

RECTIFIED PHOTOGRAPHY

Scale Accurate Photographic Recording
of
Structures and Surfaces

RECTIFIED PHOTOGRAPHY

Useful for Recording

Buildings, Facades, Walls, Piers

Doors, Windows, Fireplaces, Arches

Gates, Gateposts, Gravestones

Architectural Detail

Anything that is flat or relatively flat

On the following pages there are examples
of square-on photographs that
could be scaled to produce

RECTIFIED PHOTOGRAPHIC ELEVATIONS

All that is needed to scale the photograph
are measured dimensions
ideally horizontal and vertical dimensions

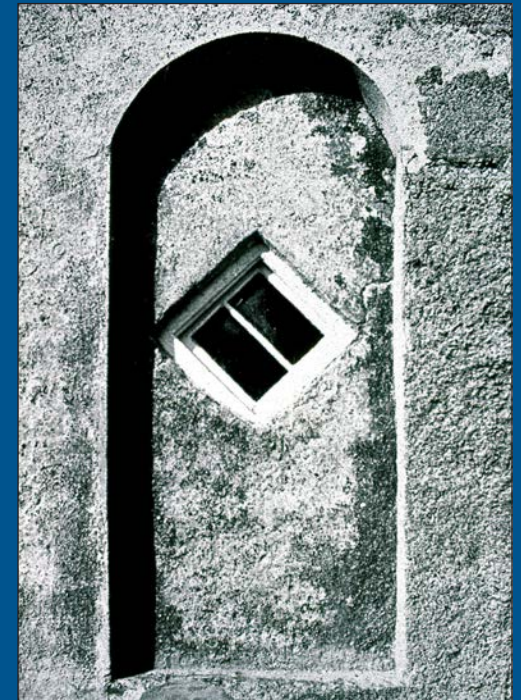
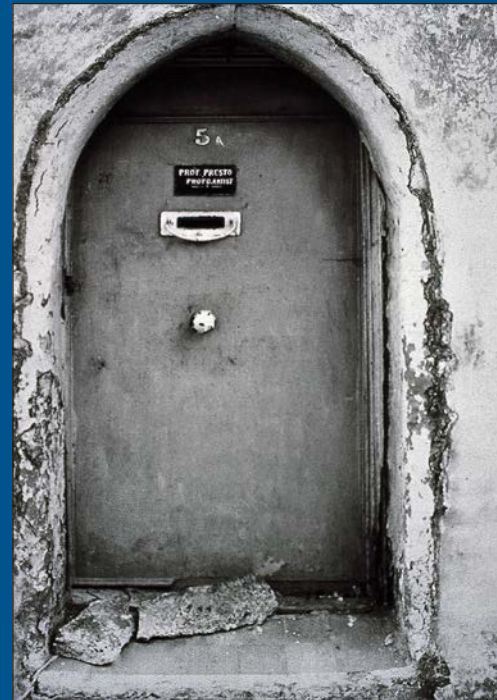
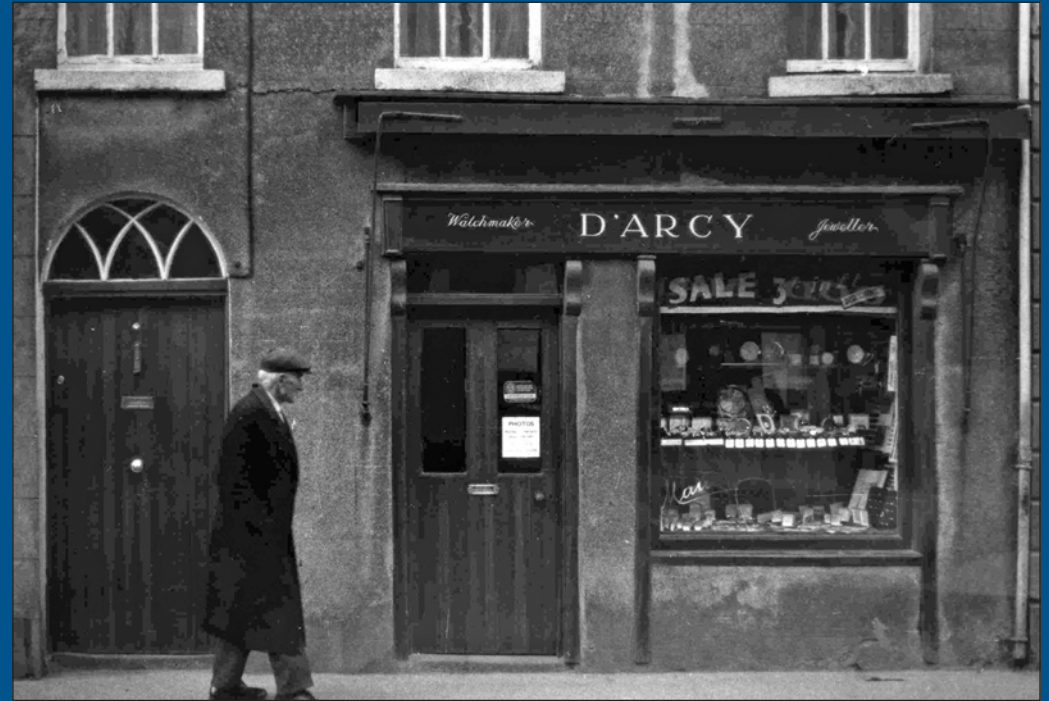


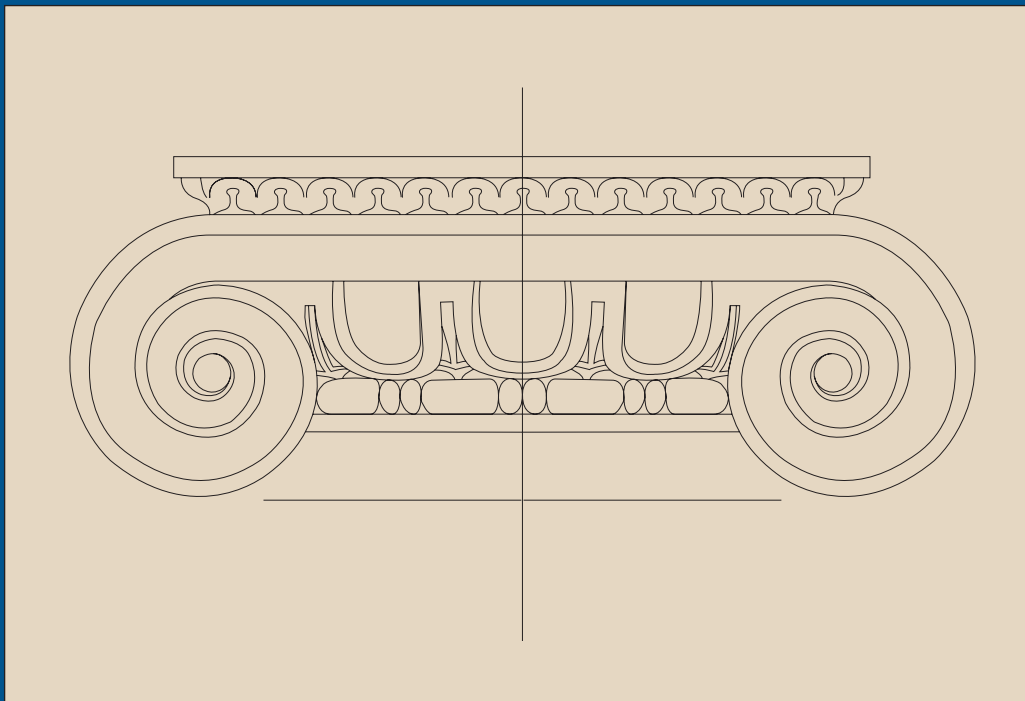










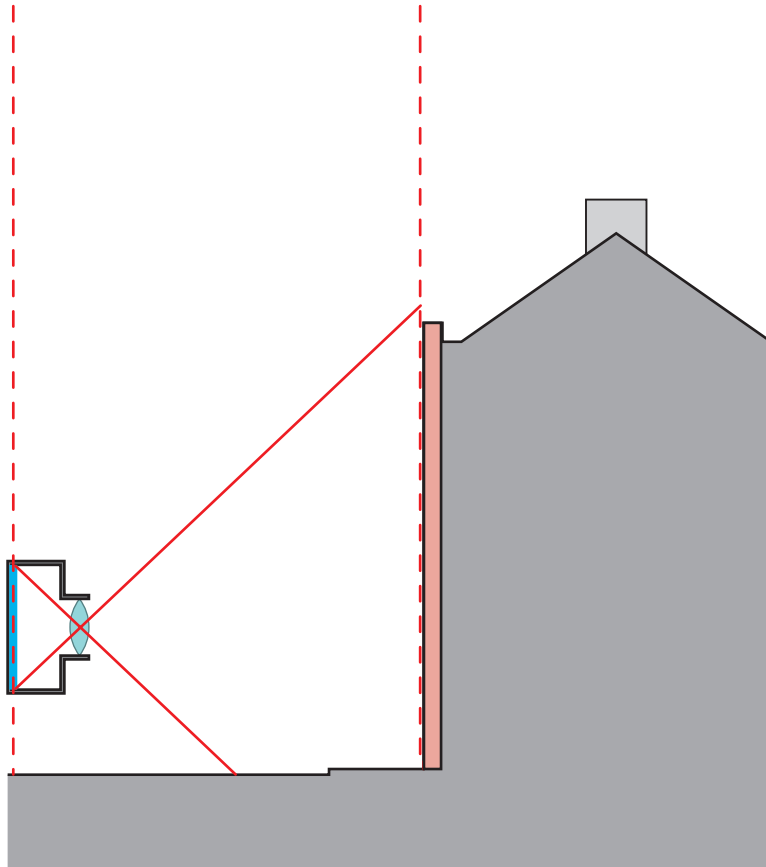


RECTIFIED PHOTOGRAPHY

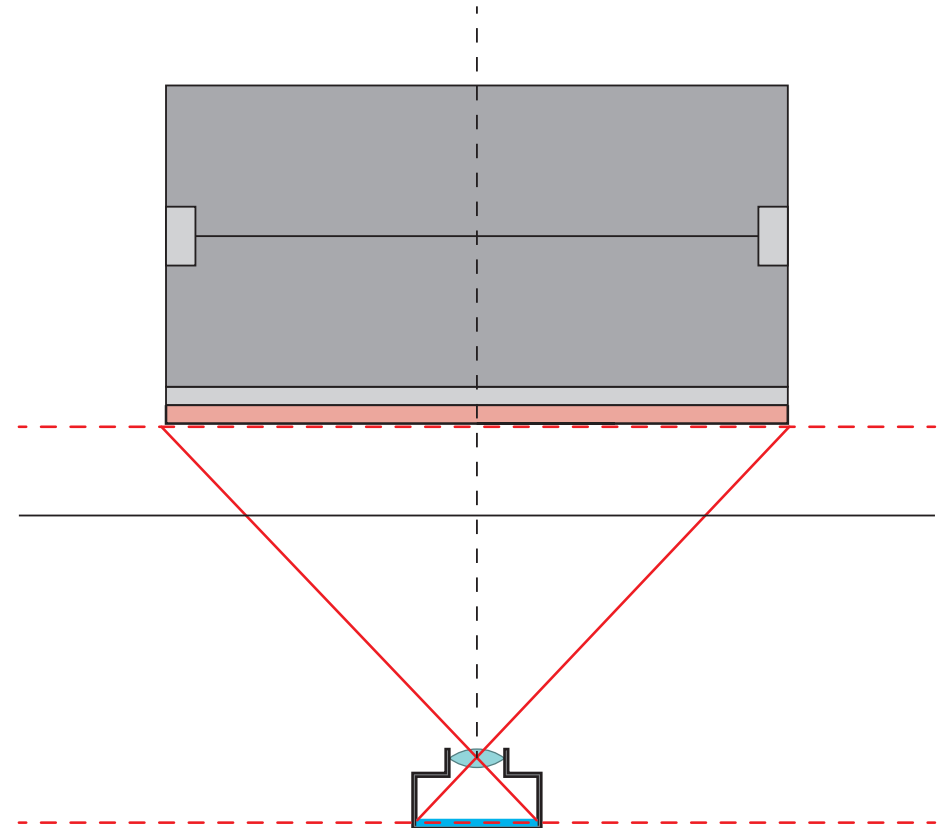
The Image Plane in the Camera

Must Be

Parallel to the Surface Being Recorded

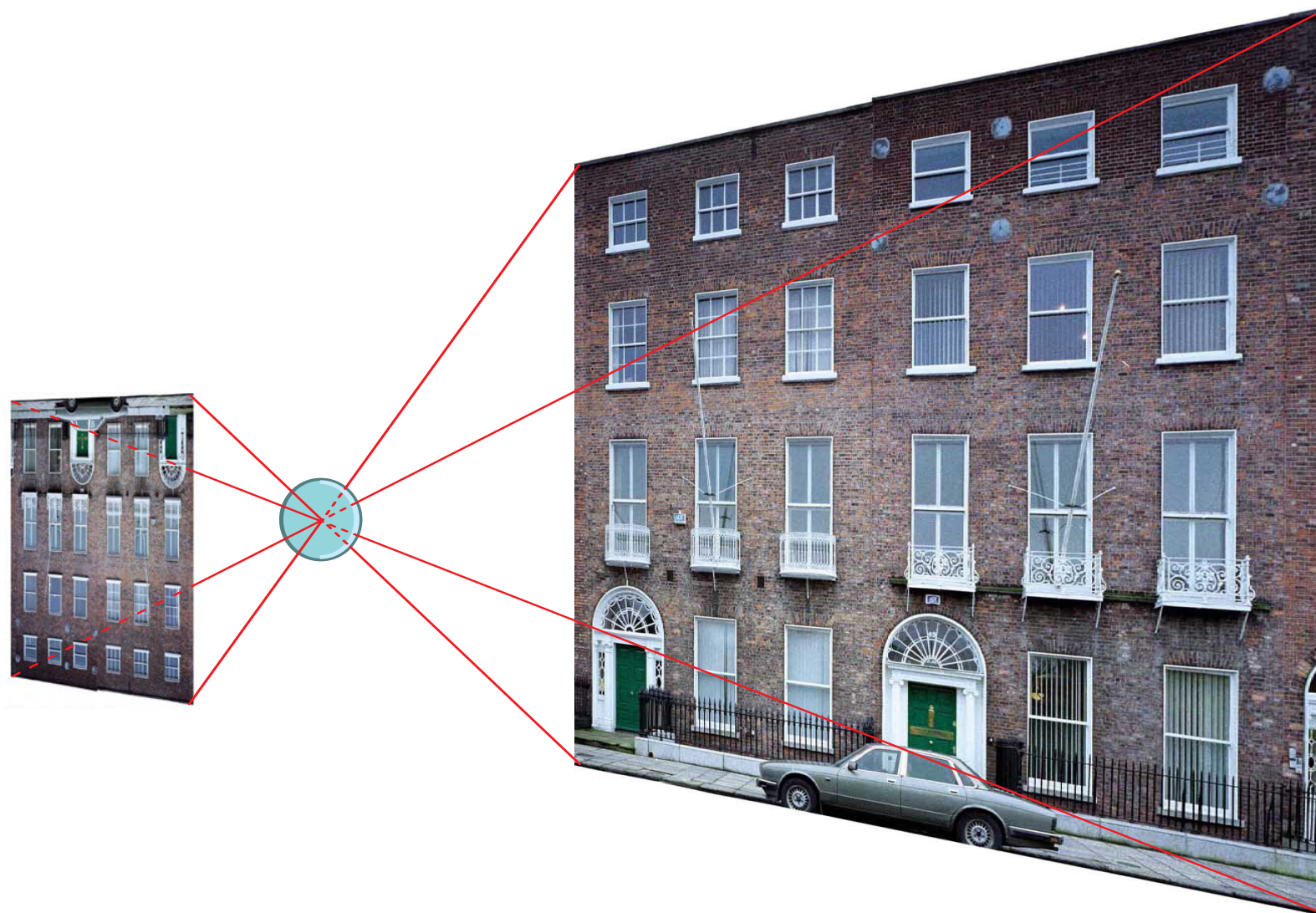


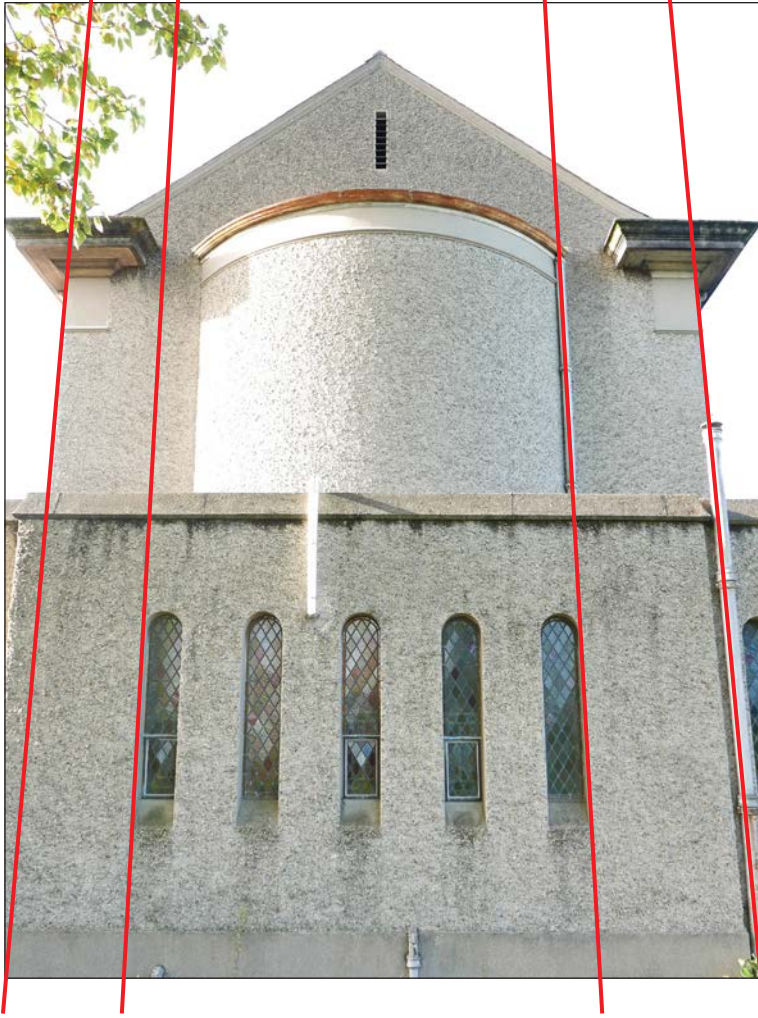
Parallel in the Vertical



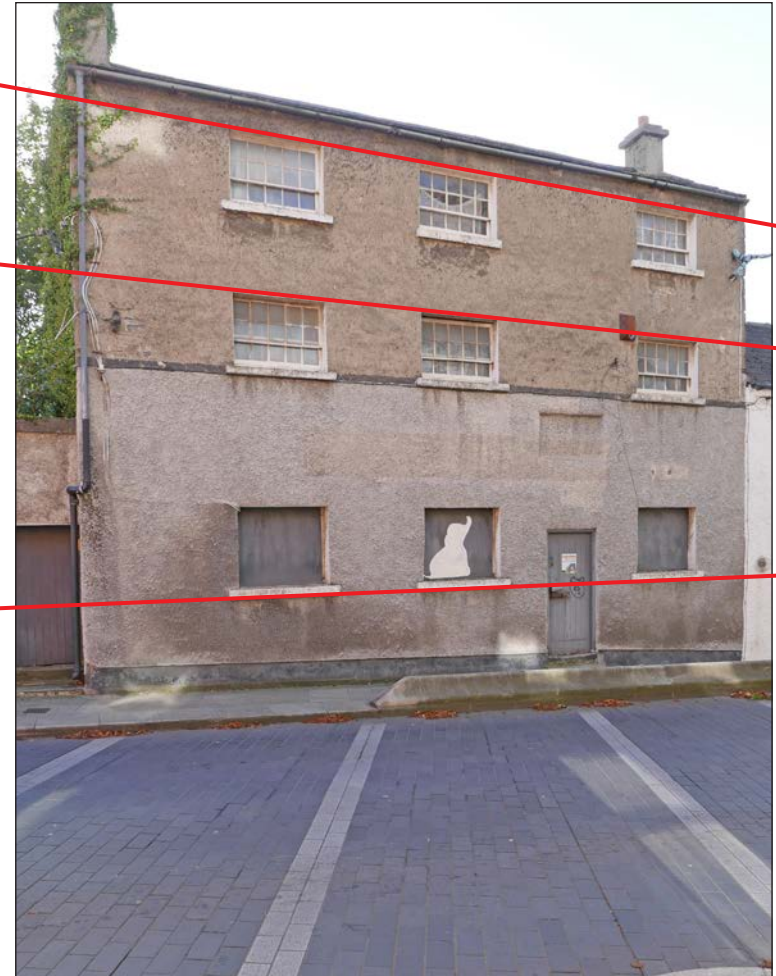
Parallel in the Horizontal

The image plane is a model
of the surface being photographed





Vertical Convergence
Camera Tilted Back



Horizontal Convergence
Camera Rotated Right

Most surfaces being recorded are vertical
so ensuring that the camera is level
will usually ensure that the image plane
is parallel to the surface being recorded

A grid in the camera will help ensure the horizontal rotation of the camera is parallel to the surface being recorded

Most cameras can be used for
RECTIFIED PHOTOGRAPHY

but lenses should not introduce distortions

Wide angle lenses should not exceed

24 mm full frame equivalent

Some zoom lenses may cause distortion



Barrel Distortion



Pincushion Distortion

Mid range fixed lens camera on an adjustable tripod head



Back of the camera showing the Monitor Display



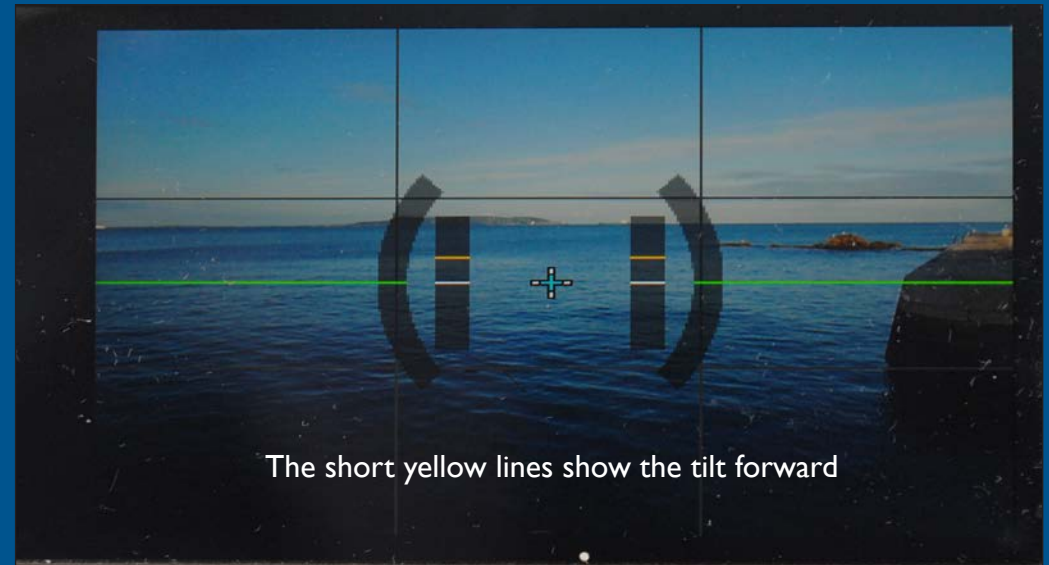
Monitor Display showing the level as green lines, the centre cross hairs in green and the grid in grey



Camera tilted forward and to the side



The yellow lines show the tilt forward and to the side

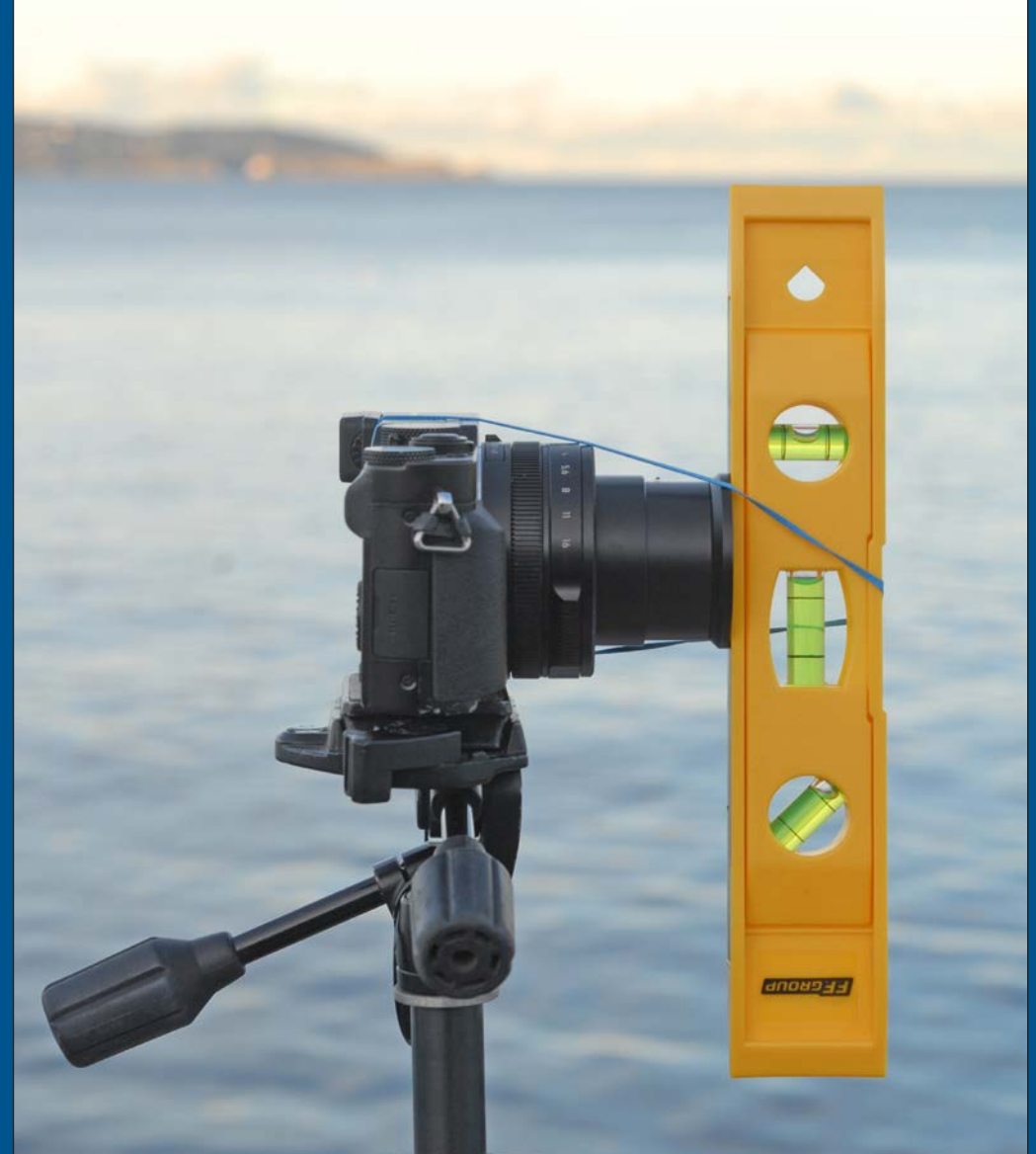


The short yellow lines show the tilt forward

Light weight tripod



Using a spirit level



Sprung mounting
for a phone



Sprung mounting on a
mini tripod



Desktop phone cradle



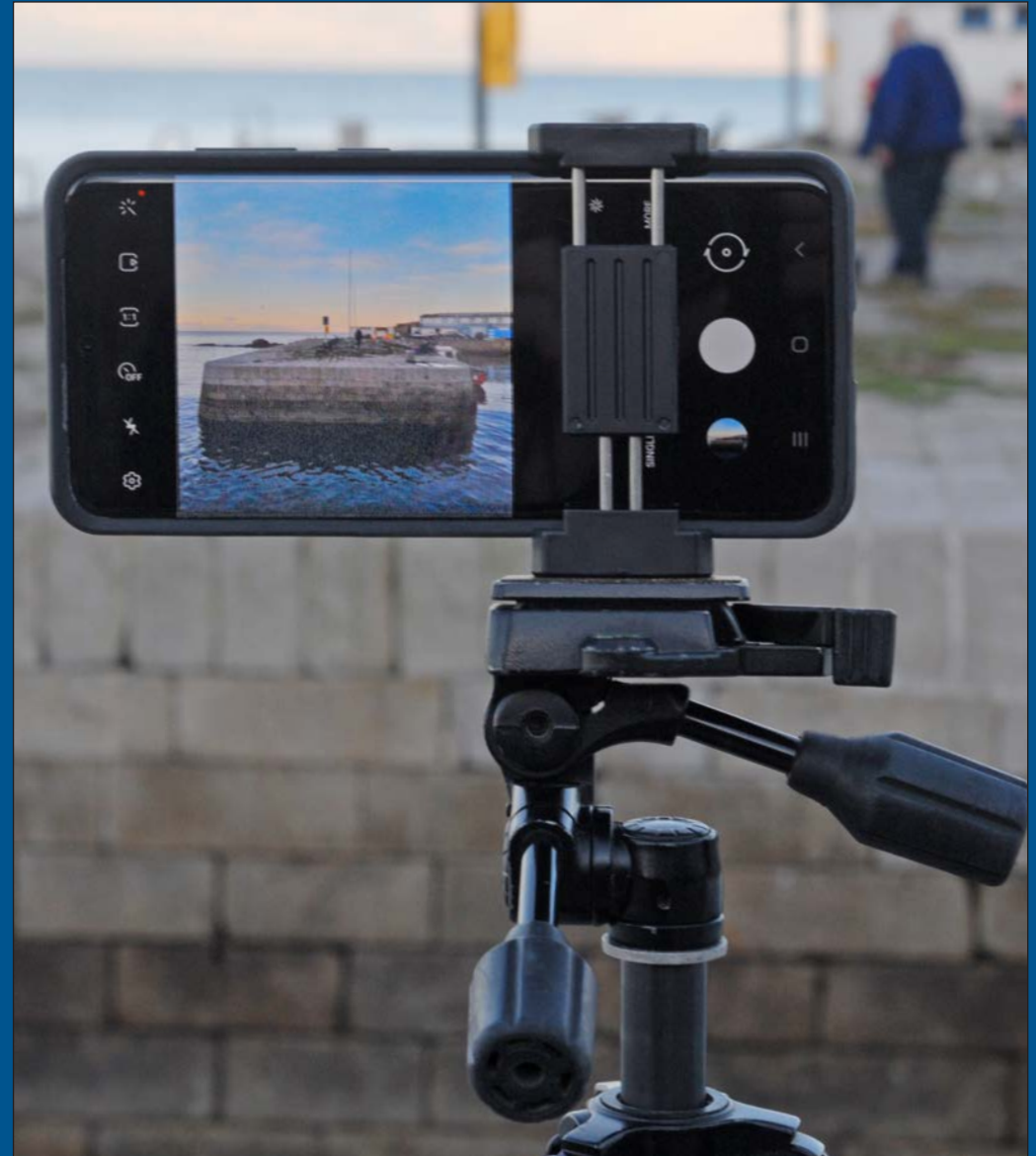
Sprung mounting on a flexible mini tripod



phone mounted on a
tripod and levelled



Phone on a tripod with
camera image on screen



Phone image of the end of the pier
Image centred on a paving line on the top of the pier



Level camera image of the end of the pier
The image plane and the face of the pier are not parallel



The camera is tilted to match the slope of the pier



The camera is tilted to match the slope of the pier
The image plane and the face of pier are parallel



SLR camera
on a heavy tripod



Nikon SLR camera
with 24mm shift lens



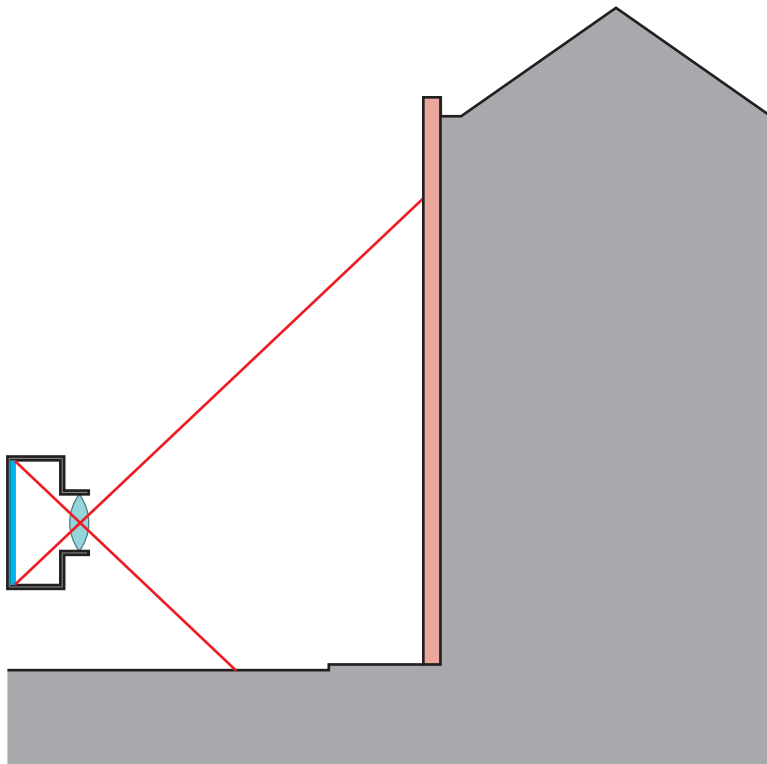
24mm shift lens
no shift applied



24mm shift lens
vertical shift applied

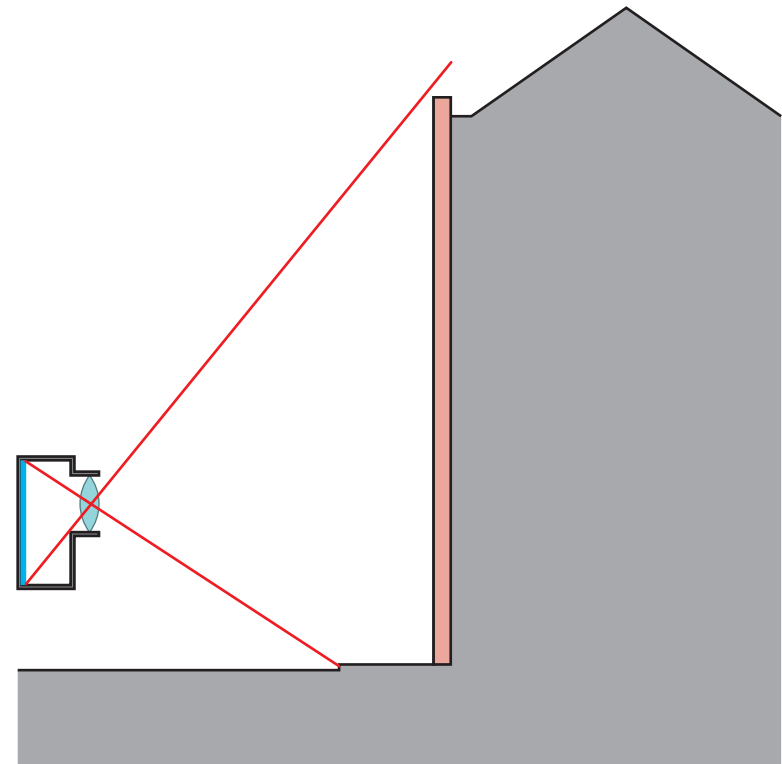


shift lens
no shift applied



Top of facade excluded

shift lens
vertical shift applied



Top of facade included
(camera not tilted)

Surfaces to be recorded should be in shade
Sunshine and shadows hide detail



Don't do this

