Montgomery Media Arts Institute

Podcasting Go! Kit

Equipment		Unit Price
Recording Interface	Presonus AudioBox USB 96	$89
	Hosa YMP 234 headphone splitter (1/4 TRS to dual 3.5 TRRS)	$6
Recording Device (also works as an interface)	Zoom H4n Pro- takes 2 AA batteries	$200
	USB synch transfer cable	$7
Microphones	TM58 Cardiods (XLR plug)	$36
	10ft. XLR Microphone Cord (need 2)	$15
	JamStand Mic Stand (need 2)	$12
	Saramonic Blink 500 B2- USB charged	$249
	Röde XLR to 3.5mm adaptor (need 2 if you are using the Presonus recording interface audiobox w/ Saramonic mics)	$10
	Rode Lavalier Go Omnidirectional w/ MiCon-11 adaptor cable for phones	$79
Headphones	ATH-M20x	$50
Headset (for Zoom, etc.)	Logitech H540 USB	$35

Mini Tripod Cell Phone Mount	Manfrotto PIXI Mini Tripod (MTPIXI-RD) Kobra Tech UniMount 360 Universal	$20 $27
Adaptors	Lightning to 3.5mm XLR to 3.5mm (need 2) OSG MA-125- mic stand to tripod	$15 $10 $6
Carrying Case	SKB Series (Pelican Knockoff)	$170
		$1036

Presonus AudioBox USB 96

- Powers on through computer (no internal battery)
- Plugs into two microphones through XLR
- Plugs into your computer through a USB (cord is underneath the device in the kit)
- Records right into software, such as Quicktime, *Reaper, Audacity, Audition
- Has a headset jack at back; use headset splitter in the kit to allow one or two people to listen- use the headset dial to adjust volume when listening
- Use dials 1 and 2 to adjust recording levels of each mic. This allows you to compensate for louder or softer voices. You want the interviewer and interviewee to be as close as possible to the same recording level. (-6 to no more than -12 decibels)

Zoom H4n Recording Device

- Takes 2 AA batteries
- Has two XLR plugs and one 3.5mm- if you are recording two people at once you will need the XLRs. If just one, you can use the 3.5 mm and use any lapel mic, etc.
- There is a headphone jack so you can listen to your levels
- The mixer dial needs to be hard left when recording; turn it towards playback to play back through the interface and headphones.
- If you press record once, you can test levels without recording; twice you will start recording
- Has a scan disk card that you can record onto; or you can record straight into your computer if you use the Zoom as an “recording interface” (*see further down the bullets*)

- Can record on 4 channels.
    - If you push the “mic” button you will record using the internal mics you see at the top. This works well if you are able to put the device near the speaker’s mouth
    - If you push 1 and 2 you will need to hook up 1 or 2 external mics via XLR cable to the recorder. You can hook up the TM58 mic or mics and you will silence the internal mics.
    - You can set it up to record on 2 mics and keep the internal mics recording (4 channels total) This might be good if you are interviewing someone and you want ambient sound (nature, street sounds, etc.) To do this, go into the menu and scroll down using the wheel to “mode.” Select 4 chnl.
- Using the Zoom H4n as a “recording interface” *If you have a Zoom H4n, you don’t need to have a Presonus Audio Box
    - Make sure “stamina” mode is turned off (button on face)
    - Hook up the Zoom to your computer through the USB port when Zoom is off. Turn on your Zoom and you should be prompted to select “Audio I/F.” If not go into menu and select Interface Mode<Audio I/F
    - Select 48KHz<Connect (the frequency options are 44.1 and 48; always select 48)
    - Go to “Preferences” and “Sound” and select USB(H4n) for both input and output
    - Plug in your two TM58 mics using XLR cords. You can hand hold the mics or use the mic “JamsStands” in the kit. (*see TM58 mic section for tips on how best to record using these mics on their stands*)
    - Press Input 1 & 2 to record on 2 mics and on 2 individual tracks in your software
    - Open up your software (*see the instructions for recording in *Reaper64 below*) Quicktime works but you can’t see your tracks.
    - On the Zoom H4n screen, adjust recording levels by pressing record once (will show levels but will not start recording) and using dial to adjust levels up and down.

Microphones

- TM58 microphone
    - Cardioid mics record in a heart shape. The best sound will be if you speak right into the top, though if on a stand you have some left and right range without compromising the sound. Best thing to do is test out where you sound best before your interview.
    - Phantom power, meaning no batteries needed.
    - The tabletop mic stands telescope. The stands come with a mic clip so you won’t need the mic clips that come with the mic.
    - You can fix the on/off switch to on by unscrewing plate and rotating.

- Saramonic Blink 500 B2 (wireless lavalier)
    - Internal batteries; charge by USB port- it comes with 3 USB charging cords
    - A TRS-TRS cord and a TRS-TRRS cord to hook the receiver to either a camera (TRS-TRS) or to a phone or tablet (TRS-TRRS).
    - 2 transmitters and 1 receiver (the receiver has a “line out”)allowing you to record two people at once. Turn on the receiver and then the transmitters and when the light goes solid blue they are paired. You can always of course choose to use just one transmitter if you only need to record one person’s audio
    - Comes with two lapel mics. (though the transmitters each have a built-in mic too).
    - To test whether the mics are working, pair the transmitters with the receiver and have the people with the transmitters move 20 yards from the receiver and do a test recording with camera or iphone.
    - The clip (be very delicate with the clip - it is made of plastic) on the receiver can hook onto the top of your video camera and plug it into the 3.5mm jack. Then you hook a transmitter up to yourself and your interview subject and record. You can also hook the receiver onto your iphone and plug it into your iphone jack.
    - When using these mics with the PreSonus recording interface audiobox, first you will need to attach the 2 XLR to 3.5 mm adapters to the box; adjust gain on box to “hot” (turn it up) and then adjust the gain on the mics using the + and - buttons.

- Headset/ Headphones
  Headset
  (Choose USB over 3.5mm plug-in for better sound. (3.5mm depend on your computer’s sound card quality where USB port headsets do not.)
    - Seinnheiser PC 8 USB ($35) is another good option

  Headphones
    - ATH-M20x ($50) Have two lineouts/ good sound isolation w/ wind screen
    - Any earbuds will do in a pinch

- Adaptors:

(3.5mm is your standard mic or headphone jack and it is **TRS**. (Tip, Ring, Sleeve) vs TRRS (Tip, Ring, Ring, Sleeve) **TRRS** cables are often used to carry stereo audio plus composite video. These cables are also used for two-way connectivity with iOS devices such as the iPad, iPhone, and iPod touch, where the cable is used to carry both the microphone input and the headphone output on a single cable.)

    - Lightning to 3.5mm (If using your phone to record and it has a lightning port)

- XLR to 3.5mm (need 2 for Saramonic mics when using PreSonus AudioBox)
- OSG MA-125- allows you to mount a camera or camcorder onto the mic stand in the kit.

Extras in MMAI Podcasting Go! Kit

- KobraTech iphone mount that with an adaptor fits on the mic stands
- Audio technica AT8531 lavalier microphones. Condenser lavalier mics with two power modules. Plug into the zoom
- Sennheiser G4 Wireless Mics ($600)- State-of-the-art with 680 Tunable Frequencies Across 42 MHz. (Sometimes hard to pair since frequencies are busy!) Great if your interviewee needs to be far away from the receiver. Clip-on omni lavalier mic (only one mic)
- Batteries:
    - 2 AA used for Seinnheiser receiver; 2 AA used for Seinnheiser transmitter
    - 2AA used for Zoom H4n recorder
    - 2AA used for the two Audio technica AT853 power modules that you attach lavs to.

Extras You Might Consider

- USB Microphone for Zoom / Skype calls, recording narration for podcasts or recording music

- Blue Yeti Microphone ($130) Blue Yeti Pro Microphone ($270) To compare
    - Has a headphone jack and volume control
    - Can handle high SPL (sound, pressure, level measured in decibels) so you will be okay with loud sources, even tracking a drum kit in a room.
    - Comes with a tabletop stand but you can buy a boom stand (Comes with a pop filter and windscreen) ($26)
    - Has 3 capsules in the head allowing for 4 microphone settings:
        - For interviewing the figure 8 (bidirectional mode) will pick up two voices sitting across.
        - For recording a musical instrument, make sure the blue logo faces the instrument; adjust the gain down; and select the cardioid recording mode.
        - For recording performances and shows, choose omnidirectional mode and adjust gain.

- AKG Lyra USB Microphone ($149)
    - Front has a headphone volume control
    - Back has gain control and control of the pickup patterns (front, front and back, tight stereo, wide stereo)
    - Has 4 capsules in microphone head allowing for a wide sound in all modes

- Audio Technica 2100 ($65) or Samson Q2U ($90)
    - Super durable
    - Has both an XLR and USB port to plug straight into your computer
    - Comes with a stand, XLR cord and USB cord

*Reaper64- My go-to audio software- download for PC or MAC

- Go into system preferences and select sound. Select input (and select interface); Select Output (and select interface)
- Open up Reaper and open up two tracks
- Go under preferences in Reaper and under “audio device” select Audio Box USB/or H4 depending
- Arm the track by clicking on the red button
- Set one track to Mono (input 1); the other to Mono (input 2)
    - Sidenote- if you choose stereo you will only hear track 1 in the left ear and track 2 in the right ear. This is called a Pan and can sound cool but a little more tricky. Sticking with the Mono setting is probably a better idea.
- Press record and start the interview. Each microphone will record into separate tracks (unless you are using the wireless Saramonic Blink 500 B2 mics and those will come into the same track.
- Save as and name your project and choose where you want to save the project (you could create a project folder on your laptop prior (Name of Project) with Subfolders: Working Files; Assets; Exports and save everything there.

	PATTERN SETTING SYMBOL	SOUND SOURCE & DIRECTION
STEREO MODE Uses both the left and right channels to capture a wide, realistic sound image—perfect for recording acoustic guitar or choir.		
CARDIOID MODE Well-suited to podcasts, vocal performances, voice-overs and instruments. Cardioid mode records sound sources that are directly in front of the microphone, delivering rich, full-bodied sound.		
OMNIDIRECTIONAL MODE Picks up sound equally from all around the mic. It's best used in situations when you want to capture the ambience of "being there"—like a live recording of a band's performance, a multi-person podcast or a conference call.		
BIDIRECTIONAL MODE Records from both the front and the rear of the microphone—ideal for recording a duet or a two-person interview.		


PreSonus AUDIOBOX USB 96
1 Mic/Inst 2