



OPERATION MANUAL **IMPORTANT:** Please read instructions carefully prior to use!

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**From novice to professional, from defender to attacker,
... ideal for every type of player and every level of play**

Congratulations, you are now the owner of a Butterfly table tennis robot.

The manufacturer offers a full 2 year guarantee as well as a 5 year service plan covering repairs and replacement parts, effective from the date of purchase. Please ensure you keep your receipt!

Special features:

- Unique worldwide innovation: Ball delivery with state of the art three-wheel technology
- The wheels are manufactured using rigid sponge with a special coating for better durability
- Compact, solid, functional construction (6kg)

- A large all-round collection net
- Well designed and user-friendly control panel.
- Variable ball placement, adjustable to desired spin, speed and trajectory
- Programmed and random delivery of balls with different spin, speed, direction and trajectory
- Automatic correction of length of ball delivery
- Memory and IFC (Individual Frequency Control) functions
- Remote control
- All functions adjustable from the player's side on the control panel
- Adjustable height of ball delivery
- 21 pre-saved exercises – selected by Richard Prause (see page 5)

Please note:

- Please read this instruction manual carefully before using the machine!
- The Table Tennis Robot may only be connected to a 100-230V power supply
- The projection wheels rotate at high speed, therefore avoid touching the wheels while the machine is running as this can cause injury!
- The Table Tennis Robot, AMICUS PROFESSIONAL, should only be used in closed and dry rooms!

1. ASSEMBLY

The following components are included with the robot and must either be assembled or connected to the machine prior to its use.

- a) Base unit with collection net
- b) 24V DC power adapter
- c) Control unit
- d) Extension cable
- e) Control unit holder

Other components: Allen keys, projection wheels, tube for wheel adjustment, spare rubber for the collection net, Velcro strips for securing the collection net.

1. Place the base unit on the table in an upright position (connections facing you). (Fig.1.). Open out the net supporting frame into Position 1. (Fig. 2); the metal poles facing you are for securing the base unit to the table as seen in the photograph.

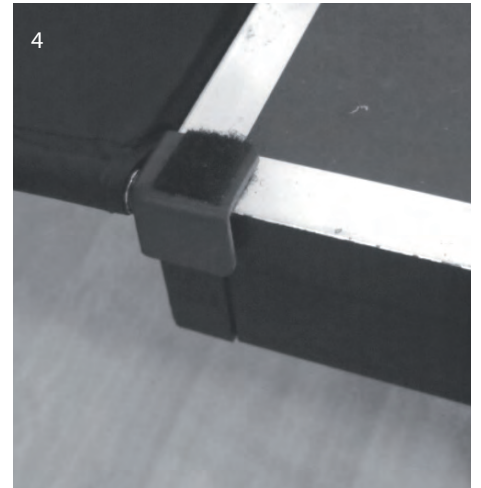
2. Attach the base unit to the table with the aid of the preassembled holder (see photograph) and rotate the head by loosening the large screw on the base unit, turning it in the opposite direction (180 degrees).

3. Standing behind the machine, fold down the net supporting frame completely by gripping the top part of the frame on each side and pulling the sides apart until fully extended (Fig. 3.) Attach the plastic corner pieces to the corners of the table (Fig. 4.)

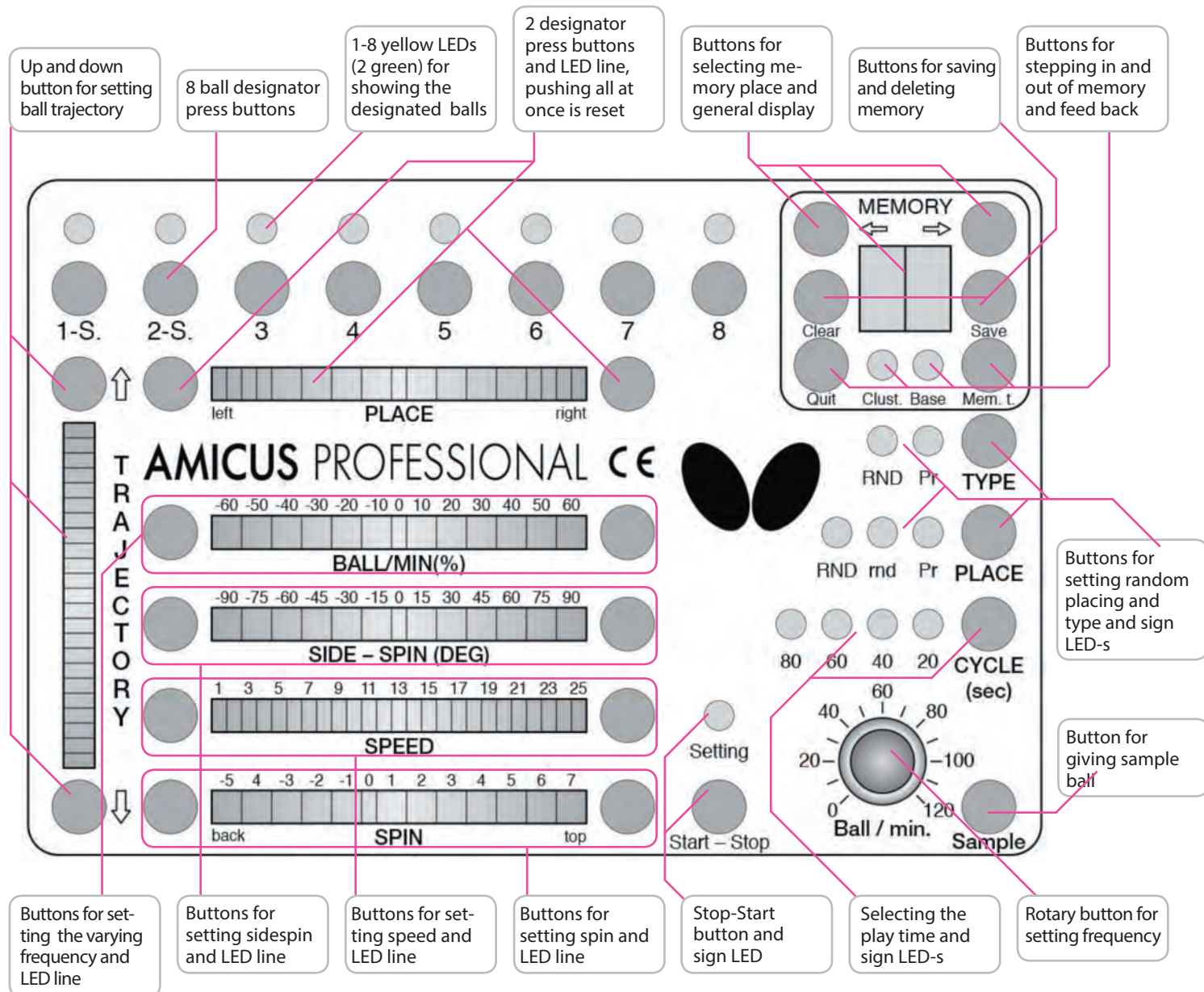
4. Then pull the ends of the ball collection net between the table tennis net posts and its supports, and secure the rubber bands to the clamp screws (Fig. 5).

Secure the velcro strips, which are attached to the side of the ball collection net, to their counterparts fixed to the plastic corner pieces. See Fig. 6.

Connect the extension cable and the adapter to the appropriate connections found on the side of the base unit (Fig.7). The cable on the opposite side of the table is then connected to the control unit which you should then mount onto the players-side of the table. (Fig. 8.)



2. CONTROL UNIT (SHORT DESCRIPTION)



The current ball is the one which ones LED flashes in the upper line (always only 1 of the 8 LEDs)
A rally of one or more balls is called play.

Trajectory:	Trajectory regulation
Button 1-8:	Setting balls 1-8
Pushbutton Place:	select placement (left → left half of the table, right → right half of the table)
Pushbutton memory ==>:	Select a previously saved exercise
Display screen:	Displays what exercise is actively
Clear:	Deletes exercise
Save:	Saves exercise
Quit:	Exit the Memory Function
Mem t:	Enable memory function
Pushbuttons Ball / min% (IFC):	individual speed regulation when playing with varied spin
Side spin:	Sidespin regulation (-90 → sidespin left; 0 → no sidespin, right sidespin → 90)
Speed:	Speed regulation (1 → slow; 25 → fast)
Spin:	Spin regulation (-5 → extreme backspin, 0 → no spin; 7 → extreme topspin)
Start / stop:	Start or stop the robot
Ball / min:	Regulation of the ball frequency (balls/min) At 0 balls / min -> Silent mode (Silent stand by)
Sample:	Simulates a ball delivery without saving it (press once to start, twice to stop)
Cycle:	defines the duration of the exercise, Pauses automatically after 20, 40, 60 or 80 seconds
Place:	Spin, speed and trajectory of the balls is equal to 1-8 but their placement varies randomly
Type:	Plays 1-8 balls in random



3. OPERATION

3.1 | STARTING THE ROBOT

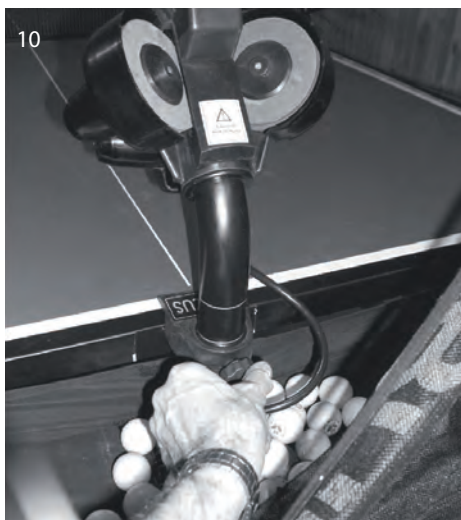
Fill the „ball container“ with a sufficient quantity of balls (50-60 balls) and then turn the Ball/min rotary switch to the „0“ position before turning on the power.

After turning on the power, the robot will carry out a brief self test (approximately 5 seconds) and the control unit will then automatically switch to the basic setting. By turning the „Ball/min“ rotary switch to a higher position the projection motors will start to work and the robot will start releasing balls.

We can define the following elements in order to set the AMICUS PROFESSIONAL easier.

3.2 | THE HEIGHT OF THE PROJECTION HEAD

As with all the Amicus robots, the height of the robot head can be adjusted as follows: Loosen the hand screw on the back of the tube which holds the projection head. The tube can be moved up and down as required. (Fig. 9). Finally adjust to the desired height, ensuring that the top of the outer tube lines up with one of the markings on the inner tube then tighten the hand screw (Fig. 10).



3.3 | BALL PLACEMENT

1. Ball delivery to a specific point on the table
After you have turned on the robot, the control unit automatically plays the balls on a certain point.

The parameters for each ball can be changed using the Trajectory, place, side-spin, spin and speed buttons. To press the sample button simulates the set of them over, by a single ball ejection.

2. Programmed ball delivery to various points on the table

With the Buttons 1-8 more balls can be selected. (max. 8). Then can be set with the associated buttons the various parameters. The flashing yellow LED shows which ball is in play next. After completion of a „round“ the balls are played again from the beginning.

3. PLACE „rnd“ function

To use the rnd function, press the „Place“ button. In this case, the Robot delivers balls randomly selected from them in a circle with a diameter of 20cm and this simulates a real game situation.

4. PLACE „RND“ function

By repressing the „Place“ button to select „RND“ is enabled. Now the selected balls are ejected in random order. Again, the flashing LED will shows the next ball.

5. „Rnd“ and play „Rnd“ together

In the press the Place button a third time, you can share „Rnd“ or „rnd“ together. The balls are then ran-domly played with a radius of 20cm to the items selected in each case.

6. TYPE „RND“ function

The TYPE RND function is activated by pressing the TYPE button. The ball will be ejected accidentally, but the spin, speed and trajectory adjustment of the balls 1-8.

7. IFC (Individual Frequency Control)

The new „IFC“ (Individual Frequency Control) function can be selected when several kinds of balls are se-lected in an exercise at the same time. If the IFC feature is enabled, you can set the time intervals between the individual balls with different spins.

8. Exercises with service

By rapid, double press the keys 1-S. and / or 2-S. exercises can be trained with service. (LED green) If you play an exercise with service, the robot makes the design of the impact a short break from 1.0-1.5 seconds.

Important: If you have two set ups, the robot randomly chooses one of these two.

3.5 | MEMORY

Programming sequences and exercises takes time. In order not to lose the programmed exercises after the robot is switched off, AMICUS PROFESSIONAL allows to save up to 99 exercises that can be played at any time.

Note: Memory Banks 79-99 contain pre-saved exercises that should not be over-written.

Saving exercises in the memory

Set the rotary switch ball / min to the 0 position and press the Mem.t. Button (the „Base“ LED lights up and the space „00“ appears on the display.) It is possible, with the keys (↵) and (↵) choose a location.

If a space should not be assigned the number is flashing.

When you press the Save button, the exercise is saved. If you want to delete exercises, they must select the exercise you want to delete and press the Clear button.

Playing saved exercises

Press the Mem. t. Button to enter the exercise memory, then select an exercise with the „↵“ button. The 21 exercises on page 5, selected by Richard Prause are stored at position 79 – 99

3.6 | CLUSTER

Fill in the cluster storage

The cluster memory allows to switch the saved exercises one after the other. After each completed exer-cise the AMICUS takes a short break and starts the next exercises.

Press the Mem t. Button to enter the memory storage. To select exercises you want to copy in the cluster using the ↵, ↵ keys.

By repeatedly pressing the Mem.t. Button you will go into the cluster memory, choose it there also a loca-tion (C0-C9).

If you press the Mem.t. button third time the cluster storage will bei finished with the Save button.

3.7 | CALIBRATION

To calibrate the AMICUS press the two Trajectory buttons. The robot should now play a ball without any spin near the center of the table. If this is not the case, then they put the ball on a pedestal like that. To exit the calibration pressing start button.

Remote control

The remote control has four functions:

- 1 If the ball / min switch is set to 0, can be ejected with the red key always a single ball.
- 2 If the ball / min switch is not set to 0, then a full-scale exercise is the red button to start
- 3 The Sample button has the same function as on the control panel, there is a ball throw simulated.
- 4 With the two buttons + and - you can set the frequency of the ball eject.

3.6 | PRE-MAVED EXERCISES



LEFT-HANDED

Position	Ball 1	Ball 2	Ball 3	Ball 4	Ball 5
79	Forehand	Backhand			
80	Backhand	Mid - table			
81	Forehand	Mid - table			
82	Backhand	Backhand	Forehand	Forehand	
83	Backhand	Mid - table	Backhand	Forehand	
84	Forehand	Mid - table	Forehand	Backhand	
85	Backhand	Backhand	Backhand	Forehand	
86	Forehand	Forehand	Backhand		
87	Short Backhand	Long Backhand			
88	Short Forehand	Long Forehand			
89	Short Forehand	Long Backhand			
90	Short Backhand	Long Forehand			
91	Backhand	Mid - table	Forehand		
92	Forehand	Mid - table	Forehand		
93	Backhand	Mid - table	Backhand		
94	Backhand	Mid - table	Backhand	Forehand	Forehand
95	Forehand	Mid - table	Forehand	Backhand	Backhand
96	Half-long Mid - table	Long Backhand			
97	Half-long Forehand	Long Backhand			
98	Half-long Mid - table	Long Forehand			
99	Half-long Backhand	Long Forehand			

RIGHT-HANDED

Position	Ball 1	Ball 2	Ball 3	Ball 4	Ball 5
79	Backhand	Forehand			
80	Forehand	Mid - table			
81	Backhand	Mid - table			
82	Forehand	Forehand	Backhand	Backhand	
83	Forehand	Mid - table	Forehand	Backhand	
84	Backhand	Mid - table	Backhand	Forehand	
85	Forehand	Forehand	Forehand	Backhand	
86	Backhand	Backhand	Forehand		
87	Short Forehand	Long Forehand			
88	Short Backhand	Long Backhand			
89	Short Backhand	Long Forehand			
90	Short Forehand	Long Backhand			
91	Forehand	Mid - table	Backhand		
92	Backhand	Mid - table	Backhand		
93	Forehand	Mid - table	Forehand		
94	Forehand	Mid - table	Forehand	Backhand	Backhand
95	Backhand	Mid - table	Backhand	Forehand	Forehand
96	Half-long Mid - table	Long Forehand			
97	Half-long Backhand	Long Forehand			
98	Half-long Mid - table	Long Backhand			
99	Half-long Forehand	Long Backhand			

Note: Short balls should be returned with a flick, half – long balls with top-spin. More exercises with Videos can be found in the official Butterfly APP for android and iOS. To start the exercises, simply turn up the ball / min knob.

4. MAINTENANCE AND REPAIR



Important: Always unplug from the mains before carrying out any maintenance or repairs!

• **Ensure that whilst operating the robot small objects such as hair and broken balls etc do not find their way into the collection net and subsequently into the machine, because this can lead to ball jams.**

• The ball projection wheels are very durable and will last for at least 500 hours. Nevertheless, these wheels will finally wear off after intense use. One sign for a worn wheel is that the machine releases the balls at irregular lengths at high speed. This means that the surface of the wheels does not have enough grip on the balls. For that reason, the distance of the wheels has to be adjusted.

• To do this first remove the adjustable plastic tube from its holder which can be found between the projection wheels (Fig. 11.). First loosen the black adjusting screw next to the protective cover of the lower motor (Fig. 12.) with the bigger allen key provided with the accessories. Push the motor up towards the adjustable tube, gripping its cover, until the wheels touch the tube. (Fig. 13.) Repeat this for the two upper motors.



Please note: The correct distance between the wheels should be 36-37 mm.

• If the distance can no longer be adjusted, the ball projection wheels have to be re-placed. Therefore loosen the screws (Fig.14.) located in the wheel mounts using the smaller allen key provided among the accessories; this applies to all three wheels. Now remove the “adjusting screws” on the two upper motors (it is not sufficient just to loosen them) (Fig. 15.)

Then rotate the two upper motors away from the projection hole. Grip the outer casing to enable the removal of the projection wheels from the axis of the motor. (Fig. 16.)



The plastic disc can now be removed from the motor shaft. (Fig. 17.a, b,) Remove the plastic disc from the projection wheel (which is held together by three screws) and replace it with a new one.



Slide the new wheel onto the end of the axis and tighten the screw. Then adjust the correct distance of the wheels with the help of the adjustable tube as described above.

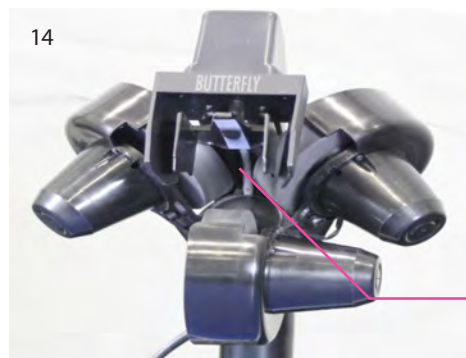
• If a ball jam should occur, the machine will try to remove the jam automatically by turning the motor and the projection wheels backwards and forwards (7-8 times). Should for any reason the feeding motor and both projection motors jam at the same time, the machine will stop to prevent any damage to the motors. In this case, all six yellow lights will start to flash on the control unit. You will have no alternative but to remove the head from the machine together with any damaged balls located in the bottom section of the robot with the aid of a pencil or screw-driver, etc. (Fig. 18)





5. ERROR MANAGEMENT

PROBLEM	SOLUTION
The robot does not function after mounting	a.) Check the correct connection of the extension cord between body and the control box. b.) If the rotary button for ball frequency (Ball/min) is set to 0, set it to a higher value.
The ball is released with irregular lengths.	Check the distance between the ball throw discs – the discs may be worn. (see page 4)
The robot releases balls irregularly: two balls quickly, then failing to release one ball.	There are silver rings on the tube of the robot head. These rings have to be visible when mounted on the tube of the base. Please mount the head exactly on top of the base so a ring is visible.
E1 is displayed, yellow lights flash on the control unit, the feeding motors are stuck. Ball jam.	Unplug the power cord, and remove foreign object or defective ball in the ball transport. Plug the robot back in.
E2 is displayed, the robot stops. Ball gets stuck between throwing discs. Yellow lights flash on the control box.	Unplug the power cord and remove the ball between the throwing discs. Then set the Ball/min button to 0 and plug the robot back in.
E3 is displayed, the robot stops. The electronics have overheated, perhaps due to an electric shortage in the machine.	Start the robot again with low speed balls. If E3 is still displayed, please consult a technician to solve the problem.



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Attention: If you are not able to resolve the problems with the help of this checklist, a specialist must be consulted! Please contact your specialist supplier or the Butterfly service centre (address is located on the side). Always contact a competent specialist if the power cable is defective or if the fuse blows again immediately after being replaced. Failure to do so will invalidate your claim for a refund during the two year guarantee period

Pin for regulating the length

6. LIST OF REPLACEMENT PARTS

mobil -100	Base unit with collection net
mobil -101	Robot head
Professional 102	Control unit
mobil -103	Holder for control unit
mobil -104	DC adapter (24V; 2,5A)
mobil -105	Extension cable
mobil -106	Projection motor
mobil -107	Feeding motor
mobil -108	Oscillating head motor
mobil -109	Motor for height adjustment
mobil -110	Projection wheel
mobil -111	Axis for projection wheel
mobil -112	Ball placement mechanism
mobil -113	Motor casing (3 part)
Further replacement parts on demand!	

7. TECHNICAL DATA

Mains Power Supply: 100-230V, 50-60 Hz transformer, approximately 40 W
The robot should only be operated indoors within a temperature range of 0-40°C.
Weight: 6 kg (with net)

Overall dimensions (with net): Height 0.75m; Width 0.28 m; Depth 0.25 m

Conformity with the Low Voltage directive 73/23/EEC
As last amended by EEC Directive 93/68/EEC
Registration No.: AN 50091861 0001
Report No.: 17004848 001

As is evident from Test Report
Nos. NTEK-2010NT1115351E
and NTEK-2010NT11153535S

The robot AMICUSPROFESSIONAL is permitted - tabled to bear the CE trademark.

Further product information and the product video are available on
butterfly.tt/amicus



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