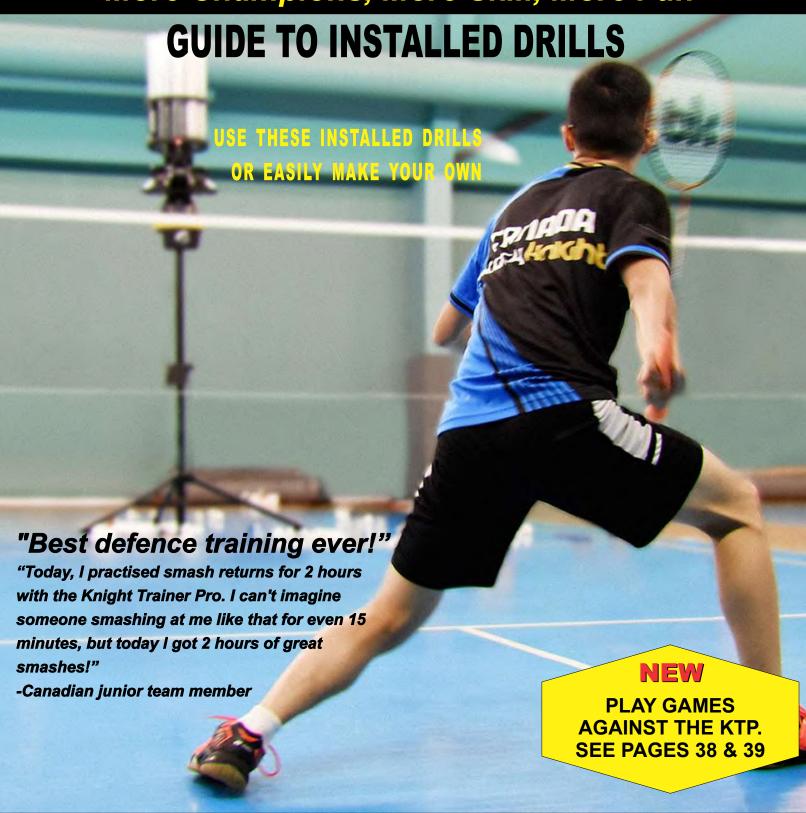
# KnichtTrainerPro

More Champions, More Skill, More Fun



# **BEFORE YOU START**

Before you use one of our drills for the first time, please test the shots in the drill and make adjustments if necessary.

Distance, directions and angles can differ a bit with different shuttles and locations and with different KTPs.

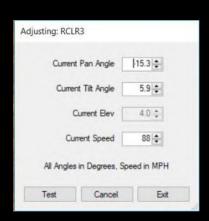
Before testing, set the KTP position for zero degrees and then lock the wheels and tighten the knob on the yellow cylinder (see page 4).

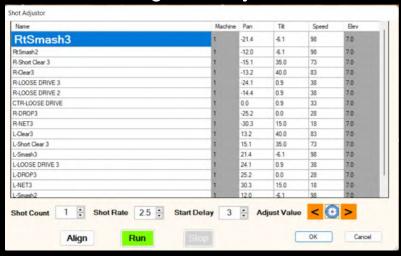
Then, to adjust and test, in the TRAINER app click on the button for "Adjust all shots" or right click on the cork of a shot you want to test and choose "Adjust".

Either way, you will be able to see and change:

- pan (direction), tilt (up or down angle), speed

-Test each shot, make any changes and then test again until you are satisfied.







The Shadow Trainer is a random pointing system with 160 possible combinations. It sets up in seconds for personal or team training. Use the Shadow Trainer to improve badminton fitness, speed, movement & reflexes and to evaluate player potential and progress.

See the Shadow Trainer in action on the Shadow Trainer page at www.KnightTrainer.com

For more information: info@KnightTrainer.com



# Train better Teach better Play better

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# HELP YOUR KTP FIND ITS ZERO ANGLE

The Knight Trainer Pro knows a lot about time and space, BUT you have to point it straight ahead and *confirm the zero degree pan angle* so that all the shot angles will be delivered correctly.

Most of our drills will include one zero degree shot, even if that shot is not put into the Playlist. If the shot is only for testing, we name it "CTRTEST".

When you test the 0 degree shot, if it does not shoot out straight ahead:

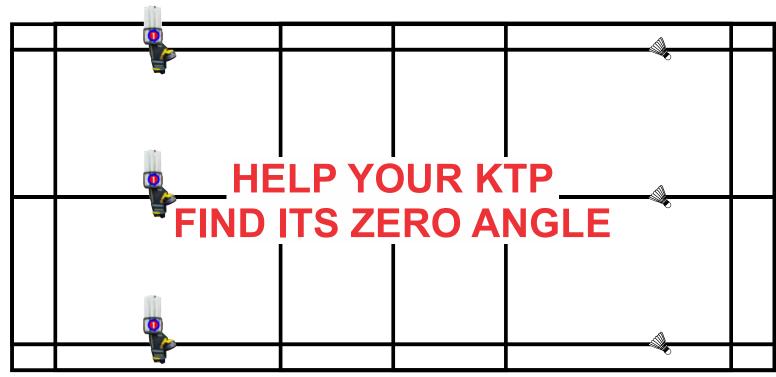
- rotate the bottom of the machine (the part below the yellow disc) to face straight ahead. There are 2 faint bumps in the black plastic to help show the "straight ahead" position.
  - test again, and then adjust again if necessary

You can also make this adjustment by rotating the tripod and testing.

Once the KTP knows its zero pan angle, lock it into position by tightening the knob on the yellow cylinder and by locking the wheels.

This step will be important no matter where the KTP is shooting from - such as the centre or the sides of the court.





#### THE DRILLS IN THIS GUIDE ARE INCLUDED WITH THE Knight Trainer Pro

As described on page 2, before the first time you use one of our drills or games, you should test and adjust the shots to match your shuttles and location. You will also need to center the Knight Trainer Pro each time you move it on the court (see page 4).

Please refer to the manual for more information about creating, opening and modifying drills.

### For each drill in this guide, we show:

- o the position of the Knight Trainer Pro
- o the height starting with H, distance from the net starting with N, distance from the left line starting with L
- o the suggested base position of the player
- o the various shots in the drill
- In some cases, we also show
  - where the player should direct the return
  - the path the player should follow

#### Understanding the **PLAYLIST**

The Playlist will deliver your shots in sequence, randomly or in a combination of the two. You will see many examples on the following pages. A Playlist consists of shots, Loops and Groups.

- Build your Playlist by adding shots
  - o From all the shots showing on the court, choose only the shots that you want for the Playlist
  - o Add shots in the sequence you want; add the same shot more than once as needed.
  - The default interval is 2.5 seconds, but you can highlight any interval and type in a new one between 1 and 15 seconds.
  - o Add new shots using Shot Creation

#### LOOPS:

- A Loop repeats all of the Playlist lines that you put into the Loop. Create as many Loops as you want in the Playlist, including Loops inside other Loops.
  - You can select adjacent shots and also Groups (select the whole Group) you want Looped, right click, choose Loop, enter the number of repetitions (the default is 5).
  - o Running in sequence, each Loop will play all its shots, inner Loops and Groups:
    - When all the Loop's repetitions are completed, the Playlist will continue to the next line of the Playlist
      if there is one. If not, then the KTP will stop.
  - Running randomly, shots are selected without regard to Loops and Groups. The more often a shot is in the Playlist, the more often it will be chosen randomly.

#### **GROUPS**:

- With Groups, part of your Playlist will run randomly, and the rest in sequence.
  - Select any adjacent shots, right click and choose Group. You have now created a Group. Yes, you can place
    Groups inside Loops if you wish. However, only shots can go into Groups. You *cannot* have a Group in a Group,
    or a Loop in a Group. Doing so will result in an error message.
  - When you are running a Playlist in sequence and Trainer encounters a Group:
    - The TRAINER app will randomly play <u>only one shot</u> from the Group
    - The TRAINER app then moves to the next line after the Group if there is one. If not, then the drill stops.
    - If the Group is inside a Loop, then each time around, there will be another random choice from the Group.
  - o If you want one shot to be selected more than others, enter it in the Group more than once.
  - o If you run the drill randomly, shots are selected without regard to Loops and Groups

#### SOME SHOTS NEED MORE TIME

- The Knight Trainer Pro works in 5 dimensions height, direction (pan), angle (tilt), speed and interval. Pan, tilt and speed require time to change between shots. When the Knight Trainer Pro feeds with short intervals between some shots, sometimes the changes won't complete before it is time to play the next shot.
  - For example, if the hardest smash is followed by a delicate drop shot, the drop may have more velocity than
    planned, and you'll get a deeper drop shot. Adjustments to the interval, to the shots and to the KTP location will
    minimize this effect.

### **CIRCUIT TRAINING**

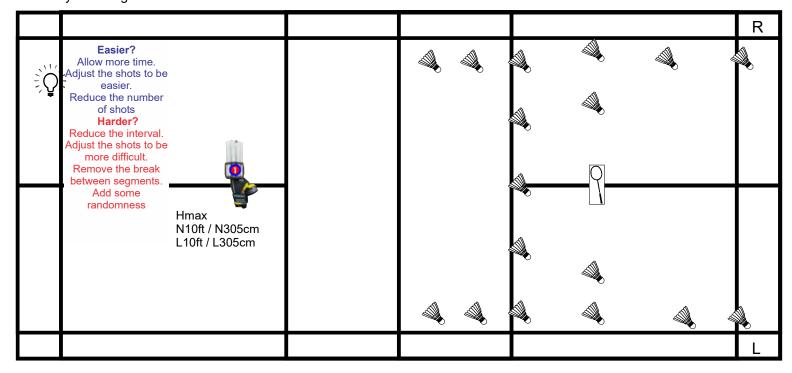


Think of this drill as a sampler of a few of the many practice routines you can create with the KTP. We've set this up to run in sequence, but you can add some randomness if you prefer (you'll learn more about random shots further into this guide). We've placed a 6 second pause between each segment to mark the transition from one part of the drill to the next.

Remember to wear eyeguards

#### The player will:

- -return 21 smashes
- -cut off and smash 13 short clears
- -play 17 net shots
- -move 5 times through a four corner drill
- -attack 16 short shots around the service line
- -return 13 full clears
- -return 17 drop shots
- -finish by returning another 21 smashes



To start the Playlist, click on the Run button to the left of the menus

or

press F5 (or Fn F5, depending on your laptop)

#### IF YOU ARE CHANGING A DRILL



These symbols are used on the following pages

Includes random shots

Location of Knight Trainer

Shot placement

Suggested base position for player

Player hits to here

Player's direction

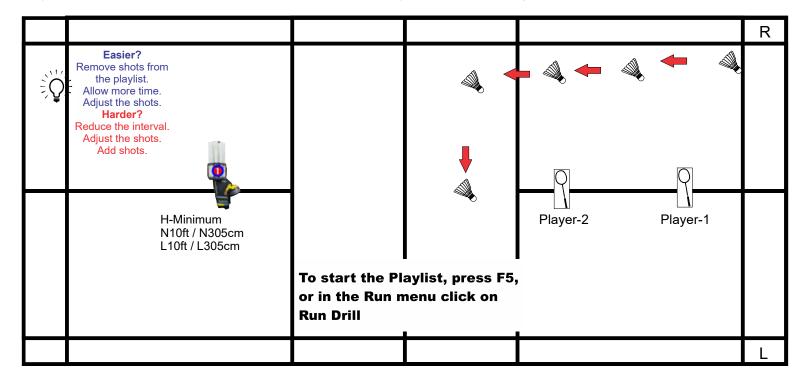
Suggestions

# **DOUBLES ROTATION - right side, novice**

Eyeguards strongly recommended around

the Knight Trainer Pro

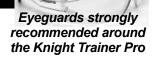
These shots will be fed in order: Deep clear, shallow clear, loose drive, loose net shot, second net shot. Player-1 smashes the clears (3/4 force, emphasis on control), advancing towards the net, attacking the 2 net shots. At the same time, player-2 rotates to the back. As the Loop continues, Player-2 smashes and then goes to the net while Player-1 rotates to the back. The Loop repeats 10 times so that each player has 5 turns attacking.

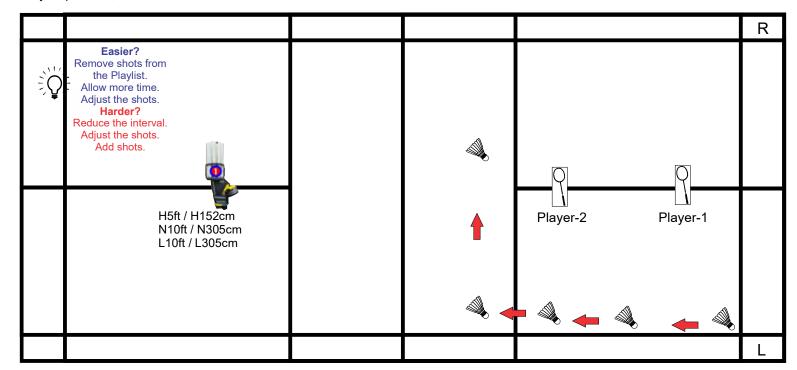


To start the Playlist, press F5, or in the Run menu click on Run Drill

# **DOUBLES ROTATION - left side, novice**

These shots will be fed in order: Deep clear, shallow clear, loose drive, loose net shot, second net shot. Player-1 smashes the clears (3/4 force, emphasis on control), advancing towards the net, attacking the 2 net shots. At the same time, player-2 rotates to the back. As the Loop continues, Player-2 smashes and then goes to the net while Player-1 rotates to the back. The Loop repeats 10 times so that each player has 5 turns attacking. To start the Playlist, press F5, or in the Run menu click on Run Drill.





## **DOUBLES ROTATION with serves**

Receiving player starts, serve is to the right, easy short serve or easy flick.

2nd shot will be deep right clear, or loose not shot. Who smashes and who goes to the not depends on the Remen

2nd shot will be deep right clear, or loose net shot. Who smashes and who goes to the net depends on the serve (short or deep). Back player smashes the clear (3/4 force, emphasis on control) for all smashes,

3rd shot will be a deep clear to the right. Back player smashes.

4th shot will be a short right clear. Back player smashes.

5th and 6th shots will be a drive and then a net . Back player goes to the net.

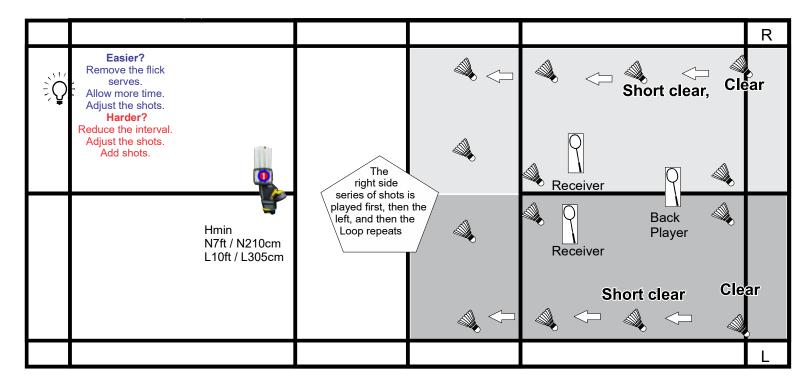
Shots 3, 4 and 5 repeat for other player.

Remember to wear eyeguards



10 second pause, while players prepare to receive serve on the left. Above sequence repeats on the left. This completes one loop.

Loop repeats 5 times. For each loop, players switch who receives, so that each player receives 2 in a row, one left and one right in the loop. Each player has 5 turns receiving on the left and 5 turns receiving on the right.









# **DOUBLES: ADVANCED ROTATION**

Receiver starts by receiving a short serve **or** long serve on the right. 2nd shot will be a loose drive on the left **or** right.

Who goes to the drive depends on the serve (short or deep).

3rd shot will be a deep clear to the right or left.

Back player smashes (3/4 force, emphasis on control for all smashes).

4th shot will be a short clear to the right or left.

5th shot will be at the net to the right or left.

Shots 3, 4 and 5 repeat.

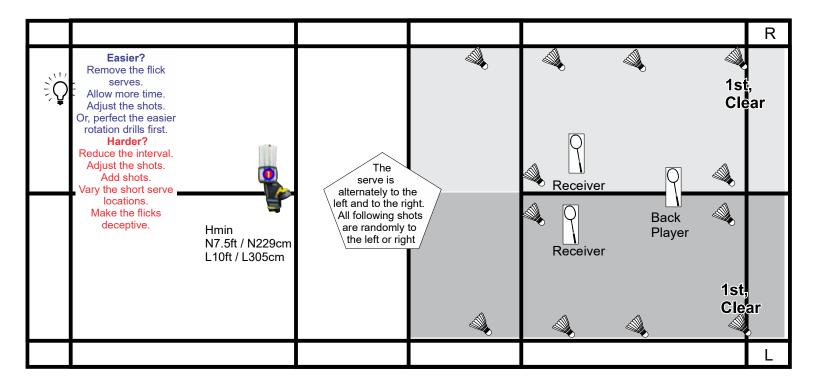
Eyeguards strongly recommended around the Knight Trainer Pro



10 second pause, while players prepare to receive serve on the left. Above sequence repeats on the left. This completes one Loop.

Loop repeats 8 times. After each Loop, players switch who receives, so that each player receives left and right serves during one Loop. Each player has 5 turns receiving on the left and 4 turns receiving on the right.

Overall, the drill runs in sequence, but using the Group option, clears and net shots will be randomly to the left or right, and serves will be randomly flicks or short serves.



IF YOU ARE CHANGING A DRILL



To start the Playlist, click on the Run button to the left of the menus or press F5 (or Fn F5, depending on your laptop)

# **MIXED DOUBLES: From the left**

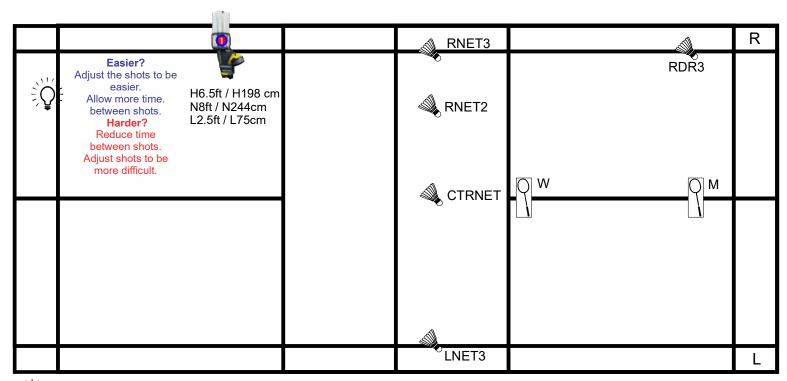
Man and woman are positioned as shown.

- Shot#1 from the KTP is a net shot to the middle
- Shot#2 is randomly a drive to the man or a net shot to the woman
- Shot#3 is a net shot to the players' far left, LNET3
  - If shot#2 was RNET3 or RDR3, then the man will go to LNET3
  - If shot#2 was RNET2, then the woman will go to LNET3.

The pattern repeats a total of 10 times.







Here is the Playlist for this drill. You can change any of the intervals, increase or decrease the looping, delete or insert any of the existing shots, or create and add new ones. Adding a shot to a group more than once increases the chances of that shot being played.

### **PLAYLIST**

Group: Each time the Playlist reaches a Group, only one shot is randomly selected from the Group and the drill continues to the next item after the Group.

Time Delta	Shot
L1	Loop 10 Times - Start
2.0	CTRNET
G1	Group Start
1.5	RNET2
1.5	RDR3
G1	Group End
1.5	LNET3
2.0	CTRNET
G2	Group Start
1.5	RNET3
1.5	RDR3
G2	Group End
1.5	LNET3
L1	Loop Ends



# **MIXED DOUBLES: From the right**

Man and woman are positioned as shown.

- Shot#1 from the KTP is a net shot to the middle
- Shot#2 is randomly a drive to the man or a net shot to the woman
- Shot#3 is a net shot to the players' far right RNET3
  - If shot#2 was LNET3 or LDR3, then the man will go to RNET3
  - If shot#2 was LNET2, then the woman will go to RNET3.

The pattern repeats a total of 10 times.





	RNET3	R
Easier? Adjust the shots to be easier. Allow more time. between shots. Harder? Reduce time between shots. Adjust shots to be more difficult.	CTRNET Q W	
H6.5ft / H198cm N8ft / N244cm	LNET2	
L17.5ft / L533cm		
	LNET3	L



Here is the Playlist for this drill. You can change any of the intervals, increase or decrease the looping, delete or insert any of the existing shots, or create and add new ones. Adding a shot to a group more than once increases the chances of that shot being played.

### **PLAYLIST**

Group: Each time the Playlist reaches a Group, only one shot is randomly selected from the Group and the drill continues to the next item after the Group.

Time Delta	Shot
L1	Loop 10 Times - Start
2.0	CTRNET
G1	Group Start
1.5	LNET2
1.5	LDR3
G1	Group End
1.5	RNET3
2.0	CTRNET
G2	Group Start
1.5	LNET3
1.5	LDR3
G2	Group End
1.5	RNET3
L1	Loop Ends



# MIXED DOUBLES: Full court coverage

Man and woman are positioned as shown.

- Shot#1 from the KTP is a net shot to the middle
- Shot#2 is randomly a drive that the woman will cut off, or a clear to the man which he will smash,
- Shot#3 for the woman is another net shot, randomly either RNET2 of RNET3.
- Shot#4 is a net shot to the far left, LNET3.
  - If shot#3 was RNET3, then the women cannot get to LNET3 and it will be the man's shot.
  - If shot#3 was RNET2, then the woman will return LNET3.
- -Shot#5 is a deep left clear, LCLR3.

The pattern repeats on the left ending with shots on the right. The Loop will cycle through the left and right patterns 10 times.





			RNET3	R	
	Easier? Adjust the shots to be easier. Allow more time. between shots. Harder? Reduce time between shots.		RNET2	RCLR3 RDR3	3
L	Adjust shots to be more difficult.  H6.5ft / H198cm N8ft / N244cm	<b>_</b>	CTRNET	W N	4
	L10ft / L305cm		LNET2	LDR3	3
			€ LINE IS	L	_



Here is the Playlist for this drill. You can change any of the intervals, increase or decrease the looping, delete or insert any of the existing shots, or create and add new ones. Adding a shot to a group more than once increases the chances of that shot being played.

To start the Playlist, click on the Run button to the left of the menus or press F5 (or Fn F5, depending on your laptop)



Time Delta	Shot
L1	Loop 10 Times - Start
2.0	CTRNET
G1	Group Start
1.5	RDR3
1.5	RDR3
1.5	RCLR3
G1	Group End
G2	Group Start
1.5	RNET3
1.5	RNET2
G2	Group End
1.5	LNET3
1.5	LCLR3
2.0	CTRNET
G1	Group Start
1.5	LDR3
1.5	LDR3
1.5	LCLR3
G1	Group End
G2	Group Start
1.5	LNET3
1.5	LNET2
G2	Group End
1.5	RNET3
1.5	RCLR3
L1	Loop ends

# SCRAMBLE - left or right side

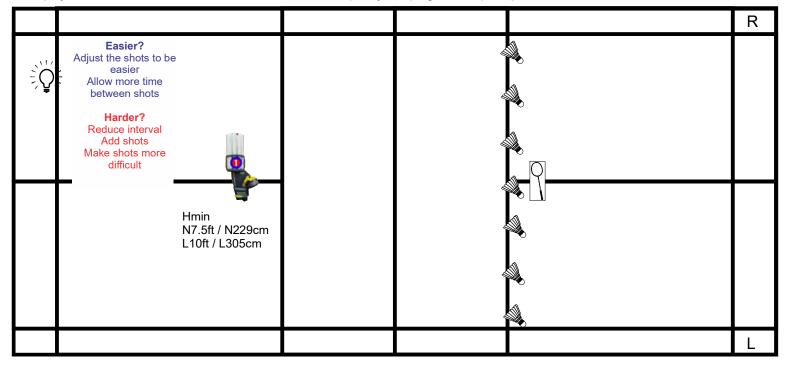
This is a drill for doubles or mixed, for the front player. All shots from the KTP are random short shots, placed around the service line. The player attacks all the shots. The player is based 1-2 ft / 30-60 cm behind the short service line. Players play NO BACKHANDS. On their backhand side they go around the head.

Eyeguards strongly recommended around the Knight Trainer Pro

- The drill begins with a 6 second pause followed by shots only to the left half, 17 times. For the first 9 shots there are 2 seconds between shots, and for the next 8, there is only 1 second between shots.
- There is a 6 second pause before continuing to shots to the right half.
- Again, there are 17 shots, starting with 2 seconds between shots and ending with 1 second between shots.



The player needs to use an accurate, hard shot and react quickly, keeping the racquet up all the time.





In the Playlist for this drill, the shots are named in sequence from the outside to the centre of the court:

LSHORT3 LSHORT2 LSHORT1 SHORTctr

The same pattern is used on the right.

You can change the timing, increase or decrease the looping, delete or insert any of the existing shots, or create and add new ones.

#### IF YOU ARE CHANGING A DRILL



To start the Playlist, click on the Run button to the left of the menus or press F5 (or Fn F5, depending on your laptop)

### DRIVES FROM CENTRE

This drill begins with an 8 second pause, followed by a mid court clear. The player smashes the clear and then advances, attacking a random series of 20 soft and hard drives ending with 2 weak shots near the net that the player can put away. There is another 8 second pause and the drill repeats one time and then ends.

Eyeguards strongly recommended around the Knight Trainer Pro



Below, the back shuttle is the mid-court clear, smashed to start the drill. The 2 rows of 3 represent 6 different drives, the back row being harder drives. After 20 drives from these 6 shots, the 2 closest to the net are fed loosely to end the Loop.

			R
Easier? Remove shots. Adjust the shots to be easier. Allow more time. between shots. Harder? Reduce intervals. Add shots. Make shots more difficult.  H65in / H165cm N10ft / N305cm L10ft / L305cm	Attack these 2 shots to finish	Smash this clear to start the drill	
			L



Here is the Playlist for this drill. You can change any of the intervals, increase or decrease the looping, delete or insert any of the existing shots, or create and add new ones.

R = RightL = Left CTR = Centre DR = Drive

Time Delta	Shot
L3	Loop 2 Times - Start
8.0	3/4 clear
L1	Loop 20 Times - Start
G1	Group Start
1.5	RDR1hard
1.5	CTRDRhard
1.5	LDR1hard
1.5	RDR1easy
1.5	CTRDReasy
1.5	LDR1easy
G1	Group End
L1	Loop End
L2	Loop 2 Times - Start
G2	Group Start
1.5	RNET1
1.5	LNET1
G2	Group End
L2	Loop End
L3	Loop End

**PLAYLIST** 

IF YOU ARE CHANGING A DRILL SAVE



To start the Playlist, click on the Run button to the left of the menus or press F5 (or Fn F5, depending on your laptop)

### **SCRAMBLE - full front court - random**

This is a drill for doubles or mixed, for the front player.

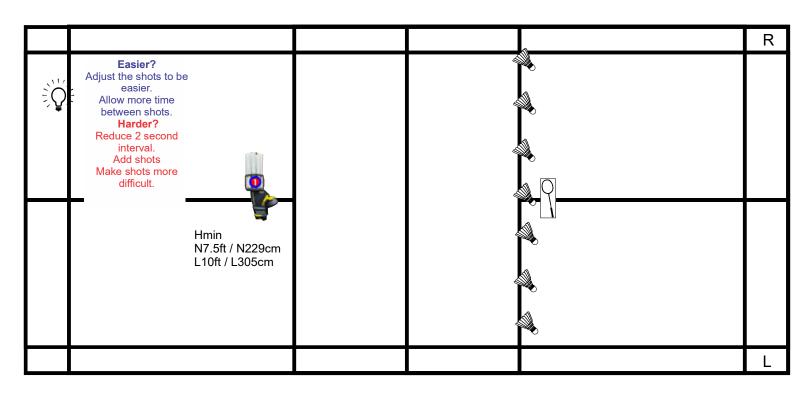
All shots from the KTP are to the short service line area, and the player attacks all the shots. The player is based 1-2 ft  $\!\!\!/$  30-60 cm behind the short service line. Players play NO BACKHANDS. On their backhand side they go around the head.

There will be 20 random shots to the full front court, with intervals from 1.5 to 1.0 seconds

Player needs to have an accurate, hard shot and react quickly, keeping the racquet up all the time.









Here is the Playlist for this drill.
The shots have been named in sequence from the outside left and outside right to the centre:

You can change the timing, increase or decrease the looping, delete or insert any of the existing shots, or create and add new ones.

### **PLAYLIST**

Time Delta	Shot
L1	Loop 20 Times - Start
G1	Group Start
1.5	LSHORT3
1.5	LSHORT2
1.2	LSHORT1
1.0	SHORTctr
1.5	RSHORT3
1.5	RSHORT2
1.2	RSHORT1
G1	Group End
L1	Loop End

To start the Playlist, click on the Run button to the left of the menus or press F5 (or Fn F5, depending on your laptop)

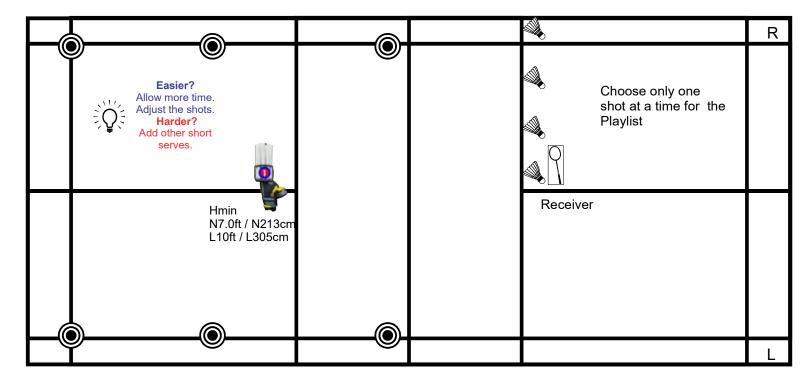


# **RETURNING SHORT SERVES - right side**

Eyeguards strongly

The KTP will tirelessly feed up to 250 doubles serves so that players of all levels can improve their returns. In this drill, several short serves to the right have been created but only one is active. Place the serve you want inside the Loop in the Playlist. The Playlist has been set for 30 serves. There will be a 6 second delay between serves, to allow the player to prepare to receive the next one.

Eyeguards strongly recommended around the Knight Trainer Pro

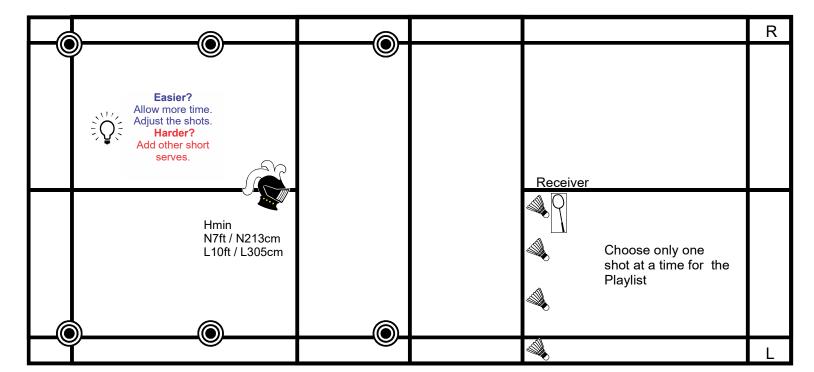


### **RETURNING SHORT SERVES - left side**

Eyeguards strongly recommended around

the Knight Trainer Pro

The KTP will tirelessly feed up to 250 doubles serves so that players of all levels can improve their returns. In this drill, several short serves to the left have been created but only one is active. Place the serve you want inside the Loop in the Playlist. The Playlist has been set for 30 serves. There will be a 6 second delay between serves, to allow the player to prepare to receive the next one.



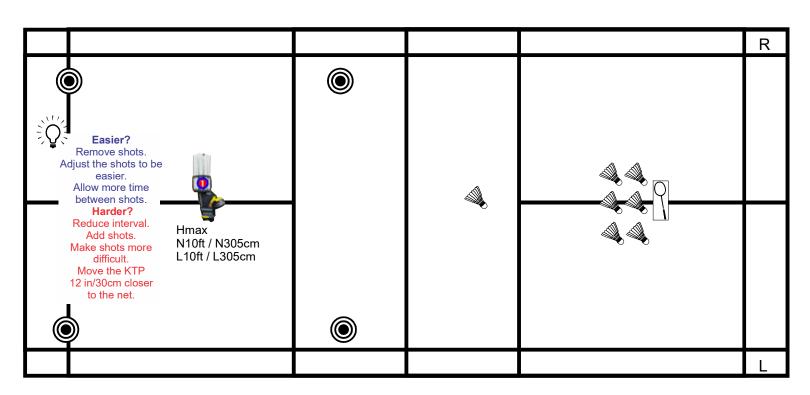
# **SMASH DEFENCE - close to the body**

6 smashes and 1 drop are shown on the court. The smashes in the front row are steeper than those in the back row. This drill will use only 6 of the shots, but the drop shot can be added to the list for an extra challenge.

 Defence around the body: One player, positioned mid court, defends against smashes to 6 points around the body. Player should try to place the returns. Four return locations are suggested below.









- Insert any shot more than once to increase the frequency of that shot.
- Add the drop shot to the Playlist for an extra challenge.

### **PLAYLIST**

Time Delta	Shot
1.5	LSM1-LOW
1.5	CTRSM-LOW
1.5	RSM1-LOW
1.5	LSM1-HIGH
1.5	CTRSM-HIGH
1.5	RSM1-HIGH

#### IF YOU ARE CHANGING A DRILL



For this drill, use **Run Random button or Ctrl F5** and
enter the number of shots that you
want, up to 250.

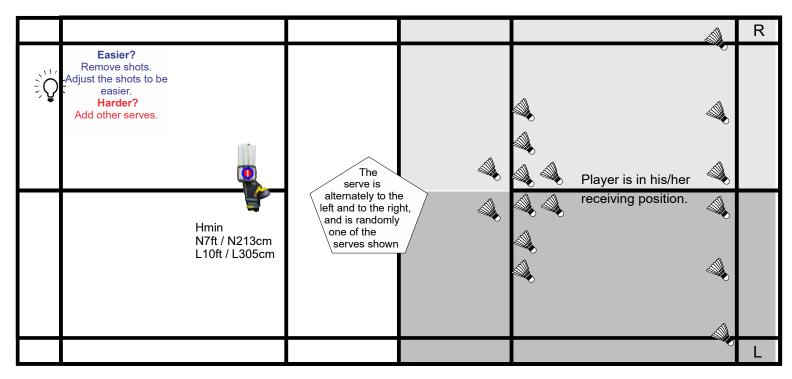
### **SERVE RETURNS - DOUBLES - random**

Player receives 30 serves alternating between the right and left service boxes. The serves are a random mixture of short and long serves, with 6 seconds between serves. Player's position is his/her usual service return position. **Player should not hit shots that are out.** 

Eyeguards strongly recommended around the Knight Trainer Pro

The KTP is placed on the centre line, near the service line, because it will serve both to the left and the right.





The shot assortment includes 1 shot towards each service box that is out, to encourage players to call the lines.

As closely as possible, for every long serve there is a short serve with the same tilt (angle) and direction (pan).

Increase the probability of any shot in a Group but adding it more than once to the Group. For example, increase the frequency of the short serves by including more short serves.

#### IF YOU ARE CHANGING A DRILL



### **PLAYLIST**

3,2,1 in the shot names counts down from the furthest out towards the centre. R = Right L = Left SServe=Short Serve DServe=Deep Serve

Time Delta	Shot
L1	Loop 30 Times - Start
G1	Group Start
6.0	RSServe3
6.0	RSServe2
6.0	RSServe1
6.0	RSServe1Deeper
6.0	RSServe1Short
6.0	RDServe3
6.0	RDServe2
6.0	RDServe1
G1	Group End
G2	Group Start
6.0	LSServe3
6.0	LSServe2
6.0	LSServe1
6.0	LSServe1Deeper
6.0	LSServe1Short
6.0	LDServe3
6.0	LDServe2
6.0	LDServe1
G2	Group End
L1	Loop End

# **SMASH DEFENCE - for singles**

7 smashes and 2 drops are on the court. The Playlist contains the 9 smashes. The 2 drops can be added to increase the challenge if necessary. Players should try to place the returns. Four return locations are suggested below.

Eyeguards strongly recommended around the Knight Trainer Pro

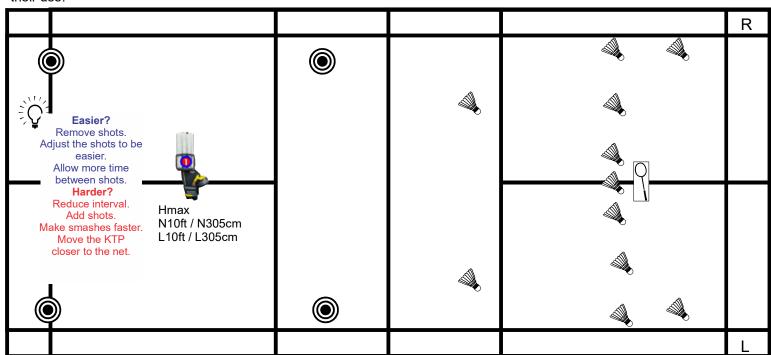
The drill can be run 2 ways:

- Run the drill with 20 random smashes to the right half, followed by 20 random smashes to the left half, and then 20 smashes across the full court. In this way the player can work on basic control to the left and to the right before the challenge of covering the whole court. The drill allows 2 seconds between the smashes. *To start, press F5, or in the Run menu click on Run Drill*.



- You can also run the drill with only random smashes across the full court, up to 250. *Use Run Random Drill or Ctrl F5* and enter the number of shots that you want.

The smashes furthest to the left and right appear extra times in the Playlist to increase the frequency of their use.





- Insert any shot more than once to increase the frequency of that shot.
- Add the drop shots to the Playlist for an extra challenge for advanced players.

The goal is not to beat the player, but to set a level that lets the player improve his control. Sometimes, easier is better. After another 8 second pause, the Playlist will continue with 25 smashes across the full width of the court.

#### IF YOU ARE CHANGING A DRILL



### **PLAYLIST**

Time Delta	Shot
8.0	LSM3
L1	Loop 24 Times - Start
G1	Group Start
2.0	LSM3
2.0	LSM2
2.0	LSM1
2.0	CTRSM
G1	Group End
L1	Loop End
8.0	RSM3
L2	Loop 24 Times - Start
G2	Group Start
2.0	CTRSM
2.0	RSM3
2.0	RSM2
2.0	RSM1
G2	Group End
L2	Loop End

# **SMASH DEFENCE - for doubles team**

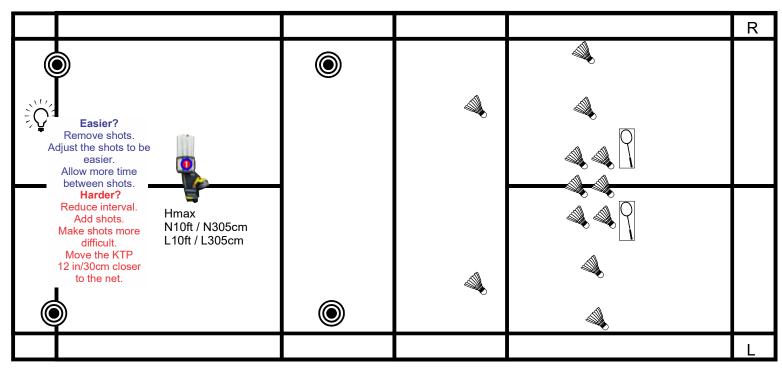


• 10 smashes and 2 drops are on the court, but only the smashes are in the Playlist. Of the 6 smashes in the middle of the court, the smashes in the front row are steeper than those in the back row.

The doubles team takes their defensive positions and tries to play flat returns of the smashes. The 2 drops can be added to increase the challenge.



For this drill, use
Run Random button or Ctrl F5
and enter the number of shots
that you want, up to 250.





# **SINGLES: FRONT & BACK - in sequence**

Right side: Player starts in the receiving position in the right service box. Serve will be a short serve. Player plays net shot to the right side.

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2nd shot will be a deep clear to the right. Player hits a drop shot to the right. 3rd shot will be to the net at the right. Player plays a net shot to the right. Shots 2 & 3 repeat 10 times.

10 second pause, to allow player to prepare to receive on the left

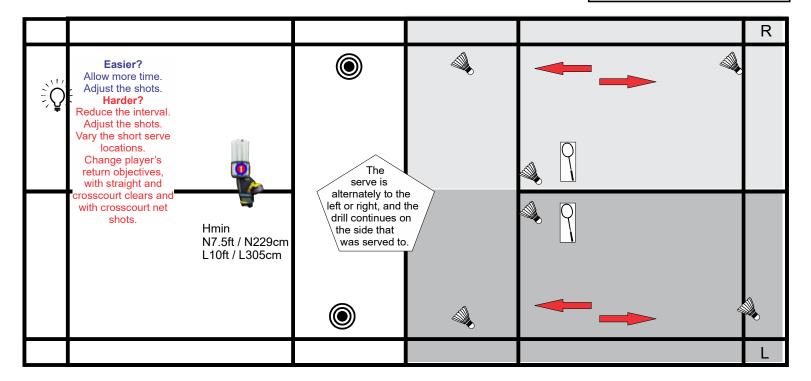
Left side: Player starts in the receiving position in the left service box. Serve will be a short serve.

Player plays a net shot to the left side.

2nd shot will be a deep left clear. Player hits a drop shot to the left. 3rd shot will be to the left net. Player plays a net shot to the left. Shots 2 & 3 repeat 10 times.

Total shots: 42

To start the Playlist, press F5, or in the Run menu click on Run Drill





Add some random timing. Vary the time before net shots by as little as 0.1 seconds up or down. You will do this by placing the same shot in a Group 3 times, and then setting a different interval for each appearance of the shot. Each time the Loop reaches the Group, only one of the grouped net shots will be chosen randomly.

You can do the same thing for the clears.

To place shots in an existing Group, select a shot in the Group, then right click on the cork of the shot you want to insert. Choose "Insert" or type "I" and that shot will be added to the Group.

To make a new Group in the Playlist, select the adjacent shots that you want in the Group, right click and choose "Group."

(Don't place a Group inside another Group or a Loop inside a Group - either of these will cause an error message.)

### **SINGLES: FRONT & BACK - random**

Right side: Player starts in receiving position in the right service box. After 10 seconds, serve will be a short serve. Player plays a net shot to the right.

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The following shots will be randomly deep right clears or shots to the net at the right. Repeats for 20 shots.



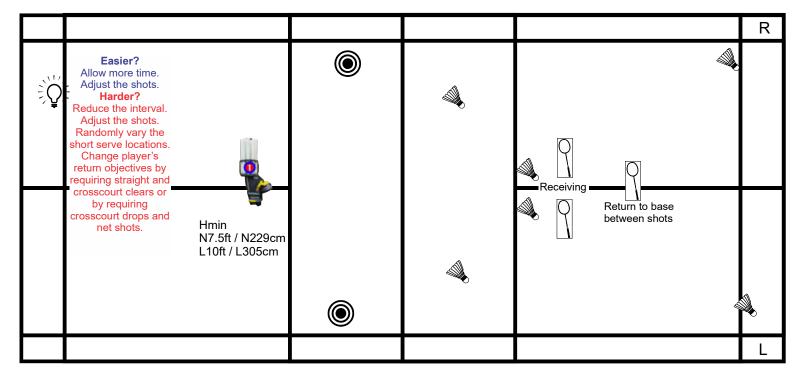
10 second pause, to allow player to prepare to receive on the left

Left side: Player starts in receiving position in the left service box. Serve will be a short serve. Player plays a net shot to the left.

The following shots will be randomly deep left clears or shots to the net at the left.

Repeats for 20 shots.

Total shots: 42





The net shot and the clear on the left are given a similar pan and tilt. The shots mainly vary in speed. This makes it harder for the player to anticipate which shot is coming next. The same is done for the two shots on the right.

The serves will alternate, preceded by a 10 second pause. Following each serve the player will randomly receive net shots and clears. The player should plan the placement of each return shot.

IF YOU ARE CHANGING A DRILL



To start the Playlist, click on the Run button to the left of the menus or press F5 (or Fn F5, depending on your laptop)

# SINGLES: 4 CORNER - in sequence

Player starts in receiving position in right service box. Serve will be a short serve. Player hits to right net and returns to his base.

Eyeguards strongly recommended around the Knight Trainer Pro

2nd shot will be a deep right clear. Player hits drop to left net.

3rd shot will be to the left net. Player plays net shot to left net.

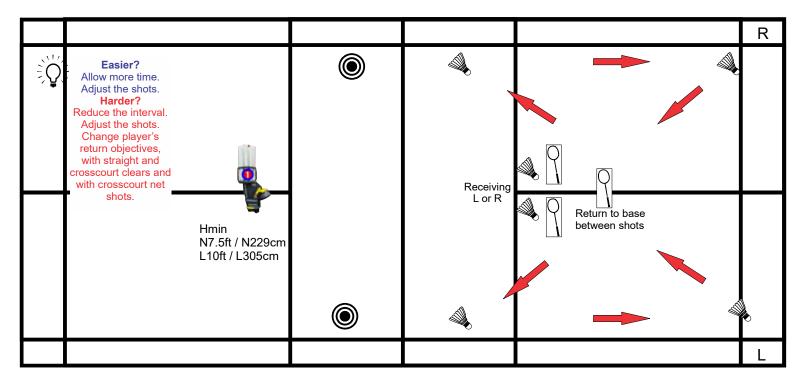
4th shot will be a deep left clear. Player hits drop to right net.

5th shot will be to the right net. Player plays a net shot to the right net.

Shots 2 thru 5 then repeat 10 times.

10 second pause, to allow player to prepare to receive on the left

Total shots: 45





Add some random timing. Vary the time before net shots by as little as 0.1s up or down. You will do this by placing the same shot in a Group 3 times, and then setting a different interval for each appearance of the shot. Each time the Loop reaches the Group, only one net shot will be chosen randomly.

You can do the same thing for the clears.

To place shots in an existing group, select a shot in the Group, then right click on the cork of the shot you want to insert. **Choose "Insert" or type "I"** and that shot will be added to the Group.

To make a new group, in the Playlist select the adjacent shots that you want in the Group, right click and choose "Group".

Don't place a Group inside another Group, or a Loop inside a Group - either of these will cause an error message.

## **SINGLES: 4 CORNER - random**

Eyeguards strongly recommended around the Knight Trainer Pro

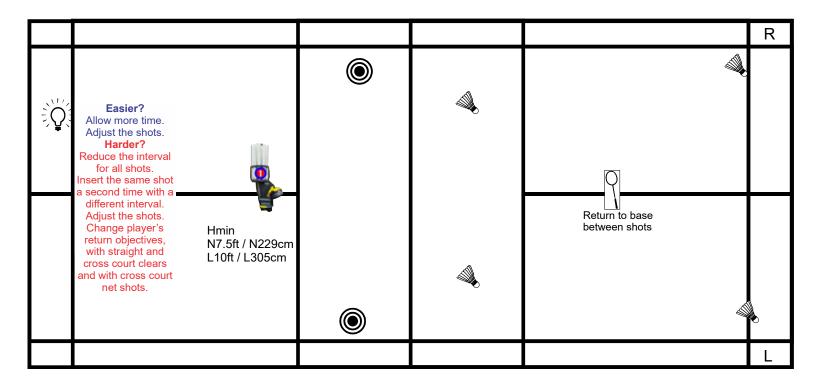
Player starts at his midcourt base and returns there between shots.

The KTP will send the following shots randomly:

- Net shot to the left net. Player plays net shot to left net.
- Left clear. Player hits drop to right net.
- Net shot to the right net. Player plays a net shot to the right net.
- Right clear. Player hits drop to left net.



Select the number of shots when you choose the "Run Random" button or press Ctrl F5.



The net shot and the clear on the left are given a similar pan and tilt. The shots only vary in speed. This makes it harder for the player to anticipate which shot is coming next. The same is done for the two shots on the right.

We cannot hide changes in direction, but shortening the interval will give the player less of a chance to watch the KTP.



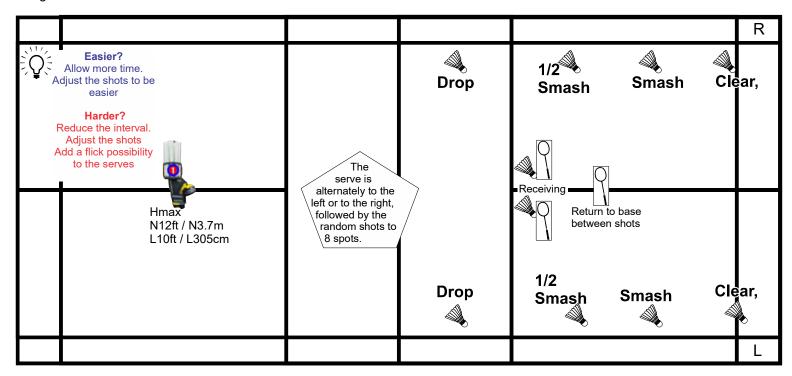
### **SINGLES: 8 SHOTS - random**

Player starts by receiving a serve, and then returns to his midcourt base between shots. After the serve, the KTP will send the following 8 shots randomly, with 24 shots in total. Then the serving side will change, and there will be another 24 random shots. That will end the drill.

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- Choice of 2 drop shots to the left
- Half smash to the left
- Full smash to the left
- Left clear
- Choice of 2 drop shot to the right
- Half smash to the right
- Full smash to the right
- Right clear





#### For deception:

smash, 1/2 smash, and some drops use a similar tiltsome drops use the same tilt as the clears

This drill uses Groups to create random feeding, allows the drill to start with a serve. In the Playlist after the right side serve, all the other shots appear once in a Group that is inside a 24 shot Loop. After the 24 shots, the drill pauses for 10 seconds and then serves to the left, and continues with the 24 shot mix of shots to 8 points around the court,

If you want certain shots to be fed more often than others, place them more than once inside the Group.

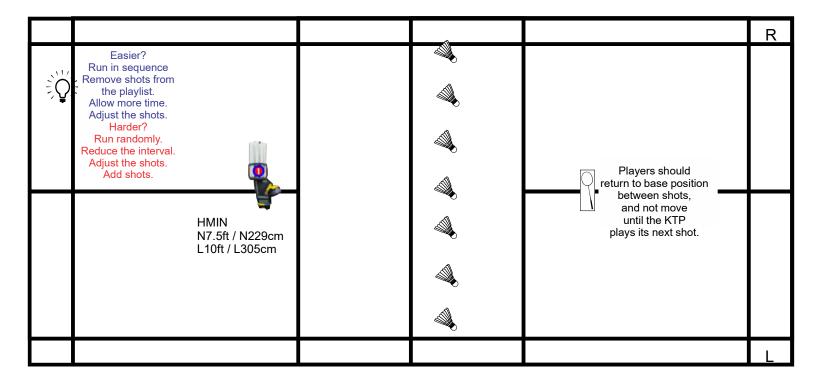
(Don't place a Group inside another Group or a Loop inside a Group - either of these will cause an error message.)

# **RETURNING NET SHOTS**

#### KTP is set for net shots only.

Player can be instructed to reply with net shots or clears. Run randomly (Ctrl+F5, or Run Random Drill) or in sequence (F5, or Run Drill).



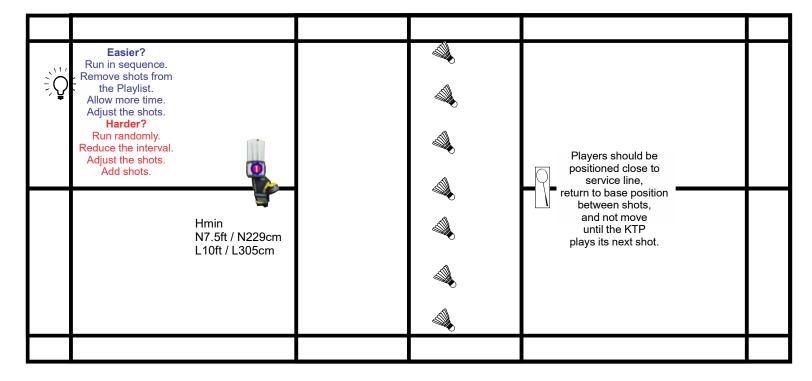


# **KILLING NET SHOTS**

#### KTP is set for net shots only.

Player is positioned closer to the net and is instructed to attack all the net shots. If necessary, make the shots looser to allow a better chance for the attack. Run randomly (Ctrl+F5, or Run Random button) or in sequence (F5, or Run Drill).



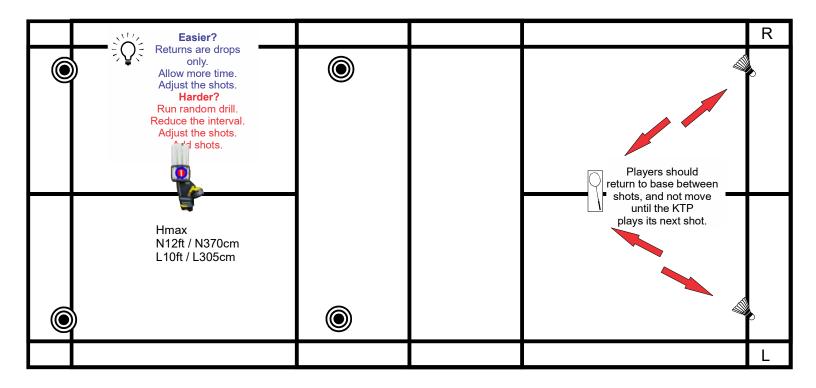


# **RETURNING CLEARS with drops and clears**

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#### KTP is set for clears only.

Player can be instructed to reply with net shots or clears. Run drill with a Loop of 10 for 20 shots by player, in an alternating right clear / left clear pattern.



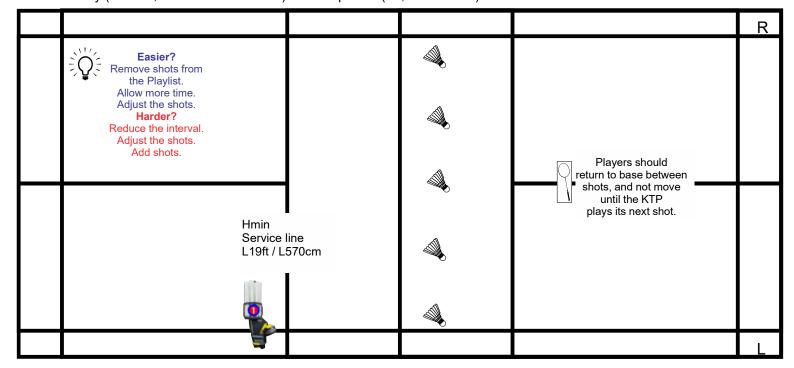


# **NET SHOTS fed from player's left**

#### KTP is set for net shots only, feeding from the right.

Player can be instructed to reply with net shots or clears.

Make the shots loose enough so that players can try to attack the net shots. Run randomly (Ctrl+F5, or Run Random Drill) or in sequence (F5, or Run Drill). Eyeguards strongly recommended around the Knight Trainer Pro

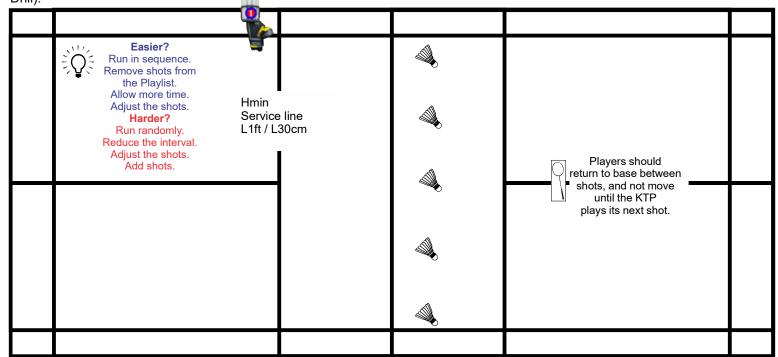


# **NET SHOTS fed from player's right**

Eyeguards strongly recommended around the Knight Trainer Pro

#### KTP is set for net shots only, feeding from the left.

Player can be instructed to reply with net shots or clears. Make the shots loose enough so that players can try to attack the net shots.Run randomly (Ctrl+F5, or Run Random Drill) or in sequence (F5, or Run Drill).



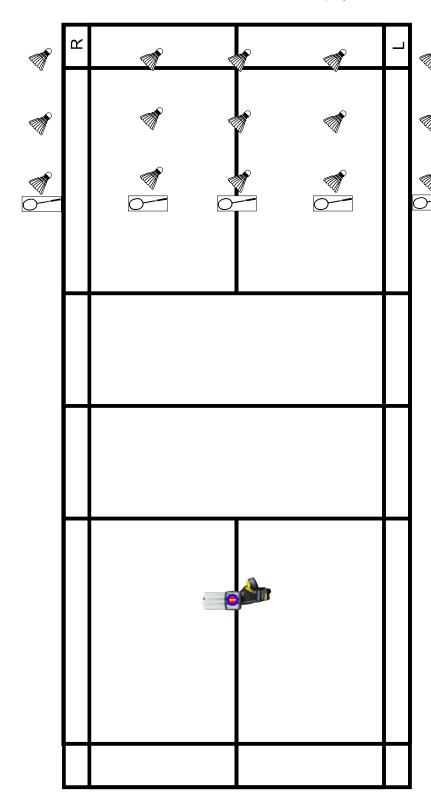
### **5 BEGINNERS & 3 CLEARS**

This is a simple drill to feed shuttles to beginners, using some space outside of the court in a facility where the courts are far enough apart. The players are positioned roughly as shown. The three clears are: Half court, 3/4 court, full court.

For the half court clear, each player receives one shot, and then the KTP moves to the next player. Using the Loop function, the KTP repeats that shot again to each player and then a third time. Each cycle of the Loop sends that shot once to each player, but the Loop has 3 cycles.

The feeding then changes to the next type of clear, and repeats the pattern - one shot per player, repeated 3 times.

C1-HALF is furthest to the right, followed by C2-HALF, C3-HALF, C4-HALF, C5-HALF. These are the half court clears to each player. Then, C1-3/4, C2-3/4, C3-3/4, C4-3/4, and C5-3/4 are the 3/4 court clears to each player. Finally, C1-FULL, C2-FULL, C3-FULL, C4-FULL, C5-FULL are the full clears to each player. In each case there is a Loop of 3.



### **PLAYLIST**

Time Delta	Shot
L1	Loop 3 Times - Start
2.5	C1-HALF
2.5	C2-HALF
2.5	C3-HALF
2.5	C4-HALF
2.5	C5-HALF
L1	Loop End
L2	Loop 3 Times - Start
2.5	C1-3/4
2.5	C2-3/4
2.5	C3-3/4
2.5	C4-3/4
2.5	C5-3/4
L2	Loop End
L3	Loop 3 Times - Start
2.5	C1-FULL
2.5	C2-FULL
2.5	C3-FULL
2.5	C4-FULL
2.5	C5-FULL
L3	Loop End

After all the Loops, the drill will end, and can be restarted by the coach for the next set of players. Each player will have hit 9 shots, for a total of 45 shots in the drill.

It is also possible to place a 10 second pause at the end of the drill during which new players take their positions. The drill would then automatically restart. This overall Loop could repeat 5 times before reloading the carousel, so you could feed to 5 sets of players before stopping.

The time between shots has been set at 2.5 seconds, but this can be increased or decreased as you wish.

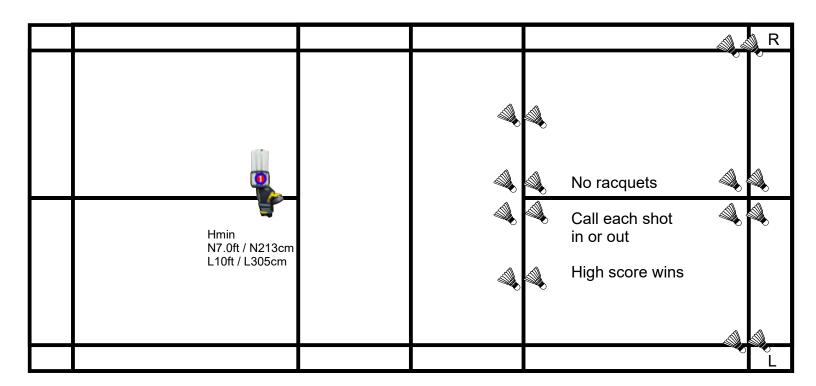
With fewer players, you can delete lines from the Playlist as necessary.

### LINE CALL TOURNAMENT

Challenge players test and improve line calls with this quick, fun line call tournament. Here's how it works:

Eyeguards strongly recommended around the Knight Trainer Pro

- Eight players take part in an elimination Line Call Tournament and play 4 quarter finals. Winners move onto 2 semi finals and then 2 players go to the finals.
- Players won't have racquets because we don't want them to hit the shuttles.
- Allow 2 minutes per game. A tournament for 8 players will take about 16 minutes
- Each game has 2 players competing, one in the left service box, the other in the right service box.
- Serves will alternate between left and right service boxes every 3 seconds. This gives each player 6 seconds between serves. Each player receives a total of 15 serves
- The receiving player must move to each serve and quickly call the shot in or out.
- Every correct line call is a point. The player with the highest score wins and moves to the next round.
- In the event of a tie, let them play again, but the first time one player takes the lead, that player wins. If the tie continues too long, you might consider a coin toss.



IF YOU ARE CHANGING A DRILL



To start the Playlist, click on the Run button to the left of the menus or press F5 (or Fn F5, depending on your laptop)

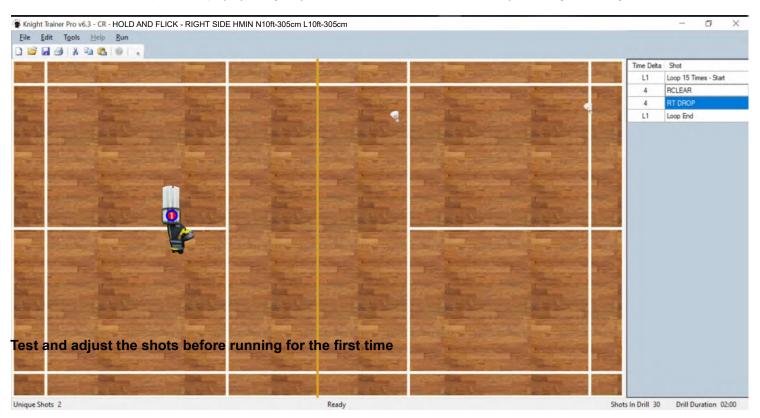
#### **HOLD AND FLICK - LEFT SIDE**

This creates similar training to the Hold and Flick video. The KTP is positioned on the centre line, at minimum height (HMIN N10ft-305cm L10ft-305cm). The player returns a clear with a straight drop shot and then moves towards the net to return a deep net shot with a hold and flick racquet movement, playing a cross court lift. This repeats 15 times. The emphasis is on control rather than speed. Simplify by using only the net shot. Make it more difficult by reducing the timing.



#### **HOLD AND FLICK - RIGHT SIDE**

As with the previous drill, this creates similar training to the Hold and Flick video. The KTP is positioned on the centre line, at minimum height (HMIN N10ft-305cm L10ft-305cm). The player returns a clear with a straight drop shot and then moves towards the net to return a deep net shot with a hold and flick racquet movement, playing a cross court lift. This repeats 15 times. The emphasis is on control rather than speed. Simplify by using only the net shot. Make it more difficult by reducing the timing.

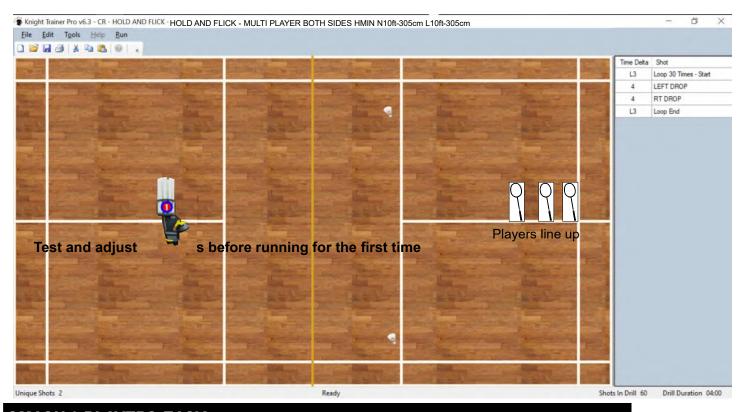


#### HOLD AND FLICK - MULTI PLAYER BOTH SIDES

The KTP is positioned on the centre line, at minimum height (HMIN N10ft-305cm L10ft-305cm).

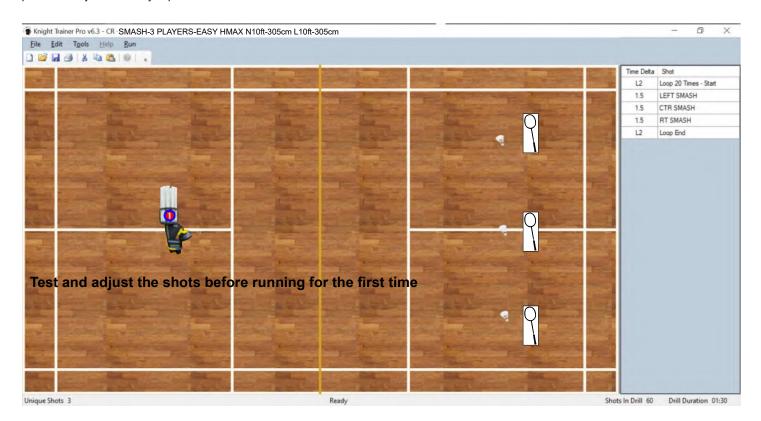
If run with an even number of players, each player will always go to the same side. With an odd number, each player will alternately go left and right. Players line up on the centre line. The front player returns the net shot and then goes straight back to play a shadow smash, then goes to the back of the line of players. At the net, players can practice the Hold and Flick action, playing a crosscourt clear.

You can use the same feeding and make the drill simpler by asking players to simply return the feed with a straight net shot.



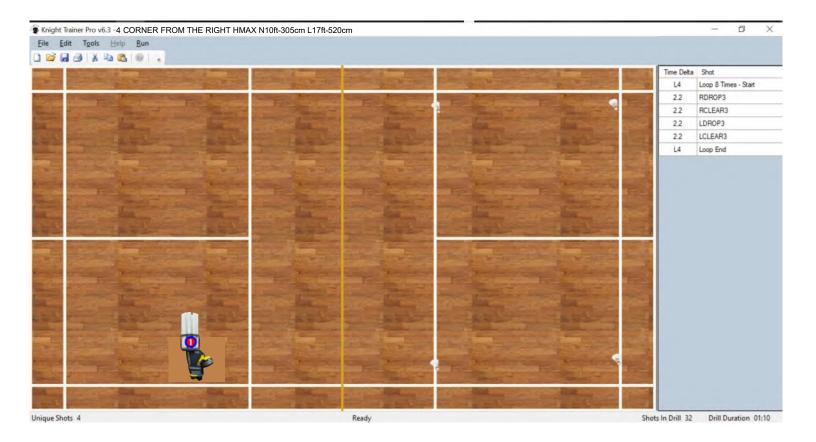
#### SMASH-3 PLAYERS-EASY

The KTP is positioned on the centre line, at maximum height (HMAX N10ft-305cm L10ft-305cm). This drill allows 3 players on court at a time practising smash returns. In this example each player gets another smash every 4.5 seconds, for a total of 20 per player. If you reduce the interval to one second, each player will only wait 3 seconds. When the drill is finished, either bring new players onto the court, or have the same 3 players change their positions. Players should try to place their returns.



### 4 CORNER FROM THE RIGHT

The KTP is positioned near the right side line, at maximum height. The drill consists of 2 drops and 2 clears as shown. This challenges the players with a 4 corner drill that includes straight drops and straight clears to the player's left, as well as the cross court shots that are shown. Adjust the tightness and timing of the shots to vary the difficulty.



Test and adjust the shots before running for the first time

### 2 DROPS 2 HIGH DRIVES FROM THE RIGHT

We are grateful to Efendi Wijaya of E Badminton Training Centre in Markham, Ontario for a few of his drills. Efendi and his training centre are developing many of the best young players in Canada.

The KTP is positioned near the right side line, at maximum height (N10ft-305cm L17ft-520cm). The drill consists of 2 drops and 2 high drives with 2 second and 1.2 second intervals. The player moves as quickly as possible on the court to attack all of the shots.

Adjust the speed and timing of the shots to vary the difficulty. Create your own variation by creating a new drill with the KTP positioned on left side.



Test and adjust the shots before running for the first time

### 3 POINT CLEAR DRIVE DROP FROM THE RIGHT

Eyeguards strongly recommended around the Knight Trainer Pro

Here is another drill from Efendi Wijaya of E Badminton Training Centre.

The KTP is positioned near the right side line, at maximum height (N10ft-305cm L17ft-520cm).

The player returns the straight clear with a straight smash, then moves quickly to return the cross court drive with a cross court net shot and then attacks a loose net shot on the left. The player moves as quickly as possible on the court to and the goal is to attack the net shot.

Adjust the speed and timing of the shots to vary the difficulty. If the player cannot reach the net shot in time to attack, create and save an easier version allowing more time and/or making the net shot looser.



Test and adjust the shots before running for the first time

### CROSSCOURT SMASH TO RIGHT HIGH LEFT DROP



Thanks again to Efendi Wijaya of E Badminton Training Centre in Markham, Ontario for one of his drills.

The KTP is positioned near the right side line, at maximum height (N10ft-305cm L17ft-520cm). 25 times, the player returns a crosscourt smash with a crosscourt net shot and then attacks a loose net shot on the left. The player moves as quickly as possible on the court and the goal is to attack the net shot.

Adjust the speed and timing of the shots to vary the difficulty. If the player cannot reach the net shot in time, create and save an easier version allowing the player to develop the speed.

#### Test and adjust the shots before running for the first time.



### 13 SHOT CHALLENGE FROM THE RIGHT HMAX N10ft-305cm L17ft-520cm

Try this out with advanced players for an intense full court workout. The drill is run randomly (Run Random button, or Ctrl F5, or Run Random Drill from the Run menu). To run it in shot order, either run it as the 13 shot drill shown here, or add Loops and Groups to control the shot order and repetitions.

The KTP is positioned near its right side line, at maximum height (N10ft-305cm L17ft-520cm).

The drill consists of tight drops, deeper drops, half smashes, full smashes and clears across the court, plus 2 smashes further into the court. By feeding from the side of the court, the drill mixes faster straight shots with cross court shots.

Adjust the speed and timing of the shots to vary the difficulty.

Create your own variation by creating a new drill with the KTP positioned on its left side of the court. Using the new Mirror function, create all the shots on one side, then Mirror them. Since straight shots are very different from crosscourt shots, you will still have to test and adjust each mirrored shot. You should also modify the names of the mirrored shots to reflect their position on the court.



Test and adjust the shots before running for the first time



### Play games of SINGLES against the KTP:

By varying the difficulty, these games can challenge players of all levels.

The KTP is at H5.5', N7' and L10' (H166cm, N215cm, L305cm). For the singles game:



- There will be 21 points, taking about 15 minutes and with 245 shots so one game per carousel. However this can easily be adapted to shorter games to get 2 or 3 games per carousel.
- The game can be easy for beginners or very hard for experts by changing the timing and the difficulty of the shots. If making versions for different levels save each version under a different name.
- Before first use with another KTP, the shots should be checked and adjusted, as with any drill from another machine.
- Start the game (F5 on the keyboard or the Run button) and it begins with a 10 second wait before a serve to the player's right service box. The serve will randomly be one of 6 short or long serves.
- After each serve there are 10 random shots net shot, drop shot, smash, clear and more to create the feel of playing a point in a game.
- After the serve and 10 shots, the KTP will stop for 10 seconds before serving to the player's left side. Again after the serve the there will be 10 random shots.

After 20 points (each with a serve and 10 shots), there will be a 21st serve and followed by 25 random shots for the last point.

The player can keep score. One example for scoring is this:

if the player returns everything - the serve and the 10 random shots - then the player has one point.

if the player misses a shot, then the KTP scores a point.



Test and adjust the shots before running for the first time

Note: This is only a partial view of the Playlist. Open the game in Trainer and scroll down to see more.

### Play games of DOUBLES against the KTP:

- the KTP feeds defensive or neutral shots such as net shots, drives and clears
- the players try to stay on the offensive
- the KTP is at H5.5', N7' and L10' (H166cm, N215cm, L305cm).

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Like a drill, this game can be changed by the user

- shots modified, timing changed, shots inserted or removed, difficulty level changed and new versions saved under new names.
- if the game is too easy for the players, then make the drill faster and with more difficult shots
- if it is too hard for the players, either challenge them to keep trying, or make the game easier.

For this doubles game, there will be 12 points, taking about 9 minutes and with 240 shots – so one game per carousel. This can easily be adapted to shorter games to get 2 or 3 games per carousel.

- -The game can be made easy for beginners or very hard for experts by changing the timing and the difficulty of the shots.
- -If making versions for different levels save each version under a different name.

Before first using this game with your KTP, the shots should be checked and adjusted, as with any drill from another machine.

Press the Run button or use Function F5 on the keyboard and the game begins with a 10 second pause and then a serve to the players' right. The serve will randomly be one of 6 short or long serves.

- After each serve there are 19 random shots net shot, drive, smash return, clear and more to create the feel of playing a point in a game. The serve shots can be mixed into the point for more variety.
- After each serve and the 19 shots, the KTP will stop for 10 seconds before continuing with serves alternately to the left and right side. each followed by 19 random shots
- The games ends after 12 serves and 228 other shots.

The players can keep score. One example for scoring is to compare teams:

- if the players return everything during a point - the serve and the 19 random shots - then one is added to that teams score. Each team tries to do better than the other teams' scores.



Test and adjust the shots before running for the first time

Note: This is only a partial view of the Playlist. Open the game in Trainer and scroll down to see more.

# Train better Teach better Play better

Our team has been devoted to badminton for more than 45 years, through innovation, quality, service and support.

In 2008, we introduced the original Knight Trainer, the culmination of more than 15 years of development. It was the world's first mechanical feeder, a revolution for badminton.

Now with the Knight Trainer PRO, we are proud to bring endless new opportunities for players, teachers and coaches to advance in badminton.

