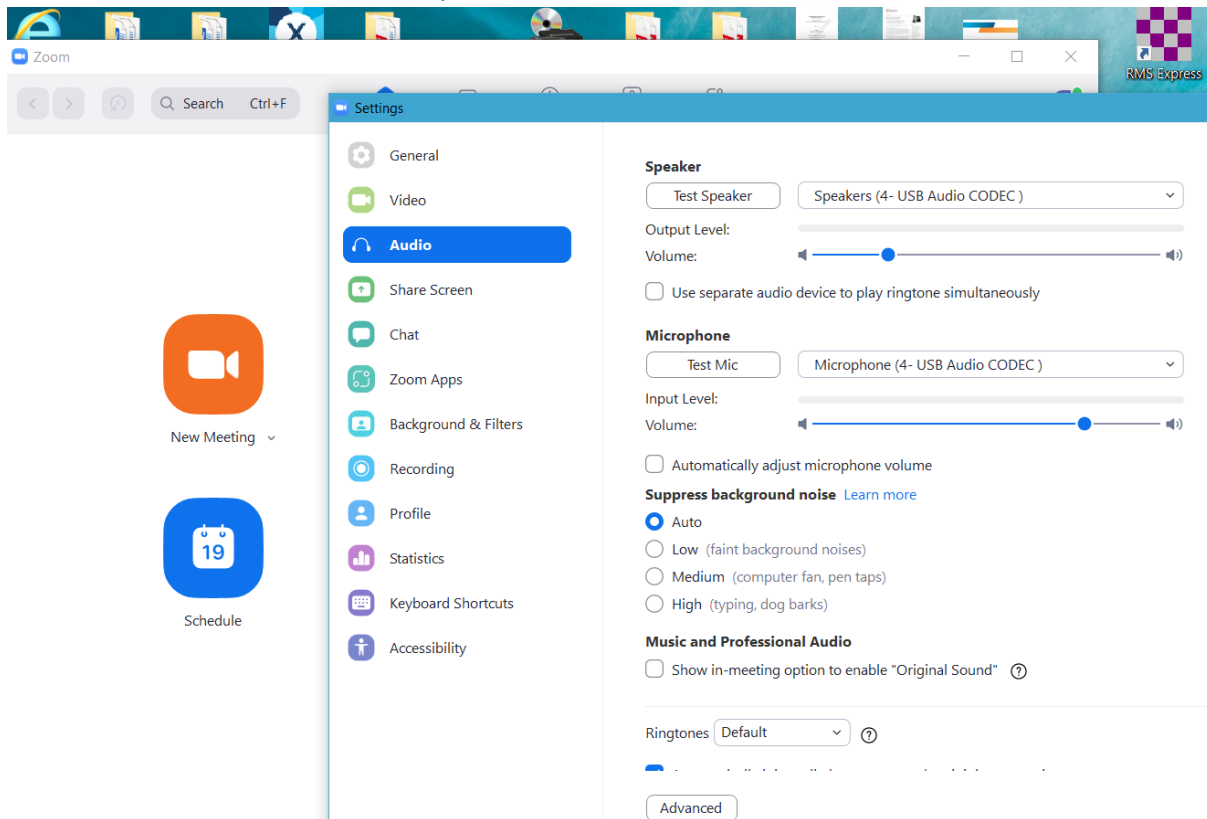


# SMARC Zoom System – Lessons Learned

## Zoom Software/Hardware Setup



- The Test Speaker function is used to set the room volume level initially.
- Then use the Test Mic function to verify the microphone audio levels from the mixer, followed by the Record function and Playback.
- By record and then play, both levels should be about equal from the speaker.
- Toggling between these controls and the master volume on the speaker, the levels balanced out great. Once set, don't touch the mixer mic levels.
- Audio from the powered speaker was roughly equal to the local mic/mixer volume room levels. The powered speaker level was set to about 2:00, then provided a bit of treble peaking, also about 2:00 and bass at 10:00.
- The audio from the remote participants and the local mics were both good. The Anchor Power Speaker is capable of 25W.
- With the fact the power speaker has separate inputs via the RCA connectors, is it is impossible to send Zoom audio from the PC back into the PC input, a Zoom software requirement.
- It is highly recommended to support video, use multiple windows so they can be moved to the two monitors and the projector. This needs to be done during system set up and before logging on to a Zoom session.

- It is best to have another PC or tablet logged in to the Zoom session to see what is actually being sent to remote users. (Make sure audio is off.)



## 19" Rack Gator Case



### Sterilite Clear Plastic Tub

8.25"W x 5"H x 13.6"D



Gator Case >>>



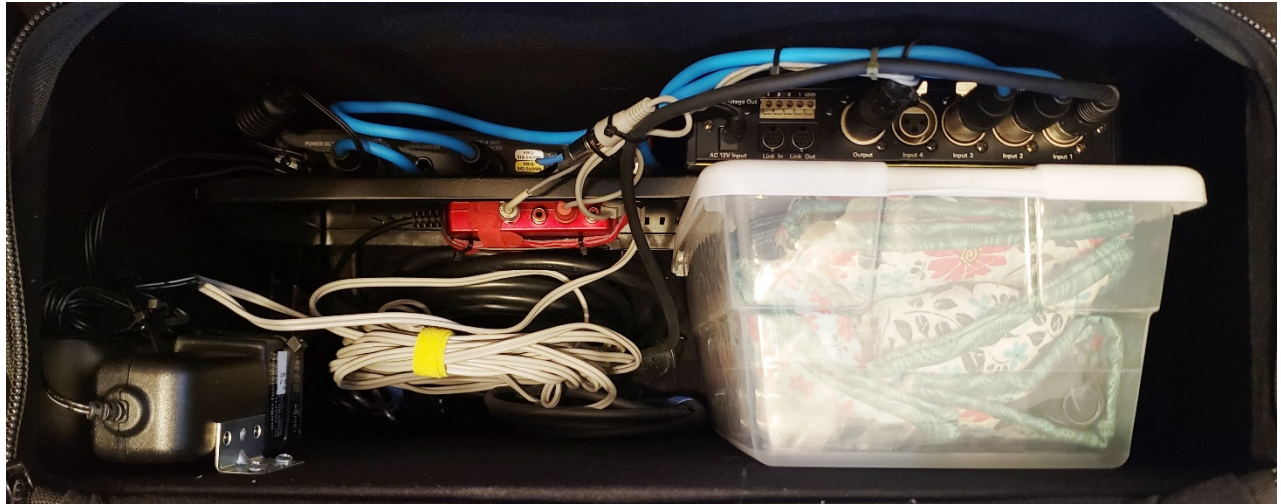
The Gator case is constructed with a 9mm plywood frame inside a fabric cover with zippered front and rear. Size of the case is:

Exterior: 9.75"H, x 21.75"W x 16.5"D and 13 lbs. empty  
Interior: 4U Height (7") x 14" deep and standard 19" rack rails

The mic mixer is 10.5" deep and the wireless mic receiver, 6.5". The USB interface will be located behind the receiver.

There is a zipper front that will be used to hold AC extension cords.

Gator Case Rear Before Being Setup



Gator Case Front Before Being Setup



USB Audio Interface



**Note:** All of the cable that extend from the Gator case as pre-attached inside, so they only need to be extended to the PC, power, powered speaker and wired microphone.



## July SMARC Meeting Photos



## Discuss Issues and Next Improvements?

1. Our setup time has been reduced from about 2 hours to 15-20 minutes.
2. Added longer USB extension cables for the cameras for safety reasons.
3. Need another tripod to be placed closer to the projector to view the local audience.
4. May need to acquire a larger and potentially powered USB hub as today one camera must be connected to hub and one via the PC.
5. Jordan, K4AVG, has loaded a studio control room software called OSB and is experimenting with it. The hope is to use OSB to make it easier and more professional looking by adding graphics, camera selection, etc.

## The Original/First Equipment List

1. **Video Projector** - Optoma HD146X (\$550 at Best Buy)
  - a. HDMI and USB inputs only
  - b. 100K lamp life with a 90-day lamp warranty
  - c. 28" to 300" screen, 3.5' to 35' lens throw
  - d. 1080P and 8500 lumens, super contrast and 30 fps motion handling
2. **Windows 10 PC** with Zoom software – Setup member brings to event
3. **USB Audio Interface** – Behringer U-Control UCA222 (\$25)
4. **Audio Mixer** (4 input, 1 output) – Audio Technical AT-341a (used, ~\$75)
  - a. 4 input
  - b. 1 output
5. **Wired Microphone** – Dynamic Mic with XLR (club owned)
6. **Wireless Mic System** – TBD (\$160-\$450)
  - a. Dual Handheld Microphones
  - b. UHF
7. **Powered Speaker** – Anchor AN-130 (used, ~\$60)
8. **Cables** (\$100)
  - a. One dual RCA to RCA, 25 ft
  - b. One RCA to RCA, 3 ft
  - c. One XLR to Two female RCA
  - d. One XLR mic Cable, 25'
  - e. Two XLR mic Cables, 2'
  - f. Two AC Extension Cords, 25'
  - g. Two USB Extension cables for cameras
9. **Camera 1** – Logitech C920x HD Pro Webcam, Full HD 1080p/30fps
  - a. Tripod Mountable
  - b. Tripod - PHOPIK Phone Tripod Stand: Selfie Stick (\$20)
10. **Camera 2** – 1080P DashCam (\$16) eBay
11. **2<sup>nd</sup> Monitor (USB)** – AOC e1659Fwu (\$120)
  - a. 15.6-Inch Ultra Slim 1366x768 Res
  - b. 200 cd/m2 Brightness
  - c. USB 3.0-Powered Portable LED
  - d. Case Black
12. **Carry Cases (anticipate three)**
  - a. Projector comes with a case
  - b. Harbor Freight padded for mixer, wireless mics, wired mic and mic cable
  - c. Two small Harbor Freight grip tool bags, one for speaker and one for cable

