

90 Second Challenge Resource:

Techniques used to make 'The 12 Shots of Christmas' by Paul Appleby

The film was made by an amateur using borrowed professional equipment, but most of it could have been shot with just a camera and tripod.

Slow Motion – the drummers

On TV, there are 25 individual frames in each second, so “real time” is 25 frames per second. Film cameras expose each frame. Just like a roll of 35mm stills film, and can run at a range of different speeds, from individual frames to 500 or more frames per second (fps). At 500 fps, the action is 500 times per second, and when played back it at 25 fps, it's slowed 20 times, showing all the action in detail.

On video, it's harder to get true slow motion, because all but highly specialised cameras run at 25 fps, and any fast action can only be slowed down in the edit, where it tends to blur. Our drummers are slowed 5 times in the edit, but by setting the video camera shutter at 1/250 second exposure, the action is still sharp, even though the tape is just running slower.

Macrophotography - the piper

The extreme close-ups of the piper were shot with a miniature video camera within a few centimetres of his eyes, lips, fingers and bagpipes. This close focus is a characteristic of macrophotography – making small objects larger than they are in real life. Macro shooting is especially effective in making familiar objects seem unreal, and combined with a very wide-angle lens, a surprising amount of the frame is in focus.

Tracking - leaping footballers

Moving the camera with the action creates dynamic shots, or reveals new details, and tracking is the standard in feature films. We used lightweight plastic track, with a folding camera “dolly” carrying the camera, operator and tripod, and a second crew member to push it. What's crucial is to get a sense of the movement, so foreground is vital – the shot of the goalkeeper through the net shows the technique best.

With a steady hand and a wide-angle lens, you can get the same effect with a hand-held camera.

Craning - ladies dancing

A standard studio shot, re-created in a room at the Kuumba Arts Centre. The camera is mounted at one end of an arm, counterbalanced with weights, and with its centre on the tripod. Another joint effort, with 1 person pushing up the weighted end, whilst the other tilts the camera up as it descends. This keeps the dancers in the frame. Like the track, it's a common drama shot, and can also be achieved with a hand-held camera, and a little practice.

Timelapse - the maid

As the opposite of slow-motion, timelapses are shot on film by exposing 1 frame at a time, so the action speeds up when it is replayed at 25 fps. Whatever real time it took to shoot 25 frames will be condensed into 1 second. On video the same feel can be created in the edit as a motion effect. This action took over a minute, but is shown at 20 times normal speed. It's a great way of making landscapes or natural transitions such as sunrises or cloud fronts more dramatic.

Zoom - the swans

The simplest technique for revealing a new aspect. This shot goes from the tightest close-up to the widest angle of the lens.

Hand-held - the geese

Hand-held shooting is the easiest way to work with unpredictable subjects like geese! By moving around them at their height, you get an intimate shot that can't be done any other way, and on the wide-angle lens, the action is smooth.

Stop-frame - the rings

The same principle as time-lapse, with the tripod locked off to maintain the same framing throughout. The shot was set up, then the rings were actually removed from the blocks. In the edit, the sequence was reversed, the hand action edited out, and a mix placed between each shot.

Pull-focus - the birds

Another "reveal" technique, generally used to link 2 different subjects by changing the focus from foreground to background, or vice-versa. A low "depth of field" is critical to the effect. The sparrows were unpredictable, so the shot is focussed on the bird, then "pulled" out of focus, and run backwards in the edit.

Tilt - the "French Hens"

Like the zoom, a simple technique to link subjects – skyline to market to chicken. This shot was done on a tripod, as tilting is quite difficult to get smooth with a hand-held camera.

Point-of-view - the pigeons

There are no turtle doves in Bristol, but if you're stuck with pigeons, shooting from their height at least makes them more interesting. Point-of-view shots are best used in a sequence when it's obvious that the action is that seen by one of the protagonists, for added dramatic effect.

Composite – the Partridge

Partridges aren't easy, either, so this stuffed one is from the City Museum. It was shot in the basement, in front of a blue cloth lit by filming lights. The editing system detects the blue in the picture, and adds a second image – or images – as a background. The process is called "colour separation" or "chroma-key". It's standard for Star Wars, but you can do it too!

It's not easy to shoot – matching the shade on the wood in the studio and in a back garden took a few attempts.

The film was made with the help of:

John Weeks	Katherine Avery	Bristol City Museum
Chitcombe Organic Farm	City of Bristol Pipe Band	Ella & Georgia Comrie
Fraser Hart	Films @ 59	Issa Cawame
Jamaica Bell FC	David Ravie John	Katy Noakes
Kuumba Arts Centre	Julian Smart	Alex Stoloff
Sam Trebilcock	Windmill Hill City Farm	White Lion W-o-T FC