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:
1. Unique worldwide innovation: Ball delivery with state of the art three-wheel technology
2. The wheels are manufactured using rigid sponge with a special coating for better durability
3. Compact, solid, functional construction (6kg)
4. A large all-round collection net
5. Well designed and user-friendly control panel
6. Variable ball placement, adjustable to desired spin, speed and trajectory
7. Automatic correction of length of ball delivery
8. Memory and AFC (Automatic Frequency Control) functions
9. Remote control
10. All functions adjustable from the player’s side on the control panel

Please note:
12. Please read this instruction manual carefully before using the machine!
13. The Table Tennis Robot may only be connected to a 100-230V power supply
14. The projection wheels rotate at high speed therefore avoid touching the wheels while the machine is running as this can cause injury!
15. The Table Tennis Robot, AMICUS ADVANCE, should only be used in closed and dry rooms!
2. Control Panel (Quick Reference Guide)

With the help of rotary switches 1-6 above and the buttons, it is possible to program six different landing spots, for example Ball 1 P middle, Ball 2 P left, Ball 3 P right, Ball 4 P right ... See illustration.

Trajectory: Trajectory regulation
Button A: Setting balls 6-1
Button B: Setting balls 1-6

Side-Spin: Sidespin regulation (left → Side-spin left; 0 → no Sidespin; right → Side-spin right)

Speed: Speed regulation (1 → slow; 19 → fast)

Spin: Spin regulation (4 → extreme backspin; 0 → no spin; 5 → extreme topspin)

Memory Place: Choice of up to 10 previously saved exercises

Ball/min: Regulation of the ball frequency
RND: Choice of two random functions
AFC: Automatic frequency regulation when playing with varied spin

Advice:
When executing an exercise starting with service, both the trajectory and speed of the ball are to be adjusted in low position, whereas the height of the head in rather high position.

3. Operation

Switching on the Machine
Fill the “ball container” with a sufficient quantity of balls (50-60 balls) and then turn the Ball/min rotary switch to the “O” 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.

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. 8) 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. 9).

Ball Placement
1. Ball delivery to a specific point on the table
After turning on of the robot, the first yellow light is flashing and the control unit will automatically switch-to the basic setting. The parameters of this ball (Trajectory, Sidespin, Speed and Spin) can be changed with the help of the buttons for setting the trajectory, sidespin, speed and spin. The landing spot can be continuously set using the rotary switch for left/right placement. Pushing the “Sample” button the machine gives an actual ball (one that is set momentarily) during the setting procedure.

2. Programmmed ball delivery to various points on the table
With Button B → “”, at least two balls (max. 6) must be selected. Then various targets can be chosen by means of the corresponding left/right switches. The flashing LEDs indicate which ball will be delivered next. By pressing Button A “ ” the number of balls can be reduced. After the end of each “round” the ball delivery will commence again from the beginning.

3. “rnd” Random ball delivery to various points around a specific point
In case the rnd is switched on with the Button for random function (RND) then the robot plays the set rally (described above) but not exactly to the set places, but to 20 cm big surrounding of those, which is closer to the real game. Do not set the ball placing to the edge of the table when using the „rnd”, because the machine can throw the balls near the table by reason of the ball spread! (It is enough the assigned one ball to this function.)

4. “RND” Random ball delivery to various points on the table
In case switching on the Rnd (pushing once more the RND button) the machine doesn’t throw anymore the set balls in their set order, but in random way, jumping here and there among the designated balls. Therefore it can not be foreseen where the robot throws the next ball. It is sure only the fact that the balls are thrown to one of the set places. (It needs at least 2 assigned balls to use this function.)

5. Combining “Trnd” and “rnd”
The “Trnd” and “rnd” functions can be combined by pressing Button RND for a third time. In case this the set points are chosen at random (RND) and the balls will be delivered randomly within a 20cm diameter circle of the set points, simulating a real match situation.

AFC function
The new “AFC” function can be selected if there are different types of balls selected within an exercise. When the AFC function has been
selected the ADVANCE automatically adjusts the time intervals between individual balls with varied spin. This function takes into consideration whether the previous ball was delivered fast or slow and with backspin or topspin. It can therefore simulate a real match situation by delivering the next ball earlier or later accordingly.

**Note:** This function was developed based on the fact that fast balls are generally returned quickly whilst returns of slow and shorter balls require more time.

**Memory**
The settings described in the Control Panel Quick Reference Guide enable a ball sequence or rather exercise to be programmed. All exercises will, however, be lost once the machine is switched off. As the programming of exercises can be quite time-consuming, the AMICUS ADVANCE offers the option of saving them, enabling them to be called upon at any time.

**Saving exercises in the memory**
Turn the “MEMORY place” rotary switch to the position where you want to save the exercise on the control unit (places 0-10). Hold down the “MEMORY Select/save” button (approx. 2 secs) until the light starts to flash. The flashing LED means that the exercise has been saved in the memory.

**Retrieving the saved exercise from the memory**
First select the program you require by turning the “MEMORY place” button accordingly. By quickly pressing the “MEMORY Select/save” button, the program number will now appear on the control unit to which the switch is currently pointing. All the lights will now start flashing, indicating that the robot is operating in memory mode and is now ready to play the exercise from the memory. Turn the „Ball/min” rotary switch to start the exercise. The only settings which can now be adjusted are: „Ball placement”, „Ball/min”, „AFC” and „RND”. It is not possible to change the parameters of the other ball settings.

**Changing programs in the Memory**
It is possible to change the ball sequences in the programs which have previously been saved by using the „Backstep” button. This should be activated for the specific ball which you would like to adjust within the program which has just been retrieved from the memory. After changing a ball’s settings, the program can now be saved again in the memory by pressing the „MEMORY select/save” button.

**Ball characteristics**
The set Spin, Speed, Side-Spin and trajectory apply for each programmed ball in the same way.

**Ball-frequency**
By turning the „rotary switch for ball-frequency” you can adjust the quantity of ejected balls per minute. The AMICUS throws more balls out if the frequency is set higher.

**Switch off**
Disconnect the power supply when the robot is not used for a longer period of time; the AMICUS should never be left alone switched on.

### 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 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. 10). First loosen the black adjusting screw next to the protective cover of the lower motor (Fig. 11) 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. 12) Repeat this for the two upper motors.

1. If the distance cannot be adjusted, the ball projection wheels have to be replaced. You should therefore loosen the screws (Fig. 13) located in the wheel mounts using the smaller allen key provided with 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. 14) 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. 15) The plastic disc can now be removed from the motor shaft. (Fig. 16a, 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 (Fig. 16), and tighten the screw. Then adjust the correct distance between the wheels with the help of the adjustable tube as described above.

2. 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 screwdriver, etc. (Fig. 17)
5. Error Management

<table>
<thead>
<tr>
<th>Problem</th>
<th>Solution</th>
</tr>
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</table>
| The robot does not function once assembled | a) No power supply?  
b) Blown fuse → replace the fuse in the control unit  
c) Check whether the cable plugs on the bottom of the control unit have been plugged in correctly.  
| When the small green control light found on the adapter is not lit, despite being connected to the mains, this means that the adapter is damaged and has to be replaced.  
| Length of ball delivery is irregular | a) Check distance between the projection wheels, are the wheels worn?  
b) Incorrect assembly: Are the tubes and the robot head securely in place?  
c) The pin for regulating the length “is stuck” → lubricate it with some silicone.  
| The balls are suddenly being delivered irregularly and with varying length | a) Restart  
b) A damaged ball or other foreign body is obstructing the transport of balls to the projection wheels → remove.  
| Ball jam; the yellow light is flashing on the control unit | A damaged ball or foreign body is obstructing the transport of balls to the projection wheels → remove.  
| Random function (RND) on the control unit cannot be activated; green indicator light does not light up | At least two balls must be activated and at least two yellow indicator lights must be on.  
| Balls are stuck between the ball projection wheels, the control unit switches itself off. | Pull out the adapter from the mains, remove all balls from between the projection wheels, set the Ball/min button to the “O” position, then resume play.  

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.

6. List of Replacement Parts

<table>
<thead>
<tr>
<th>List of Replacement Parts</th>
<th>mobil-100</th>
<th>mobil-101</th>
<th>mobil-102</th>
<th>mobil-103</th>
<th>mobil-104</th>
</tr>
</thead>
<tbody>
<tr>
<td>mobil-100</td>
<td>Base unit with collection net</td>
<td>mobil-101</td>
<td>Robot head</td>
<td>ADVANCE 102 Control unit</td>
<td>mobil-103</td>
</tr>
<tr>
<td>mobil-110</td>
<td>Projection wheel</td>
<td>mobil-111</td>
<td>Axis for projection wheel</td>
<td>mobil-112</td>
<td>Ball placement mechanism</td>
</tr>
</tbody>
</table>

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  
The electrical adapter device was subject to a test for the approval of electrical appliances and was found to conform to the standard outlined below:  
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-2010NT11153SS and NTEK-2010NT11153SS  
The robot AMICUSADVANCE is permitted to bear the CE trademark.

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

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