

TE3075 Assignment 1  
**Sound Design**

# Production Process for 'Supernatural Show'

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## Introduction

This document evidences my production process for my short film, Supernatural Show. Throughout this report, I will reference some examples by filename. I have made most of my production paperwork, footage, audio recordings, projects, outputs and more available for download online. They will be linked in the appendices of this document. At the end, I will discuss what I have learned and analyse points for improvement.

## Link

[www.youtube.com/watch?v=ooqTSGDM0R8](http://www.youtube.com/watch?v=ooqTSGDM0R8)

## Production Process

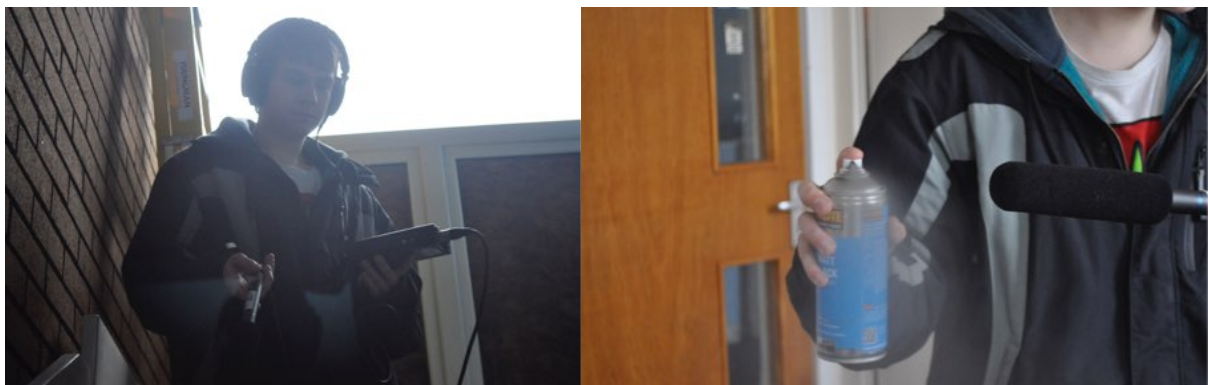
### Pre-Production

#### Idea

The idea for this came from watching TV shows like Ghost Hunters<sup>1</sup> (Monahan, 2012). Lots of the action is motivated by sound. Even though they have to boost the sound by quite a lot to make some sounds audible, you can see the effects it has on the cast as well.

#### Script

I wrote the script, almost in 'found footage' style. I waited for the script to be just shy of 4 minutes. I made sure to work in lots of motivated sound. Next, I annotated the script and highlighted where any sounds, effects or ambiance would take place. These have been highlighted in blue. This allowed me to create a list of all the sound effects I would need to capture. The list is attached in the appendices.



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<sup>1</sup> Ghost hunters (2012) Directed by Richard Monahan [TV show]. SciFi. IMDB page: <http://www.imdb.com/title/tt0426697/>

## Production

### Capturing the SFX

Before I shot the footage, I took my list of SFX and sounds that I had created earlier and started to compile a library. Most sound effects are recordings of the same thing that they will be portraying. Some SFX were not so simple, therefore I needed to think outside the box. For example, the door in the final scene was not creaky, however I wanted a dramatic creak. To find the perfect, long drawn out creak, I hunted through all the cupboard in the building to find one with a suitably creaky door. I found one in the end and was pleased with the result. I did need to slightly EQ it to make it slightly more bassy. To record the sound effects, I used the following equipment:

- Marantz PMD661 Solid State recorder
- AudioTechnica AT897 Condenser Mic
- AudioTechnica ATH-M50x Headphones
- XLR

### Shooting the Footage

I shot the footage in a single day with Danny. We shot the scenes in chronological order through the script.

### Equipment list

- Sony NX3
- Swift Dedo toplight<sup>2</sup>
- Manfrotto Tripod
- AudioTechnica ATH-M50x Headphones<sup>3</sup>
- Sennheiser EW-100 G3 Wireless lav mic

### Practical Effects

Some practical special effects were used. For example, the moving table was achieved by wrapping electrical cable around the leg of the table, taping it in place and pulling it from behind the camera. The thickness of the cable allowed me to pull with some force, this was especially useful when pulling it towards Danny at speed. Because it was tied to the very bottom of the leg, I was able to get most of the table in shot, this enchanted the reality of the effect.

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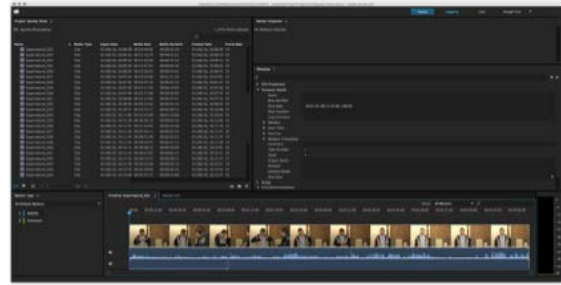
<sup>2</sup> S-2041 chip array LED on-camera light (no date) Available at: <http://www.swit.us/s2041-chip-array-led-oncamera-l2041.html> (Accessed: 12 January 2016).

<sup>3</sup> ATH-M50x (no date) Available at: <http://eu.audio-technica.com/en/products/product.asp?catID=5&subID=39&prodID=4596> (Accessed: 12 January 2016).

## Post-Production

### Ingestion

As I had shot the footage onto SD card, I plugged this into my Mac and booted up Adobe Prelude. As I had recorded footage and sound effects onto the same SD card, they were in the same AVCHD file.

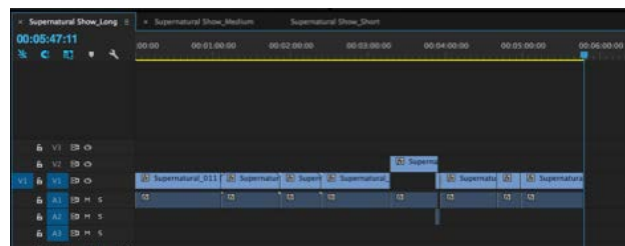


*Adobe Prelude ingesting footage*

First, I selected the footage and transcoded the clips into ProRes 1080p 25fps 422 HQ, a great intermediate codec. I then selected the SFX clips for transcoding into WAV 48000 16-bit.

### Rough Cut

Once I had all my clips in ProRes, I selected them all and sent them into Premiere Pro. I created a sequence and laid out the clips according to the Script, this rough cut can be found..... This first sequence was too long, almost 6 minutes. As the brief asked for a video 2-4 minutes, I started trimming. I first took out the scene in the drum room as it stood on it's own. This sequence was still too long, just over 5 minutes, so I decided to take out the section with the darts and transition straight from the table to the staircase. This new sequence came in just a couple of seconds under 4 minutes. I then spent a small amount of time trimming the clips so they flowed a bit better.



*My first rough cut was 5:47 long!*

### Audio Editing

Now that I had a sequence to work from, I sent the sequence to Audition from Premiere Pro. Now in Audition, I began by replacing the dialogue.

### ADR

For ADR I used:

- SeX1 Microphone<sup>4</sup>
- Reflection filter<sup>5</sup>
- Mic stand
- Roland Quad Capture<sup>6</sup>

<sup>4</sup> The X1 (no date) Available at: <http://www.seelectronics.com/se-x1-microphone/> (Accessed: 12 January 2016).

<sup>5</sup> REFLEXION FILTER® PRO (no date) Available at: <http://www.seelectronics.com/reflexion-filter-pro/> (Accessed: 12 January 2016).

<sup>6</sup> Corporation, R. (2012) QUAD-CAPTURE | USB 2.0 audio interface. Available at: <https://www.roland.co.uk/products/quad-capture/> (Accessed: 12 January 2016).

- AudioTechnica ATH-M50x

After connecting the equipment and testing the microphone, I created a new track called Danny Vox and selected the microphone as its input. We recorded the new, clean dialogue in small sections, usually a sentence each. Danny would first listen to the section on loop, try and match it and mark up the script with notes on inflection, spacing and breaths. Once he could repeat it consistently, we stopped



### *Danny and I recording vocals*

the loop and prepared to record. Audition allows the recording of multiple takes<sup>7</sup>, however not as efficiently as other programs such as Pro Tools or Logic. To record multiple takes, you must select the section you want to record during, pull the playhead back for a bit of pre-roll and hit record. Danny would then record a take. We would listen to the take with and without the original. If we liked it we would keep it, if not we recorded another take. Occasionally we liked different parts of different takes, fortunately in Audition you can trim and crossfade different takes. Occasionally, Danny's timing would be off slightly, however it was simple to use the razor blade tool to split and move clips to make them match the video. There were a few places where the ADR does not look like it matches the video, however, when you compare it to the original, it is spot on. This phenomenon was hard to deal with, it was a tough decision whether to keep it matching the original but look wrong, or to move it so it looked natural. I made a different decision for each clip after watching them several times each. Overall, Danny's ADR took 134 takes and about three hours to complete.

After Danny had completed his ADR, I did mine. My timing was less important as I was not on screen. I used the same method and tried to match the on camera sound. My ADR took 17 takes and a much shorter time.

### Ambiance

The next step I did was add fade-ins and fade-outs to all of the clips. This removes unwanted noise from either side of the clip. It also makes sure that each clip ends

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<sup>7</sup> Recording audio (2014) Available at: <https://helpx.adobe.com/audition/using/recording-audio.html> (Accessed: 8 January 2016).

on a zero crossing<sup>8</sup>, removing nasty pop and clicks. You can also fade a clip which has been cut short to give it a more natural end.

Next, I gave each location (room) two tracks. First, a track for the vocals, beginning V\_ and another for the ambient beginning A\_. I had taken impulse responses in each room and I used these to add convolution reverb as a track effect for each pair. I then muted the original vocal tracks and copied the vocal clips for each room onto the tracks. I adjusted the Wet/Dry mix for the track to make it seem more realistic. However, because the vocals had gaps, you got an awkward 'studio silence' in-between clips when there was no dialogue. To counter this, I added some ambient background noise I had recorded earlier to the ambient tracks for each room. The convolution reverb on these made it seem more natural too. Again, I faded these to remove pops and clicks.

### SFX

The next step was to add sound effects. I added two SFX tracks and began to pull clips in such as creaks, bangs, the table and spray paint noises. I would listen to each clip in place on the timeline to see if it fitted and if didn't, I removed it. Most of my SFX tracks were of the actual thing so they made sense and fitted. Others, such as the door creak in the final scene were actually a recording of something else which exaggerated and dramatised certain features.

### Footsteps & Rustles

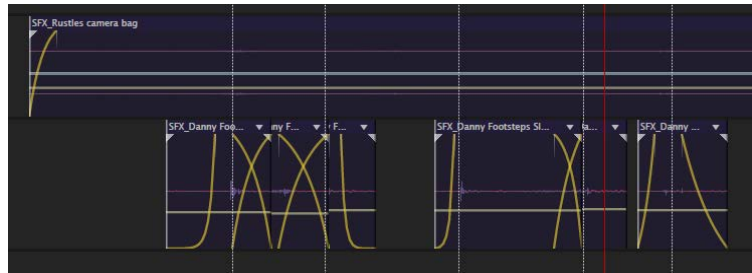
I need two more SFX tracks, one for footsteps and one for Danny's coat rustles which appeared throughout the entire piece. I had recorded several versions of footsteps on the day, some slow, some fast, some scuffs and some on the staircase.



*All tracks used.*

<sup>8</sup> Zero crossing points - what are they? - oh Drat (2012) Available at: <http://www.ohdratdigital.com/tutorials-2/zero-crossing-points-what-are-they/> (Accessed: 9 January 2016).

I used markers to mark where footsteps should fall while watching though each scene and then used the razor blade to chop up and reposition the footstep tracks. I had to repeat a few footstep tracks, however by changing the volume, you can't tell that they are the same clip. For the rustles, I recorded them much the same as the vocals. I watched the whole thing through and rustled my camera bag, which made a similar noise to Danny's coat, attempting to mirror the sound. When I pulled this track in, it fitted well and only needed a few minor volume and timing tweaks.



*Footsteps and rustles*

### Mixing

Throughout the whole process above, I had completely focused on whether things were in the correct place, not how they worked in the mix. I first mixed using my headphones, I find that this allows me to hear small details that I would not hear on a TV or speakers. However, not everyone will watch this wearing headphones so next, I tweaked the mix whilst listening on my speakers. Finally, I tweaked the mix minutely again whilst listening to it on my TV. I tried to make everything sound as natural as possible, I didn't want to draw attention to subtleties like footsteps, however they had to be noticeable otherwise the audience notices the absence.



*Rather than mixing the track levels, I adjusted each clip individually*

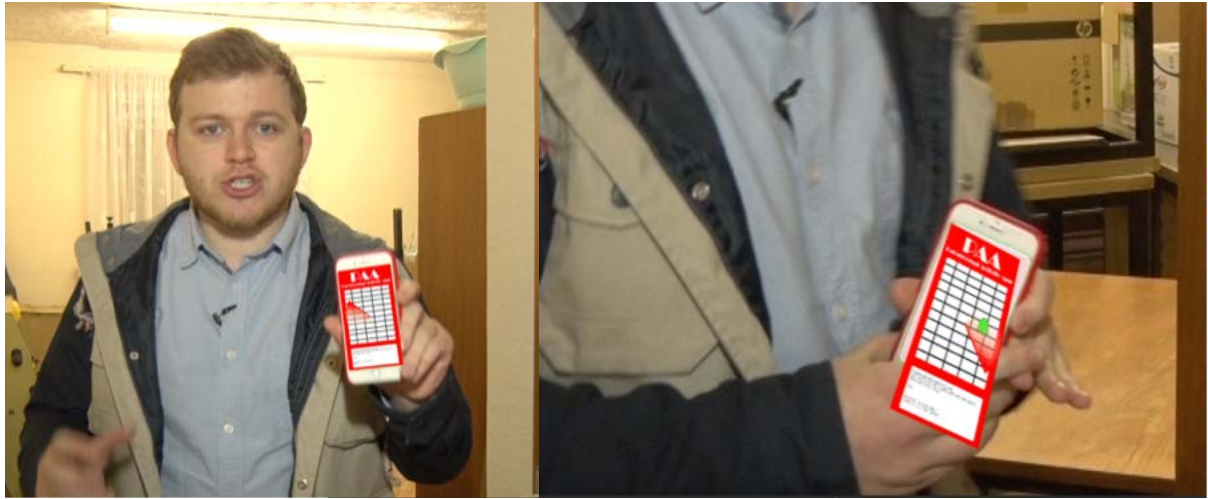
### Comparison

Throughout the audio editing process, I kept comparing my composition to the sound straight off the camera. I found that by listening to the original in one ear and my composition in the other, it allowed me to spot differences between them, besides noise, and highlight sounds that I had missed.

### After Effects

For some shots where Danny is using PAA, I planned on tracking a generated overlay onto the phone. To prepare for this, I created a green image with positional markers. Danny displayed this on his phone while shooting. In post-production, I tried to use both Mocha and After Effects to track the phone,

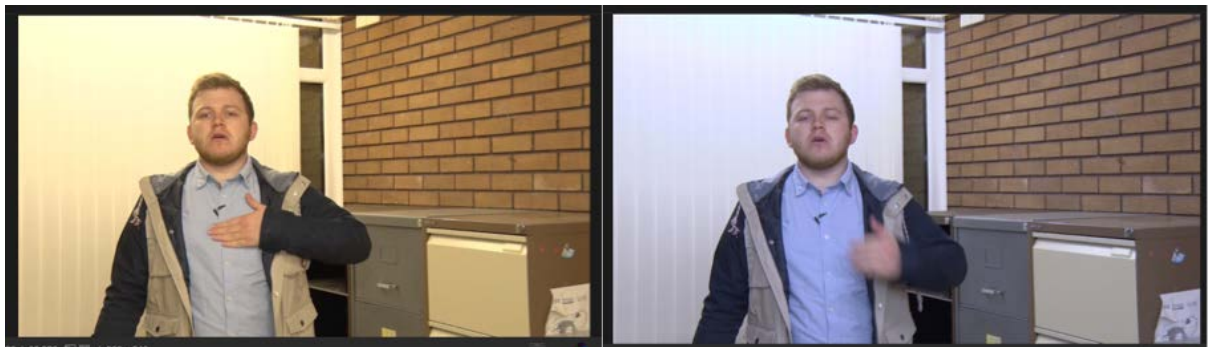




*Left: Corner pinning working well...*

*Right: ....and not so well*

neither could cope with the speed of movement and produce an accurate track. In the end, I ditched the idea and used Keylight to key out the green and replace it with a glowing red screen.



*The same shot before (Left) and after (Right) colour correction.*

### Colour Correction & Grading

There was a lot of colour correcting to be done as I had rather foolishly forgotten to white balance. My correcting included a lot of temperature correction, some saturation correction and some slight fiddling with the contrast. For the sections where I had used Keylight, some green had been lost from the surrounding area so I changed the tint to compensate. Once I had corrected my clips, I added an adjustment layer. I quite liked the warm look to the footage so I added a 'Warm Midtones' preset to the Adjustment Layer.

### Overlay

Finally, to conclude my 'straight off the camera' style, I added an overlay created in Illustrator. It consists of some 10% safety markers in the corner, a recording dot and

a timecode. The timecode also helps show the passage of time by simulating extra shots in-between the ones shown.

## Evaluation & Analysis

Unfortunately, due to the sheer amount to effects, editing and techniques I have used, there is so much to talk about and I have been unable to keep my report concise. I apologies for the high word count, however I did not want to cut out any information about my process and workflow. In this section, I will take a look at my piece of work from a different viewpoint. This is one of my favourite pieces of work that I have produced in a long time It is something that I can be proud of a put on a showreel. There are however, places for improvement.

Firstly, I would re-record most of the ADR in a studio environment. Although the reflection filter helped isolate the sound, there was still a lot of noise from within my room. However, I was pleased with my location sounds. I felt that aiming high on Learning Outcome 4 helped me achieve some great clips. I also feel that by listening to and analysing my mix on different outputs, I achieved LO4.

By stripping back my soundscape to nothing and starting from scratch, I was able to make small adjustments, such as the Wet/Dry mix and notice the difference, something that would be impossible with a noisy track. By experimenting with foley and ADR, learning the advantages and frustrations, I have not only targeted LO1, but have begun to understand what is going to be necessary for a small team to achieve in Assignment 2.

By comparing sounds to the original audio and adjusting the effects accordingly, not only have I achieved LO1, but I have found a useful technique which I can use in the future on other audio based assignments. By watching the composition without the original audio, however, allows you to gauge is the soundscape is too bare and view how the sound enhances the visual action or perhaps even motivates it.

I enjoyed making this video and look forward to working on the longer version!

## Bibliography

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- Zero crossing points - what are they? - oh Drat (2012) Available at: <http://www.ohdratdigital.com/tutorials-2/zero-crossing-points-what-are-they/> (Accessed: 9 January 2016).

# Appendices

## 1. Resources

I try to make as many of my resources available as possible, this includes recordings, screenshots, footage and photos. All available resources will appear at [lukenelson.uk/TE3075](http://lukenelson.uk/TE3075) under the 'Assignment 1 - Sound Design' header.

## 2. Script

The script is available to view here: [https://docs.google.com/document/d/1ey4NYL27Q5YfaJLnm8w4Mug\\_8\\_hh-PcjTrrCroEqX88/edit?usp=sharing](https://docs.google.com/document/d/1ey4NYL27Q5YfaJLnm8w4Mug_8_hh-PcjTrrCroEqX88/edit?usp=sharing). It will also appear with this document as the first appendix.

## 3. SFX List

The sound effects list I compiled from my script:

- Ambient Location sound
- Gentle wind
- Electrical pop - microphone plugging in
- Patting a mic on clothing.
- Clapper board (a few)
- Clothing rustles
- Wood falling (wood slap)
- Wood creaking
- PAA's Beeping - Generated?
- Light switch (a few)
- Banging wood - cupboards
- Dragging table
- Table legs
- Table creaking
- Table hitting doorway
- Table shaking
- Darts hitting wall
- Darts hitting paper
- Darts hitting photo paper
- Dart falling on table
- Spray paint
- Spray paint moving
- Rapid spray paints
- Spray paint can falling on floor
- Spray paint can lid rolling
- Spray paint can lid falling - maybe bouncing too
- Steps - jogging up
- Paper rustling
- Paper falling to floor
- Door creak
- Footsteps slow
- Footsteps fast
- Footsteps scuffs
- Rustling of clothes

## Appendix - Script

TE3075 - Assignment 1  
Supernatural Show

by

Luke Nelson

Yellow: Notes

Green: Shot list referencdes

Blue: Sounds to be recorded externally

Luke Nelson  
lukenelson.uk

Transition: Cut straight into action

Shot #1

INT. Lower Community Centre, Kings Blackpool - Late 2016

Sound recorded on scene but replaced later.

(Ambient location sound. ADR of speech.)

PRESENTER - Sherlock Holmes-esque attire sans magnifying glass and pipe. This presenter is new to the field but eager to make good TV.

Our first view is through the lens of a camera being set down on a tripod. We see PRESENTER pacing fiddling to attach a lapel mic. We hear a faint pop as his mic goes live.

PRESENTER

Ok, I'm live.

PRESENTER pats his mic.

PRESENTER

1. 2. Come on, I need you rolling!

We hear another faint pop as the camera's mic is connected.

CAMERA OPERATOR - We never see this man but hear his voice and see his effects.

CAMERA OPERATOR

Ok, I'm live annnndddd, we're rolling.

PRESENTER

Great, okay.

PRESENTER takes a deep breath in and out, then positions himself in front of the camera, straightens his clothing (clothing rustles) and prepares to speak by clearing his throat. CAMERA OPERATOR claps a clapper board in front of the camera.

PRESENTER

(Addressing the camera)

Hello, and welcome to Supernatural Show. Today we're in an abandoned community center, flooded during the notorious Northern storms Desmond, Eva and Frank last year, 2015. Nurses struggled ... and failed to evacuate some of the twelve pensioners living on the premises. Unfortunately, that fateful area has since been boarded up and we are unable to go through, however workers attempting to clean up the rest of the building have reported some, disturbing liveliness here. Today, we will explore...

As PRESENTER looks and gestures around, we hear the sound of the clapper board again. (Sound of wood falling, short loud slap) PRESENTER looks as CAMERA OPERATOR, dismayed.

PRESENTER

What did you do that for, I hadn't finished, that was going fine!

CAMERA OPERATOR

That wasn't me?

PRESENTER looks excited.

PRESENTER

Okay, keep rolling.

PRESENTER clears his throat, straightens his clothing and looks into the camera.

Presenter

(Addressing the camera)

Our first encounter with the paranormal! Let's explore.

Transition: Cut to next angle

INT. Lower Hallway

We see PRESENTER crouching next to a pile of wood. CAMERA OPERATOR claps the clapper board in front of the camera.

Presenter

(Addressing the camera)

This wood was leant up against the wall when we arrived but now, it's on the floor. Let's see if PAA, my patent pending Paranormal Activity App knows anything.

PRESENTER gets his phone out of his pocket and loads up PAA. (Beeping tracker-style noises) PRESENTER now waves his phone slowly over the wood. We hear beeping from the app and quiet creaking from the wood. CAMERA OPERATOR shivers, the effect of this can be seen as the camera shakes slightly.

CAMERA OPERATOR

Ohh.

PRESENTER

You can feel it can't you? The heat just left the room. Once you provoke the world of the supernatural, you open yourself up to all it's effects.

PRESENTER continues to scan the wood.

PRESENTER

I don't think there's anything else to learn from this wood, you can probably stop here and we'll find something else.



Transition: Cut

INT. Lower left room (Drum room)

The camera is panning across some photos on the wall. PRESENTER switches a light off; it is too dark to see the photos so the camera zooms out and turns. We see PRESENTER moving around banging on cupboard doors and looking through the contents.

Transition: Cut

INT. Lower right room (Room with tables)

The camera is already set on the tripod however CAMERA OPERATOR is still framing up and focusing. We see PRESENTER scanning a table. PAA is furiously beeping.

PRESENTER

Quick, are you getting this?

CAMERA OPERATOR

Yes, yes. ... Maybe you should say something about, this?

PRESENTER

Of course!

PRESENTER stands up, faces the camera, straightens his clothing and prepares to speak by clearing his throat. CAMERA OPERATOR claps a clapper board in front of the camera.

PRESENTER

As reported, there is a strong supernatural residence here. The room we're in now used to be a games room but maybe now, the pensioners are in a different kind of high spirits? ... That was rubbish wasn't it?

CAMERA OPERATOR

Erm...Yeah, it was a bit cheesy.

PRESENTER  
Ok, let me try again.

PRESENTER straightens his clothing and clears his throat.

PRESENTER  
As reported, there is a strong  
supernatural residence here. The  
room we're in now...

We hear the sound of a table being dragged on the floor. PRESENTER stops speaking and, confused, begins to look at the table behind him. The table begins to move towards PRESENTER. Presenter takes a step away from the table. The table then shoots towards presenter. PRESENTER lets out a yelp and lunges behind the camera. The table cannot fit through the doorway and shakes in the doorway for a moment before standing dormant. CAMERA OPERATOR moves the camera back a few steps into the hallway.

PRESENTER  
(Heavy breathing)  
Wow, quick, erm. PAA alerted us to  
some really strong supernatural  
energy coming from this table,  
just moments before we were  
attacked by it. Possessed  
furniture is one of the more  
\*gulp\* intense forms of paranormal  
activity. Erm...

As PRESENTER catches his breath, we can hear a faint noise. (darts on a picture) PRESENTER looks confused and turns around, looking into the next room.

PRESENTER  
What the...? Keep rolling.

PRESENTER goes through into the next room to explore the source of the noise. Will keep camera still on tripod whilst next shot is set up, once it is set up... CAMERA OPERATOR begins to detach the camera from the tripod.

PRESENTER

AHH!

CAMERA OPERATOR rushes camera through into the next room (will use drum room). PRESENTER has been pinned against the wall with a dart.

PRESENTER

Look! Look at the darts!

PRESENTER points towards a wall behind the CAMERA OPERATOR. CAMERA OPERATOR aims the camera towards the wall. There is a poster on the wall featuring people. All of the people have darts in their heads. The camera takes a close look. We can hear PRESENTER un-pinning himself behind the camera. As the camera zooms back out, PRESENTER walks into shot holding the dart.

PRESENTER

Supernatural forces are often  
hostile towards unwelcome  
visitors.

PRESENTER uses PAA to scan the dart. There is a lot of beeping.

PRESENTER

Just as I thought, riddled with  
metaphysical energy.

PRESENTER continues by scanning the darts and the poster. We hear a spraying noise, however PRESENTER is transfixed by PAA's results.

CAMERA OPERATOR

Did you hear that? Upstairs?

PRESENTER puts PAA away (screen lock noise), he moves past the camera.

Transition: Cut

INT. Staircase

The camera is looking slightly up the stairs. PRESENTER jogs up to the halfway point. The spraying noise can be heard, it is louder.

PRESENTER

If you're exploring the supernatural, you need to be observant. Sound, \*tugs earlobe\* is often first form contact paracommunity beings will make.

Transition: Cut

INT. Large room(Christmas decorations room)

The camera is handheld. PRESENTER is walking towards the room, the spraying noise is very loud now. As we approach the door, we hear the spray cans hit the floor and paper fluttering. PRESENTER switches on the light and slowly enters the room (door creak). He takes a look into the camera then PRESENTER and CAMERA OPERATOR begin to enter the room. A pile of paper is lying on the floor covered in spray paint alongside some spray paint cans. As we get closer, we can begin to read a word on the paper.

PRESENTER

(Peering down at and reading the paper)  
Leave.

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END