

# Photographing NBTV and other slow displays.

## Preamble.

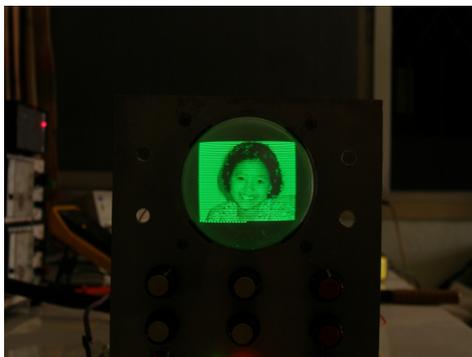
There has always been a desire to be able to display the fruits of our NBTV labours in the form of still photographs. It sure would be nice to do video too, but that's not so easy, especially with a different frame rate to conventional TV. The following requires practice and patience.

## Digital Still Cameras.

Fuji, Kodak, Canon and many others jumped on the digital bandwagon when they realized that the sales of film was going to virtually vanish with the introduction of the digital still camera. Eastman (Kodak) and others still make film for the movie industry, but it's a niche (read expensive) market, and that's also under threat from the digital movie cameras currently being marketed professionally.

## So you've got a digital still camera...

There are huge advantages with digital still cameras, immediacy, privacy (we won't go into that here) and the ability to manipulate the image on a computer. But how to get that base image in the first place from a flickering NBTV screen?



The first consideration is exposure time. Basing this on the club standards a complete frame is done in 1/12.5ths of a second, so it is necessary for your exposure to be at least this duration. This is not a speed that can be used hand-held; the camera needs to be mounted securely so it doesn't move during the time the shutter is open (or the electronics captures the image). A tripod is the answer, they're not expensive, but moving furniture around to provide a stable support is a valid alternative.

The next point is camera shake. This is simply that when you push the shutter release you move the camera body. If your camera has a delayed shot (most do) of say ten seconds, use it, the wobbles (even on a tripod) will have died out by then. Better still is a remote control...some models do have this, mainly Canon and Olympus.

Going back to exposure time, it is tricky capturing a single frame even if your camera does have a 1/12.5s exposure setting (unlikely). It's better to get the average of several frames, say at least ten. This requires the camera to be set in exposure time mode, usually a 'S' on the mode wheel which with the correct controls can be set to at least one second, better still, two or more. This will require a still image on the display.

Next is exposure light levels, don't zoom in to the flickering display only, include a reasonable portion of the surrounding...err, apparatus. Set the ambient light levels to a similar visual level to the display brightness or slightly less. Use average exposure metering and you should get a reasonable result. You might have to adjust the exposure time such that the iris is within range to get a good picture.

With the generally low levels of light output from NBTV monitors and the long exposures needed the flash on the camera needs to be disabled, this is usually found within the menu system.

More advanced is to use exposure bracketing, this is where the camera determines the nominal exposure takes a snap, then it takes (usually two) that are differently slightly under-exposed and two in the same manner over-exposed. You then choose the best of five. Most digital cameras have this feature.

Focusing. Some cameras will auto-focus on a NBTV display, some won't. If your camera has manual focus, use it. If your display or the area you wish to capture is quite small you'll need to put the camera into Macro mode for taking very close-up pictures, say less than 300mm.

Just as with film cameras there is the speed/sensitivity to be considered, with film it's the ISO/ASA number of the film loaded, with digital you can change it from shot-to-shot. Most digital cameras will start up in 'Auto mode', the camera selecting a speed usually between 80 and 400. Just as with film it's a trade-off between sensitivity and noise/grain.



Once you have an acceptable raw image then some simple software to crop it and convert it into grayscale if you wish is all that's required.

The nub of all the above is to experiment and read the camera manual. It will also help you with the family snapshots too...after all this it might be a good idea to read the manual and find out how to get it back to 'Factory Presets', undoing all the above takes some patience.