



Creating a Quality Home Office eLearning Studio

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Excerpt

More instructional designers are working remotely. Home offices were never designed for studio recording yet videos must be professional. I'd like to share what I learned about setting up a quality recording environment in one of the most challenging home office environments imaginable.

Quiet Living On a Mountaintop

A couple of years ago we moved from the expensive and congested Seattle area to the beautiful mountains in northern Idaho. My wife and I arranged to work remotely, so this has been a good move for us. Clean air, deer grazing nearby, and quiet living.

What we encountered was quite different.

Our view property is in direct earshot of train tracks, 40 trains a day to be exact. When Canadian winds aren't threatening to rip our roof off, a chorus of crickets belt out tunes every evening. Our neighbors have RVs and ATVs that need to be test-driven in front of our house. A mile away is a motor speedway that revs into action two nights a week. The only thing missing is an airport or heliport.

As with any family household, daily life is rarely quiet, and in my case, we both are busy on phone calls and hosting web conferences.

My work is to record and produce high-quality product (app) instructional videos. Customers are going to expect high quality videos and not everyone has access to a Lynda.com professional studio. So, I need to create a practical, professional recording environment.

It all comes down to proper planning and testing. This involves being smart about scheduling your work, choosing a location (in your house to work in), and selecting proper tools. We're lucky that the quality of computers, software, and audio equipment continue to improve.

Identifying the Best Recording Environment

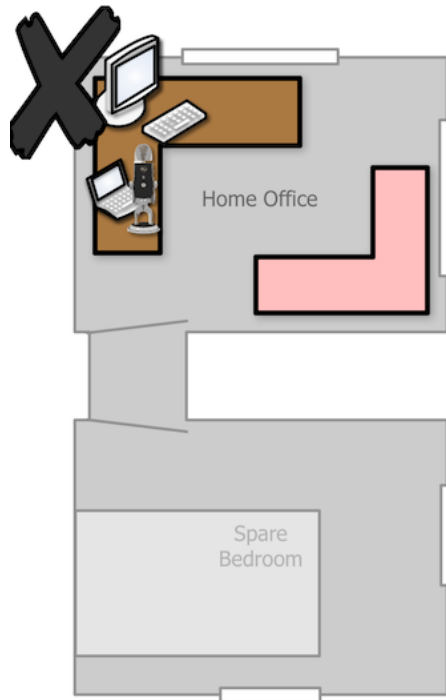
Living on a mountain side has the added disadvantage of lower-speed Internet along with occasional power fluctuations. So, I need to use software tools that don't rely on an Internet connection. Uninterrupted Power Supplies (UPS) are a necessity.

I performed several mic tests in our home office to see just how bad recording voiceovers would be. I had already made the decision to record with a MacBook Pro laptop and edit/produce on a more powerful iMac desktop. A spreadsheet was created to keep track of every audio test performed:

Mic	Grade		Gain	Quality	Noise (Hiss)
	C	Audio Test 8 (YETIPRO)	B	C	F
	A	Audio Test 2 (YETIPRO)	B	A	A

I kept track of other facts such as the microphone (I used several—all of them USB mics), use of a pop filter, the room where the test was performed, and mouth-to-mic distance. I was still hoping that I could record videos in our home office.

It wasn't good at all due to the hum of disk drives, uninterruptable power supplies (UPS), and other equipment. It also didn't help that the floors were all hardwood and that caused the voice recordings to have a slight echo and tinny sound. Background noise was very noticeable. Using audio software tools to remove the noise resulted in inferior voice quality. Soundproofing around the laptop made no difference.



Testing of the Blue Designs Yeti Pro in our home office was mediocre at best (grade C in the spreadsheet). This is surprising because the Yeti Pro is one of the better USB mics on the market. So, now what?

Where Audio and Video Should Be Recorded

After determining that a busy home office isn't going to work for audio recording. In my case, a spare bedroom is the best alternative to record voiceovers and record videos. During my many audio tests, I learned some lessons:

- The recording room needs to absorb and not distort or redistribute sound.
- You don't need to put up isolation shield all over the walls or attempt to squeeze into (don't laugh!) a closet.
- Record in the early morning. Not only is the outside world quieter, you'll be more awake and alert.

The first hurdle to overcome was to create an isolation barrier in front of a corner wall. I placed an isolation shield on a stand:



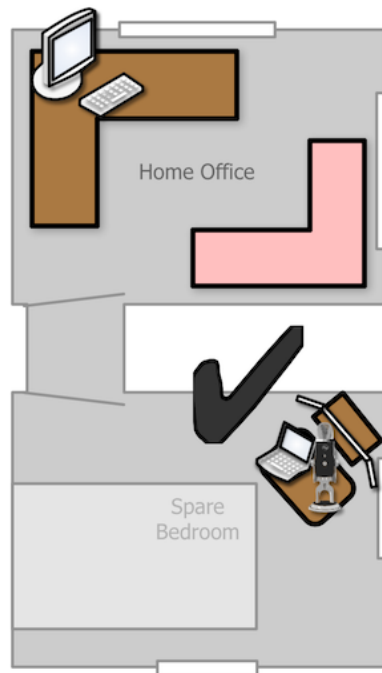
- A. All doors (closets, room door) closed
- B. Windows shades (curtains) closed

- C. Glass framed objects removed from wall
- D. Floor rugs are a must—no exposed hard surface on the floor
- E. Last, but not least, a portable microphone isolation shield can be placed on a stand or small table

Best of all, the isolation shield and stand can be set up (or taken down) in about 30 seconds.

Determining Tools to Use

My instructional video work must support recordings of software apps running on either Macs or PCs. For that reason, I can place a laptop on an adjustable laptop table that can be rolled into a spare bedroom.



I use an external video monitor that works with either laptop. That also allows me to keep the app being recorded on a separate monitor. The laptop's screen can be used to show a script or other information to guide the recording.

This picture shows my MacBook Pro recording setup:



- A. The isolation shield (already shown)
- B. The adjustable laptop table
- C. The mic and stand
- D. Keyboard
- E. Mouse
- F. Headphones that can monitor the recordings in real time

Switching from the Mac to a PC couldn't be easier:



The only thing that needs to be changed out is the laptop. The monitor, mic, keyboard, and mouse should be able to easily connect to either the PC or Mac laptop.

Dressing Up the Mic

You need the best mic you can afford and I tested five quality USB mics from different manufacturers. I found that the Blue Designs Yeti Pro (or Yeti) consistently proved to have the best audio quality. Even though most of the mics I tested had a desk stand, every keystroke and mouse movement will be unfortunately recorded. For that reason I highly recommend that you should always use a boom arm with your mic. Here's how I "accessorized" my Blue Designs Yeti Pro mic:



- A. Mic boom arm
- B. Mic installed on a shockmount
- C. Shockmount to "float" the mic from any unwanted sounds
- D. Compact and lightweight isolation shield mounted on the boom arm—this absorbs most everything behind the mic
- E. Metal pop filter that reduces the impact of "plosives" (hard consonants)

This combination of hardware may look like overkill. This arrangement delivers the results I was looking for. Referring back to my testing spreadsheet, this resulted in a grade A in audio recording quality. What an improvement from a grade C!

And the Cost?

Not including the cost of laptops and external video monitor, everything I've shown can be purchased for just under \$500 (US).

Isolation shield [1]	\$65
Mobile height-adjustable laptop stand [2]	\$50
Blue Designs Yeticaster Professional Broadcast bundle (USB mic, Radius III shockmount, and Compass boom arm) [3]	\$200
Blue Designs The Pop (metal pop filter) [4]	\$65
Pyle PSMRS08 Compact Microphone Isolation Shield [5]	\$60
Logitech K380 Bluetooth Multi-Device Silent Keyboard [6]	\$30
Logitech M330 Silent Mouse (also M220) [7]	\$20
Total	\$490

Where Editing and Production Takes Place

After I record the audio and app video, I use my desktop computer (in the home office) to perform all of the editing and production required to export an instructional video for customer viewing. I really don't need the absolute quiet I need when recording. All I need is some great headphones for post-recording work.

So what about software used to record, produce, and host instructional design videos? I've tried a variety of apps and I am pleased to recommend Camtasia from TechSmith Corporation. [8] And to host your videos outside of the normal video portals (Youtube, Vimeo, and so on), TechSmith offers [ScreenCast.com](https://www.techsmith.com/screen-cast.com).

So, what is stopping you from creating professional videos at home?

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Bio

Ken Whitaker, managing director of [Leading Software Maniacs](#), has more than 25 years of software development leadership and training experience. He has written books on leadership and is an innovator in instructional design and agile project leadership workshops. Ken is the creator of PM Chalkboard, a software company VP, and most recently the editor for *Better Software* magazine. He is creating a unique gamification product that redefines learning and a visual book/workshop called *A Young Person's Guide to Software Project Management*.