

# GAMEMASTERS

Australia P/L

1/13 Gabrielle Crt, Bayswater Nth 3153 AUSTRALIA

PH: 03 9761 7500

<https://www.gamemasters.com.au>

Congratulations on purchasing the Gamemasters "ULTIMATE" Air Hockey.

The following are a few suggestions to get maximum potential of the table for your-self and for your player appeal.

The table surface is made of a gloss Acrylic so it is essential that you keep it clean from any abrasive particles. We recommend that you clean the surface with a "Windex" or Ammonia based type of cleaner. Do not use an abrasive dry powder type of cleaner and avoid using a polish as that may end up blocking the air holes.

The Aluminum side rails are Powder coated to make cleaning easier and they too should be cleaned regularly to enhance the appearance of the table. With the powder coating it is possible and recommended that you clean the inside of the rails also (where the pucks hits), unlike other brands where it is recommended that you leave the dirt on.

Do not use a puck, which is greatly lighter in weight to the ones supplied. Lighter pucks increase the speed of the game but they have a tendency to fly off the table when they hit the side rails at a fast speed and thus may cause an injury to anyone in the vicinity.

Do not let players toss a coin on the table surface to see who will start the game (as this may cause small dents and scratches).

Do not allow drinks to be placed on the surface or anywhere on the table as they may be spilt over onto the playing surface. ***If spillage occurs, wipe it up immediately.***

Do make sure that the table is leveled correctly. A not level playfield may cause the puck to lift off the table.

**WARNING:** Misuse of the puck and negligent playing may cause an injury to the players or spectators around the table from the puck lifting off the table. Proper supervision of the area is strongly recommended

# ASSEMBLY INSTRUCTIONS

*Please read these instructions completely before assembly.*

Fit all the leg levelers to the legs.

Remove all of the cardboard packaging from the base while it is still mounted onto the "Transport pallet".

While the Main base is still mounted onto the Transport pallet, bolt on the legs using the bolts provided.

The two short bolts are to secure the Leg which is under the Coin door. These bolts go on the right hand side of the leg. Underneath the cash box.

The Air Hockey table can now be put onto its legs and then the Transport pallet removed.

Remove the Prismatic cover from the Light / Scoring unit to gain access to the display wiring. (Eight screws)

Using the Hex bolts provided, bolt the two arm supports to the Light / Scoring unit in the position marked. (No nut is required on the inside as they are already placed on the support arms). Note that the Displays which have the small Credit remaining display face the player one side (the side with the cash box). Therefore the arm which has the cable must be on the right hand side as you look from the one player side of the unit.

Connect the Data cable (5 wires in 6 pin plug) to the small Printed circuit board.

Connect the 240V wiring to the fluorescent light via the three pin plugs.

Replace the Prismatic light cover. (The light box unit is now ready for installation)

If you have not already removed the PCB access door from the center of the table, remove it now.

Lay the Light box unit on the table top with the Light box arm brackets roughly in position of where they are to be mounted.

Carefully place the wiring from the Light box arm through the large hole above the access door. This wiring will be connected later.

Lift the Light box into position (you will need two people to do this) and using the Hex bolts provided bolt the Light box into position. (Six bolts on each side)

Connect the Display cable to the main PCB into position J7 (Bottom right hand corner of the PCB labeled DISPLAYS).

Connect the 240V power for the Light box via the three pin plugs.

The Air Hockey is now ready to be plugged in and turned on.

NOTE: There is an on / off switch located near the PCB access door underneath the Table.

All going well the displays should now be on and all showing zero's.

Level the table with the leg levelers.

Check to see if the price per play is set at what you need for the location, if not, see "Advanced programming".

Alter the volume to suit the location. The volume control is located on the Main PCB at the top Left hand corner and labeled RV1 VOLUME.

The Air Hockey is now ready for use.

## GAME ADJUSTMENTS FOR “ULTIMATE” AIR HOCKEY

There are several operator adjustments available on the Gamemasters “Ultimate” Air Hockey game. These adjustments are done via the Switch panel located on the right hand side when you open the Coin door.

Each of these functions will be explained later in detail.

There is one bank of dip switches on the PCB.  
Normal position for all switches on the PCB is OFF.

Switch	1	GAME DISABLE
	2	PROGRAMME MODE ENABLE
	3	STEP UP
	4	STEP DOWN
	5	PROGRAMME ADVANCE (NEXT MEMORY LOCATION)
	6	COIN 1 INPUT
	7	COIN 2 INPUT
	8	COIN 3 INPUT

Programming can be done using the Dip switches on the PCB or via the Program switches located on the right hand side of the baffle when you open the Coin door.

To alter the programming levels, Push the switch on the furthest left hand side of the switch panel down to the on position. (A red light will come on next to the switch to tell you that you are in the programming mode. Leave it in this position.)

When this switch is first turned to the “ON” position, a zero (0) is displayed in the credit remaining display. This is the first memory location.

**ADV** push button is used to advance to the next memory location. Pushing the switch and releasing it advances one memory location (Shown on the credit remaining display).

**UP** push button is used to increase the level in a particular memory location. Pushing the switch and releasing it advances the level by one. (Shown on the large displays)

**DOWN** push button is used to decrease the level in a particular memory location. Pushing the switch on and releasing it decreases the level by one. (Shown on the large displays)

When the PGM switch is pushed again the CPU exits the programming mode. (The red light now goes off to tell you that you are now out of the program mode. Ignore the displays at that time as they will be reset when the next game starts, or you can turn the unit off then on again.).

***Do not turn the power off then on again while you are in the programming mode.***

<b>Memory Location</b>	<b>Min Value</b>	<b>Max Value</b>	<b>Factory Set</b>	<b>Description</b>
0	1	99	01	COIN 1 MULTIPLIER
1	1	99	05	COIN 2 MULTIPLIER
2	1	99	10	COIN 3 MULTIPLIER
3	1	99	05	UNITS FOR CREDIT
4	1	99	01	COIN METER INCREMENTS
5	1	99	05	COIN 2 METER
6	1	99	10	COIN 3 METER INCREMENTS
7	1	07	07	MAXIMUM SCORE LEVEL
8	1	99	30	NUMBER OF 10 SECOND PLAY INTERVALS
9	1	0	01	CREDITS ON POWER UP

# ADVANCED PROGRAMMING

This is done when you wish to make any adjustments to the game software.

The PGM switch must be pushed to the ON position.

ADV is used to increment to the next memory location.

UP is used to increment the level required.

DOWN is used to decrease the level required.

## MEMORY LOCATIONS 0 TO 2.

These adjustments are done in conjunction with memory location 3. To initialize a pricing structure you must first find out the minimum required to give one credit.

e.g. 60c = 1 play

\$1 = 2 plays

\$2 = 4 plays

Therefore 3 coins is the minimum for 1 credit

Memory location 0 = 1

Memory location 3 = 3

After 3 coins 1 credit is obtained.

To work out \$1 coin then 2 plays X 3 units for credit = 6

Memory location 1 = 2 x 3 = 6

Memory location 2 = 4 x 3 = 12

e.g. \$1 = 1 play (20c)      \$1 = 1 play (\$1 coin)      \$2 = 2 plays (\$2 coin)

Memory location 0 = 1

Memory location 1 = 1 x 5 = 5

Memory location 2 = 2 x 5 = 10

Memory location 3 = 5

## MEMORY LOCATION 3.

This location is used to set your base number of how many units are required for one credit. As each coin gives out a different number of pulses to the coin line this location must be worked out with your pricing structure in locations 1 to 3.

## MEMORY LOCATIONS 4 TO 6.

This adjusts the number of pulses given to the coin meter for each individual coin line, so in order for the coin meter to read correctly all locations must be set to read in the same base number of increments.

Location 4    Coin 1 meter increments (Aust 20c line)

When set to 1, coin meter reads in 20c increments.

When set to 2, coin meter reads in 10c increments.

Location 5    Coin 2 meter increments (Aust \$1 line)

When set to 5, coin meter reads in 20c increment.

When set to 10, coin meter reads in 10c increments.

Location 6    Coin 3 meter increments (Aust \$2 line)

When set to 10, coin meter reads in 20c increments.

When set to 20, coin meter reads in 10c increments.

### **MEMORY LOCATION 7.**

This number may be set from 1 to 7. This is to set the maximum score a player may reach for game over. (usually 7)

### **MEMORY LOCATION 8.**

This is the game timer. The game timer works in multiples of 10 seconds, e.g. If the two large digits read 1 3 then the game time is  $13 \times 10 = 130$  seconds (2 minutes 10 seconds of game play)

Minimum is 10 seconds. Maximum is 990 seconds (16.5 minutes).

**Note:** *Game over is reached when either player reaches the maximum allowed score OR when the game timer runs out.*

### **MEMORY LOCATION 9.**

Credits on Power up.

If this location is set to 1 then on power off, all the remaining credits are cleared to zero.

If this location is set to 0 then on power off, the current game will be lost, but on power up all of the remaining credits will be stored in memory and be displayed in the credits display.

**After you have finished programming push the PGM switch to exit the programming mode. The red light next to the switch should now be off.**

***The game will not operate if the programming switch is left on.***

**If you have missed a location, exit and re enter the PGM mode again, then advance to that location using the ADV switch.**

# ALIGNING SCORE OPTO SWITCH

1. Turn the power on, with the goals screwed in place.
2. On the inside of the Air Hockey next to the Solenoid Assembly, there is a small PCB which has an adjustment for scoring. Adjust the pot so that the LED has just turned on and then back off the pot until the LED has just turned off, (it's normal state is off). Access to this is via a small door underneath the machine.
3. Drop the puck through the goal to see if it scores, if it doesn't, keep adjusting so the LED still remains in the off state, but closer to on. (it should just blink on when correctly set), and repeat putting the puck through until it scores.
4. Once it is scoring consistently, hit the outside of the goal very firmly to see if the flex in the goal causes a miss-score, if it does, back the adjustment off slightly and try again, repeat until it doesn't score by hitting the goal. (The LED should blink as the puck passes the sensors).

Note this procedure is the same for both sides of the machine.