



# The OCTOPUS Guide

OCTOPUS is available at <https://www.tindie.com/products/Ken/octopus/>

OCTOPUS is a wireless MIDI interface . There are some wireless MIDI interface in the market, so, what's the different is OCTOPUS ?

The major difference of OCTOPUS is that it has TWO independent MIDI inputs (one wireless MIDI input and one wired MIDI input) that can be used simultaneously , the signals from the two MIDI inputs will merge and go to the MIDI output.

That means, OCTOPUS can act as a MIDI mixer. You can connect two MIDI input devices (e.g. a MIDI keyboard and a keytar) to OCTOPUS.

## Specifications of OCTOPUS

The working band is 2.4GHz ISM.

3 radio channels selectable.

Maximun Wireless communication distance 80 feets without obstacle.

No noticeable latency.

USB class compliant for Win ME/XP and Windows 7.

Linux(Ubuntu 14 tested) compatible

## OCTOPUS Receiver

Powered by USB

1 MID In port

2 MIDI Out ports

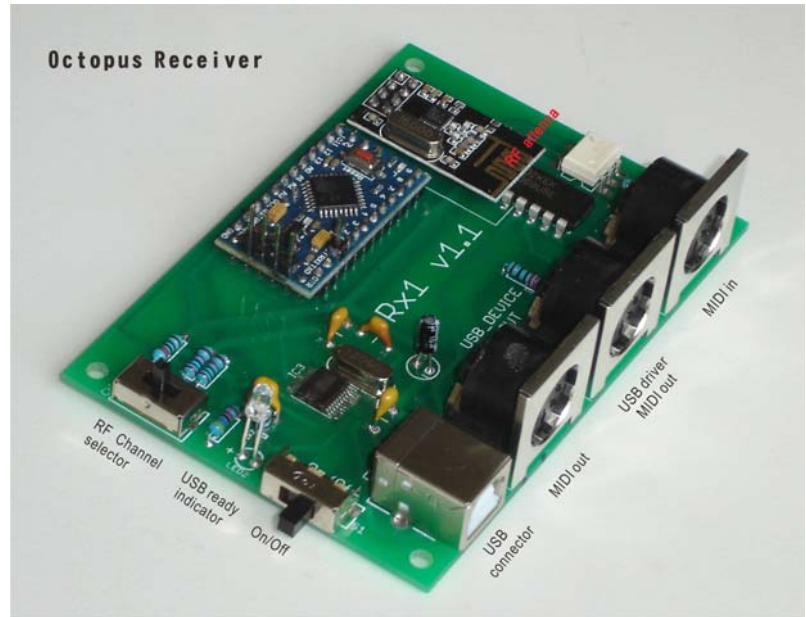
1 LED

RF Channel switch

Power switch

Size : 9.7cm x 6.7cm x 2.5cm

Weight : 50 grams



## OCTOPUS Transmitter

2 x 1.5 Volts AA battery holder

MID In port

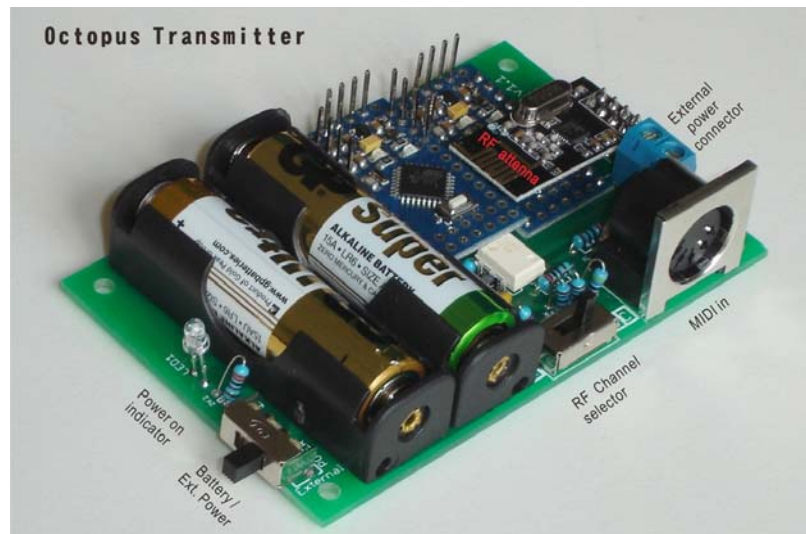
RF Channel switch

Power switch

External Power connector

Size : 9.2cm x 6.0cm x 2.5cm

Weight : 50 grams (without battery)



## System requirement

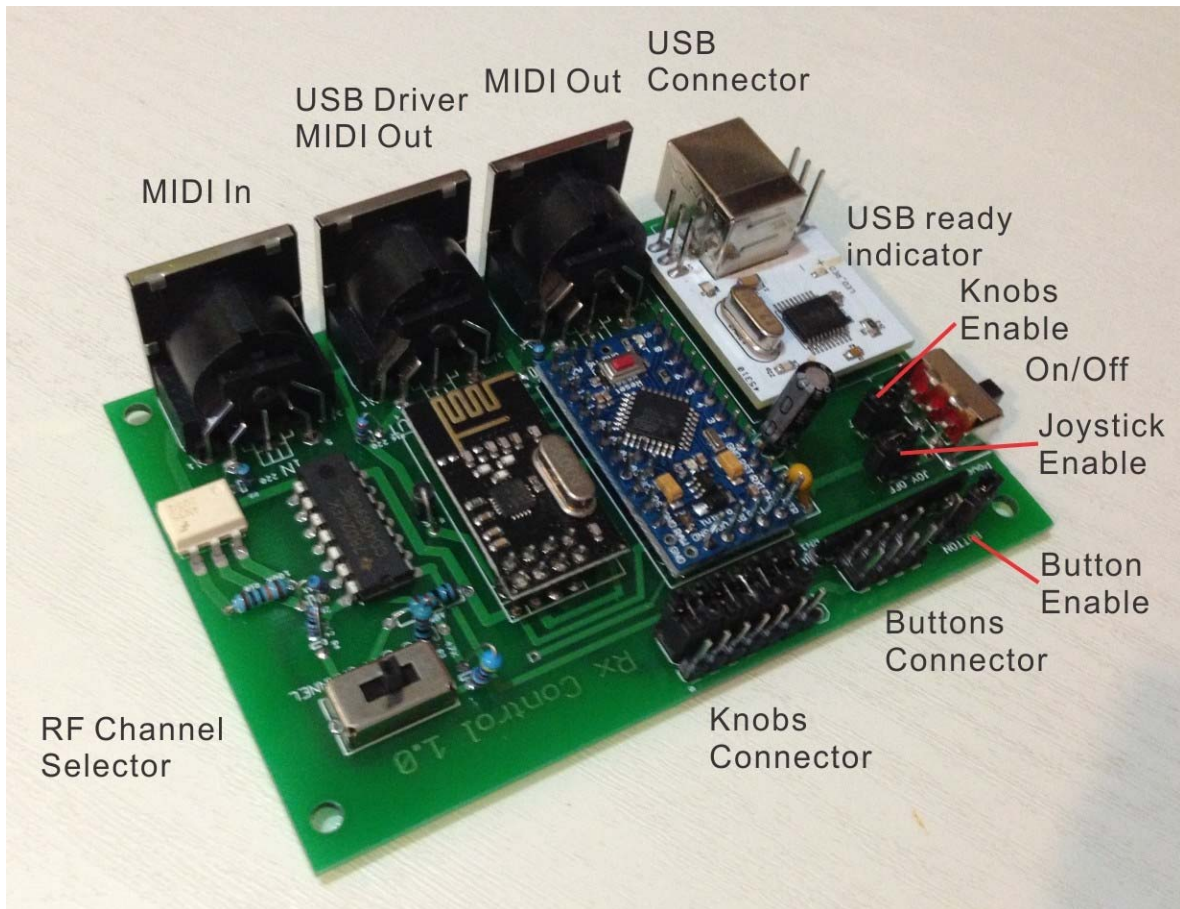
A resonable fast PC

Win XP/ Win 7

MIDI keyboard/controller

MIDI synthesizer/sound card/tone generator/soft synthesizer

## Upgrade : OCTOPUS Rx control



OCTOPUS Rx control is an upgraded version of OCTOPUS receiver which can connect potentiometers(B10K) and buttons to send out realtime MIDI controller messages. You may also use other sensors instead of potentiometer as MIDI control devices.

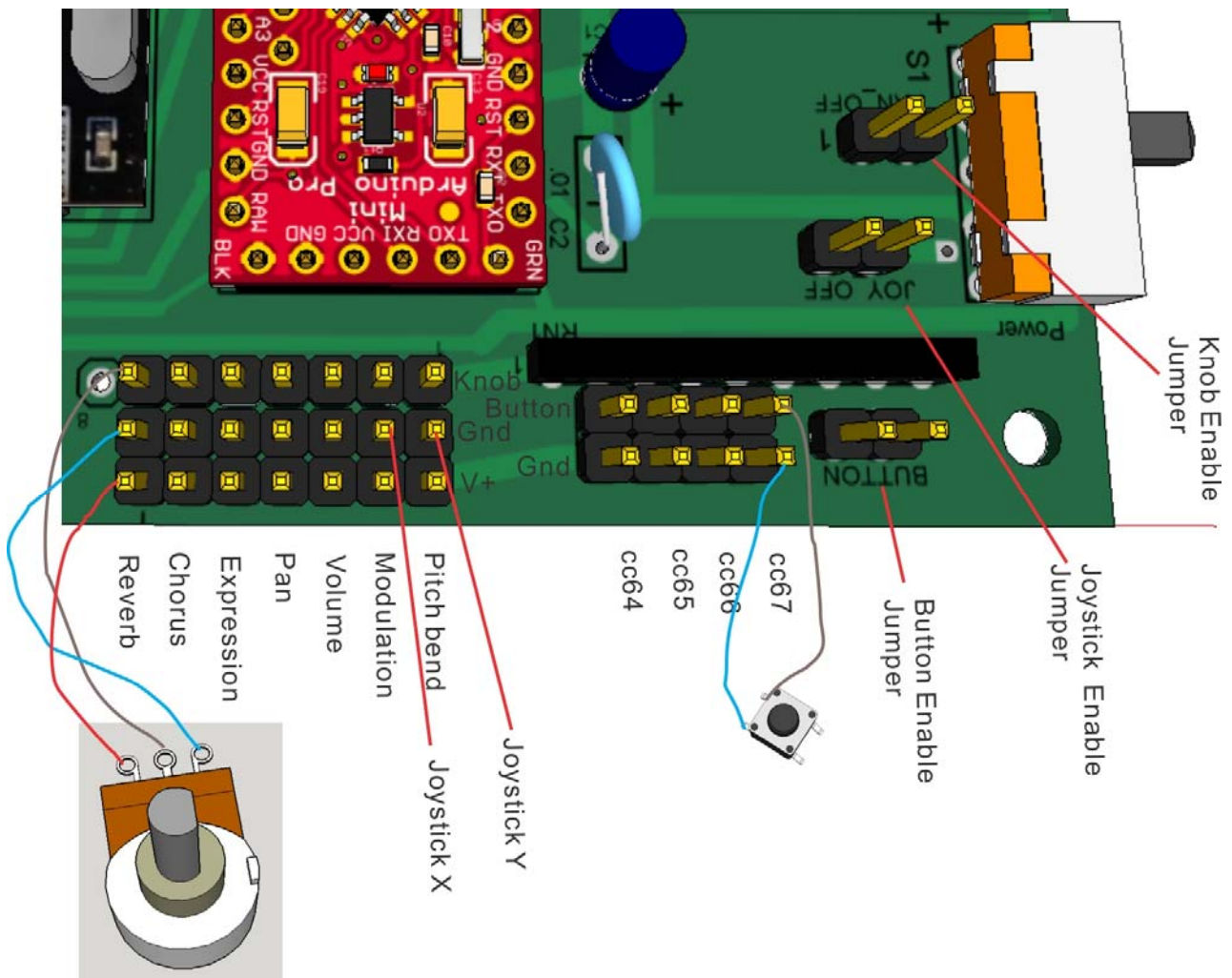
Features :

- 5 knob slot to send volume(CC7)pan(CC10), expression(CC11), reverb(CC91),chorus(CC93).
- 2 special knob slot to connect joystick to send pitch bend & modulation (CC1 output : left=no output, center to right = 0-63).
- 4 button slot to send Sustain pedal(CC64),Portamento(CC65), Sustain(CC66), Soft(CC67).
- Pan Knob,joystick & button can be disabled by jumper setting.
- Dimension : 10.5cm x 6.7cm x 2.5cm

Notes : If you want to use other MIDI controller number, you can remap the CC numbers in the computer software.

# Knobs & Buttons connection

You can connect 5 knobs, 1 joystick and 4 buttons to the Octopus Rx control as shown belows :



Notes : Removing the <Knobs Enable> , <Joystick Enable> , <Button Enable> or <Pan Enable> jumper head will disable the corresponding functions.

The above diagram shown how to connect the <Reverb> knob and the <CC67> button. Other knobs, joystick & button are connected in the same way (i.e. knob/joystick connect V+,Gnd and the knobs pin. Button connect Gnd and Switchs pin. The 3 jumpers in the diagram are all disabled (not connected).

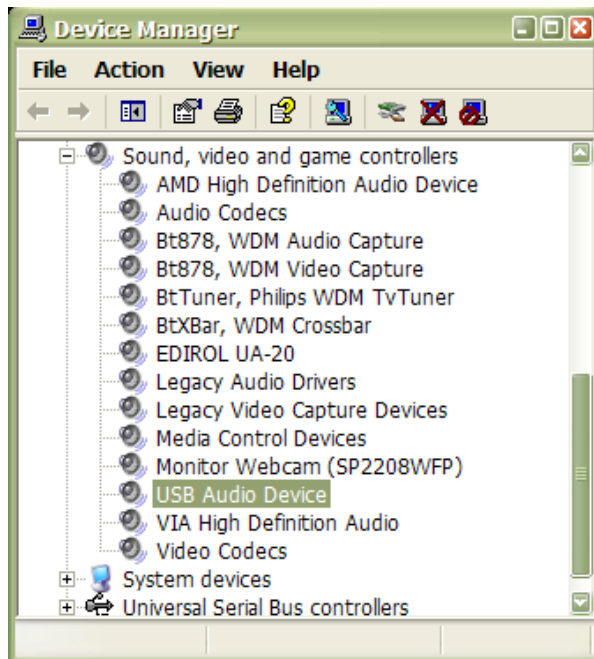
## Warning :

- Do not enabled the knobs/joystick if you have not connect ALL potentiometer/joystick. If you have not connect potentiometer/joystick to the knobs and you enabled the knobs/joystick, the Tx board will continuously send out corresponding random CC values.
- Compatible joystick is available in the Octopus shop. If you use incompatilbe joystick, the joystick may not send out the correct center value.

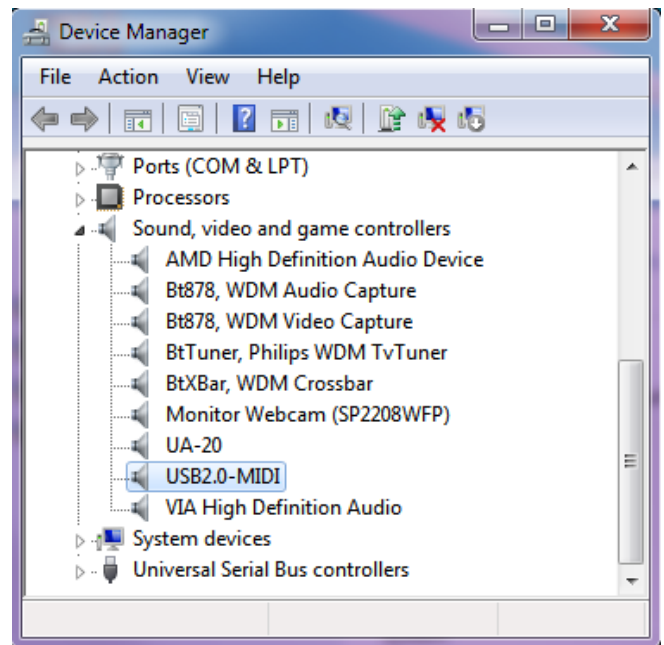
## Installation of OCTOPUS

1. Make sure OCTOPUS receiver & transmitter are switched to the same RF channel (Channel A, B or C) BEFORE you turn on their power, otherwise, they can not communicate.
2. Connect OCTOPUS receiver to a computer using a USB cable.
3. Turn on the Power switch of OCTOPUS receiver. If the USB ready LED is turned on, then the receiver is OK and the driver for OCTOPUS will be installed automatically.

Windows XP (install as USB Audio Device)



Windows 7 (install as USB2.0-MIDI)

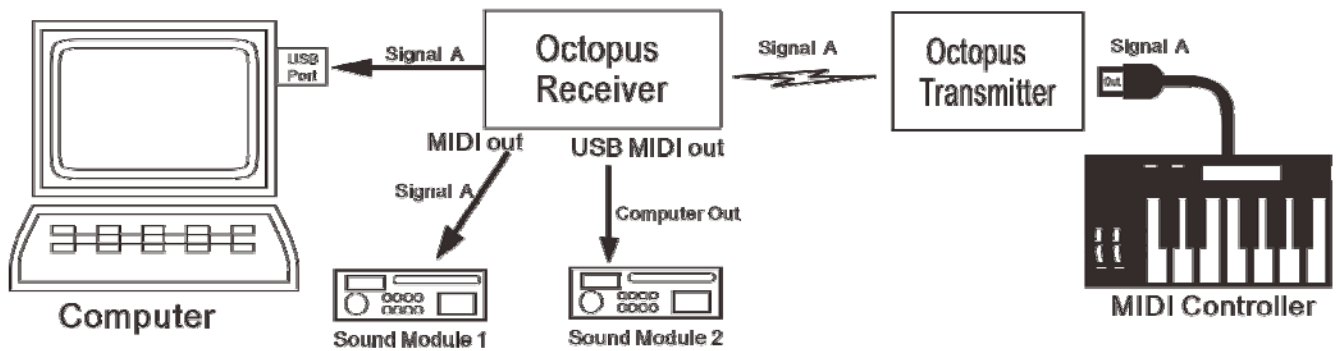


4. Connect a MIDI keyboard/controller to the MIDI In port of the OCTOPUS transmitter.
5. Place usable battery into the battery holder of the OCTOPUS transmitter. Turn on the power switch, the power on LED will light up.

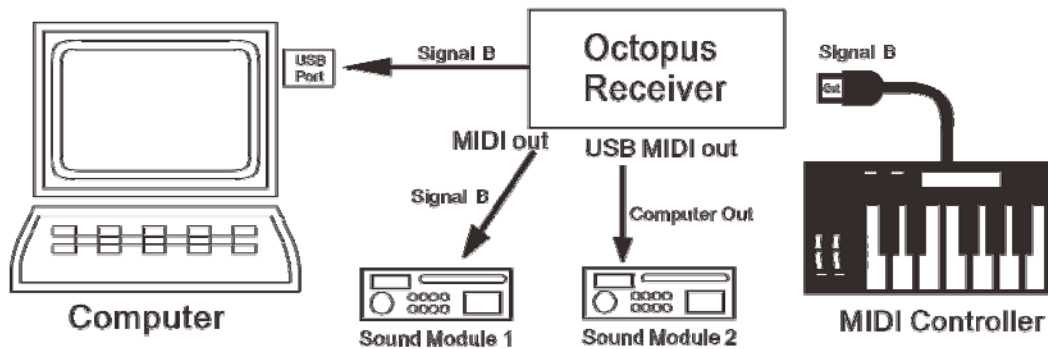
Now OCTOPUS is ready to use !

# OCTOPUS setup examples :

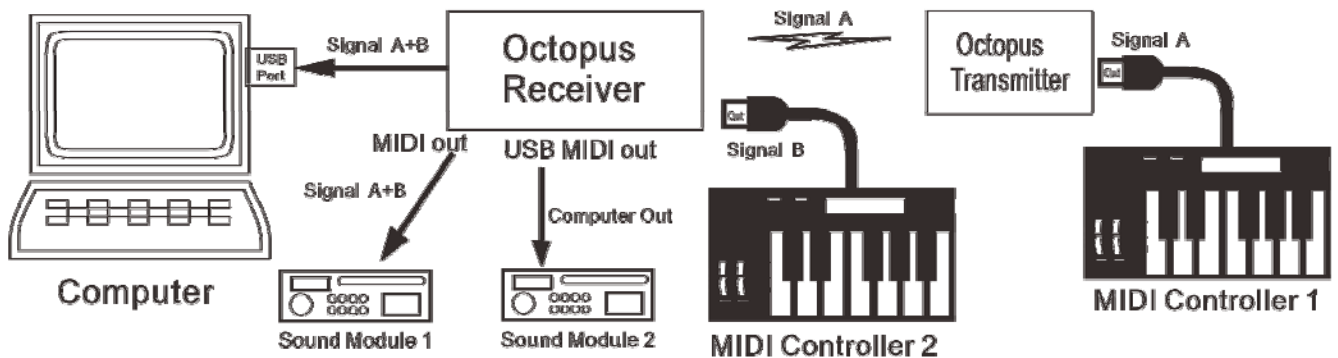
## 1. Wireless MIDI interface



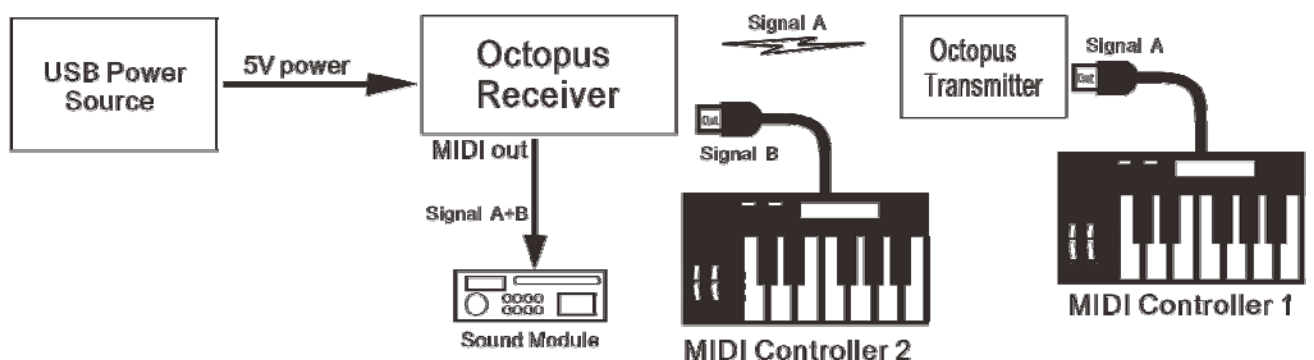
## 2. Wired MIDI interface



## 3. MIDI Mixer



## 4. Setup without computer



## FAQs

Q : Windows does not detect the OCTOPUS driver.

A : Unplug OCTOPUS, shut down the computer and wait a minute. Restart computer and re-plug OCTOPUS.

Q : I can't see "OCTOPUS" driver in the device manager.

A : The driver name of OCTOPUS is "USB Audio Device" in Windows XP and "USB2.0-MIDI" in Windows 7.

Q : I cannot see the OCTOPUS driver in my music program (e.g. Cubase/Logic/MIDI Ox/soft synth/....)

A : This is a Windows bug !

Open Control Panel->System->Device Manager. If you see OCTOPUS driver in the device manager, but you cannot see the driver in your music program, then :

1. Exit your music program
2. While the Device Manager is opening, switch off/unplug OCTOPUS, and you can see the OCTOPUS driver disappear.
3. Switch on/unplug OCTOPUS again, you can see the OCTOPUS driver re-appear.
4. In Device Manager , right-click on <Sound,video and game controllers> and select <Scan for hardware changes>.
5. Now re-open your music hardware, you should see the OCTOPUS driver now.

Q : The wireless connection does not work.

A : Check the channel switches to ensure both the transmitter & receiver are working at the same wireless channel.

Q : In the output device list of my music program, I can see the OCTOPUS driver, but there is an additional "MIDIOUT2" driver. What is it ?

A : The USB driver chip of OCTOPUS is capable of handling two hardware MIDI output port, but in OCTOPUS only 1 hardware USB MIDI output is implemented. So, this two software MIDI output port will both be connected to the OCTOPUS hardware USB MIDI output port.

Q : How to improve the effective communication distance of the OCTOPUS transmitter & receiver ?

A : 1. Keep minimum obstacles between the transmitter antenna and the receiver antenna. (e.g. let the antenna side of the receiver antenna face the antenna side of the transmitter.)

2. Keep the transmitter & receiver stationary.