

# UFO Capture - Leeds

## Recommended settings for camera and capture device

### General:

Exposure - 25 fps (non-integrating mode)

Gain – AGC Lo (Hi is often too noisy)

Gamma – Off (=1.0 - to increase contrast, also adjust capture device)

### Specific to the Watec 902H Ultimate:

Shutter mode ON

AE Mode Control 8 EI:OFF (stops it 'hunting' in twilight)

# UFO Capture - Leeds

## Profile tab

**U** UFOCapture

Input | Operation | Profile | DB

Serial ID	U2000-0000522
Observer name	A_R_Pratt
Location ID (max12AN)	Leeds
Longitude(E+)	-1.6078
Latitude(N+)	53.8376
Altitude(m)	115.0
Camera ID (max2AN)	SE
Camera name	Watec_902H2
Lens name	6mm_f/0.75
Capture eq. name	
<input checked="" type="checkbox"/> Interface	<input type="checkbox"/> Bottom Field First
Comment	

# UFO Capture - Leeds

**UFOCapture**

Input Operation Profile DB

Single File Mode  Start Detect at Activation  
 Logging  Do Not Use Trash Box

Still Image Capture

SnapShot(\*)  PeakHold(\*)  \*bmp  \*jpg  
 Thumbnail X: 200 Y: 150  +Mark  
 Map bmp  Leave Image of Long Clip

Detect Schedule (LT)

h	m	to	h	m	Settings	
<input type="checkbox"/>	6	53	to	19	30	...
<input checked="" type="checkbox"/>	19	5	to	6	53	...

Auto Adjust to Sun   
 Auto Restart Interval 1 hour 0 min

HDD Free Space Check

Minimum Free Space 100 MB (now 25267 MB)  
 Stop  Delete Oldest in dir

Action

Beep at Capture Start \*.wav ...  
 Action at Capture End \*.bat ...

Mail Transfer

Mail  S/Pjpeg  Tjpeg

FTP Transfer

FTP  S/Pjpeg  Tjpeg  wmv  
+no. 8

Maintenance

UFOCapture V 2.24  
   
 save as template

## Operation tab

**UFOCapture Detect Schedule Adjust Settings**

Longitude : -1.6078, Latitude : 53.8376  
Month 09 Day 23 (LT) Sunrise 06:53 Sunset 19:05

Schedule 1 (Day) 06:53 to 19:05  
Sunrise + 0 min To Sunset + 0 min

Schedule 2 (Night) 19:05 to 06:53  
Sunset + 0 min To Sunrise +

Start with Replay sheet (power save)  
 Shutdown after detect end

Manual startup

Automatic shutdown



# UFO Capture - Leeds

## Input tab – Capture device settings

The screenshot shows the UFOCapture software interface with the Input tab selected. The settings are as follows:

- Input: Operation, Profile, DB
- Video: 1:Conexant Polaris Video, 1:Combx, set
- Audio: NULL, set
- Tuner: 2, ant, set
- Size X: 720, Y: 576, ReSize X: 720, Y: 576
- Codec: 13:Lagarith Lossless Cod, set, Fps: 25.000
- Frame Shift: Head: 25, Tail: 25, Diff: 1
- Video Trigger: Detect Area: DA-ALL.bmp, Edit
- Min(fm): 2, Max(sec): 0, EXsize: 0
- Detect Level Noise Tracking: DLratio: 110, MinDL: 10, MinL-N: 3
- Scintillation Mask: SMlevel: 110, SMspeed: 2, SMsize: 5
- DarkObjMask DOlevel: 2
- SlowObjMask(✓) P/s: 20, SOsize: 15
- Optional Triggers:  Audio,  Time Interval (min): 60
- Super Impose: Format: %T%m(UTC) %C %F %L 902H2 6mm f/0.75 A
- On: s, m, l, Y-Pos: 1, +msec: -33
- UTC,  ChangeDate: 20001231\_235959
- Preview option:  Area,  MaskW,  MaskE

The screenshot shows two windows: Properties Graphics card and Properties USB video grabber.

**Properties Graphics card**

- SimulStream, Device, Logo, Size and Crop
- Video Proc Amp, Video Decoder, Input, RefSize
- Brightness: 250
- Contrast: 511

**Properties USB video grabber**

- CxPolaris Version, Video Decoder, Video Proc Amp
- Brightness: 5000, Auto
- Contrast: 9984, Auto
- Hue: 0, Auto
- Saturation: 0, Auto
- Sharpness: 100, Auto
- Gamma: Auto
- White Balance: Auto
- Backlight Comp: Auto
- Gain: Auto
- ColorEnable:
- PowerLine Frequency (Anti Flicker): Auto
- Default

# UFO Capture - Leeds

## Input tab – Detect Area mask

The screenshot displays the UFO Capture software interface. The main window is titled "UFOCapture" and has a status bar at the top right indicating "status : idle". The interface is divided into several sections:

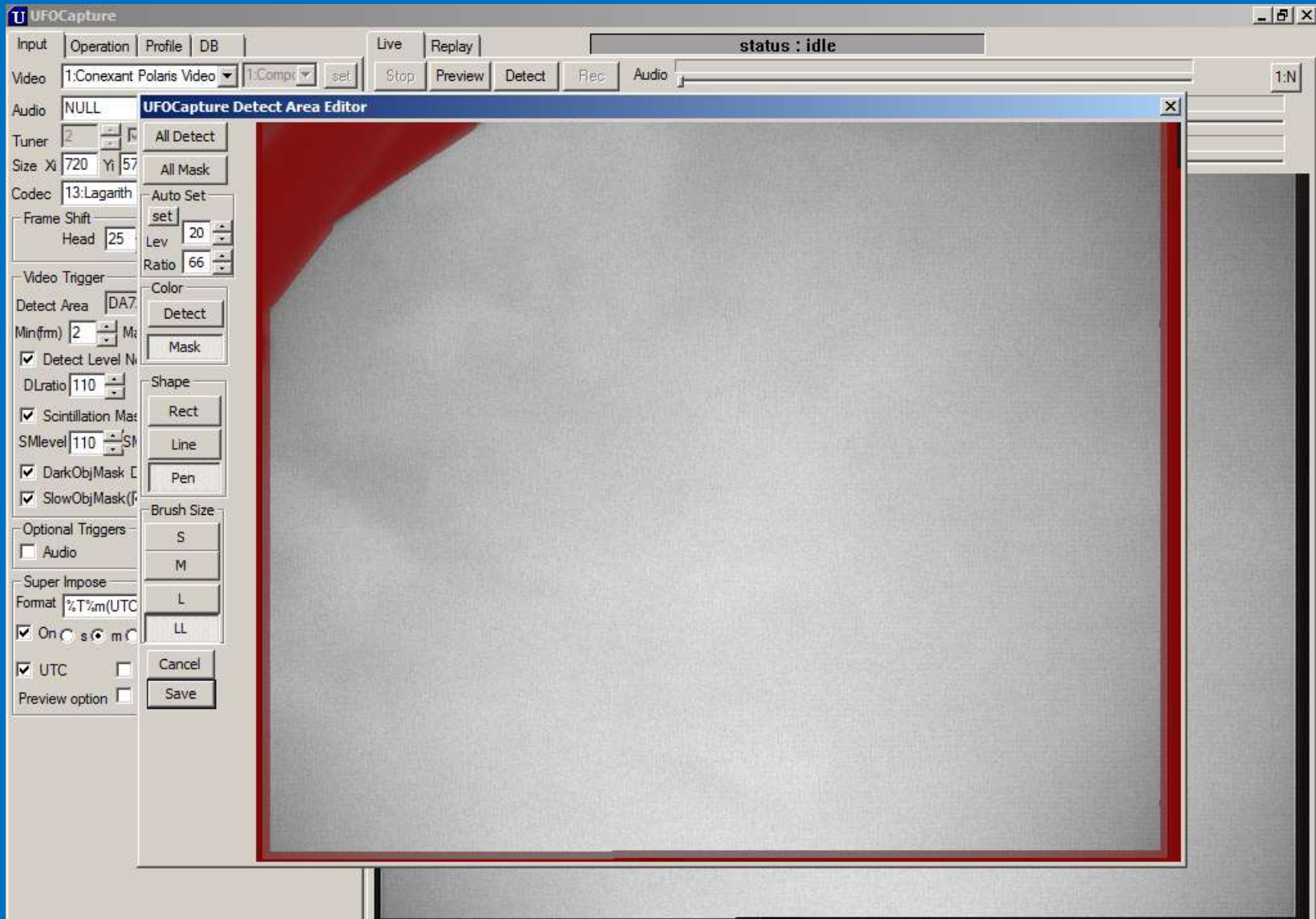
- Input Section:** Includes tabs for "Operation", "Profile", and "DB". The "Video" dropdown is set to "1:Conexant Polaris Vided", and the "Audio" dropdown is set to "NULL". The "Tuner" is set to "2" with the "ant" checkbox checked. The "Size X" and "Y" are both set to "720". The "Codec" is set to "13:Lagarth Lossless Cod" with a "Fps" of "25.000". The "Frame Shift" section has "Head" and "Tail" both set to "25" and "Diff" set to "1".
- Video Trigger Section:** The "Detect Area" is set to "DA-ALL.bmp" and is highlighted with a yellow box. Below this are various detection parameters: "Min(fm)" is "2", "Max(sec)" is "0", and "EXsize" is "0". The "Detect Level Noise Tracking" checkbox is checked, with "DLratio" at "110", "MinDL" at "10", and "MinL-N" at "3". The "Scintillation Mask" checkbox is checked, with "SMlevel" at "110", "SMspeed" at "2", and "SMsize" at "5". The "DarkObjMask" checkbox is checked with "DOlevel" at "2". The "SlowObjMask" checkbox is checked with "P/s" at "20" and "SOsize" at "15".
- Optional Triggers Section:** The "Audio" and "Time Interval (min)" checkboxes are unchecked, with the time interval set to "60".
- Super Impose Section:** The "Format" is set to "%L 902H2 6mm f/0.75 A R Pratt (Leeds SE)". The "On" radio buttons are set to "s" (start) with "Y-Pos" at "1" and "+msec" at "-33". The "UTC" checkbox is checked, and "ChangeDate" is set to "20001231\_235959". The "Preview option" section has "Area", "MaskW", and "MaskE" checkboxes unchecked.

At the top right of the main window, there are "Live" and "Replay" tabs, and a "status : idle" indicator. Below these are buttons for "Stop", "Preview", "Detect", "Rep", and "Audio". A "Detect Size" slider is set to "3", and a "Detect Lev" slider is set to "41". The main display area shows a dark, blurry image, likely a video frame being captured.



# UFO Capture - Leeds

## Input tab – Detect Area mask



# UFO Capture - Leeds

## Input tab – Superimpose setting

**UFOCapture**

Input | Operation | Profile | DB

Video: 1:Conexant Polaris Video | 1:Combc | set

Audio: NULL | set

Tuner: 2 | ant | set

Size: Xi 720 | Yi 576 | ReSize: Xx 720 | Yo 576

Codec: 13:Lagarith Lossless Cod | set | Fps 25.000

Frame Shift: Head 25 | Tail 25 | Diff 1

Video Trigger

Detect Area: DA-ALL.bmp | Edit

Min(fm) 2 | Max(sec) 0 | EXsize 0

Detect Level Noise Tracking

DLratio 110 | MinDL 10 | MinL-N 3

Scintillation Mask

SMlevel 110 | SMspeed 2 | SMsize 5

DarkObjMask DOlevel 2

SlowObjMask(✓) P/s 20 | SOsize 15

Optional Triggers

Audio |  Time Interval (min) 60

Super Impose

Format: %T%m(UTC) %C %F %L 902H2 6mm f/0.75 A

On  s  m  l | Y-Pos 1 | +msec -33

UTC |  ChangeDate 20001231\_235959

Preview option  Area  MaskW  MaskE

Super Impose

Format: %T%m(UTC) %C %F %L 902H2 6mm f/0.75 A R Pratt (Leeds SE)

## Auto-documents camera, lens and site details



# UFO Capture - Leeds

## Input tab – Dark Object mask

**UFOCapture**

Input | Operation | Profile | DB

Video: 1:Conexant Polaris Video | 1:Combc | set

Audio: NULL | set

Tuner: 2 | ant | set

Size X: 720 | Y: 576 | ReSize X: 720 | Y: 576

Codec: 13:Lagarith Lossless Cod | set | Fps: 25.000

Frame Shift: Head: 25 | Tail: 25 | Diff: 1

Video Trigger

Detect Area: DA-ALL.bmp | Edit

Min(fm): 2 | Max(sec): 0 | EXsize: 0

Detect Level Noise Tracking

DLratio: 110 | MinDL: 10 | MinL-N: 3

Scintillation Mask

SMlevel: 110 | SMspeed: 2 | SMsize: 5

DarkObjMask DOlevel: 2

SlowObjMask(  )P/s: 20 | SOsize: 15

Optional Triggers

Audio |  Time Interval (min): 60

Super Impose

Format: %T%m(UTC) %C %F %L 902H2 6mm f/0.75 A

On: s | m | l | Y-Pos: 1 | +msec: -33

UTC |  ChangeDate: 20001231\_235959

Preview option:  Area |  MaskW |  MaskE

DarkObjMask DOlevel 2

Reduces detection of birds in silhouette, etc

Set DOlevel to 0, 1 or 2



# UFO Capture - Leeds

## Input tab – Slow Object mask

The screenshot shows the 'UFOCapture' application window with the 'Input' tab selected. The 'SlowObjMask' section is highlighted with a yellow box. The settings for this section are:  SlowObjMask( )P/s 20 SOsize 15. Other visible settings include: Input: Operation, Profile, DB; Video: 1:Conexant Polaris Video, 1:Combx; Audio: NULL; Tuner: 2, ant; Size X: 720, Y: 576, ReSize X: 720, Y: 576; Codec: 13:Lagarith Lossless Cod, Fps: 25.000; Frame Shift: Head 25, Tail 25, Diff 1; Video Trigger: Detect Area DA-ALL.bmp, Min(fm) 2, Max(sec) 0, EXsize 0; Detect Level Noise Tracking:  DLratio 110, MinDL 10, MinL-N 3; Scintillation Mask:  SMlevel 110, SMspeed 2, SMsize 5; DarkObjMask:  Dlevel 2; Optional Triggers:  Audio,  Time Interval (min) 60; Super Impose: Format %T%m(UTC) %C %F %L 902H2 6mm f/0.75 A;  On s m l Y-Pos 1 +msec -33;  UTC,  ChangeDate 20001231\_235959; Preview option:  Area,  MaskW,  MaskE.

A close-up view of the 'SlowObjMask' settings. It shows a checked checkbox followed by the text 'SlowObjMask(' followed by another checked checkbox, then ')P/s' followed by a numeric input field containing '20', and 'SOsize' followed by a numeric input field containing '15'.

Reduces detection of 'planes and satellites

Set Pixel/s to:  
15 for a 3.8mm lens  
40 for a 12mm lens

Default value of SOsize is 15

# UFO Capture - Leeds

## Input tab – Stellar scintillation mask

The screenshot shows the UFO Capture software interface with the Input tab selected. The Scintillation Mask section is highlighted with a yellow box. The settings for Scintillation Mask are:  Scintillation Mask, SMlevel 110, SMspeed 2, and SMsize 5. Other visible settings include: Input: Operation, Profile, DB; Video: 1:Conexant Polaris Video, 1:Combc; Audio: NULL; Tuner: 2, ant; Size X: 720, Y: 576, ReSize X: 720, Y: 576; Codec: 13:Lagarith Lossless Cod, Fps: 25.000; Frame Shift: Head 25, Tail 25, Diff 1; Video Trigger: Detect Area DA-ALL.bmp, Min(frm) 2, Max(sec) 0, EXsize 0, Detect Level Noise Tracking checked, DLratio 110, MinDL 10, MinL-N 3; DarkObjMask DOlevel 2; SlowObjMask( )P/s 20, SOsize 15; Optional Triggers: Audio unchecked, Time Interval (min) 60; Super Impose: Format %T%m(UTC) %C %F %L 902H2 6mm f/0.75 A, On s m l Y-Pos 1, +msec -33, UTC checked, ChangeDate 20001231\_235959; Preview option: Area unchecked, MaskW unchecked, MaskE unchecked.

A close-up of the Scintillation Mask settings. The  Scintillation Mask checkbox is checked. Below it, the SMlevel is set to 110, SMspeed is set to 2, and SMsize is set to 5. Each value is in a spin box with up and down arrows.

An SMlevel of 110 detects scintillation values 10% above average background level

Default SMspeed is 2

Increase this if heavy scintillation

Default SMsize is 5

Increase if poor seeing / unsharp images

Decrease if good seeing / sharp images

# UFO Capture - Leeds

## Input tab – Stellar scintillation mask

Codec: 13: Lagarith Lossless Cod set Fps 25.000

Frame Shift  
Head 25 Tail 25 Diff 1

Video Trigger  
Detect Area DA720-576.bmp Edit  
Min(frm) 2 Max(sec) 0 EXsize 0  
 Detect Level Noise Tracking  
DLratio 110 MinDL 10 MinL-N 3  
 Scintillation Mask  
SMlevel 110 SMspeed 2 SMsize 5  
 DarkObjMask DOlevel 2  
 SlowObjMask( )P/s 20 SOsize 15

Optional Triggers  
 Audio  Time Interval (min) 60

Super Impose  
Format %T%m(UTC) %C %F %L 902H2 6mm f/0.75 A  
 On  s  m  l Y-Pos 1 +msec -33  
 UTC  ChangeDate 20001231\_235959  
Preview option  Area  MaskW  MaskE



2014/09/24 22:03:18.9(UTC) 0000

00000 070 902H2 6mm f/0.75 A R Pratt (Leeds SE)

# UFO Capture - Leeds

## Input tab – Sensitivity tuning

The screenshot shows the UFO Capture software interface. The 'Input' tab is active, displaying various settings for video, audio, and detection. The 'Detect Size' and 'Detect Lev' controls are highlighted with a yellow box. The 'Video Trigger' section is also highlighted with a yellow box, showing 'Min(frm)' set to 2 and 'EXsize' set to 0. The 'DLratio' is set to 110, 'MinDL' to 10, and 'MinL-N' to 3. The 'Optional Triggers' section shows 'Audio' and 'Time Interval (min)' set to 60. The 'Super Impose' section shows 'Format' set to '%T%m(UTC) %C %F %L 902H2 6mm f/0.75 A' and 'On' checked.

Purpose	DLratio	MinDL	MinL-N	Detect Size
Very bright object only	200	20	10	30
Safety setting for noisy camera	120	20	8	5
Safety setting for hi S/N camera	110	10	5	5
Recommended general setting	110	10	3	3
High sensitivity setting	105	5	2	2

**Min (frm) = 2 and EXsize = 0 – recommended for meteors**  
**Min (frm) = 0 will detect meteors, sprites, noise...**

# UFO Capture - Leads

## Recommended reference sources

### UFO Capture Night Sky Observation Guide

<http://sonotaco.com/soft/NSOG/index.html>

### UFO Capture User's Manual

<http://sonotaco.com/soft/UFO2/help/english/index.html>