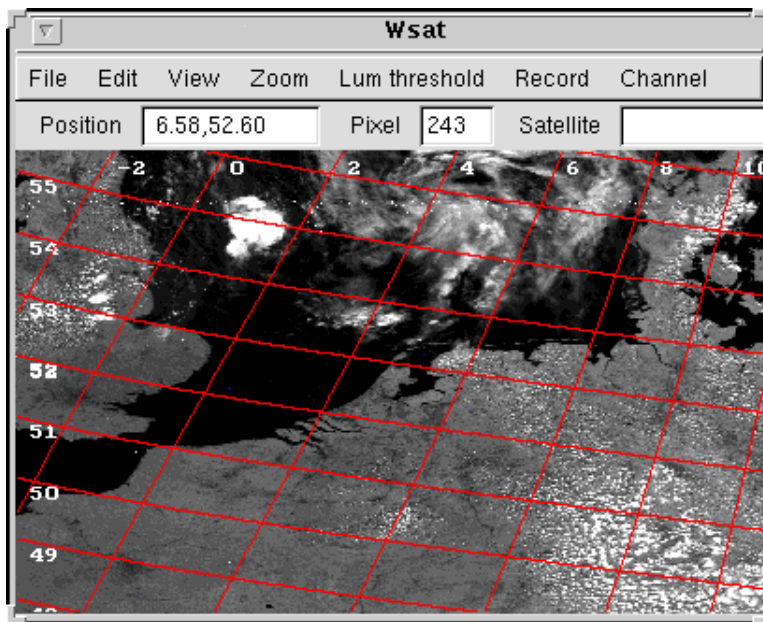


# Manual WSAT program (2002.2).

Click on a menu item to jump to the description of this item (html version only).

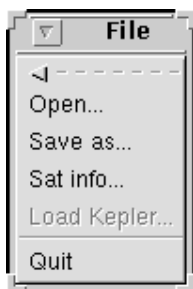
---

## Overview program; main menu.



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## Menu: File.



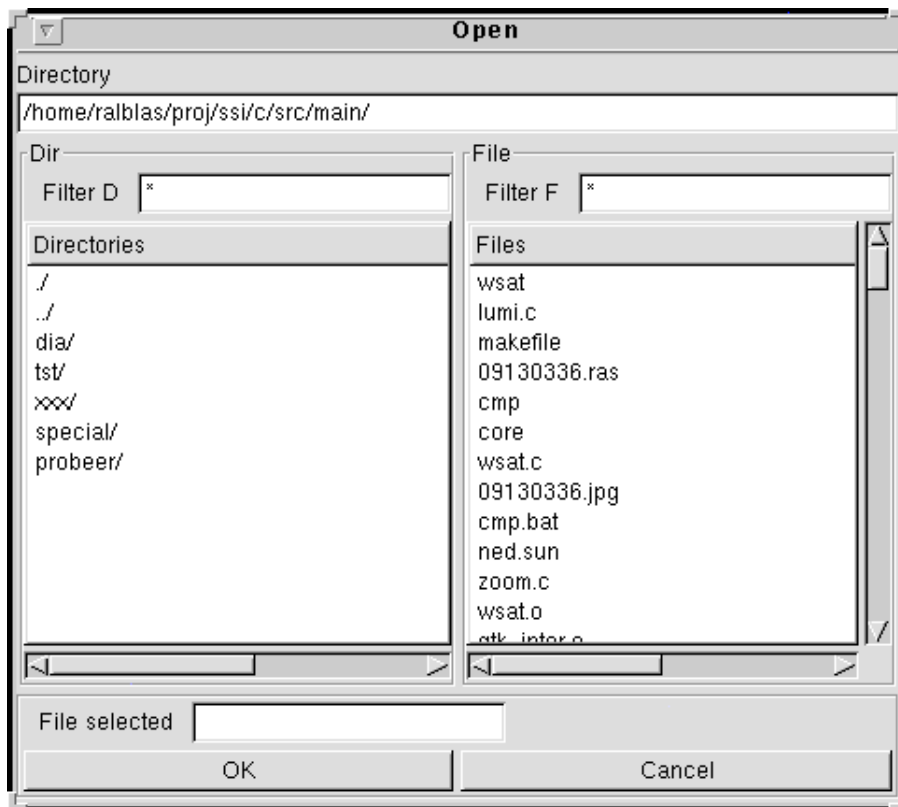
---

## Open.

Open a existing picture file:

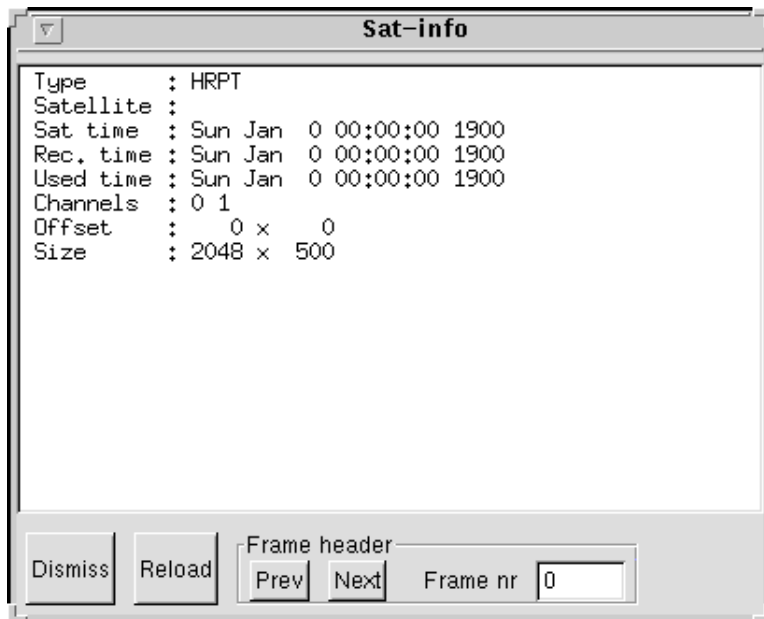
- Browse by:
  - Double click on dirs in the left list

- Adding a filter ('Filter D') to restrict the amount of listed dirs
- typing the dir name in the 'Directory' entry part. Every time you type a dir. separator ('/' or '\') the dir will be evaluated and files in current dir are shown in the right list.
- Add a filter ('Filter F') (e.g. \*.dat) to restrict listed files.
- Click on a file and then click 'Ok'.



## Sat info.

Information about the current file s shown. For HRPT and HRI files header info is shown; by clicking on 'Prev' or 'Next' info in a header of a certain frame can be examined.



## Save.

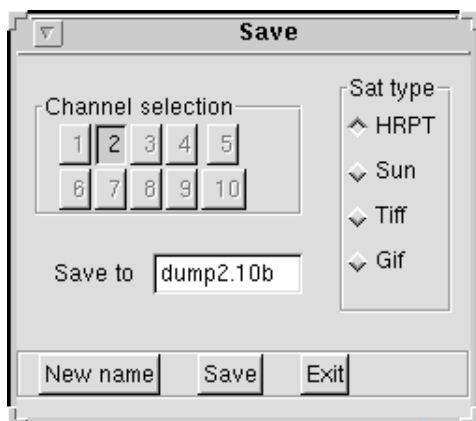
Save/translate picture file. "New name" will generate a non-existing file name in which the file will be saved. File types supported:

- HRPT
- HRI
- SUN
- GIF
- TIFF

Note that for translating HRPT into another format (GIF, SUN, TIFF) information is lost (10 bits --> 8 bits per pixel).

Only by translating HRPT to HRPT-format more than 1 channel can be saved.

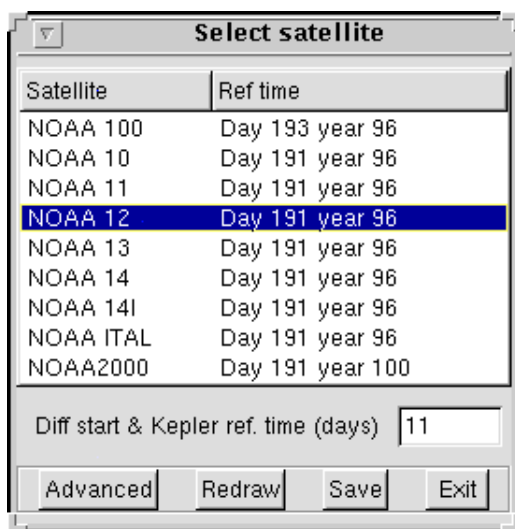
If zoomed the zoomed part will be saved.



## Ldkepler.

After opening a file containing NORAD 2-lines Kepler-file this window pops up. Select the derired satellite. The "Diff start & Kepler..." shows the time between record time and reference time of the selected Ksatellite in days.

- *Advanced*: show/change the Kepler-elements.
- *Redraw* show the new grid ("grid" should be activated).
- *Save*: save the new settings (times and Kepler elements) into the HRPT-file.



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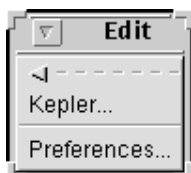
## Quit.

Exit the program.

---

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## Menu: Edit.



## Orbit.

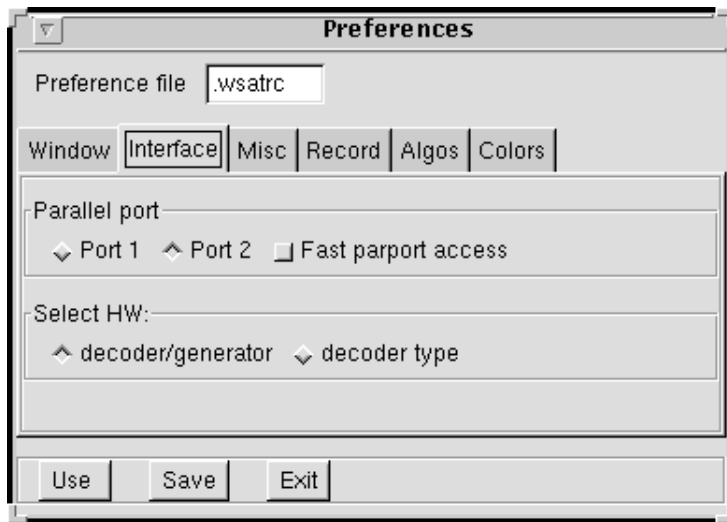
Change orbit/kepler data manually.

- *Extract*: Extract start-time from satellite data.
  - Click on *Search time*. The fields below show which line is used and the satellite name. Click again on *Search time* if derived time seems unreliable.
  - Click on *Use time* to load/use the extracted time.
- *Select*: Choose which time to use: the computer-time or the time transmitted by the satellite. (Note: In the last case the year is derived from the computer time!)
- *Redraw*: Show the new grid ("grid" should be activated).
- *Undo*: get previous settings.
- *Reload*: reload orbit/kepler settings from the HRPT file.
- *Save*: save the new settings (times and Kepler elements) into the HRPT-file.
- *Exit*: exit the window; settings will be kept.
- *Cancel*: exit the window; settings will be lost (except if saved into the file).

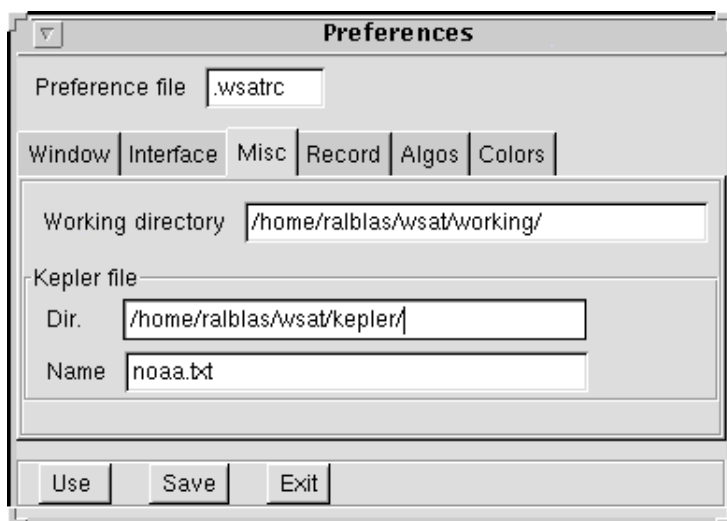


**Kepler.**

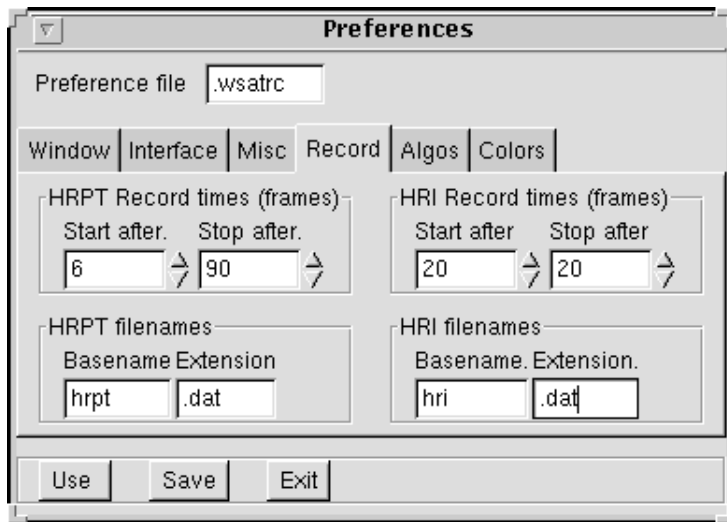




## Working directory and Kepler files

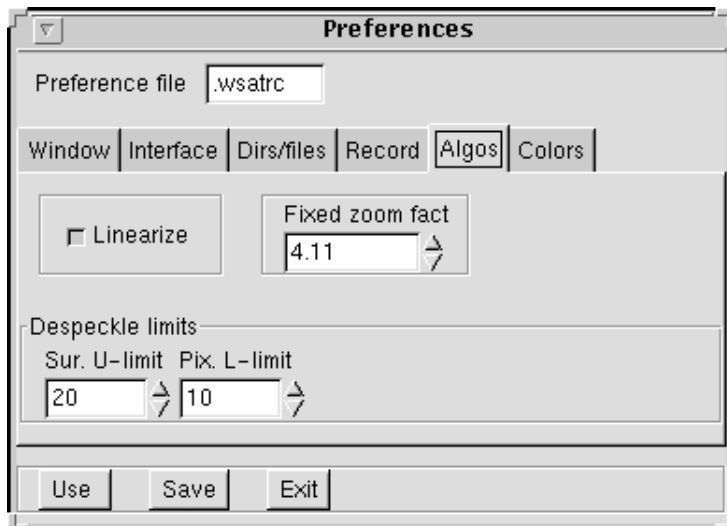


## Record related settings



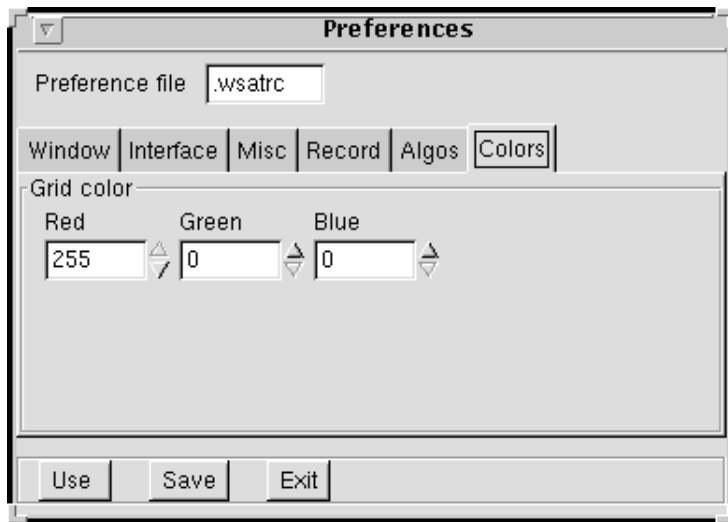
## Algorithmic

Define linearize on or off at start-up  
 Define speckle-size for despeckling  
 Define fixed-zooming fact.

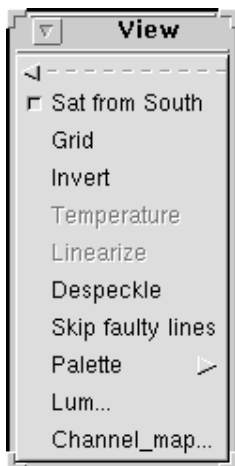


## Colors





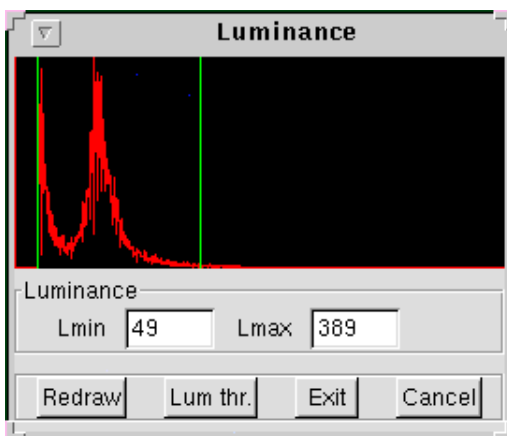
## Menu: View.



- **Sat direction** Choose satellite direction: from south to north or from north to south.
- **Grid** Activate lon/lat lines for HRPT or grid for HRI.
- **Invert** Invert picture
- **Temperature** Make temperature mapping (IR-channels only).
- **Linearize** Linearize HRPT picture.
- **Despeckle** Despeckle picture. See Preferences for some important settings.
- **Skip faulty lines** Skip faulty lines in HRPT or HRI pictures. The faulty lines are replaced by the nearest line which is OK. This is done by a flag present in HRPT and HRI files for each line, indicating if the decoder was in-sync.
- **Palette** Choice between palette present in file and grey-palette.



- **Luminance** Change luminance mapping.  
Press left mouse button near a green line and drag it.
  - *Lmin*: Enter lower threshold.
  - *Lmax*: Enter upper threshold.
  - *Redraw*: Show the new luminance mapping.
  - *Lum thr.*: Automatic luminance setting.



- **Channel mapping** Combine several channels.
  - *ro/go/bo* = red/green/blue offset
  - *r/g/b 1/2/3/....* = contribution of channel to red/green/blue
  - *Redraw*: Show new mapping results.
  - *True color*: Automatic settings for CHRPT/Seawifs true color pictures.
  - *Align settings*: Show/hide align buttons
  - *Auto align*: Align CHRPT channels.
  - *Reset align*: Reset all align-numbers to 0.
  - *Exit*: Exit this window.

Map channels

colors

Ch1

Ch2

Ch3

Ch4

Ch5

Ch6

Ch7

Ch8

Ch9

Ch10

ro

r1

r2

r3

r4

r5

r6

r7

r8

r9

r10

0

0.0

1.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

go

g1

g2

g3

g4

g5

g6

g7

g8

g9

g10

0

0.0

1.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

bo

b1

b2

b3

b4

b5

b6

b7

b8

b9

b10

0

0.0

-0.5

0.0

0.0

0.0

0.0

1.0

0.0

0.0

0.0

HShift

h1

h2

h3

h4

h5

h6

h7

h8

h9

h10

0

0

0

0

0

0

0

0

0

0

VShift

v1

v2

v3

v4

v5

v6

v7

v8

v9

v10

0

0

0

0

0

0

0

0

0

0

TILT

tilt1

tilt2

tilt3

tilt4

tilt5

tilt6

tilt7

tilt8

tilt9

tilt10

0

0

0

0

0

0

0

0

0

0

Redraw

True color

Align settings

Auto align

Reset align

Exit

## Menu: Zoom

Zoom

100% (f)

In (l)

Out (o)

dx->dy (c)

dy->dx (C)

zx->zy

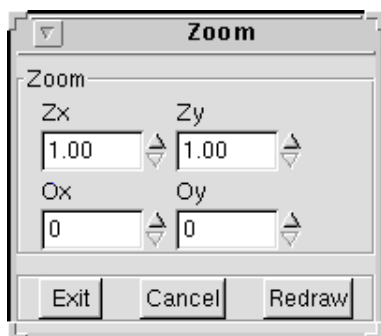
zy->zx

Zoom...

shortcut	function
z	Zoom; click on 2 opposite corners of virtual rectangle (right-mouse button: cancel)
Z	Zoom fixed; move rectangle to part of picture in which to zoom and click (right-mouse button: cancel) (See preferences to change fixed-zoom factor.)
f	full picture (zx=zy=1)
i	zoom in fixed (default: 2x; see preferences)
o	zoom out fixed (default: 2x; see preferences)
c	dx->dy: Make pixel-size dx equal to dy
C	dy->dx: Make pixel-size dy equal to dx
	zx->zy: Make zoom-factor zx equal to zy
	zy->zx: Make zoom-factor zy equal to zx

---

Change zoom vars manual.




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## Menu: Luminance threshold.

Optimum mapping picture on grey palette.

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## Menu: Record.

See preferences to define parallel port and fast par. port access.

Enabling 'Fast parallel port access' only makes sense if you want to record all 10 CHRPT channels at the same time.

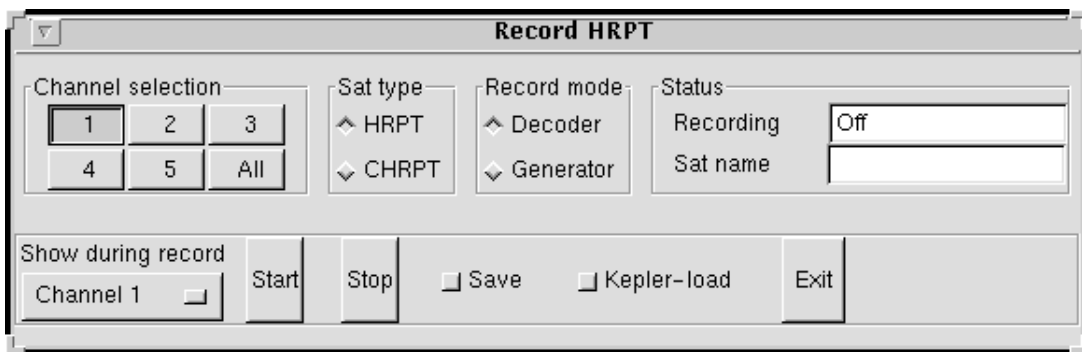
You need to adapt the hardware; the 'Readyn' signal has to be delayed.

If you record HRPT, HRI or just a subset of the CHRPT channels (8 or less) you don't need this option.



## HRPT

- *Channel selection:* Choose 1 or more channels to record.
- *Sat type:* Choose the satellite to record. (NOTE: You have to make sure that the selected sat-type on software and hardware is the same!)
- *Record mode:* Choose decoder or generator. (Not present if deocder type is switched instead of decoder/generator; see preferences.)
- *Save:* Click if the picture to record has to be saved.
- *Show during record:* Select the channel to show on screen during record.
- *Start:* Start record. Make sure that the Save button is in the right state!
- *Stop:* Abort record. Results up to now are kept.
- *Exit:* Exit this window.



## HRI

- *Record mode:* Choose decoder or generator. (Not present if deocder type is switched instead of decoder/generator; see preferences.)
- *Record all:* If set, all pictures are recorded (including encrypted pictures)
- *Save:* Click if the picture to record has to be saved.
- *Start:* Start record. Make sure that the Save button is in the right state!
- *Stop:* Abort record. Results up to now are kept.
- *Exit:* Exit this window.



The 'Record HRI' dialog box features a 'Record mode' section on the left with expandable options for 'Decoder' and 'Generator', and a 'Record all' checkbox. The 'Status' section on the right includes a 'Recording' dropdown menu currently set to 'Off', a 'Sat name' text input field, and a 'Received up to now' section with 'Recorded' and 'Encrypted' checkboxes. At the bottom are 'Start', 'Stop', 'Save', and 'Exit' buttons.

Record mode	
Decoder	
Generator	
<input type="checkbox"/> Record all	

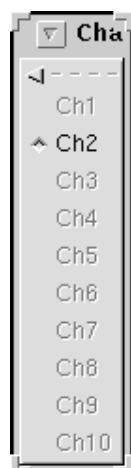
Status	
Recording	Off
Sat name	
Received up to now	
Recorded	<input type="checkbox"/>
Encrypted	<input type="checkbox"/>

Start Stop ☐ Save Exit

---

## Menu: Channel.

Choose a channel to view.



A vertical menu titled 'Cha' with a list of channels from Ch1 to Ch10. Ch2 is currently selected and highlighted.

- Ch1
- Ch2
- Ch3
- Ch4
- Ch5
- Ch6
- Ch7
- Ch8
- Ch9
- Ch10

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