

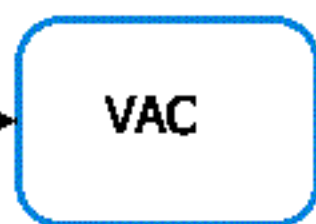


Antenna

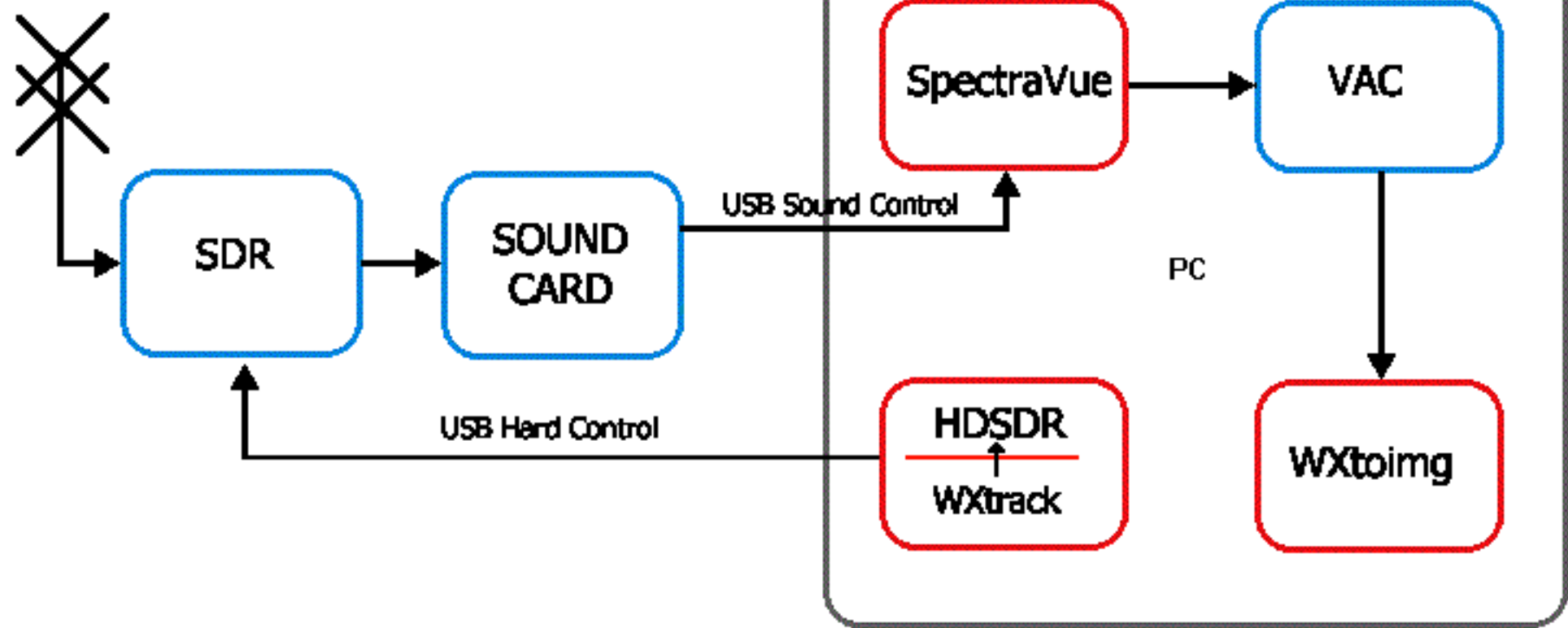


USB Sound Control

USB Hard Control



PC



Dirección C:\Tools\SatSignal

**Tareas de archivo y carpeta**

- Crear nueva carpeta
- Publicar esta carpeta en Web
- Compartir esta carpeta

**Otros sitios**

- Tools
- Mis documentos
- Documentos compartidos
- Mi PC
- Mis sitios de red

**Detalles**

**SatSignal**  
File Folder  
Fecha de modificación: lunes, 23 de julio de 2012, 08:34

Nombre	Tamaño	Tipo	Fecha de modificación
keplermanager.1.4.2		File Folder	31/07/2012 07:13
WXtrack		File Folder	07/09/2012 05:53

Dirección C:\Tools\SatSignal\WXtrack

Tareas de archivo y carpeta

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Detalles

**WXtrack**  
 File Folder  
 Fecha de modificación: viernes, 07 de septiembre de 2012, 05:53

Nombre	Tamaño	Tipo	Fecha de modificación
WXtrack	2.174 KB	Application	20/07/2012 17:11
ijl15.dll	364 KB	Application Extension	15/09/2000 15:51
lpng-px.dll	215 KB	Application Extension	17/11/2000 21:48
vd150.bpl	1.976 KB	Archivo BPL	24/01/2000 05:01
WXtrack	186 KB	Archivo de ayuda H...	17/05/2012 03:08
1beep	9 KB	Archivo de sonido	07/01/2001 11:03
2beep	19 KB	Archivo de sonido	11/12/1998 10:47
3min	35 KB	Archivo de sonido	02/11/1998 17:28
Aos	27 KB	Archivo de sonido	29/04/2001 13:35
Los	24 KB	Archivo de sonido	02/11/1998 17:28
#25544	1 KB	Archivo ICN	17/05/2012 03:08
wxtrack.kml	1 KB	Archivo KML	07/09/2012 05:53
Flip.SQF	1 KB	Archivo SQF	17/05/2012 03:08
SATINI.SQF	1 KB	Archivo SQF	17/05/2012 03:08
frequencies	1 KB	Configuration Settings	07/08/2012 04:13
GroundStations	2 KB	Configuration Settings	19/07/2012 18:57
ScanOffsets	1 KB	Configuration Settings	17/05/2012 03:08
Tracker	1 KB	Configuration Settings	17/05/2012 03:08
_City	4 KB	Documento de texto	17/05/2012 03:08
PassList	1 KB	Documento de texto	07/09/2012 15:23
ReadMe	1 KB	Documento de texto	17/05/2012 03:08
WXtrack	28 KB	Documento de texto	17/05/2012 03:08
#07530	5 KB	Imagen ICO	11/07/2012 19:03
#20580	21 KB	Imagen ICO	17/05/2012 03:08
#22314	3 KB	Imagen ICO	17/05/2012 03:08
#22825	2 KB	Imagen ICO	30/05/2010 21:32
#23613	3 KB	Imagen ICO	17/05/2012 03:08
#24278	2 KB	Imagen ICO	12/06/2010 08:46
#25338	5 KB	Imagen ICO	12/07/2012 22:10
#25544	3 KB	Imagen ICO	09/05/2010 09:11
#26388	3 KB	Imagen ICO	17/05/2012 03:08
#26931	2 KB	Imagen ICO	19/10/2010 22:06
#27453	5 KB	Imagen ICO	12/07/2012 22:10
#27509	2 KB	Imagen ICO	17/05/2012 03:08

Dirección C:\Tools\SatSignal\WXtrack

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Detalles

**WXtrack**  
 File Folder  
 Fecha de modificación: viernes, 07 de septiembre de 2012, 05:53

Nombre	Tamaño	Tipo	Fecha de modificación
WXtrack	28 KB	Documento de texto	17/05/2012 03:08
#07530	5 KB	Imagen ICO	11/07/2012 19:03
#20580	21 KB	Imagen ICO	17/05/2012 03:08
#22314	3 KB	Imagen ICO	17/05/2012 03:08
#22825	2 KB	Imagen ICO	30/05/2010 21:32
#23613	3 KB	Imagen ICO	17/05/2012 03:08
#24278	2 KB	Imagen ICO	12/06/2010 08:46
#25338	5 KB	Imagen ICO	12/07/2012 22:10
#25544	3 KB	Imagen ICO	09/05/2010 09:11
#26388	3 KB	Imagen ICO	17/05/2012 03:08
#26931	2 KB	Imagen ICO	19/10/2010 22:06
#27453	5 KB	Imagen ICO	12/07/2012 22:10
#27509	2 KB	Imagen ICO	17/05/2012 03:08
#27566	3 KB	Imagen ICO	17/05/2012 03:08
#27607	2 KB	Imagen ICO	19/10/2010 22:22
#28375	2 KB	Imagen ICO	19/10/2010 22:23
#28650	2 KB	Imagen ICO	30/05/2010 21:22
#28654	5 KB	Imagen ICO	12/07/2012 22:10
#28912	2 KB	Imagen ICO	17/05/2012 03:08
#32960	3 KB	Imagen ICO	01/06/2008 18:07
#33591	5 KB	Imagen ICO	12/07/2012 22:10
#35870	2 KB	Imagen ICO	03/10/2010 10:28
#36122	2 KB	Imagen ICO	30/05/2010 21:22
#37772	2 KB	Imagen ICO	10/08/2011 08:14
#38079	5 KB	Imagen ICO	02/03/2012 08:49
#38082	18 KB	Imagen ICO	14/02/2012 19:10
result	73 KB	Imagen JPE	10/07/2012 17:47
UserMap	196 KB	Imagen JPE	03/04/2010 15:29
metop-1b	1 KB	Imagen PNG	17/05/2012 03:08
MSG	1 KB	Imagen PNG	17/05/2012 03:08
Countries	643 KB	KMP - MPEG Movie File	13/06/2009 07:27
etopo5	18.225 KB	KMP - MPEG Movie File	18/02/2009 09:48
IssGroundStations	1 KB	KMP - MPEG Movie File	17/05/2012 03:08

```
# Frequencies.ini file for WXtrack
```

```
# Each section comprises a header (the NORAD catalog number) and up to  
# four <name>=<frequency> pairs. Depending on your display font, only  
# three pairs are typically displayed.
```

```
# Frequencies are in integer Hz & are displayed with Doppler corection.
```

```
# 2011 Mar 07 - NOAA-15 APT frequencies updated  
# Last Updated 2012/07/27 by EA1AXY to Wxtrack Folder
```

```
# ISS  
[25544]  
ARISS voice=145800000  
ARISS packet=145825000
```

```
# AO-27  
[22825]  
Downlink=436795000
```

```
# SO-50  
[27607]  
Downlink=436795000
```

```
# HAMSAT  
[28650]  
Downlink=145900000
```

```
# JAS-2  
[24278]  
Downlink=435800000
```

```
# OSCAR 7  
[07530]  
Downlink=145950000
```

```
# NOAA-15  
[25338]  
HRPT=1702500000  
APT=137620000
```

```
# NOAA-18
```

[25544]  
ARISS voice=145800000  
ARISS packet=145825000

# AO-27  
[22825]  
Downlink=436795000

# SO-50  
[27607]  
Downlink=436795000

# HAMSAT  
[28650]  
Downlink=145900000

# JAS-2  
[24278]  
Downlink=435800000

# OSCAR 7  
[07530]  
Downlink=145950000

# NOAA-15  
[25338]  
HRPT=1702500000  
APT=137620000

# NOAA-18  
[28654]  
HRPT=1702500000  
APT=137912500

# NOAA-19  
[33591]  
HRPT=1698000000  
APT=137100000

Tareas de archivo y carpeta

- Crear nueva carpeta
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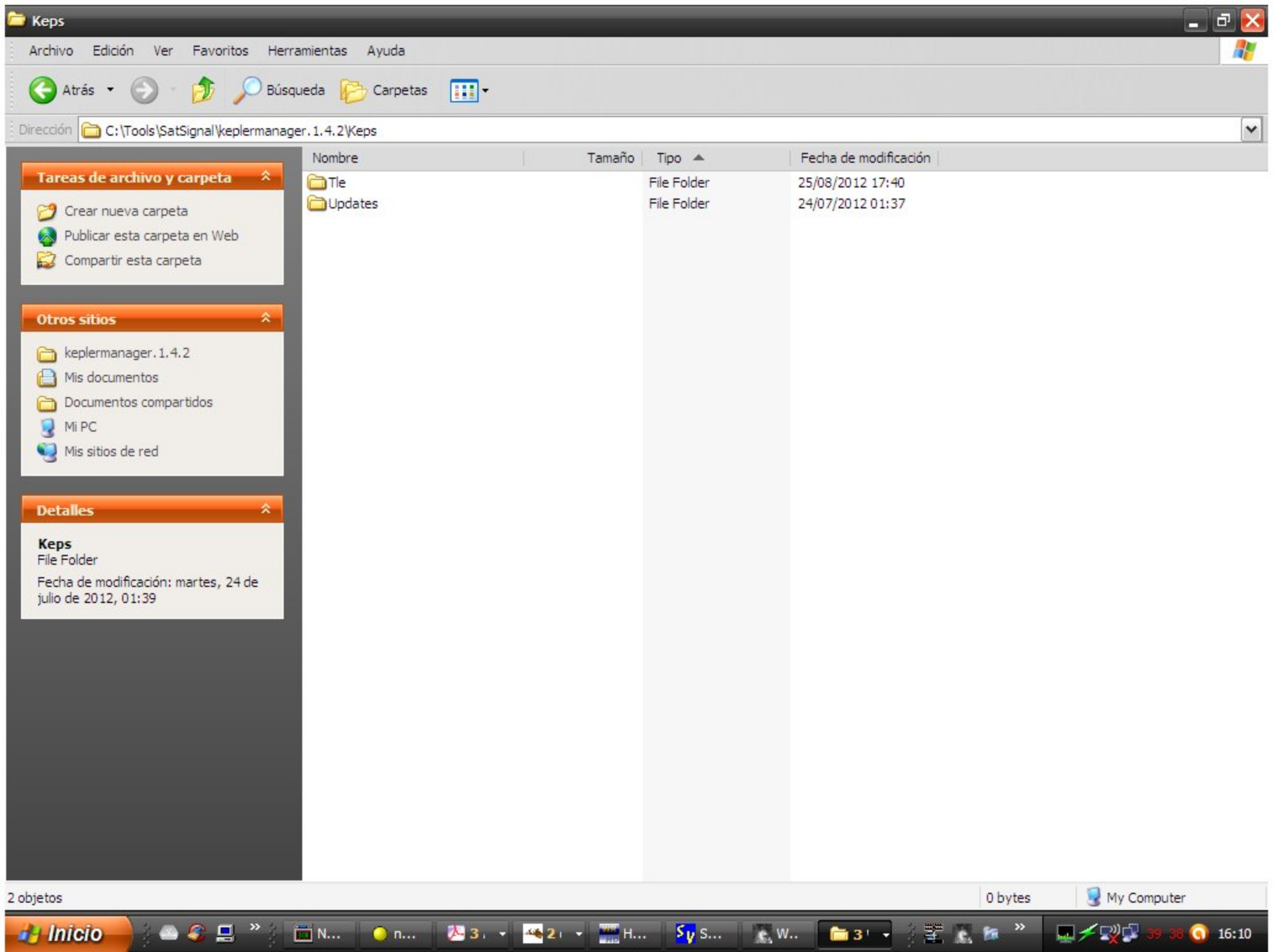
Otros sitios

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Detalles

**keplermanager.1.4.2**  
 File Folder  
 Fecha de modificación: martes, 31 de julio de 2012, 07:13

Nombre	Tamaño	Tipo	Fecha de modificación
Keps		File Folder	24/07/2012 01:39
KeplerManager	1.349 KB	Application	20/02/2011 01:04
libeay32.dll	1.178 KB	Application Extension	06/12/2010 19:07
ssleay32.dll	292 KB	Application Extension	06/12/2010 19:07
KeplerManager	1 KB	Configuration Settings	24/07/2012 09:36
KeplerManager	13 KB	Documento de texto	07/06/2011 09:36



Keps

Archivo Edición Ver Favoritos Herramientas Ayuda

Atrás Búsqueda Carpetas

Dirección C:\Tools\SatSignal\keplermanager.1.4.2\Keps

Tareas de archivo y carpeta

- Crear nueva carpeta
- Publicar esta carpeta en Web
- Compartir esta carpeta

Otros sitios

- keplermanager.1.4.2
- Mis documentos
- Documentos compartidos
- Mi PC
- Mis sitios de red

Detalles

**Keps**  
File Folder  
Fecha de modificación: martes, 24 de julio de 2012, 01:39

Nombre	Tamaño	Tipo	Fecha de modificación
Tle		File Folder	25/08/2012 17:40
Updates		File Folder	24/07/2012 01:37

2 objetos 0 bytes My Computer

Tle

Archivo Edición Ver Favoritos Herramientas Ayuda

Atrás Búsqueda Carpetas

Dirección C:\Tools\SatSignal\keplermanager.1.4.2\Keps\Tle

**Tareas de archivo y carpeta**

- Crear nueva carpeta
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**Otros sitios**

- Keps
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**Detalles**

**Tle**  
File Folder  
Fecha de modificación: sábado, 25 de agosto de 2012, 17:40

Nombre	Tamaño	Tipo	Fecha de modificación
Radio	2 KB	Configuration Settings	29/08/2012 17:49
gps-ops	6 KB	Documento de texto	06/09/2012 09:44
MyFavourites	2 KB	Documento de texto	06/09/2012 09:44
TLEnotes	2 KB	Documento de texto	27/07/2012 06:25

4 objetos 9,87 KB My Computer

Inicio

N... n... 3 2 H... S... W... 3

16:10



Setup Download

## Select satellite groups

Save file name

FullCatalog.txt

Amateur.txt

Weather.txt

Select group to download

 Full Satellite Catalog Amateur Geosynchronous Globstar Inmarsat Intelsat Iridium Navigation Orbcomm Special Interest Weather Visible

## Individual satellite list

Save file name

MyFavourites.txt

Catalog numbers

07530

22825

24278

25338

25544

27607

28650

## Update historic data

- ENVISAT
- FY1C
- FY1D
- ISS-Zarya
- MetOp-A
- NOAA-12
- NOAA-14
- NOAA-15
- NOAA-16
- NOAA-17
- NOAA-18
- NOAA-19

## Save to

Save group data to folder

C:\Tools\SatSignal\keplermanager.1.4.2\Keps\Tle\



Save historic Kepler data to folder

C:\Tools\SatSignal\keplermanager.1.4.2\Keps\Updates\



Close



Setup Download

## Select satellite groups

Save file name

FullCatalog.txt

Amateur.txt

Weather.txt

Select group to download

 Full Satellite Catalog Amateur Geosynchronous Globstar Inmarsat Intelsat Iridium Navigation Orbcomm Special Interest Weather Visible

## Individual satellite list

Save file name

MyFavourites.txt

Catalog numbers

27607

28650

28654

33591

38079

38082

## Update historic data

- ENVISAT
- FY1C
- FY1D
- ISS-Zarya
- MetOp-A
- NOAA-12
- NOAA-14
- NOAA-15
- NOAA-16
- NOAA-17
- NOAA-18
- NOAA-19

## Save to

Save group data to folder

C:\Tools\SatSignal\keplermanager.1.4.2\Keps\Tle\



Save historic Kepler data to folder

C:\Tools\SatSignal\keplermanager.1.4.2\Keps\Updates\



Close



Setup Download

Progress log

Space-Track login

Username EA1AXY

Password .....

Proxy server

Server

Port

Proxy authentication

Username

Password

Download

Close

DSCAR 7

1 07530U 74089B 12248.63163283 -.00000027 +00000-0 +10000-3 0 04733

2 07530 101.4091 242.7920 0011863 125.1227 235.0963 12.53591135730001

KITSAT B

1 22825U 93061C 12248.90112938 .00000195 00000-0 93465-4 0 1895

2 22825 098.5795 190.4964 0009192 049.1248 311.0723 14.29482247987864

JAS 2

1 24278U 96046B 12250.23437953 .00000042 00000-0 77966-4 0 9304

2 24278 098.5866 340.2964 0350559 179.3851 180.7790 13.52988456792917

NOAA 15

1 25338U 98030A 12248.74548958 +.00000022 +00000-0 +28291-4 0 03914

2 25338 098.6968 234.9343 0009743 235.1000 124.9232 14.25112636744189

ISS (ZARYA)

1 25544U 98067A 12248.88135417 +.00016604 +00000-0 +29351-3 0 02458

2 25544 051.6457 084.9563 0015352 036.1732 158.4734 15.50348064790401

SAUDISAT 1C

1 27607U 02058C 12248.56611757 +.00001078 +00000-0 +18294-3 0 08567

2 27607 064.5567 053.4115 0078228 232.5857 126.8134 14.72484880521655

HAMSAT

1 28650U 05017B 12248.60159439 +.00001948 +00000-0 +24361-3 0 02015

2 28650 097.5921 275.6606 0027065 138.0198 222.3095 14.83142512396741

NOAA 18

1 28654U 05018A 12248.66043344 +.00000460 +00000-0 +27779-3 0 03074

2 28654 099.0544 207.4430 0013585 293.7904 066.1845 14.11694462375771

NOAA 19

1 33591U 09005A 12248.68622437 +.00000262 +00000-0 +16881-3 0 04969

2 33591 098.8677 187.5060 0014327 152.9345 207.2570 14.11378966184227

E-St@r

1 38079U 12006C 12249.06457730 .00057746 00000-0 14107-2 0 4838

2 38079 069.4849 132.4828 0721205 146.9652 217.9459 14.19712335 28909

XaTcobeo

1 38082U 12006F 12249.68860397 .00072478 00000-0 17421-2 0 5323

2 38082 069.4848 130.2881 0710853 145.6322 219.2984 14.22219554 29014

```
# Radio.ini file
#
# Satellites
#
# There can be as many satellites as you like in the file. Each
# Satellite section must contain the satellite name in brackets
# e.g. [NOAA-12], [AO-40]. Each section can contain an Uplink= and
# a Downlink= entry. Don't forget the "=" sign! There should be no
# spaces around the "=" sign. Each entry can contain a frequency
# and a mode specifier.
#
# It appears that CelesTrak may now add a field following the satellite
# name such as [-], [P] etc. To allow the square brackets in the name
# of each section, you can replace the square brackets [ ] by braces { }.
# An example is given in the "SO-50 [+]" sample entry below.
#
# Note that the section names must match the names in the Kepler
# data. "NOAA-15" does not match "NOAA 15".
#
# Frequencies
#
# Frequencies must be in MHz, do not include the word "MHz"
# Only the first of a pair of frequencies will be used. So if
# 144-146 is specified, only 144 will be used.
# There must be no spaces in the frequency field
# Either "." or "," is accepted as the decimal separator character
#
# Radio modes
#
# Supported radio modes are: fm-n fm fm-w lsb usb cw cw-n
#
# Last Updated 2012/07/27 by EA1AXY Mover a carpeta de TLE´s / NO Directorio de Wxtrack
# Sample satellites in this file
#
# Samples here are for a few satellites
#
# Sample for XX - just a single frequency

[SAUDISAT 1C]
Uplink=145.850 FM
Downlink=436.795 FM
```

```
# Sample satellites in this file
#
# Samples here are for a few satellites
# Sample for XX - just a single frequency
```

```
[SAUDISAT 1C]
Uplink=145.850 FM
Downlink=436.795 FM
```

```
[KITSAT B]
Uplink=145.850 FM
Downlink=436.795 FM
```

```
[ISS (ZARYA)]
Downlink=145.825 FM
```

```
[HAMSAT]
Downlink=145.900 USB
```

```
[JAS-2]
Downlink=435.800 USB
```

```
[OSCAR 7]
Downlink=145.950 USB
```

```
# Samples for NOAA-15..NOAA-19 - just a single frequency
```

```
[NOAA 15]
Downlink=137,620 FM
```

```
[NOAA 18]
Downlink=137,9125 FM
```

```
[NOAA 19]
Downlink=137,100 FM
```

;Last Updated 2012/07/27 by EA1AXY Copiar a carpeta de TLE's / NO Directorio de Wxtrack

; This file to be used for WXtrack satellite information.

; Some satellite frequencies listed may not be operating anymore or may be  
; in a standby mode. Also some are left for historical reasons.  
; All frequencies are in MHz, unless otherwise printed.

; % = CatNo conflicts (USSPACECOM vs. AMSAT).

; \* = Satellite monitored from Ontario, Canada.

; <#> = Note number for notes at bottom.

; 999.9999 as downlink indicates non-operational.

;Cat# Downlink ERP Launch Date (UTC) Comments Satellite Descriptor

-----				
;Cat#	Downlink ERP	Launch Date (UTC)	Comments	Satellite Descriptor
25338	137.6200	LD=1998/05/13@15:52:04	APT-ON	;NOAA 15
28654	137.9125	LD=2005/05/20@10:22:00	APT-ON	;NOAA 18
33591	137.1000	LD=2009/02/06@10:32:00	APT-ON	;NOAA 19
25544	145.8250	LD=1998/11/20@06:20:00	APRS	;ISS
27607	436.7950	LD=2002/12/20@00:00:00	FM 145.850 Up 67PL	;SO-50
28650	145.9000	LD=2005/05/05@04:45:00	SSB 435.250 Up	;VO-52
22825	436.7950	LD=1993/09/26@00:00:00	FM 145.850 Up	;AO-27
24278	435.8500	LD=1996/08/17@00:00:00	SSB 145.950 Up	;FO-29
07530	145.9500	LD=1974/11/15@17:11:00	SSB 432.150 Up	;AO-7

Choose active satellites with drag and drop

Available

- E-ST@R
- GPS BIIA-10 (PRN 32)
- GPS BIIA-14 (PRN 26)
- GPS BIIA-15 (PRN 27)
- GPS BIIA-21 (PRN 09)
- GPS BIIA-22 (PRN 30)
- GPS BIIA-23 (PRN 04)
- GPS BIIA-24 (PRN 06)
- GPS BIIA-25 (PRN 03)
- GPS BIIA-26 (PRN 10)
- GPS BIIA-28 (PRN 08)

Active

- NOAA 15
- NOAA 18
- NOAA 19

0 0 Set priority

Active bank

1  2  3  4

Prioritise passes

Pass list generator

Show passes for

2012 sep 07

Select a pass for this day, and click your choice below

Passes for 2012 sep 07 (UTC)

Date, time, dir, longitude, duration (sec), sat
09/07 02:51:25 S 347 746 NOAA 19
09/07 03:55:39 S 351 770 NOAA 18
09/07 05:24:44 S 356 733 NOAA 15
09/07 12:38:27 N 4 711 NOAA 19
09/07 13:43:08 N 7 671 NOAA 18
09/07 14:19:19 N 340 700 NOAA 19

Choose file paths

Path for satellite Kepler data files

C:\Tools\SatSignal\keplermanager.1.4.2\Ke; Browse...

Paths to satellite picture files

Add... Remove...

Path for results files

C:\Tools\SatSignal\WXtrack\ Browse...

Topo path: C:\Tools\SatSignal\WXtrack\topo5.dat

WXtrack - edit location details

Location to edit

EA1AXY

Name: EA1AXY

Latitude: (decimal) 41,927

Longitude: (decimal) -7,5586

Height (m): 680

Min elevation: 6

Set PC clock

Read GPS data

Setup GPS port

Add Delete OK Cancel

Reset

Map meridian (auto)

Choose active satellites with drag and drop

Available

- E-ST@R
- GPS BIIA-10 (PRN 32)
- GPS BIIA-14 (PRN 26)
- GPS BIIA-15 (PRN 27)
- GPS BIIA-21 (PRN 09)
- GPS BIIA-22 (PRN 30)
- GPS BIIA-23 (PRN 04)
- GPS BIIA-24 (PRN 06)
- GPS BIIA-25 (PRN 03)
- GPS BIIA-26 (PRN 10)
- GPS BIIA-28 (PRN 08)

Active

- NOAA 15
- NOAA 18
- NOAA 19

0 0 Set priority

Prioritise passes

Active bank

1  2  3  4

Choose file paths

Path for satellite Kepler data files

C:\Tools\SatSignal\keplermanager.1.4.2\Ke

Browse...

Paths to satellite picture files

Add...  
Remove...

Path for results files

C:\Tools\SatSignal\WXtrack\

Browse...

Topo path: C:\Tools\SatSignal\WXtrack\etopo5.dat

Pass list generator

Show passes for

2012 sep 07

Select a pass for this day,  
and click your choice below

Get next pass

Map from pass

Picture from pass

Fly this pass

Make pass list

Print ephemeris...

Passes for 2012 sep 07 (UTC)

Date, time, dir, longitude, duration (sec), sat

09/07 02:51:25 S 347 746 NOAA 19  
 09/07 03:55:39 S 351 770 NOAA 18  
 09/07 05:24:44 S 356 733 NOAA 15  
 09/07 12:38:27 N 4 711 NOAA 19  
 09/07 13:43:08 N 7 671 NOAA 18  
 09/07 14:19:19 N 340 700 NOAA 19  
 09/07 15:23:06 N 343 736 NOAA 18  
 09/07 16:45:26 N 350 739 NOAA 15

Auto switch

Minimum pass..

Predicted only

Duration 90 sec

All passes

Elevation 21 deg

My location details

Choose location

EA1AXY

Cities...

Edit...

Reset

**EA1AXY**

Longitude 7,5586°W, latitude 41,927°N, height  
680 metres ASL. Minimum required pass elevation  
is 6,0°.

Map meridian (auto)

Choose active satellites with drag and drop

Available

- GPS BIIA-10 (PRN 32)
- GPS BIIA-14 (PRN 26)
- GPS BIIA-15 (PRN 27)
- GPS BIIA-21 (PRN 09)
- GPS BIIA-22 (PRN 30)
- GPS BIIA-23 (PRN 04)
- GPS BIIA-24 (PRN 06)
- GPS BIIA-25 (PRN 03)
- GPS BIIA-26 (PRN 10)
- GPS BIIA-28 (PRN 08)
- GPS BIIF-1 (PRN 25)

Active

- E-ST@R
- HAMSAT
- ISS (ZARYA)
- JAS 2
- KITSAT B
- NOAA 15
- NOAA 18
- NOAA 19
- OSCAR 7
- SAUDISAT 1C
- XATCOBEO

Set priority: 0 0

Active bank:  1  2  3  4

Prioritise passes

Choose file paths

Path for satellite Kepler data files

C:\Tools\SatSignal\keplermanager.1.4.2\Kepler

Browse...

Paths to satellite picture files

Add...

Remove...

Path for results files

C:\Tools\SatSignal\WXtrack\

Browse...

Topo path: C:\Tools\SatSignal\WXtrack\etopo5.dat

Pass list generator

Show passes for: 2012 sep 07

Select a pass for this day, and click your choice below

Get next pass

Map from pass

Picture from pass

Fly this pass

Make pass list

Print ephemeris...

Passes for 2012 sep 07 (UTC)

Date, time, dir, longitude, duration (sec), sat

- 09/07 02:14:57 S 358 715 KITSAT B
- 09/07 02:51:25 S 347 746 NOAA 19
- 09/07 03:55:39 S 351 770 NOAA 18
- 09/07 05:03:07 S 10 1018 OSCAR 7
- 09/07 05:24:44 S 356 733 NOAA 15
- 09/07 06:55:39 S 344 1087 OSCAR 7
- 09/07 07:44:55 S 1 568 HAMSAT
- 09/07 08:49:12 N 354 470 ISS (ZARYA)
- 09/07 10:26:25 N 349 432 ISS (ZARYA)
- 09/07 10:48:58 N 354 808 XATCOBEO
- 09/07 11:08:11 N 351 812 E-ST@R
- 09/07 12:22:36 S 355 763 JAS 2
- 09/07 12:38:27 N 4 711 NOAA 19
- 09/07 13:41:33 S 356 431 ISS (ZARYA)

Auto switch Minimum pass..

Predicted only Duration 90 sec

All passes Elevation 21 deg

My location details

Choose location: EA1AXY

EA1AXY Longitude 7,5586°W, latitude 41,927°N, height 680 metres ASL. Minimum required pass elevation is 6,0°.

Cities... Edit...

Reset

Map meridian (auto)

### WXtrack - Tracker Options

**Tracker model**

<input type="radio"/> None	<input type="radio"/> EasyComm I COM port	<input type="radio"/> KCT server (ON1CIM)
<input type="radio"/> DTP Tracker serial V2	<input type="radio"/> FodTrack LPT port	<input type="radio"/> UNI_TRAC (ZL2AMD)
<input type="radio"/> DTP Tracker internal card	<input type="radio"/> SSB/Orbit LPT port	<input type="radio"/> R2FX channel select
<input type="radio"/> EA4TX Antenna Rotator	<input type="radio"/> SSB/Orbit COM port	<input type="radio"/> SPID native
<input type="radio"/> Kansas City Tracker (RR.dll)	<input type="radio"/> IF-100 LPT port	<input type="radio"/> WinRotor (USB/LPT port)
<input type="radio"/> RX enable COM port RTS	<input checked="" type="radio"/> CX6DD WISPDDE Client	<input type="radio"/> ServerLabjack
<input type="radio"/> SeaTel COM port	<input type="radio"/> M2 RC2800	
<input type="radio"/> CX6DD COM port (GS232)	<input type="radio"/> EGIS COM port	

**General** | **Pass Start** | **Pass End** | **Parking** | **Port Setup** | **Tracker-specific options** | **Radio**

<p>Link Control Satellite  <input type="text" value="(none)"/></p> <p>Downlink mode  <input type="text" value="fm"/></p> <p>Uplink mode  <input type="text" value="fm"/></p> <p><input checked="" type="checkbox"/> Link frequency auto-switch</p>	<p>Mean Anomaly segments  <input type="text" value="AO-40"/></p> <div style="border: 1px solid gray; padding: 5px;"> <p>1 0 9</p> <p>2 10 19</p> <p>3 20 34</p> <p>4 35 127</p> <p>5 128 250</p> </div>
--	---

**Timeframe**  
 Real-time  
 From file  
 Manual

Choose when (time in UTC)  
 2012 sep 07 16:24:15

**NOAA 15 on 137,620 MHz**  
 Az: 165,80° El: -46,33°  
 Lon: 16,93°E Lat: 54,46°S  
 Range: 10272km Alt: 827,8km

**WISPDDE**  
 Tracking stopped  
 no flip

**NOAA 15 frequencies**  
 HRPT: 1702,5262 MHz  
 APT: 137,6221 MHz

**NOAA 15 next pass in 21m 10s**  
 AOS: 16:45:26 UTC LOS: 16:57:45 UTC  
 duration: 12m 19s, maximum elevation: 74°  
 Following pass at: 05:00 - 05:12 UTC , 41°

**WXtrack - Tracker Options**

**Tracker model**

- None
- DTP Tracker serial V2
- DTP Tracker internal card
- EA4TX Antenna Rotator
- Kansas City Tracker (RR.dll)
- RX enable COM port RTS
- SeaTel COM port
- CX6DD COM port (GS232)
- EasyComm I COM port
- FodTrack LPT port
- SSB/Orbit LPT port
- SSB/Orbit COM port
- IF-100 LPT port
- CX6DD WISPDDE Client
- M2 RC2800
- EGIS COM port
- KCT server (ON1CIM)
- UNI\_TRAC (ZL2AMD)
- R2FX channel select
- SPID native
- WinRotor (USB/LPT port)
- ServerLabjack

**General** | **Pass Start** | **Pass End** | **Parking** | **Port Setup** | **Tracker-specific options** | **Radio**

**Link Control Satellite**

- (none)
- SAUDISAT 1C
- KITSAT B
- ISS (ZARYA)
- HAMSAT
- JAS-2
- OSCAR 7
- NOAA 15
- NOAA 18

**Mean Anomaly segments**

- AO-40
- 1 0 9
- 2 10 19
- 3 20 34
- 4 35 127
- 5 128 250

OK Cancel

**Timeframe**

- Real-time
- From file
- Manual

Choose when (time in UTC)

2012 sep 07 16:32:21

**NOAA 15 on 137,620 MHz**

Az: 166,08° El: -29,70°  
 Lon: 6,90°E Lat: 26,21°S  
 Range: 7724km Alt: 819,9km

**WISPDDE**

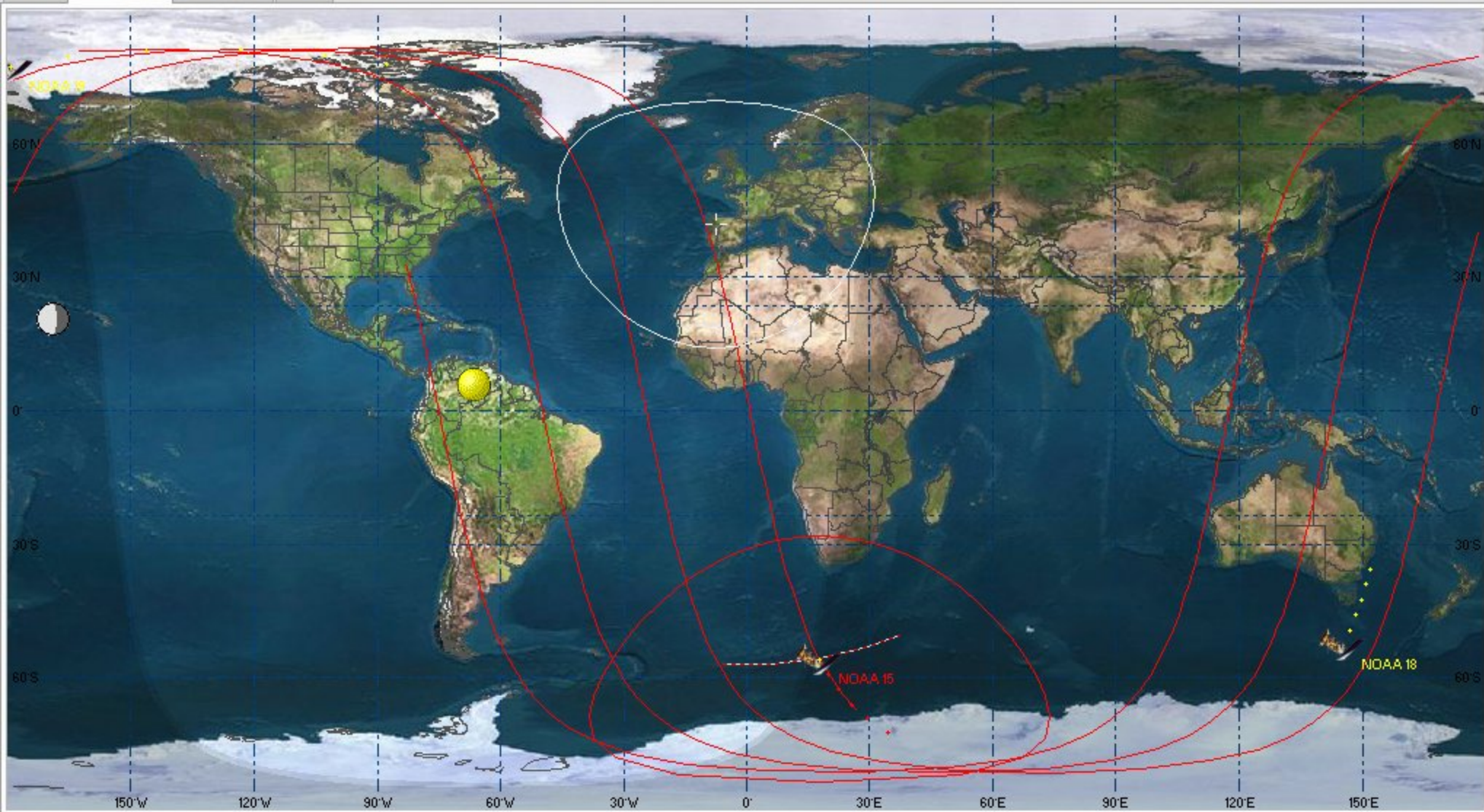
Tracking stopped  
no flip

**NOAA 15 frequencies**

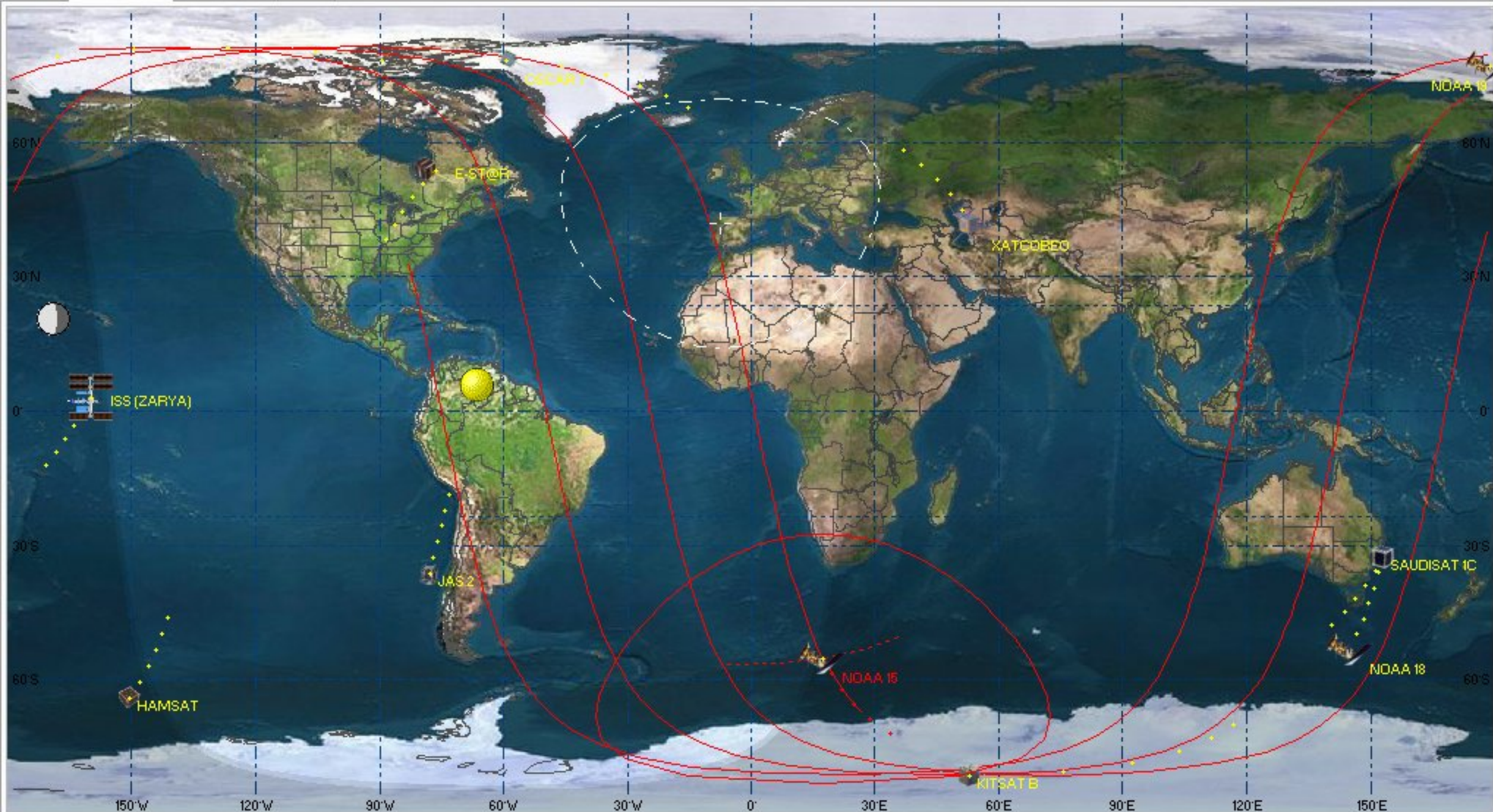
HRPT: 1702,5329 MHz  
APT: 137,6227 MHz

**NOAA 15 next pass in 13m 04s**

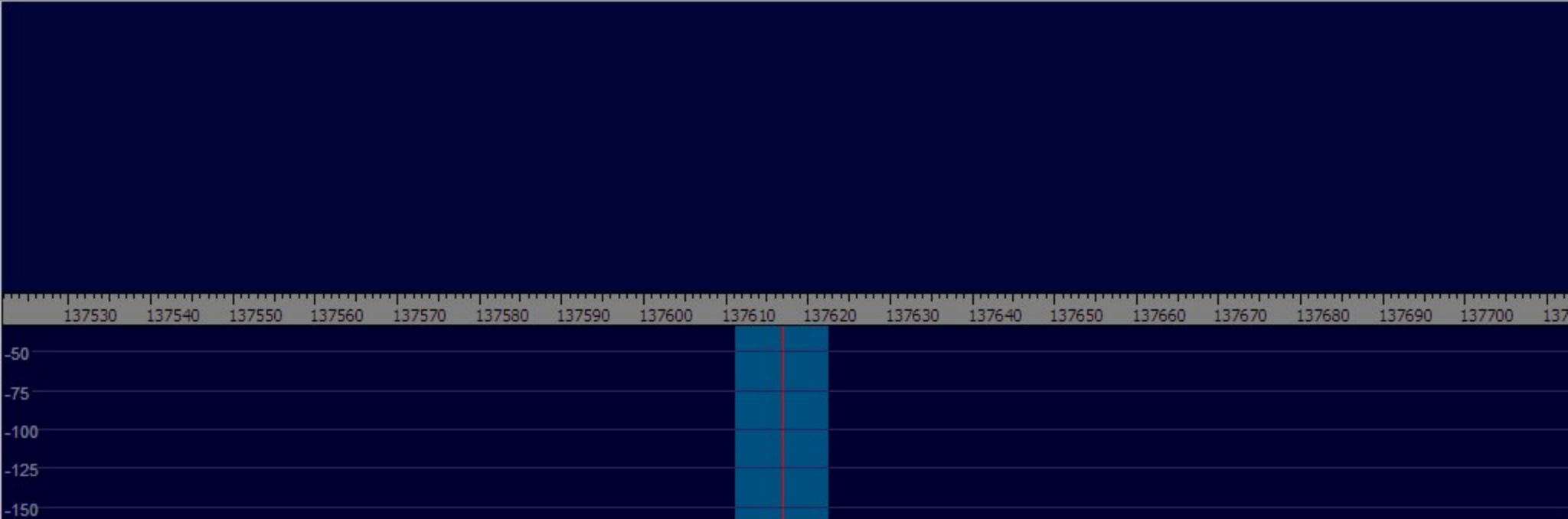
AOS: 16:45:26 UTC LOS: 16:57:45 UTC  
 duration: 12m 19s, maximum elevation: 74  
 Following pass at: 05:00 - 05:12 UTC , 41°



<p>Timeframe</p> <input checked="" type="radio"/> Real-time <input type="radio"/> From file <input type="radio"/> Manual	<p>Choose when (time in UTC)</p> <p>2012 sep 07 16:23:50</p> <p>1 Sat NOAA 15</p>	<p>NOAA 15 on 137,620 MHz</p> <p>Az: 165,82° El: -47,14°          Lon: 17,70°E Lat: 55,86°S          Range: 10384km Alt: 828,1km</p>	<p>WISPDDE</p> <p>Tracking stopped no flip</p>	<p>NOAA 15 frequencies</p> <p>HRPT: 1702,5258 MHz          APT: 137,6221 MHz</p>	<p>NOAA 15 next pass in 21m 35s</p> <p>AOS: 16:45:26 UTC LOS: 16:57:45 UTC          duration: 12m 19s, maximum elevation: 74          Following pass at: 05:00 - 05:12 UTC , 41°</p>
--	---	--	--	--	--



<p><b>Timeframe</b></p> <input checked="" type="radio"/> Real-time <input type="radio"/> From file <input type="radio"/> Manual	<p>Choose when (time in UTC)</p> <p>2012 sep 07 16:23:59</p> <p>Sat NOAA 15</p>	<p><b>NOAA 15 on 137,620 MHz</b></p> <p>Az: 165,81° El: -46,84°                  Lon: 17,41°E Lat: 55,33°S                  Range: 10342km Alt: 828,0km</p>	<p><b>WISPDDE</b></p> <p>Tracking stopped no flip</p>	<p><b>NOAA 15 frequencies</b></p> <p>HRPT: 1702,5259 MHz                  APT: 137,6221 MHz</p>	<p><b>NOAA 15 next pass in 21m 26s</b></p> <p>AOS: 16:45:26 UTC LOS: 16:57:45 UTC                  duration: 12m 19s, maximum elevation: 74                  Following pass at: 05:00 - 05:12 UTC , 41°</p>
---	---	---	---	---	---



AM  ECSS  FM  LSB  USB  CW  DRM

LO **0137,617,906** FreqMgr  
 Tune **0137,617,035** ExtIO  
 Volume#

S-units Squelch: 1 3 5 7 9 +20 +40

Soundcard [F5] | Bandwidth [F6] | Options [F7]

Info / Update [F9] | Full Screen [F11]

Start [F2] | Minimize [F3] | Exit [F4]

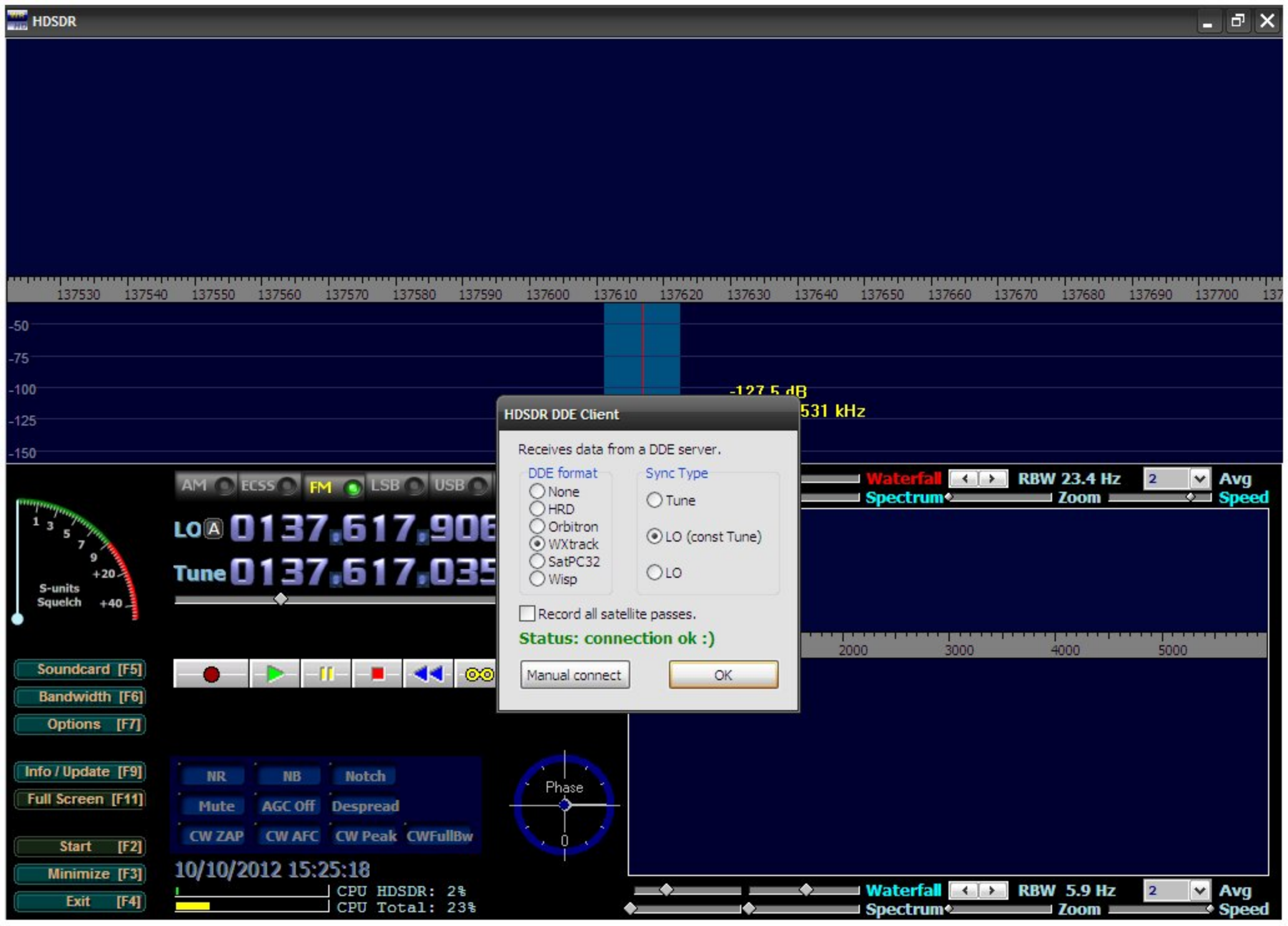
NR | NB | Notch  
 Mute | AGC Off | Despread  
 CW ZAP | CW AFC | CW Peak | CWFullBw

10/10/2012 15:25:10  
 CPU HSDR: 2%  
 CPU Total: 15%

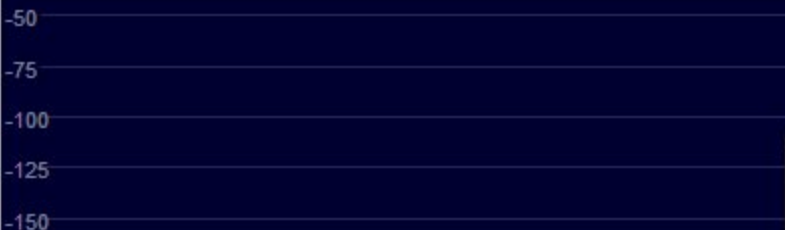
Phase: 0

Waterfall Spectrum | RBW 23.4 Hz | Zoom 2 | Avg Speed

Waterfall Spectrum | RBW 5.9 Hz | Zoom 2 | Avg Speed



137530 137540 137550 137560 137570 137580 137590 137600 137610 137620 137630 137640 137650 137660 137670 137680 137690 137700 137



AM ECSS FM LSB USB  
LO **0137,617,906**  
Tune **0137,617,035**



Soundcard [F5]  
Bandwidth [F6]  
Options [F7]



Info / Update [F9]  
Full Screen [F11]  
Start [F2]  
Minimize [F3]  
Exit [F4]

NR NB Notch  
Mute AGC Off Despread  
CW ZAP CW AFC CW Peak CW FullBw



10/10/2012 15:25:18  
CPU HSDR: 2%  
CPU Total: 23%

### HSDR DDE Client

Receives data from a DDE server.

**DDE format**

- None
- HRD
- Orbitron
- WXtrack
- SatPC32
- Wisp

**Sync Type**

- Tune
- LO (const Tune)
- LO

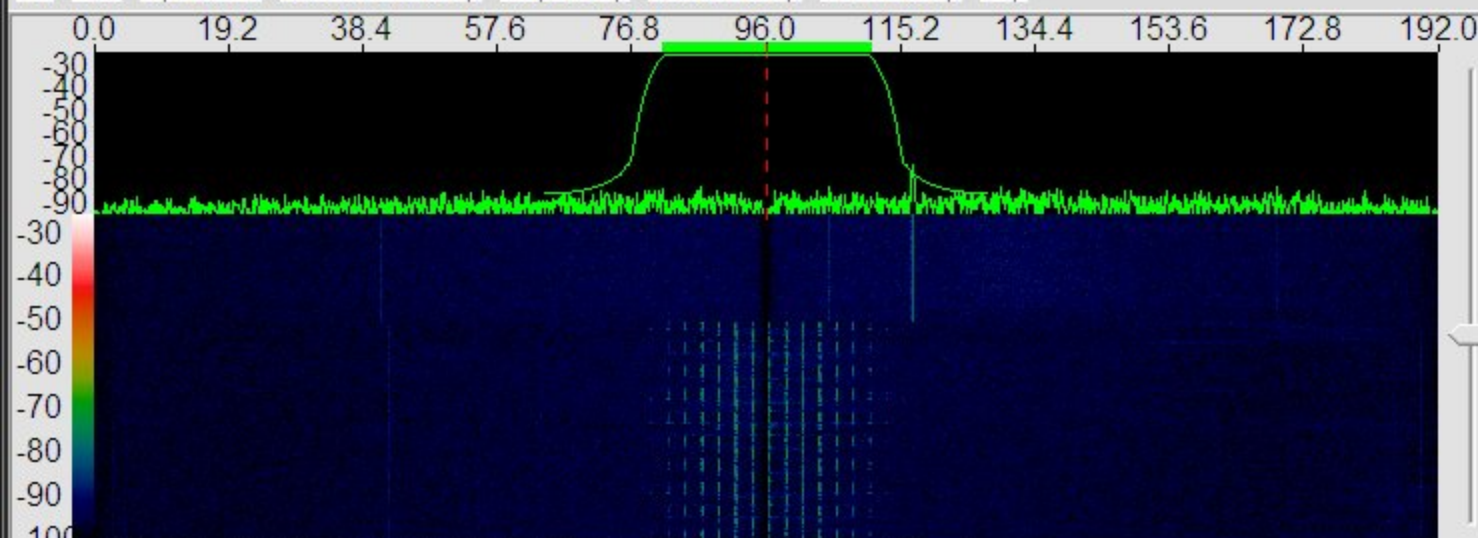
Record all satellite passes.

**Status: connection ok :)**

Manual connect OK

Waterfall Spectrum RBW 23.4 Hz Zoom 2 Avg Speed

2000 3000 4000 5000  
Waterfall Spectrum RBW 5.9 Hz Zoom 2 Avg Speed

Offset  
0

Center Frequency - Ins

1 FFT Ave

L 96.000 KHz

Auto Scale  
(A) Demod On

- AM     WFM  
 FM     NFM  
 LSB     USB  
 SAM     W/USB  
 CW-L     CW-U

NB Off

Setup...

RMS

0 Smoothing

8192 FFT/BLK

Fs=192000 RBW= 23 Hz

5 dB/Div V Scale

Span  
192.000 KHzMemory(M)  
Channels

Stop-F10

Pause-F11

Start-F12

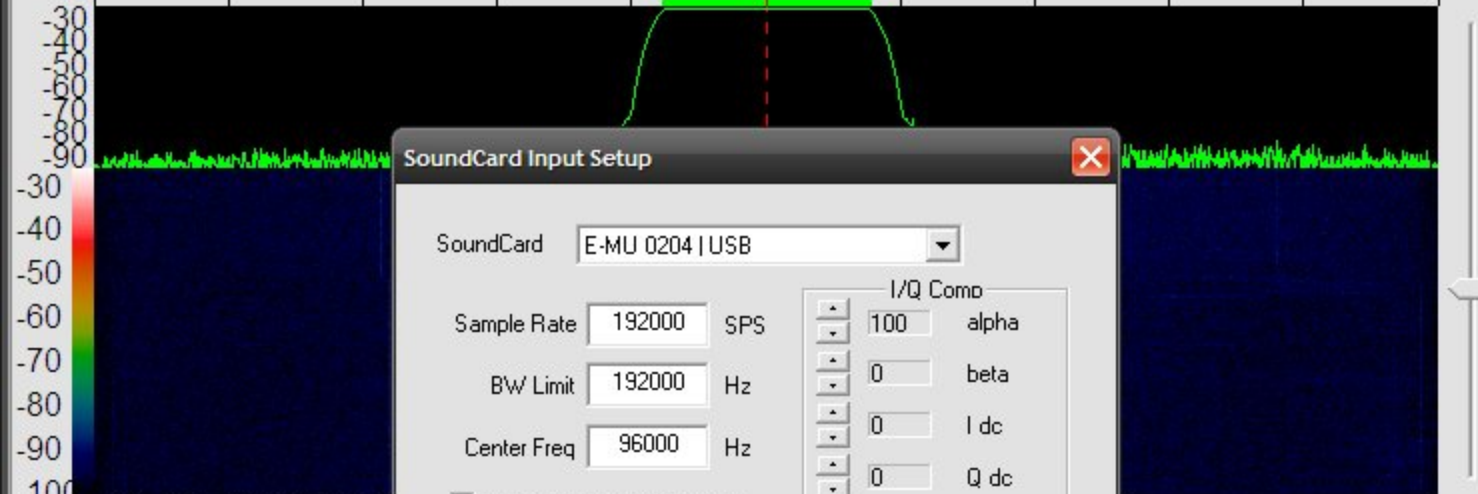
NCO Null

Mute  
SpaceBar

Audio Volume

Filter -15000 30000 15000

0.0 19.2 38.4 57.6 76.8 96.0 115.2 134.4 153.6 172.8 192.0



### SoundCard Input Setup

SoundCard: E-MU 0204 | USB

Sample Rate: 192000 SPS

BW Limit: 192000 Hz

Center Freq: 96000 Hz

Stereo (Complex I=R, Q=L)

Invert Spectrum

I/Q Comp

100 alpha

0 beta

0 I dc

0 Q dc

Sample Offset

-1  0  +1

OK Cancel

Raw Data 2D Plot 3D Plot

Offset: 0

1 FFT Ave

0 Smoothing

8192 FFT/BLK

Fs=192000 RBW= 23 Hz

5 dB/Div V Scale

NCO Null

Mute  
SpaceBar

Stop-F10

Pause-F11

Start-F12

192.000 KHz

Memory(M)  
Channels Demod On

- AM  WFM
- FM  NFM
- LSB  USB
- SAM  WUSB
- CW-L  CW-U

NB Off

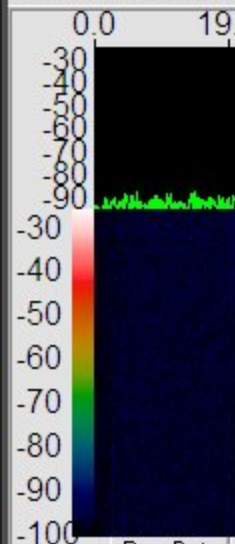
Setup...

RMS

Filter -15000 30000 15000



File View InputDev



Offsel 0

1 FFT Ave

0 Smoothing

8192 FFT/B

Fs=192000 RBW= 23

5 dB/Div V Sca

NCO Null

Idle

## Wave File Capture Setup

- RF Data to Wave File  
 Demod to Wave File  
 File Sample Rate
- Max File Size 700MB(CD)  
 Max File Size 2.1GB (DVD)  
 Max User
- Chain Multiple Files  
 TimeStamp Filename  
 FreqStamp Filename  
 Quality Write with Squelch

## Timed Recording Setup ( Right Click to Edit )

- Manual Recording Mode 30 min  
 10000000 Hz 2012-10-10 05:05:41 UTC  
 10000000 Hz 2012-10-10 05:05:41 UTC  
 10000000 Hz 2012-10-10 05:05:41 UTC

## FFT/Continuum File Saving

- No Output File Saving  
 Screen Capture to File (JPG, PNG or BMP Format) (Timed Or  
 Save Continuum Data to .CSV Excel Format File  
 Save Waterfall FFT Data as 1 byte/pixel BMP Format File  
 Use Screen Resolution  
 Save FFT Data as CSV Excel Format File(Timed Only)  
 Save absolute FFT Data as 2 byte Custom Binary Format File

Select Out File...

## Timed Saves

(1 to 36000 Seconds)

- Timed Save OFF  
 Timestamped Files  
 File Append/Overwrite

## Soundcard/Demod Output Setup

- Single Channel Demod  
 Dual Channel Demod Mono Output  
 Dual Channel Demod Stereo Output
- Output to SoundCard  
 Non-Demod Playback Gain(dB)

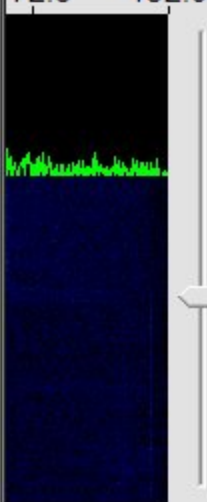
SoundCard

Virtual Cable 2

OK

Cancel

72.8 192.0



On

 WFM  
 NFM  
 USB  
 WUSB  
 CW-U

etup...

15000

RMS

8:26:02 UTC

# Virtual Audio Cable Control Panel

## Driver parameters

Cables

Clients

Streams

## Cable parameters

### Format range

SR  ..  BPS  ..  NC  ..

Max inst  Ms per int  Stream fmt  Volume control

### Connected source lines

Mic  Line  S/PDIF  Clock corr %

Cable	Max instances	MS per int	SR range	BPS range	NC range	Stream fmt limit	Volume ctl	SR	BPS	NC	Rc stms	Pb stms	Oflows	UFlows
1	20	7	11025..96000	8..16	1..2	Cable format	Disabled							
2	20	7	11025..12000	8..16	1..2	Cable format	Disabled							

NOAA 15 (ch 3-4, southbound 38 E) at 11/10/2012 04:58 UTC

**WXtolmg: Recording Options**

Record using WEFAX start/stop tones (for geostationary satellites on 1.6GHz)

---

Record only when active APT satellites are overhead  
 with maximum elevation above (degrees W:degrees E)   
 record only when satellite is above (degrees N:degrees S)   
 and require

---

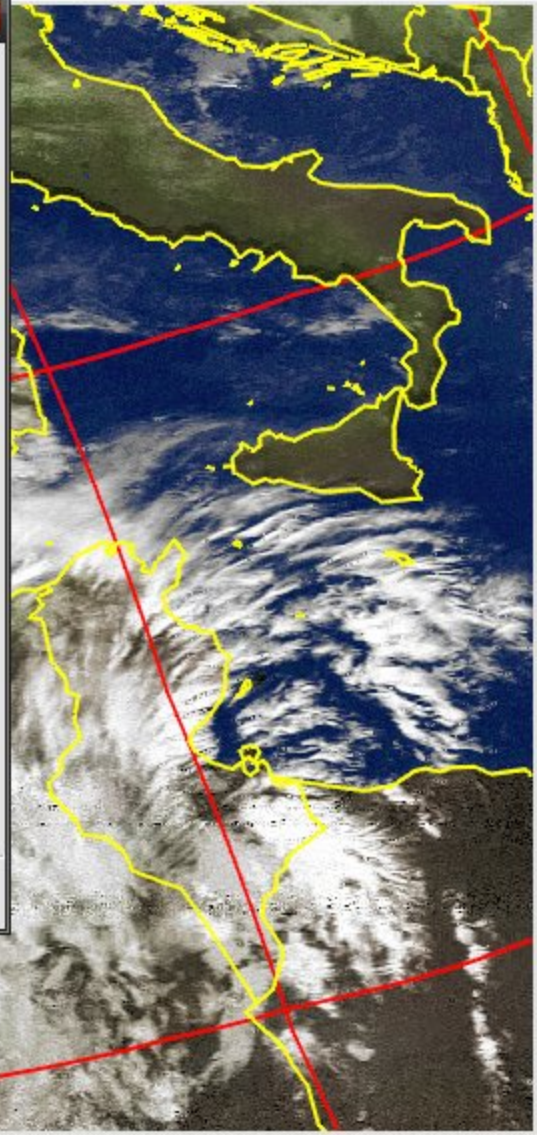
Common recording options:

soundcard	<input type="text" value="Virtual Cable 2"/>	receiver type	<input type="text" value="none"/>
sample bits	<input type="text" value="16"/>	receiver port	<input type="text" value="COM12:"/>
antenna type	<input type="text" value="Homebrew Tumstile"/>	receiver baud rate	<input type="text" value="9600"/>

---

Azimuth-Elevation Rotor Control:

rotor type	<input type="text" value="none"/>	rotor port	<input type="text" value="none"/>
park azimuth/elevation	<input type="text" value="180.0/90.0"/>	rotor baud rate	<input type="text" value="controller default"/>

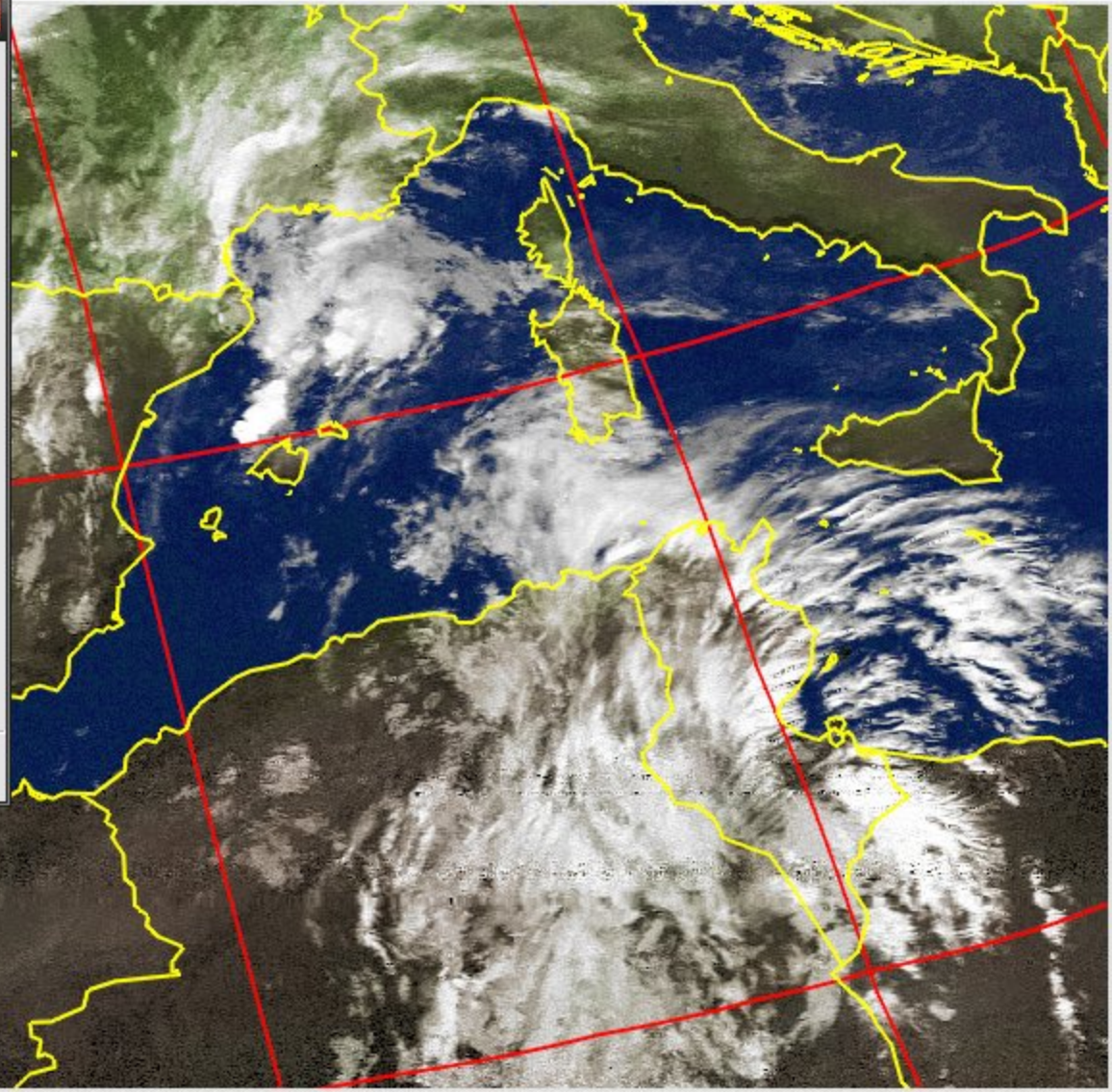


NOAA 15 (ch 3-4, southbound 38 E) at 11/10/2012 04:58 UTC

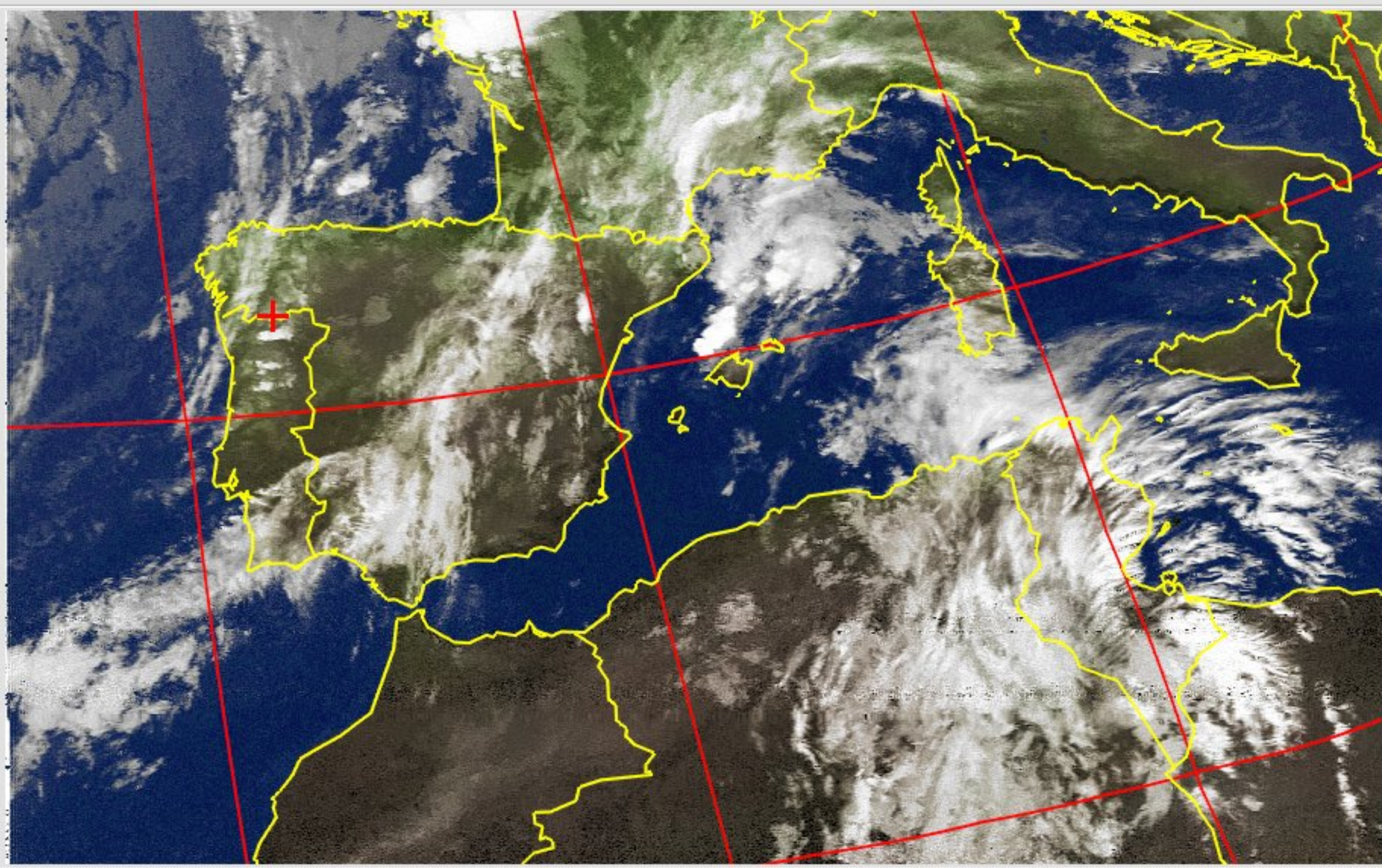
**WXtoImg: Sampling Frequency**

Default Sampling Frequency	11025.29
NOAA Sampling Frequency	11025.29
Meteor (series 3) Sampling Frequency	11025.29
Meteor (series 2) Sampling Frequency	11025.29
Resurs Sampling Frequency	11025.29
Okean Sampling Frequency	11025.29
SICH Sampling Frequency	11025.29
SICH-1M Sampling Frequency	0.00
Meteosat Sampling Frequency	11025.29
GOES Sampling Frequency	11025.29
GMS Sampling Frequency	11025.29
MTSAT Sampling Frequency	11025.29

OK Cancel



NOAA 15 (ch 3-4, southbound 38 E) at 11/10/2012 04:58 UTC



11/10/2012 05:12 UTC

Next satellite is NOAA 15 (southbound 28 W) on 137.6200 MHz at 11/10 06:38:25 UTC

vol: 48.3

100% REC: 1:26



