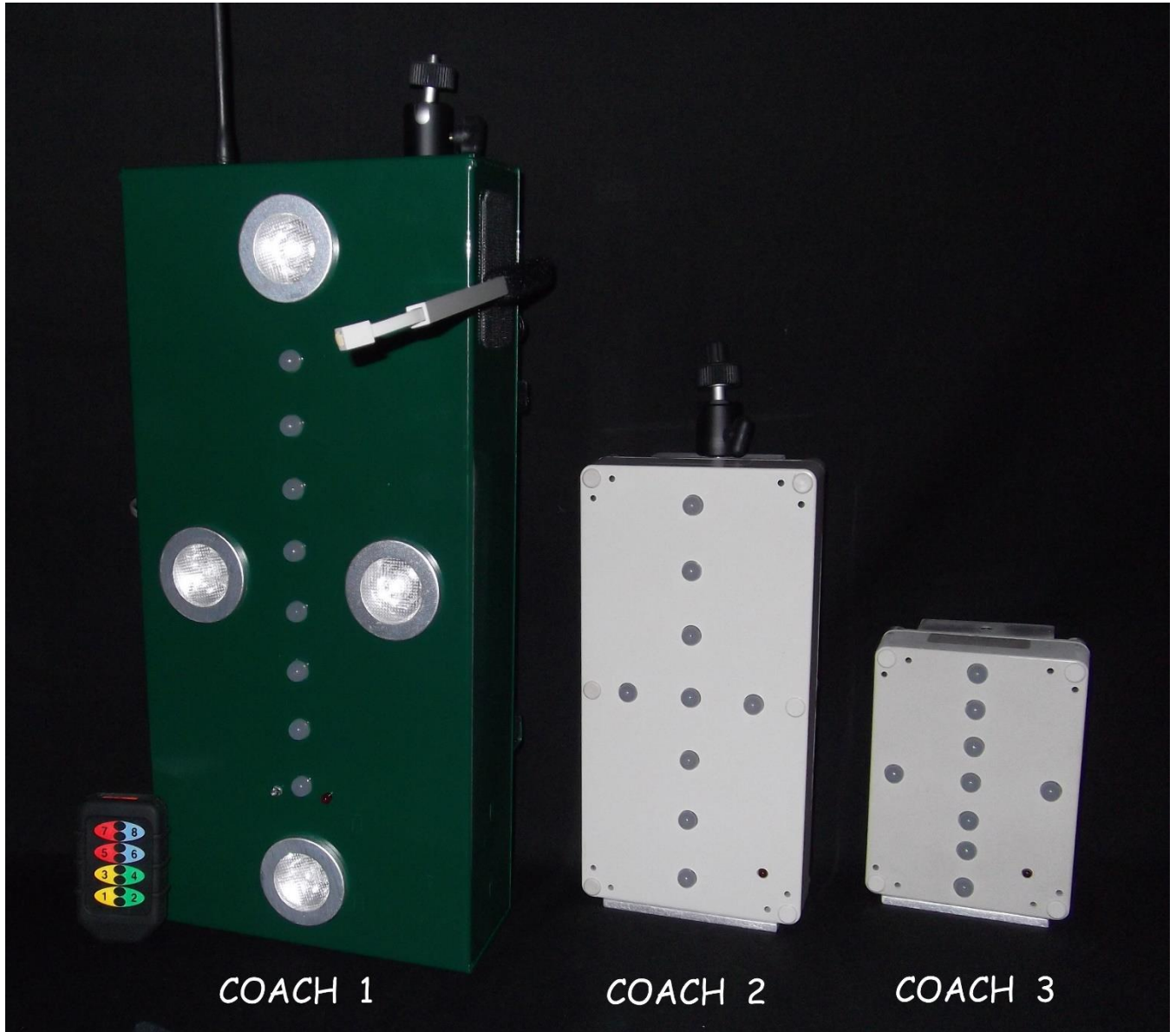


SPLIT STEP COACH 2 USERS MANUAL



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INTRODUCTION

What factors make some individuals superior in skills during sporting events? This question has been asked by many trainers for as long as civilizations have existed.

The Split Step Coach does not address all the factors, but it does address the issue of timed movement; movement has been and is a core factor that can help dedicated athletes in any sport be the best they can be. More information can be obtained in several [Newsletters](#) found under Documents at our website (www.sports-split-step.com).

SSC trains to maximize the starting acceleration with resulting speeds that allow quicker positioning of the individual or athlete, and thus better control of muscle groups involved in executing a stroke, a kick, a catch, a toss or other complex movements. A document on our website (www.Sports-Split-Step.com) called the '[Fundamental Movement](#)' provides an in-depth look behind the SSC line of products (COACH 1, COACH 2, COACH 3).

Directing our attention to the game of tennis, one might ask, "What are the fundamental movements of professional tennis players?"

Professional tennis players will perform the same basic movements on each and every ball hit by the offensive player (even if they cannot make it to the CENTER of possible returns) before the offensive player hits the ball. The defensive player is at a disadvantage when not being in the perfect position, but their best reaction is to execute the following moves.



1. Shortly before the offensive player hits the tennis ball, the defensive player or the player about to have the ball land in their court will have CENTERED or moved to the most likely spot where the opponent's ball will land.
2. As the offensive player's begins their swing to contact the ball, the defensive player will begin to load their legs for performing a HOP into the air.
3. Ball contact by the offensive player is an important time and the defensive player's goal is to be at the TOP of their HOP when the ball is struck.
4. Reading the direction of the ball coming off the offensive player's racket is a most important skill and the defensive player's goal is to determine the direction as they begin to descend from the TOP of the HOP to the tennis court. Timing is crucial for insuring the defensive player the best possible position for the opponent's shot.
5. The defensive player will always try (with some exceptions) and land on the foot that is away from the incoming ball so that gravity can help them accelerate as quickly as possible in the proper direction for the incoming ball.
6. After the defensive player gets near the hitting position they begin taking shorter steps in preparation for their shot. Once the player hits the ball they can then recover from their shot and begin centering for the opponent's next shot.

Many sports including basketball, football, and soccer can have a slightly different aspect to consider when training *offensive* players. When a running back (offensive player) comes thru a hole and sees the line-backer approaching, he will generally give some kind of fake and then rise into the air. Depending on the line backer's decision (move to left or move to right) the running back will want to land on the offside foot and move in the opposite direction.

The offensive athlete should train using the Split Step Coach (SSC) by moving in a direction opposite to the directional LEDs. For instance, if the right directional LED comes ON, the offensive player will want to move LEFT. SSC provides the athlete sequences of directional LEDs in which both forward and random lateral movements will test and improve the sensory-motor pathways.

Features & Differences of the Split Step Coach Series

COACH 1

Top of the line tool for indoor and outdoor training.

Features include:

1. Large Panel Display,
2. Sixteen Progressive-skill Drills
3. Three levels of difficulty
4. Remote Control
5. Battery operation with charger
6. Advanced Color Feature (call for information)
7. iPad Option (call for information)
8. Video Option & Mount (call for information)

COACH 2

Middle of the line tool for indoor and limited outdoor training.

Features include:

1. Ten Progressive-skill Drills
2. Three levels of difficulty
3. Remote Control
4. Battery operation with charger
5. Advanced Color Option (call for information)
6. Additional Five Drill Option (call for information)
7. Camera Mount Option (call for information)

COACH 3

Economical tool for inside training.

Features include:

1. Ten Progressive-skill Drills
2. Three levels of difficulty
3. Manual Pushbutton Control
4. Battery operation with charger
5. Camera Mount Option (call for information)

SSC products emulate the movements and timing of athletes in many of the today's sports. Furthermore it provides a platform by which the player can perform what Daniel Coyle in his New York Times bestselling book, '[The Talent Code](#)', describes as 'Deep Training'. Deep Training is where an athlete executes repetitively sport specific movements at controlled speeds, so that they can be exactly what are desired. In so doing the sensory-motor pathways for remembering are greatly enhanced as one is forced to increase the speed and add more difficult movements.

Training Advantages

1. Accelerates the training and skill building of an athlete
2. Enhances the training of the Split Step, an important move in most sports
3. Promotes better court or field coverage
4. Develops movements timed to the opponent's shot or other critical movements
5. Builds aerobic capacity while executing a timed stroke, kick or throw
6. Can be used with athletes before, during or after the introduction of strokes, kicks or throws
7. Stroke production and technique can also be practiced without having the skills required for hitting, catching, or kicking a real ball
8. Can be used on court, on the grid-iron, in your driveway, or any open area
9. Precise measurements can be recorded with a video camera for evaluating an athlete's progress within the 3 different levels of difficulty and some 16 drills.
10. Allows the athlete to train with the same drills at various speeds so that accuracy in execution can be assured before increasing difficulty.
11. The CUSTOM drills (with Anticipation cues) allow the athlete to anticipate the first move and then anticipate the execution of a sport specific movement (see description under the Video Option).

Fundamental movements of professional athletes

The following chart describes in more detail the possible movements between consecutive hits of a tennis ball. However, most sports can be dissected into the same or similar movements and Sport Split Step offers a service in which a coach's special sport and special drills with their special timing can be included into the SSC software.

In this tennis example, the average times were obtained from video of a match between [Nadal and Monfils at the 2009 US Open](#). We will now analyze and correlate these movements to the events that occur when working with the Split Step Coach.

	player-1	player-2	
1	player hits ball	top of the hop	instant in time
2	time to recover	time to land	average 1.38 sec
3	time to center prepare & Start hop	time to ball	
4		time to swing	instant in time
5	top of the hop	player hits ball	
6	time to land	time to recover	average 1.38 sec
7	time to ball	time to center prepare & Start hop	
8	time to swing		Instant in time
9	player hits ball	top of the hop	

1. The Split Step Coach is built around the movements indicated in the above chart. On the front surface of the SSC, there is a vertical column of 8 RED LEDs that will begin to sequence in a downward direction as the defensive player recovers & centers (start of item 3 in the table for player-1).
2. At the end of item 4 all 8 RED LEDs turn OFF as player-1 starts to rise into the air (SSC emits an audible beep). Sometime between the end of item 4 and the 'Top of the Hop' some Directional LEDs will turn ON to indicate direction in which the player must move.
3. The Directional LEDs will remain ON as player-1 lands on the ground (end of item 6), the RED LEDs will now begin to sequence in an upward direction.
4. As the player runs to the hitting position for this shot (item 7) the RED LEDs continue to ripple upwards. When about 4 RED LEDs have turned ON the player should be starting their swing so that as the top RED LED turns ON, the player will be contacting the imaginary ball (i.e. at contact point); a 2nd audible beep will be emitted at this time.
5. Once the ball is struck all RED and Directional LEDs will turn OFF (item 1, 9) and will remain OFF as the player recovers (item 2) and begins to center (item 3).
6. We have now arrived at the start of item 4 where-in we began preparing for the last hop, in other words as the RED LED's start their downward sequence.



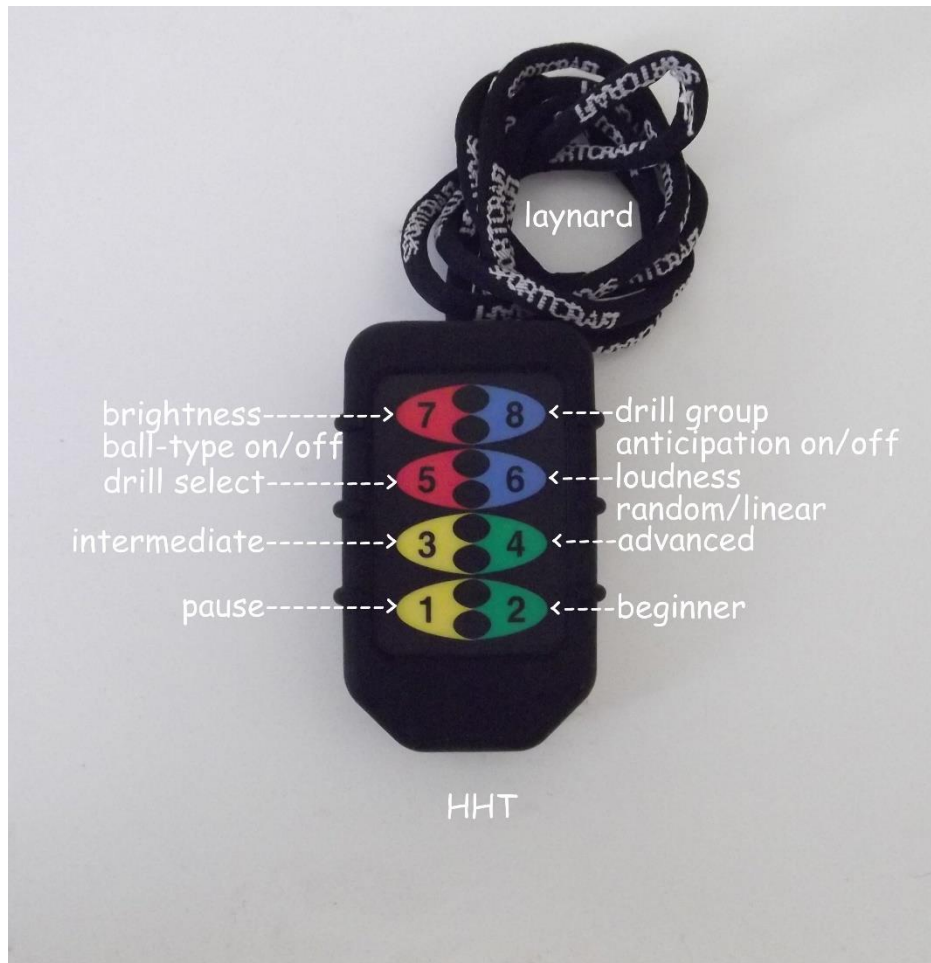
SPLIT STEP COACH

Setting up the COACH 2 Hardware

1. Unpack all of the ordered components: COACH 2 display panel, remote Hand Held Transmitter (HHT), Video Option (if ordered).
2. You might want to 'top off' the battery with an overnight charge before teaching a lesson; we ship with a fully charged battery.

3. Mount the Coach 2 display panel by hanging it from your roll-around ball cart, the net cord, a stable table, or medium/large sized tripod; typically 36" to 48" above the court or field makes for the most realistic viewing.
4. Coach 2 can be elevated by extending the tripod or ladder, or hanging it from the top of the tennis fence, thus allowing easy viewing for large groups. Coach 1 may be desirable for larger distances or larger groups; groups of up to 20 in number have been trained at one time for sports such as football & soccer using the tripod.
5. The panel's front surface should be aligned perpendicular to the athletes so that easy viewing of the LEDs from both sides of the field (or court); position players at 20 to 40 feet from the Coach 2 for proper viewing.
6. Power up the unit by using the switch on the rear of the chassis.
7. The default conditions after powering up are
 - a. BASIC type of drills
 - b. BEGINNER operation
 - c. Automatic sequencing of drills.

Using the Remote



Basic Key Functions

1. Button 1 will STOP (PAUSE) a drill, and then re-START at the beginning.
2. Button 2 will select the lowest LEVEL of difficulty (Beginner).
3. Button 3 will select the next LEVEL of difficulty (Intermediate).
4. Button 4 will select the highest LEVEL of difficulty (Advanced).
5. Button 5 will sequence to the next DRILL.
6. Button 6 will cycle the buzzer loudness thru 4 different levels, including MUTE.
7. Button 7 will cycle the Directional LED brightness thru 4 different levels.
8. Button 8 will switch between the 5 BASIC Drills and the 5 CUSTOM Drills and the Additional Five Drill Option (if ordered).
9. Button 1 (press & release) followed by Button 8 (press & release) will toggle the Anticipation mode of operation.
10. Button 1 (press & release) followed by Button 7 (press & release) will toggle between Normal and Advanced Color Mode of Operation (call for information).
11. Button 1 (press & release) followed by Button 6 (press & release) will toggle between LINEAR & RANDOM modes.

The attached lanyard on the HHT helps prevent accidental dropping of the device and possible resetting of the HHT address. When not around your neck you might consider attaching the HHT to your Split Step Coach or tripod.

General Operations

1. There are 5 different BASIC drills (see section on Drill Descriptions).
2. There are 5 different CUSTOM drills that can be ordered for a specific sport, say for instance Tennis, or Football, or Basketball.
3. In addition there is an Optional Purchase for another group of 5 drills.
4. Remote button presses of 1/2 second duration will select or change the mode of operation; when button 5 is held down continuously the effect will simulate multiple button presses with ~1 second intervals while the drills sequence.
5. The user can stop the startup automatic sequencing of drills by pressing Button 5 on the Hand Held Transmitter (HHT) one time, which will select Drill #1 (TOP RED LED will flash) while keeping all other parameters the same.
6. Once Button 5 is pressed, Drill #1 will run continuously, until Button 1 (PAUSE) is pressed or another drill is selected by pressing Button 5.
7. The DRILL # selection can continue in this fashion thru DRILL #5 at which time another push would activate the automatic sequencing mode.
8. This sequence mode will automatically execute a Drill and then sequence to the next Drill (#1, #2, #3, #4, #5) and then repeat; this automatic sequencing mode is a good warm up mode for athletes arriving early for their lesson.

9. Again, to exit the automatic sequencing mode the user would press Button 5 one more time and Drill #1 will begin executing while remaining at the same LEVEL of difficulty.
10. All drill packages come in two flavors, with or without Anticipation RED LEDs, i.e. anticipation allows the RED LEDs to simulate an opponent's movements so that the athlete can respond appropriately.
11. You can select the various drill packages (BASIC, CUSTOM & Drill Option Package) by pressing and releasing Button 8 until the desired package is selected.
12. Pressing button 8 will change the drill group and the Directional LEDs will change to different colors when in the various groups (Green=>BASIC, Yellow=>Optional package, Red=>CUSTOM drills); be careful not to confuse with the colors when operating in the ball-type mode.
13. Selecting the ball-type operation (pause button then button 6) will allow the athlete to add another dimension of complexity for learning how to respond to different balls being hit by their opponent; RED balls => defensive response, YEL balls => rally ball, GRN balls => offensive response will be used for the Directional LEDs.
14. Any of the drills at any of the 3 different levels of difficulty can be either RANDOM or LINEAR.
15. To toggle the RANDOM/LINEAR mode press the pause button 1, then button 6; the LEFT DL will flash whenever the user select a new function (letting the user know that RANDOM mode has been selected, no flash if in LINEAR mode).

The LEVELS of Drills vary in difficulty

1. BEGINNER: Lowest difficulty (slower tempo within & between shots)
 - BASIC, CUSTOM, Optional Drill Package (i.e. 3 groups of 5 drills)
 - BASIC drills use the individual or combinations of the Directional LEDs in a random/linear lateral sequence (each drill returns the athlete to the original starting position)
 - CUSTOM drills use patterns of play with random/linear lateral directions (drills will move the player to multiple positions on a tennis court or playing field)
2. INTERMEDIATE: moderate difficulty (faster tempo within & between shots)
 - BASIC, CUSTOM, Optional Drill Package (i.e. 3 groups of 5 drills)
 - BASIC drills use the individual or combinations of the Directional LEDs in a random/linear lateral sequence (each drill returns the athlete to the original starting position)
 - CUSTOM drills use patterns of play with random/linear lateral directions (drills will move the player to multiple positions on a tennis court or playing field)
3. ADVANCED: most difficult (fastest tempo within & between shots)
 - BASIC, CUSTOM, Optional Drill Package (i.e. 3 groups of 5 drills)

- BASIC drills use the individual or combinations of the Directional LEDs in a random/linear lateral sequence (each drill returns the athlete to the original starting position)
- CUSTOM drills use patterns of play with random/linear lateral directions (drills will move the player to multiple positions on a tennis court or playing field)

Recognizing which DRILL & which LEVEL is active

1. BEGINNER => bottom Directional LED is ON
2. INTERMEDIATE => bottom & right Directional LEDs are ON
3. ADVANCED => bottom, right & top Directional LEDs are ON
4. DRILL #1 => top RED LED is ON
5. DRILL #2 => top 2 RED LEDs are ON
6. DRILL #3 thru DRILL #5 turn on a corresponding number of RED LEDs
7. Left Directional LED will be turned ON when different drill packages are selected, Green=>BASIC, Yellow=>Optional package, Red=>CUSTOM drills
8. Left Directional LED will flash if in RANDOM mode, when a selection is made on the Remote Control.

S³ products and Tennis Ball Machines



SSC concepts being used with various ball machines

1. [Several ball machines](#) including the Sports Attack have been tested with the RED LED portion of the SSC and software and hardware adjustments made so that the ball is emitted when the player is at the top of the hop.
2. This combination of the RED LED portion of the SSC and ball machine allows the player to extend their 'SSC learned movements' to the next level of complexity, that of going thru a timed movement and hitting a real ball.
3. The Playmate ball machine has been setup to emulate many of the LEVELS and DRILLS used by the SSC, thus making for a powerful family of teaching tools. See the 3 Levels & Drills at the end of the manual; note that some minor settings will have to be changed because of variations within the ball machines.
4. The Playmate ball machine also has a RANDOM function that emulates the SSC RANDOM mode of operation for the more skilled players.
5. The same Video Option works for both the SSC & ball machine and can record both the player's movement and stroking/hitting skills, which can be analyzed to provide feedback to the player.
6. These types of feedback increase a player's motivation as they can see and measure their improvements against their previous executions.
7. Call (530-272-7345) for service information on interfacing to your Sports Attack, SAM or Matchmate ball machines.

Quick Guide for the COACH 2

GROUP 1 BASIC DRILLS - GREEN

(A Sequence of Movements returning to BASE)

1. Split Step (i.e. Vertical moving RED LEDs only)
2. Split Step with landing and moving to the LEFT
3. Split Step with landing and moving to the RIGHT
4. Split Step with landing and moving LEFT- RIGHT (inside-out FH)
5. Split Step with landing and moving LEFT, LEFT-RIGHT, RIGHT

GROUP 2 BASIC DRILL (Option) - YELLOW

(A Sequence of Movements returning to BASE)

1. Split Step with landing and moving to the TOP-LEFT
2. Split Step with landing and moving to the TOP-RIGHT
3. Split Step with landing and moving to the BOT-LEFT
4. Split Step with landing and moving to the BOT-RIGHT
5. Split Step with landing and moving to the BOT-RIGHT, TOP-RIGHT, BOT-LEFT, LEFT, RIGHT, LEFT-RIGHT, TOP-LEFT, R, TOP-LEFT

GROUP 3 CUSTOM DRILLS - RED

(A Sequence of Movements with Position Changes, PATTERNS OF PLAY)

1. 1 RS, then 7 Baseline zone 4 Ground Strokes
2. 1 RS, 1 Approach, then 6 Volleys
3. 1 RS, 1 Approach, 3 Volleys, 3 Overheads
4. 1 RS, 6 Ground Strokes, 1 Approach, 2 Volleys, 1 Overhead, 2 Volleys
5. 1 Serve, 6 Volleys, then 4 Overheads This drill starts with a Serve (Pausing with button 1, then repressing button 1 to start as player contacts ball), then 6 Volleys and 4 Overheads

Detailed Description of the 3 Packages of Drills

GROUP 1 BASIC DRILLS (BEG, INT & ADV will return to original starting position)

1. SPLIT STEP (Vertical RED LEDs only)
 - a. As the vertical RED LEDs (VLED) begins to sequence downward the athlete anticipates when to start loading their legs.
 - b. Fully loaded legs should occur just before the bottom VLED comes ON so that a vertical jump can commence immediately; the buzzer will beep just as the player begins to unload their legs as they start towards the Top of their Hop (TOH).
 - c. The athlete will rise into the air and as they descend the coach can start by having them land on both feet, then on the left foot or the right foot.
 - d. After landing the coach can have the athlete learn to time a sport related action during the vertically sequencing VLEDs and be at the contact point as the buzzer sounds (top VLED comes ON).
 - e. Drill repeats steps a, b, c, and d 6 times
2. SPLIT STEP & Movement to the LEFT LED
 - a. As the vertical RED LEDs (VLED) begins to sequence downward the athlete will 'center' and then anticipates when to start loading their legs.
 - b. Fully loaded legs should occur just before the bottom VLED comes ON so that a vertical jump can commence immediately; the buzzer will beep just as the player begins to unload their legs as they start towards the Top of their Hop (TOH).
 - c. The coach can now illustrate that landing on one foot will allow 'gravity' to help accelerate the athlete in the direction of the ball.
 - d. The athlete will rise into the air and as they descend the athlete will land on the right foot and accelerate 2 steps in the LEFT direction.
 - e. Athletes can start with a sport related action and develop this timed action (with tennis an actual racket can be used to swing at an imaginary ball) to the vertically sequencing VLEDs and be at the contact point as the buzzer sounds (ALL LEDs go OFF).
 - f. Drill repeats steps a, b, c, d, and e 6 times
3. SPLIT STEP & Movement to the RIGHT LED
 - a. As the vertical RED LEDs (VLED) begins to sequence downward the athlete will 'center' and then anticipates when to start loading their legs.
 - b. Fully loaded legs should occur just before the bottom VLED comes ON so that a vertical jump can commence immediately; the buzzer will beep just as the player begins to unload their legs as they start towards the Top of their Hop (TOH).
 - c. The coach can now illustrate that landing on one foot will allow 'gravity' to help accelerate the athlete in the direction of the ball.
 - d. The athlete will rise into the air and as they descend the athlete will land on the left foot and accelerate 2 steps in the RIGHT direction.

- e. Athletes can start with a sport related action and develop this timed action (with tennis an actual racket can be used to swing at an imaginary ball) to the vertically sequencing VLEDs and be at the contact point as the buzzer sounds (ALL LEDs go OFF).
 - f. Drill repeats steps a, b, c, d, and e 6 times
4. SPLIT STEP & Movement to an Inside-Out position LEFT & RIGHT LEDs
- a. As the vertical RED LEDs (VLED) begins to sequence downward the athlete will 'center' and then anticipates when to start loading their legs.
 - b. Fully loaded legs should occur just before the bottom VLED comes ON so that a vertical jump can commence immediately; the buzzer will beep just as the player begins to unload their legs as they start towards the Top of their Hop (TOH).
 - c. The coach can now illustrate that landing on one foot will allow 'gravity' to help accelerate the athlete in the direction of the ball.
 - d. The athlete will rise into the air and as they descend the athlete will land on the left foot and accelerate 2 steps in the RIGHT direction for a LEFTY Inside-Out shot; will land on the right foot and accelerate w steps to the LEFT direction for a RIGHTY Inside-Out shot.
 - e. Athletes can start with a sport related action and develop this timed action (with tennis an actual racket can be used to swing at an imaginary ball) to the vertically sequencing VLEDs and be at the contact point as the buzzer sounds (ALL LEDs go OFF).
 - f. Drill repeats steps a, b, c, d, and e 6 times
5. SPLIT STEP & Movements for 3 combinations of LEFT-RIGHT (inside-out), RIGHT, LEFT LEDs
- a. As the vertical RED LEDs (VLED) begins to sequence downward the athlete will 'center' and then anticipates when to start loading the legs.
 - b. Fully loaded legs should occur just before the bottom VLED comes ON so that a vertical jump can commence immediately; the buzzer will beep just as the player begins to unload their legs as they start towards the Top of their Hop (TOH).
 - c. The athlete will rise into the air and as they descend the athlete will land on the foot opposite to the Directional LEDs that comes ON and accelerate 2 steps in the proper direction as learned in steps 2, 3, 4.
 - d. Athletes can start with a sport related action and develop this timed action (with tennis an actual racket can be used to swing at an imaginary ball) to the vertically sequencing VLEDs and be at the contact point as the buzzer sounds (ALL LEDs go OFF).
 - e. Drill repeats steps a, b, c, d and e 8 times

GROUP 2 OPTIONAL DRILLS (BEG, INT & ADV will return to original starting position)

1. SPLIT STEP & Movement to the LEFT & TOP LEDs (forward diagonal)
 - a. As the vertical RED LEDs (VLED) begins to sequence downward the athlete will 'center' and then anticipates when to start loading their legs.
 - b. Fully loaded legs should occur just before the bottom VLED comes ON so that a vertical jump can commence immediately; the buzzer will beep just as the player begins to unload their legs as they start towards the Top of their Hop (TOH).
 - c. The coach can now illustrate that landing on one foot will allow 'gravity' to help accelerate the athlete in the direction of the ball.
 - d. The athlete will rise into the air and as they descend the athlete will land on the right foot and accelerate 2 steps in a LEFT-FORWARD diagonal direction.
 - e. Athletes can start with a sport related action and develop this timed action (with tennis an actual racket can be used to swing at an imaginary ball) to the vertically sequencing VLEDs and be at the contact point as the buzzer sounds (ALL LEDs go OFF).
 - f. Drill repeats steps a, b, c, d, and e 6 times
2. SPLIT STEP & Movement to the RIGHT & TOP LEDs (forward diagonal)
 - a. As the vertical RED LEDs (VLED) begins to sequence downward the athlete will 'center' and then anticipates when to start loading their legs.
 - b. Fully loaded legs should occur just before the bottom VLED comes ON so that a vertical jump can commence immediately; the buzzer will beep just as the player begins to unload their legs as they start towards the Top of their Hop (TOH).
 - c. The coach can now illustrate that landing on one foot will allow 'gravity' to help accelerate the athlete in the direction of the ball.
 - d. The athlete will rise into the air and as they descend the athlete will land on the right foot and accelerate 2 steps in a RIGHT-FORWARD diagonal direction.
 - e. Athletes can start with a sport related action and develop this timed action (with tennis an actual racket can be used to swing at an imaginary ball) to the vertically sequencing VLEDs and be at the contact point as the buzzer sounds (ALL LEDs go OFF).
 - f. Drill repeats steps a, b, c, d, and e 6 times
3. SPLIT STEP & Movement to the LEFT & BOTTOM LEDs (backward diagonal)
 - a. As the vertical RED LEDs (VLED) begins to sequence downward the athlete will 'center' and then anticipates when to start loading their legs.
 - b. Fully loaded legs should occur just before the bottom VLED comes ON so that a vertical jump can commence immediately; the buzzer will beep just as the player begins to unload their legs as they start towards the Top of their Hop (TOH).
 - c. The coach can now illustrate that landing on one foot will allow 'gravity' to help accelerate the athlete in the direction of the ball.

- d. The athlete will rise into the air and as they descend the athlete will land on the right foot and accelerate 2 steps in a LEFT-BACKWARD diagonal direction.
 - e. Athletes can start with a sport related action and develop this timed action (with tennis an actual racket can be used to swing at an imaginary ball) to the vertically sequencing VLEDs and be at the contact point as the buzzer sounds (ALL LEDs go OFF).
 - f. Drill repeats steps a, b, c, d, and e 6 times
4. SPLIT STEP & Movement to the RIGHT & BOTTOM LEDs (backward diagonal)
 - a. As the vertical RED LEDs (VLED) begins to sequence downward the athlete will 'center' and then anticipates when to start loading their legs.
 - b. Fully loaded legs should occur just before the bottom VLED comes ON so that a vertical jump can commence immediately; the buzzer will beep just as the player begins to unload their legs as they start towards the Top of their Hop (TOH).
 - c. The coach can now illustrate that landing on one foot will allow 'gravity' to help accelerate the athlete in the direction of the ball.
 - d. The athlete will rise into the air and as they descend the athlete will land on the right foot and accelerate 2 steps in a RIGHT-BACKWARD diagonal direction.
 - e. Athletes can start with a sport related action and develop this timed action (with tennis an actual racket can be used to swing at an imaginary ball) to the vertically sequencing VLEDs and be at the contact point as the buzzer sounds (ALL LEDs go OFF).
 - f. Drill repeats steps a, b, c, d, and e 6 times
 5. SPLIT STEP & Movements for 8 combinations of BOTTOM-RIGHT, TOP-RIGHT, BOTTOM-LEFT, L, R, LEFT-RIGHT (inside-out), TOP-LEFT-RIGHT, TOP-LEFT LEDs
 - a. As the vertical RED LEDs (VLED) begins to sequence downward the athlete will 'center' and then anticipates when to start loading their legs.
 - b. Fully loaded legs should occur just before the bottom VLED comes ON so that a vertical jump can commence immediately; the buzzer will beep as the player begins to unload their legs as they move towards the Top of their Hop (TOH).
 - c. The coach can now illustrate that landing on one foot will allow 'gravity' to help accelerate the athlete in the direction of the ball.
 - d. The athlete will rise into the air and as they descend the athlete will land on the right foot and accelerate 2 steps in 1 of the 7 different movements.
 - e. Athletes can start with a sport related action and develop this timed action (with tennis an actual racket can be used to swing at an imaginary ball) to the vertically sequencing VLEDs and be at the contact point as the buzzer sounds (ALL LEDs go OFF).
 - f. Drill will LINEARLY sequence (or RANDOMLY if in RANDOM mode) select 1 of the 8 possible movements and continues for 8 movements.

GROUP 3 CUSTOM DRILLS for Tennis (BEG, INT & ADV will move about the court)

CUSTOM Drills are more complex than the BASIC or the OTPTIONAL Drills and force the athlete to play various shots from multiple positions on the court.

The drills will all start at the baseline with a Return of Serve (RS), each of the drills will emphasis a pattern of play found in today's game of tennis. The drills will use several different shots, with positions that will vary all over the court. The various shots include combinations of Return of Serve, Approach shots, Volley and Overheads.

Shot Definitions Used in the CUSTOM drills for tennis

1. RS represents a Return of Serve
2. GS represents a Ground Stroke
3. AS represents an Approach Shot
4. V represents a Volley
5. OH represents an Over Head (opponent's LOB)

A Sequence of Shots Constitute a pattern of play

1. DRILL #1 => (RS, GS) This drill starts with a Return of Serve followed by 7 Ground Strokes in zone 4.
2. DRILL #2 => (RS, A, V) This drill starts with a Return of Serve, then an Approach Shot and then 6 Volleys in zones 4, 3, 2.
3. DRILL #3 => (RS, AS, V, OH) This drill starts with a Return of Serve, then an Approach Shot, and then 3 Volleys and 3 Overheads in zones 4, 3, 2, 4.
4. DRILL #4 => (RS, GS, AS, V, OH) This drill starts with a Return of Serve, then 6 Ground Strokes, then an Approach Shot, then 2 Volleys, an Overhead and then 2 Volleys
5. DRILL #5 => (Serve, V, OH) This drill starts with a Serve (Pausing with button 1, then repressing button 1 to start), then 6 Volleys and 4 Overheads

Common Characteristics with CUSTOM tennis drills

1. All CUSTOM drills for tennis will start with a Return of Serve (except drill #5, which starts with a SERVE) and the timing is such that the returner (the defensive athlete) will use the start of the RED LEDs down sequence as a signal to begin their Return of Serve movements.
2. The defensive athlete will time the start of the vertical HOP to the bottom RED LED turning ON (this occurs after the other 5 RED LEDs become illuminated). This timing will assure that the athlete will reach the 'TOP of the HOP' at ball contact, as seen in the photo of Federer and Nadal.
3. The description of the fundamental movements of a Professional Tennis Athlete (mentioned in the Introduction section) is identical to what the defensive athlete should follow in executing the shots with all of the CUSTOM drills.

4. The use of the RED LEDs as Anticipation cues allows the athlete to anticipate the split step HOP and also the swing and contact of the imaginary ball.
5. After the Return of Serve each of the drills will combine various shots and then end with what we refer to as a RECOVERY (REC) move.
6. The end of the drill will occur when the athlete recognizes the 4 flashing DIRECTIONAL LEDs, the athlete will recover to the end of the line or the baseline for the next sequence.

'Mating' Additional or Replacement Remote

'Mating' a replacement Hand Held Transmitter (HHT) is necessary for all remotes not received with the original purchase. The HHT can also be made inoperable if it falls or drops onto a hard surface and may have to be re-mated to the Coach. Both these situations can be accomplished by following these steps:

1. Turn the power switch OFF.
2. Remove the 6 screws on the back of the unit and carefully separate and turn the back panel upside down and towards the power switch side.
3. Turn the COACH 2 power switch ON.
4. Locate pushbutton switch S2 at the top right side of the Printed Circuit Board near the antenna at the top of the chassis.
5. Press the button on the switch S2 for 1 second and then release the pushbutton.
6. Quickly press and hold for 1 sec, each of the buttons on the remote (8 buttons for the HHT); this button pushing operation must be completed within 15 sec for all the buttons to properly 'mate'.
7. Test the new remote and see if it will control the COACH 2, if not repeat the steps 5 thru 6.
8. Turn the power switch to OFF, then carefully rotate the back panel into place, being sure the wires are inside so that the rear panel can be easily closed.
9. Install the 6 screws into the rear panel.
10. Call factory (530-272-7345) for further assistance with any questions concerning the remotes.

Limited 3 Year Warranty

Sports Split Step provides product purchasers with a limited 3 year warranty for all products.

Limited 3 Year Warranty Clauses

1. In order to be eligible for Sports Split Step Limited 3 Year Warranty, product registration must be completed by the purchaser. The warranty of the purchased product is activated from the completion date of the product registration at Sports Split Step or from an authorized distributor. Sports Split Step reserves the right to determine the eligibility of the product registration if the registration process is delayed by the purchaser for more than three months after the original purchase date. Satisfactory proof is required to claim the warranty; for example, the invoice from the initial purchase.
2. The Limited 3 Year Warranty is for the original purchaser only. In the event of a sale or product transfer by the original purchaser to a third party, the warranty period shall be as described in the “After the Limited 3 Year Warranty Period”.
3. If the product is operated under a normal operating environment during the warranty period and a malfunction is not caused by external or internal self-assembly, Sports Split Step reserves the right to exchange components, repair, or substitute the appropriate types of products at its discretion.
4. All replaced parts will be brand new parts. These can include but are not limited to: new components, modules, or substitute products for repairing.
5. When the product has exceeded the warranty period, warranty clauses, or is otherwise inapplicable to warranty (please refer to the “After the Limited 3 Year Warranty” section), maintenance service, replacement, shipment, and any other related charges might occur.

Other Exception Clauses

Sports Split Step guarantees its products against defects in materials and workmanship under limited conditions. However, under the following exceptions, Sports Split Step has no liability to provide warranty services for the repair or maintenance without charge.

1. Damages caused by accidental events, damages due to the human force or self-assembly, damages caused by negligence of maintenance or modification behaviors without authorized technical support.
2. Damages resulting from any natural disaster.
3. The appearance of a product due to dust, dirt and age, normal wear of mechanical components and accessories outside of the product itself.
4. Purchasers are responsible to pack the repair product in good condition and ship it to the original distributor/representative. Shipping charges must be paid by the sender.

After the Limited 3 Year Warranty Period

If the received products have exceeded the warranty time, Sports Split Step will still provide the related repair and or maintenance services. However, the owners of the products are responsible for the repair and or maintenance charges, the return shipping charges and any additional costs.

Trouble Shooting the Split Step Coach

SYMPTOMS	ACTIONS
1. Red or Yellow LEDs don't flash 2.. RED Battery LED is ON 3. Camera LED doesn't flash 4. Buzzer doesn't beep 5. Red LEDs flash, but Yellow LED only blink 6.Video Option does not work 7. Replacement HHT does not work 8. LEDs are locked and not cycling	1. Verify that power switch on side of COACH 1 is ON 2. Battery may need charging 3. Check that the plug is fully inserted into RJ11 connector 4. Press button 6 on the HHT 5. Battery may need charging 6. Check that the plug is fully inserted into RJ11 connector 7. We might need to <u>mate</u> the HHT to the COACH 1 8. Cycle the power switch

Call Factory (530-272-7345) for any questions you might encounter.