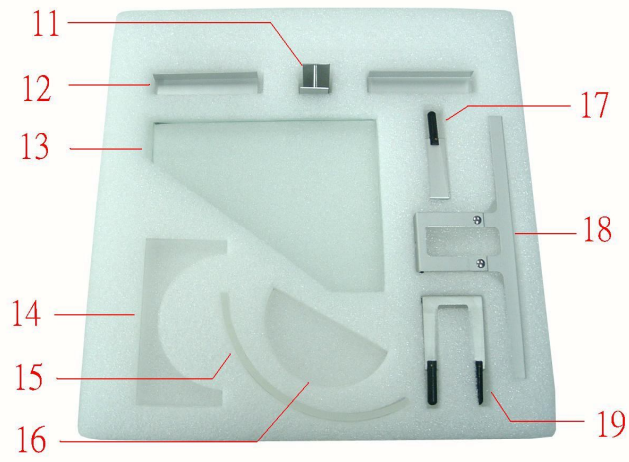
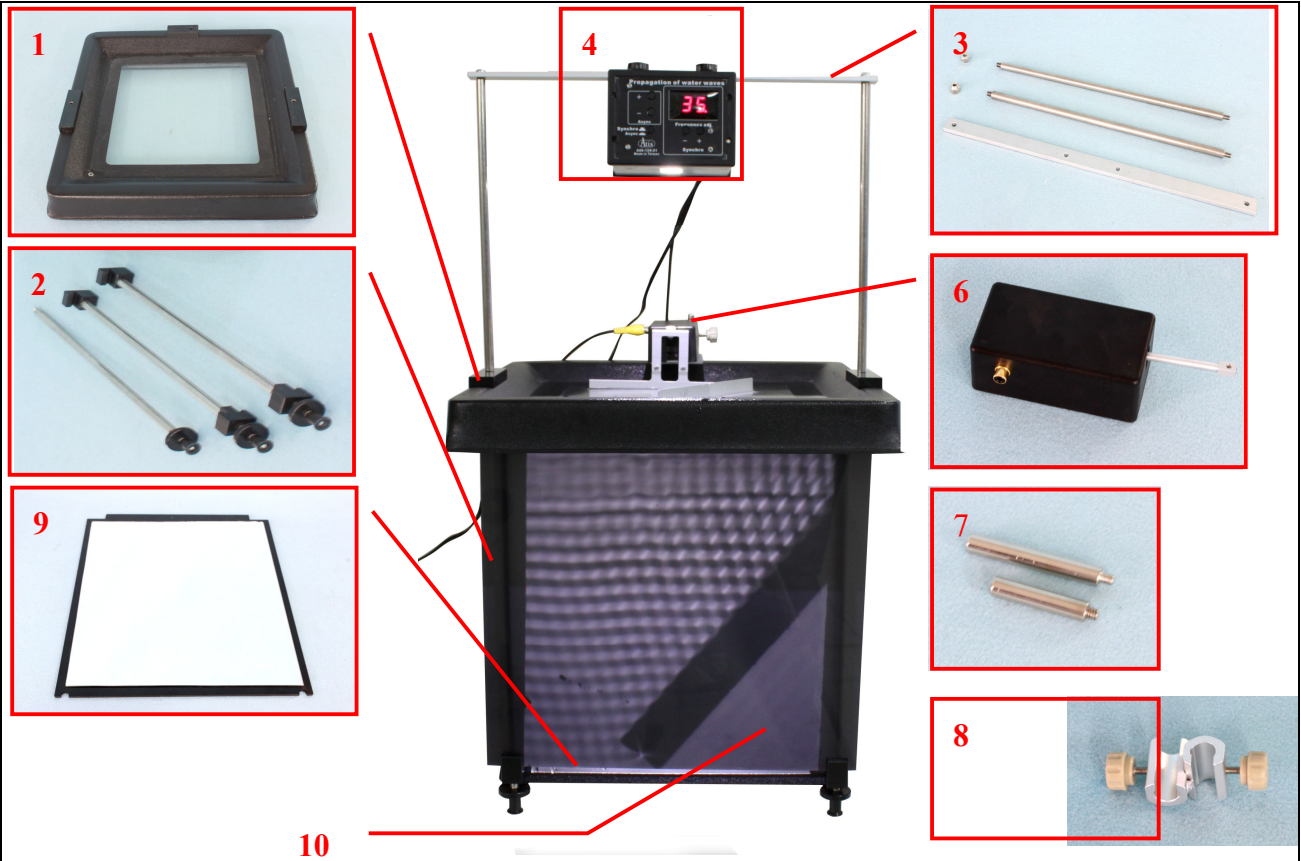


Ripple Tank Demonstration Kit

NO	Accessory	Qty	NO	Accessory	Qty
1.	Square Sink ➤ drain × 1 ➤ sealing clip × 1	1	2.	Support Rod ➤ forefoot × 2, ➤ rearfoot × 1	3
3.	Sink Bracket ➤ aluminum rod × 1 ➤ iron rod (long) with fixed knob × 2	3	4.	Propagation of Water Waves Device ➤ Knob × 2	1
5.	DC power supply (12VDC)	1	6.	Vibration Wave Device ➤ AV cable × 1	1
7.	Iron Rod (short)	2	8.	Cross Fixed Connector	1
9	Reflective glass	1	10	Screen	1
11	Interference Plate (short)	2	12	Interference Plate (long)	2
13	Refraction Plate (trapezoidal glass)	1	14	Refraction Plate (concave)	1
15	Reflex baffle (bump plate)	1	16	Refraction Plate (convex)	1
17	Single-point Wave Generator	1	18	Linear Wave Generator	1
19	Two-point Wave Generator	1			



A01-721S-Y11

(A) Set up

1. Fix the support rods on the bottom of the sink as shown in Figure 4-1.

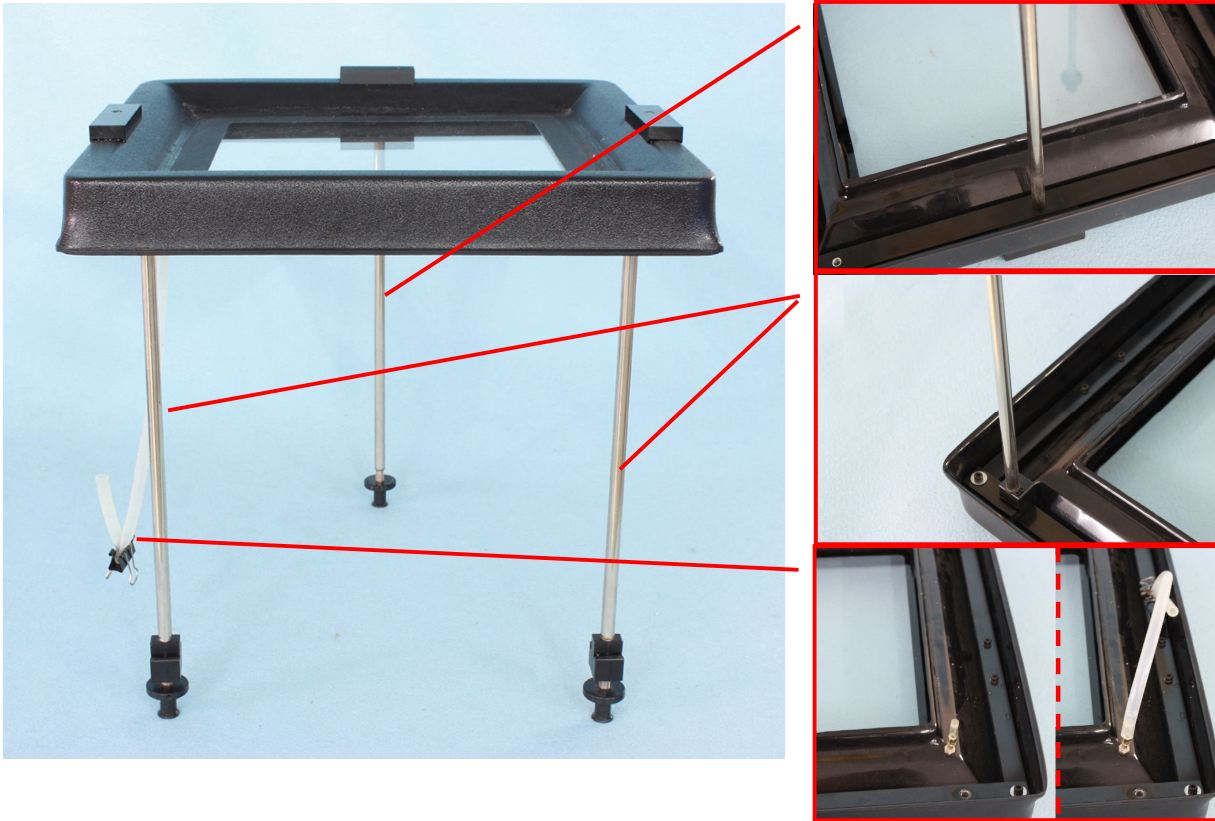


Figure 4-1

2. Fix the iron brackets (Figure 4-2) to the black holder on the front side of the sink. (Figure 4-3)



Figure 4-2

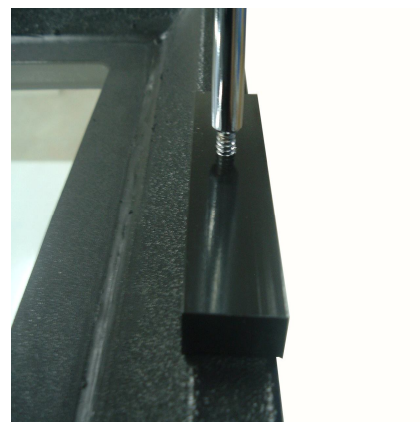


Figure 4-3

A01-721S-Y11

3. Insert the aluminum plate (Figure 4-4) into the top of iron brackets, and then tighten the screws. (Figure 4-5).



Figure 4-4



Figure 4-5

3. Fix the propagation of water waves device (Figure 4-6) on the aluminum plate (Figure 4-7)



Figure 4-6



Figure 4-7

4. Fix the iron rods (short) to the hole of the sink and vibration device using the cross fixed connector. (Figure 8)

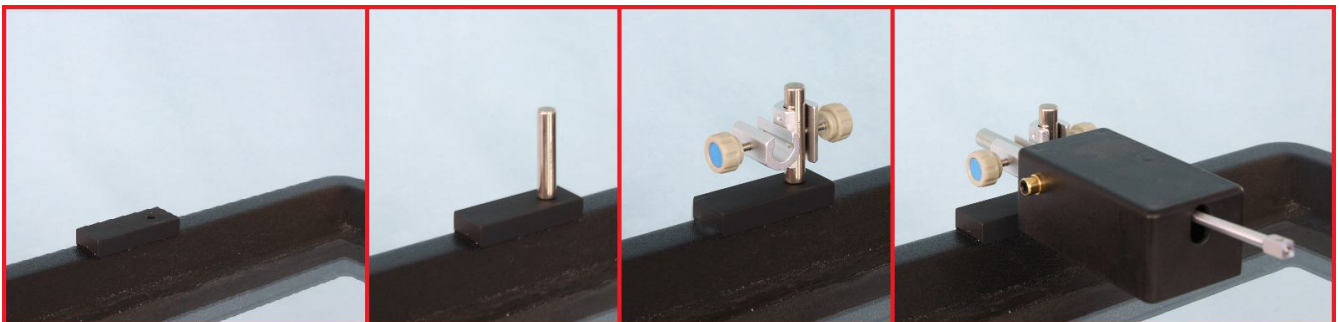


Figure 4-8

6. Set the glass into the sink bracket, and then insert the screen into the latch. (Figure 4-9)

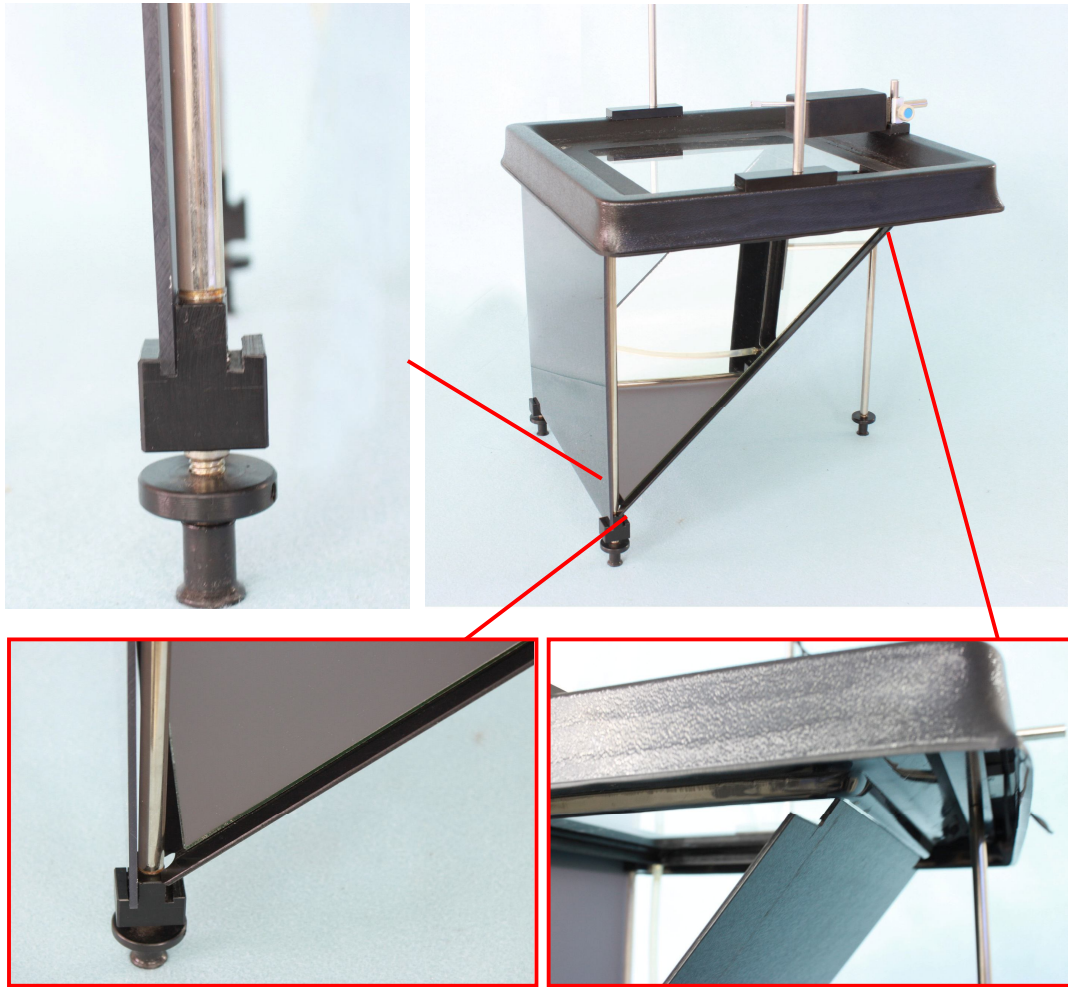


Figure 4-9

7. Connect the power supply, the cable and digital frequency wave generator as shown in Figure 4-10 and 4-11.



Figure 4-10

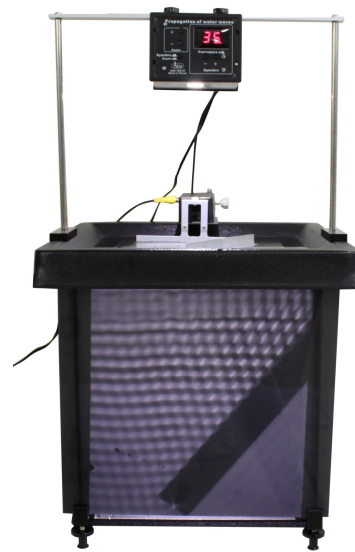


Figure 4-11

(B) Propagation of water waves device

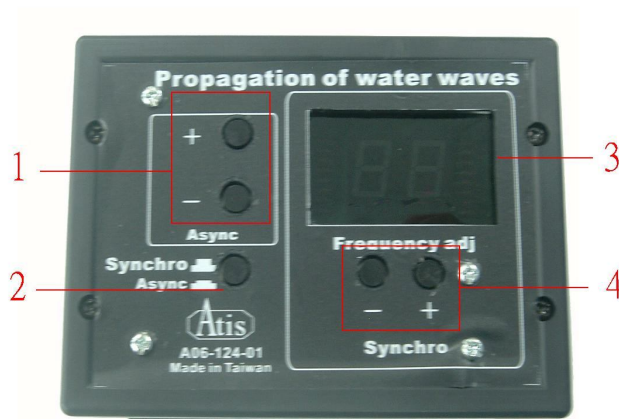


Figure 4-12

1. Frequency control keys: control the flashing frequency
2. Synchronous and asynchronous control keys: to control the LED strobe and the wave propagation device synchronously. When the red light flashes, it represents that they have the same frequency.
3. Wave propagation frequency display: to display the current frequency.
4. Wave propagation frequency control keys: to control frequency of the wave propagation generator.

(C) Steps

1. Pour water into the sink about 1.5~2cm deep. Wet the sides of the walls and accessories used in the experiment. Connect the draining device with the drain hole, so that the water does not flow out.
2. Adjust the brackets so the sink can stay balanced.

A01-721S-Y11

3. Fix the wave generator as shown in Figure 4-13. (Figure 4-13 is Two-point Wave Generator)



Figure 4-13

4. Turn on the power and adjust the frequencies of the LED strobe and the wave generator. When they have the same frequency, the wave will be still. If they have different frequencies (asynchronous), the wave image on the screen is dynamic. The result refers to Figure 4-14.

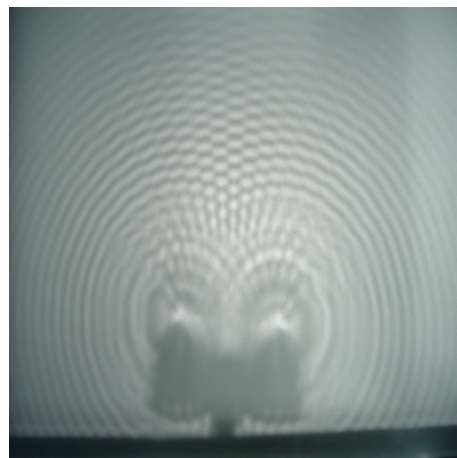


Figure 4-14

5. Use different waves to do more experiments.

Questions and Discussions

1. Explain the relationship of the source frequency and the oscillation frequency.
2. How does the water depth affect the wave?