Avatar® Universal Shock Tube Initiator Manual

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Safety Information

⚠️ Read this manual carefully before operating an Avatar® Robot or any related accessories. ⚠️

⚠️ THIS IS A DANGEROUS HIGH VOLTAGE DEVICE. DO NOT UNDER ANY CIRCUMSTANCES OPEN UP THE DEVICE.

⚠️ Carefully inspect the Avatar® Universal Shock Tube Initiator before each use.

⚠️ Ensure that all parts are secured in place and properly installed. Do not try to make repairs yourself. Parts may not work properly if they have been repaired by a party other than RoboteX, Inc.

⚠️ Do not modify any components on the robot yourself. Doing so may cause permanent damage not covered by your warranty.

⚠️ Do not place fingers in between the tracks or flippers when the unit is powered on. Keep fingers and other body parts away from moving parts at all times.

⚠️ Care should be taken when running the robot near pedestrians, small children, or objects that can be harmed. Be aware of your and the robot’s surroundings at all times.

⚠️ AC Adapter Handling: Use only the supplied AC adapter. Do not use any other unauthorized AC adapters. Damage to robot and battery may occur from use of alternate AC adapters.

⚠️ FCC Caution: This equipment generates and uses radio frequency energy and may cause interference to external reception if not installed and used properly in strict accordance with the manufacturer’s instructions.

⚠️ Before switching payloads/accessories on the robot, make sure the battery is unplugged and the unit is powered down.
Introduction to the Avatar® Universal Shock Tube Initiator

The Avatar® Universal Shock Tube Initiator allows the user to mount and wirelessly fire shock tube on the Avatar® Robot and Manipulator Arm. Using the robot and arm as a mobile base, the initiator is mounted on the arm for remote manipulation and control.
Setup & Use Instructions

⚠️ Please read the main Avatar® User Manual BEFORE proceeding with use of this device.

The manual was included with your robot purchase. ⚠️

A) Mount Initiator on the Arm

1. The Universal Shock tube Initiator comes with the following components: Initiator, (4) Stainless Steel Standoffs, & USB Avatar Firing Key, an alan wrench, and a spare bracket (last two not pictured).
Your RoboteX Shock Tube Initiator is supplied with a high angle (-10 degree) shock tube mounting bracket and a low angle (0 degree) shock tube mounting bracket. Users can choose the bracket that is most appropriate for the situation they are dealing with.

High Angle (-10 degree)

Low Angle (0 degree)
2. Make sure the Avatar Robot is not powered up (take the battery out). Then make sure the Avatar Manipulator Arm is installed properly on the Robot (See Manipulator Arm User Manual).

3. Remove the Arm Payload Cover from the side of the Manipulator Arm.
4. Install the (4) Standoffs onto the side of the Arm. Make sure they are tightened down securely with a ¼” wrench or flat head screw driver.

5. Slide the Initiator over the standoffs and tighten down the (4) Payload screws down to secure the initiator onto the Arm using a flathead screw driver.
B) Install shock tube

1. Obtain the shock tube and cut a 3ft length.

2. Loosen the spanner nut on the back end of the Initiator. Note: you do not need to remove the spanner nut, only loosen enough to slide in the shock tube.

3. Slide in the shock tube until you can see the end of the shock tube insert over the end of the firing tip. Then tighten down the spanner nut to hold the shock tube in place.
4. Loop the other end of the shock tube and secure with a small piece of electrical tape to the initiator to keep it out of the way of the robot and so it will easily uncoil when shock tube is fired.

5. Couple the other end of the shock tube as indicated close to the initiator side when firing.

6. Now the battery can be inserted to power on the Robot.
C) Operate the Initiator

1. Once the Initiator and shock tube are installed correctly, the robot and controller can be powered on.

2. When device is set up for the use case and ready to fire the shock tube, insert the USB Avatar Firing Key into the controller USB port and follow the screen prompts. The robot functions will freeze the moment the USB stick is inserted into the controller. Removing the USB will abort the initiator commands and robot functions will resume.
ARM INITIATOR?

Yes  No

REMOVE USB KEY TO ABORT.

ARE YOU SURE YOU WANT TO ARM?

Yes  No

REMOVE USB KEY TO ABORT.
PRESSING THE VOLUME SWITCH UP FIRES THE SHOCK TUBE. ALWAYS USE CAUTION AND EAR PROTECTION WHEN OPERATING.

PRESS AND HOLD UP FOR 5 SEC UNTIL YOU CAN HEAR IT FIRE.
After <5 seconds the screen will change and USB flash drive can be removed. Firing is complete.
Removing the USB will resume normal robot function.

**D) Operating Screen Troubleshooting**

1. When ready to fire and the volume button is not pressed up and held for long enough the initiator will not fire and will display the arm initiator screen again. The sequence will follow the same steps as before.

2. If the robot loses connection in the middle of the firing sequence the “NOT CONNECTED!” screen will appear:
Upon reconnecting it will go back to the “Arm Initiator? Remove USB key to abort” screen:

E) Replacing the Firing Tip

1. If the firing tip needs to be replaced, remove the old tip by unscrewing the (2) flathead screws with a flathead screw driver and pull out the whole firing tip assembly from the initiator box. Keep the screws.
2. Get the new firing tip and insert plug into plug hole on the initiator box and secure by screwing back in the (2) flathead screws using a flathead screwdriver. Make sure it is assembled to match the orientation shown below.

3. Do at least one test firing with the new tip to make sure the device is connected properly and fires correctly. You can fire the initiator without having any shock tube attached and it will make a popping sound. DO NOT LOOK AT THE TIP WHEN IT FIRES – the light can damage eyes.