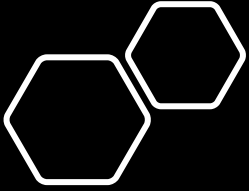


February 2024



SAT-EME Groundstation for 2m and 70cm

Antennas from Antenna Amplifiers (70cm) and Anjo (2m)

2m

YA014408 8-Element Anjo YAGI (144-146 MHz, $G=12.4\text{dBi}$) 3.13m, 8 Elements, 2 kW PEP

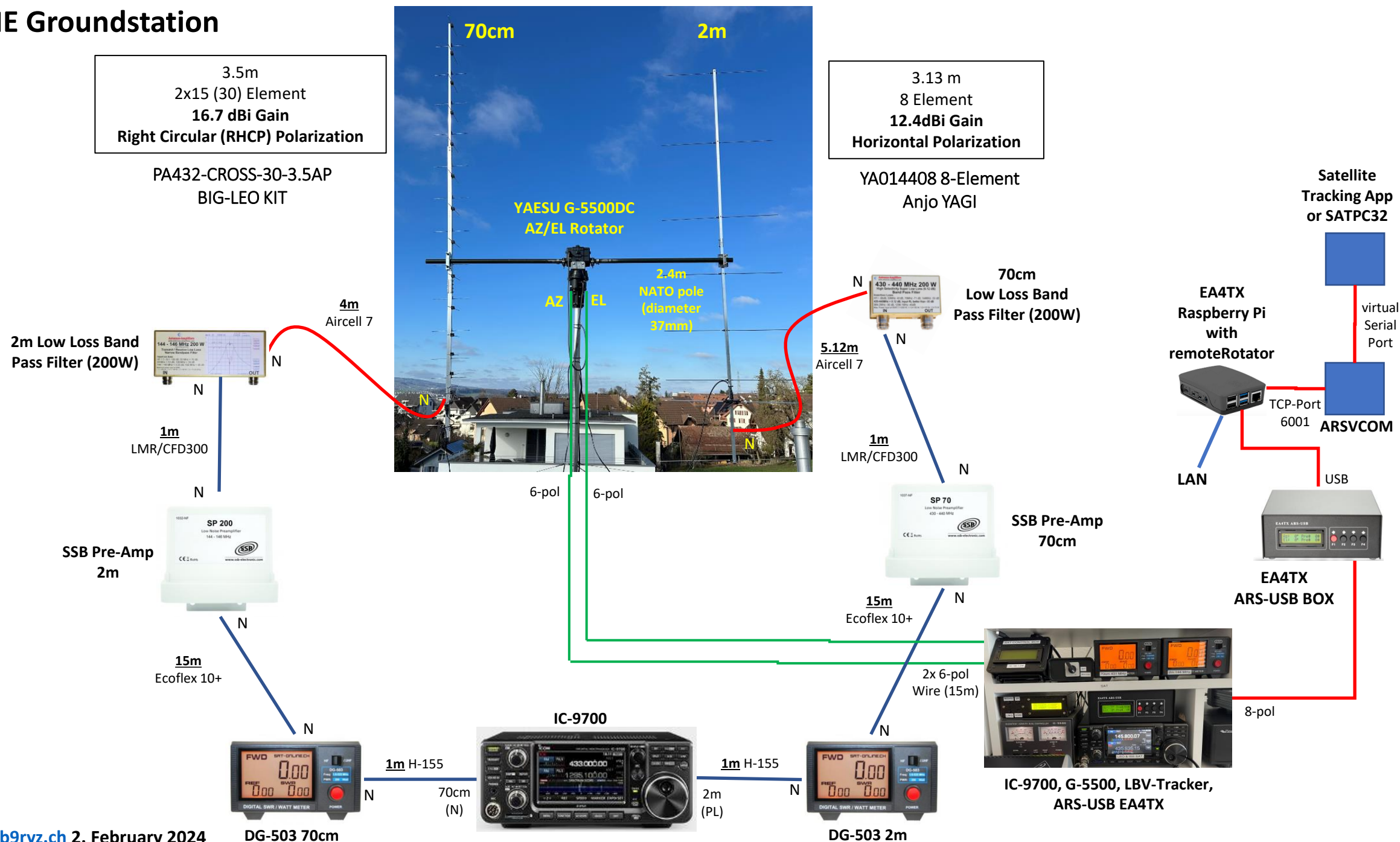
70cm

PA432-CROSS-30-3.5AP (432-440 MHz, $G=16.7\text{ dBi}$) 3.5m, 2 x 15 elements, 850 Watt PEP

- Right Circular (RHCP) for 70cm YAGI (SAT)
- horizontal for 2m YAGI (EME)
- ICOM IC-9700 with 100W
- SSB Electronic Preamp
- Low Noise Band Pass Filter for 2m and 70cm
- YAESU G-5500 AZ/EL Rotor
- ARS-USB Box from EA4TX
- EA4TX Raspberry Pi Server for Web-GUI
- SAT32PC SAT-Tracking Software
- RemoteRotator Web-GUI on Raspberry Pi



SAT & EME Groundstation



SAT & EME Groundstation



2m = 8 element, 3.13 Boom, Gain = 12.4dBi, horizontal
70cm = 2 x 15 element, 3.5m Boom, Gain = 16.7 dBi, Right Circular (RHCP) Polarization
SSB Electronic Preamps, Low Loss Narrow Bandpass Filter

SAT & EME Groundstation



- 2m = 8 element, 3.13m Boom, Gain = 12.4dBi, horizontal
- 70cm = 2 x 15 element, 3.5m Boom, Gain = 16.7 dBi, (RHCP)
- SSB Electronic Preamps
- Low Loss Narrow Bandpass Filter for 2m and 70cm

SAT Ground-Station for 2m and 70cm



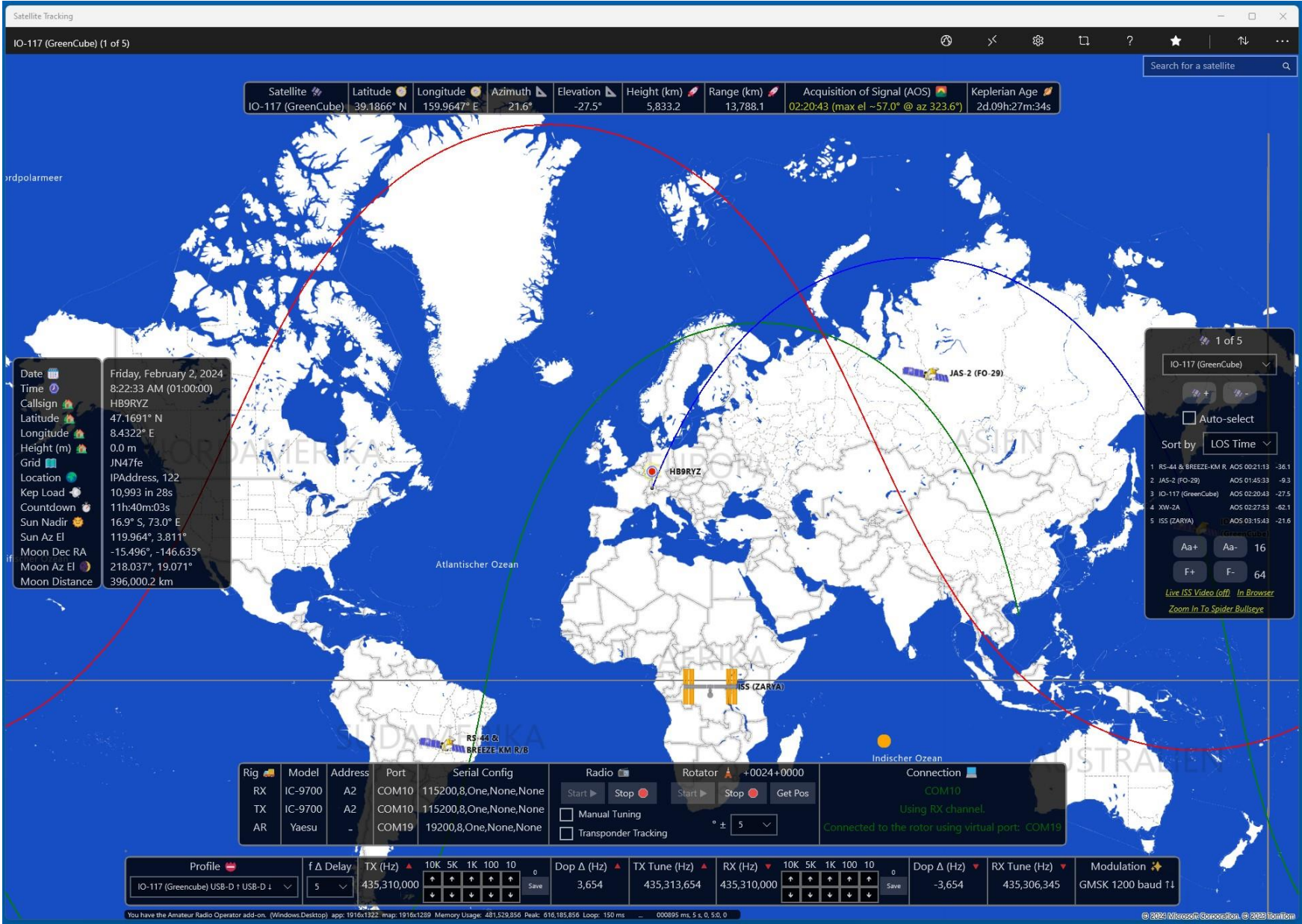
**YAESU G-5500 AZ/EL Rotor, ICOM IC-9700 (100W), ARS-USB Box
from EA4TX with Raspberry Pi Server for Web-GUI**

Windows

Satellite Tracking App from KarhuKoti

<https://apps.microsoft.com/detail/9WZDNCRDNDF7?hl=en-us&gl=US>

Microsoft Windows Satellite Tracking App



IC-9700 Configuration via VSPE and Omnirig

If you are going to use an already existing virtual COM port or use the SerialPort API (old-Windows-style) instead of the SerialDevice API (new-Windows-10/11-style) for device communication (note: use this old-style API if you seem to be having handshake issues), specify the port(s) here so the port(s) shows-up in the subsequent port pull-downs:

COM10

COM10

Step 3 - Radio configuration - select your radio(s) and related settings.

Select your receive (RX) radio (typically for 2m band), radio CI-V address, and serial port parameters. If using FT4, it is recommended to use at least 19200 baud.

radio (default address)	address (used)	port, description
IC-9700 (A2)	A2	COM10

The IC-9700, by default uses CI-V port A2 and prefers these settings: 4800-115200 (min-max baud rate), 8 (data bits), One (stop bits), None (parity), and None (handshake)

Baud Rate	Data Bits	Stop Bits	Parity	Handshake
115200	<input checked="" type="radio"/> Eight	<input checked="" type="radio"/> One	<input checked="" type="radio"/> None	<input checked="" type="radio"/> None
		<input type="radio"/> Two		

Select your receive (TX) radio (typically for 70cm band), radio CI-V address, and serial port parameters. If you are using the same radio for both RX and TX, be sure to select the same radio, address, and port in both sections. If using FT4, it is recommended to use at least 19200 baud.

radio (default address)	address (used)	port, description
IC-9700 (A2)	A2	COM10

The IC-9700, by default uses CI-V port A2 and prefers these settings: 4800-115200 (min-max baud rate), 8 (data bits), One (stop bits), None (parity), and None (handshake)

Baud Rate	Data Bits	Stop Bits	Parity	Handshake
115200	<input checked="" type="radio"/> Eight	<input checked="" type="radio"/> One	<input checked="" type="radio"/> None	<input checked="" type="radio"/> None
		<input type="radio"/> Two		

Step 4 - Click the Connect to the Radio(s) button.

Connect to the Radio(s)

Disconnect from the Radio(s)

Rotator EA4TX Configuration via ARSVCOM Virtual COM-Port

Rotator Control Setup

Follow the steps below to select and test your serial device controlling a Yaesu or compatible digital controller (e.g. SPID in Yaesu GS-232 compatible mode).

Please email us if you have any questions, issues, or another brand supported: karhukoti@hotmail.com

Step 1 - Connect your serial device to the computer that is connected to your rotator.

Step 2 - Click the Refresh Serial Device List button to see the list of possible ports to use.

Refresh Serial Device List

None, None

COM10, virtual port user-specified (COM10)

COM19, virtual port user-specified (COM19)

FT232R USB UART (COM3), \\?\FTDIBUS#VID_0403+PID_6001+A506E00LA#0000#{86e0d1e0-8089-11d0-9ce4-08003e301f73}

HAM, \\?\VSBCE#DEVICES#0001#{86e0d1e0-8089-11d0-9ce4-08003e301f73}

If you are going to use an already existing virtual COM port or use the SerialPort API (old-Windows-style) instead of the SerialDevice API (new-Windows-10/11-style) for device communication (note: use this old-style API if you seem to be having handshake issues), specify the port(s) here so the port(s) shows-up in the subsequent port pull-downs:

COM19

Step 3 - Specify the com port connected to the rotator. The Yaesu GS232A uses 150 to 9600 baud. And, the Yaesu GS232B uses 1200 to 9600 baud.

Baud Rate	Port, Description
19200	COM19

Step 4 - Click the below buttons to connect to and disconnect from the rotator.

Connect to the Rotator

Disconnect from the Rotator

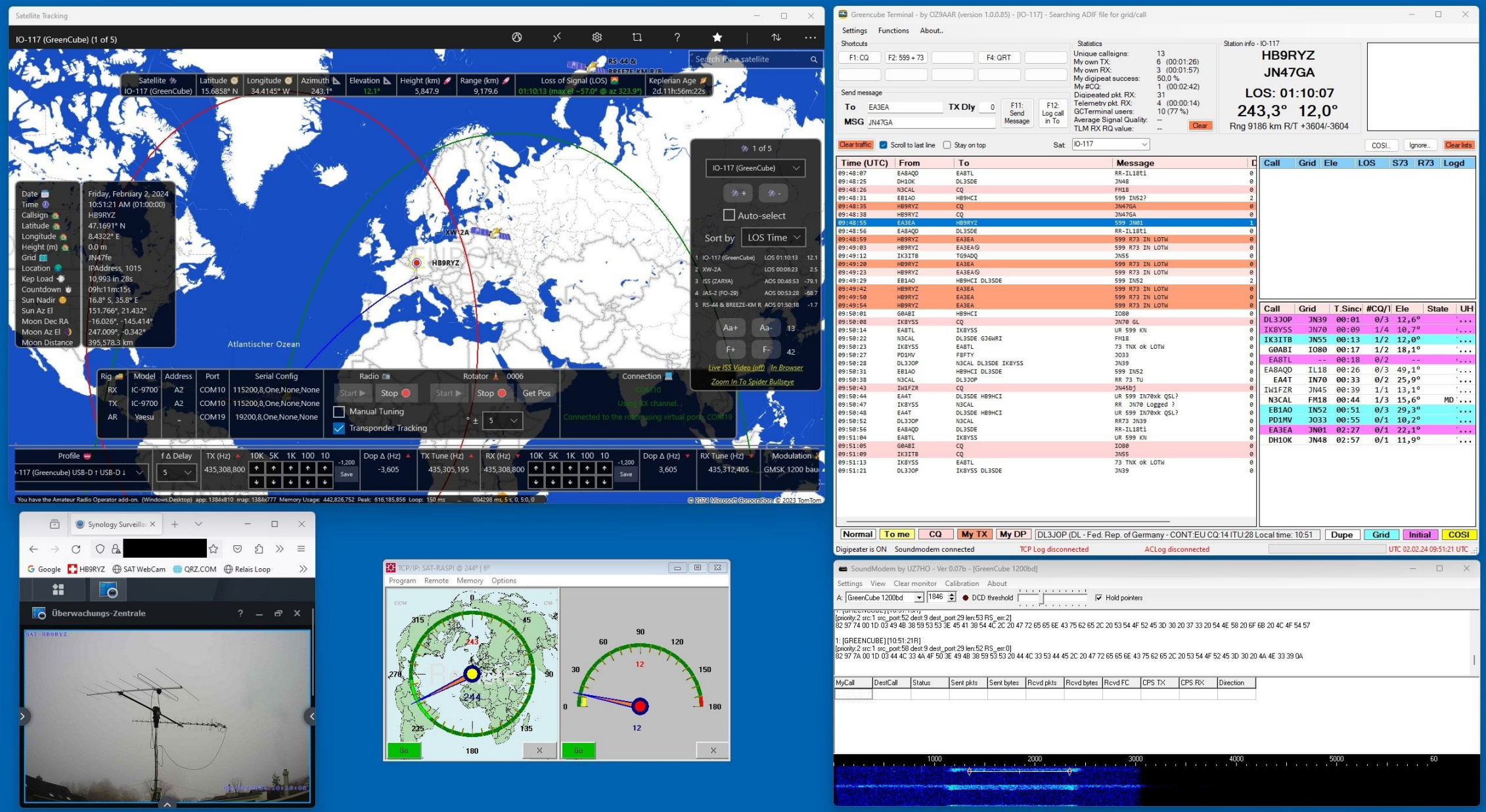
device connection status

rotator baud etc. details

Step 5 - Choose your wanted azimuth and elevation test values.

Azimuth	Elevation
<input type="radio"/> 1°	<input type="radio"/> 0°
<input checked="" type="radio"/> 90°	<input checked="" type="radio"/> 45°
<input type="radio"/> 180°	<input type="radio"/> 90°
<input type="radio"/> 270°	
<input type="radio"/> 359°	

Microsoft Windows Satellite Tracking App – Tracking Greencube (IO-117) Digi-SAT

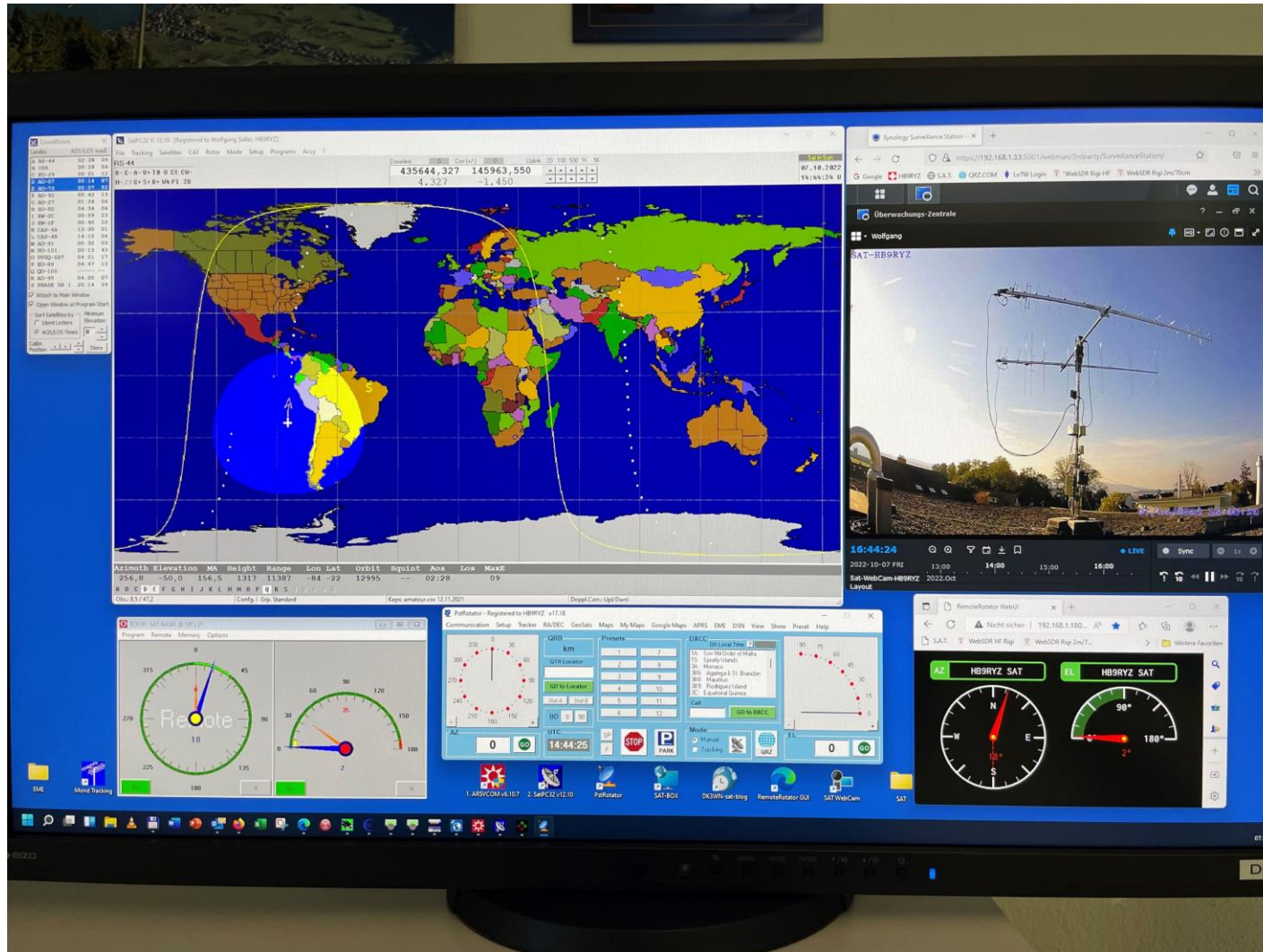


SATPC32 v12.10

with ARS-USB Box EA4TX and Raspberry Pi3 with
remoteRotator from DH1TW

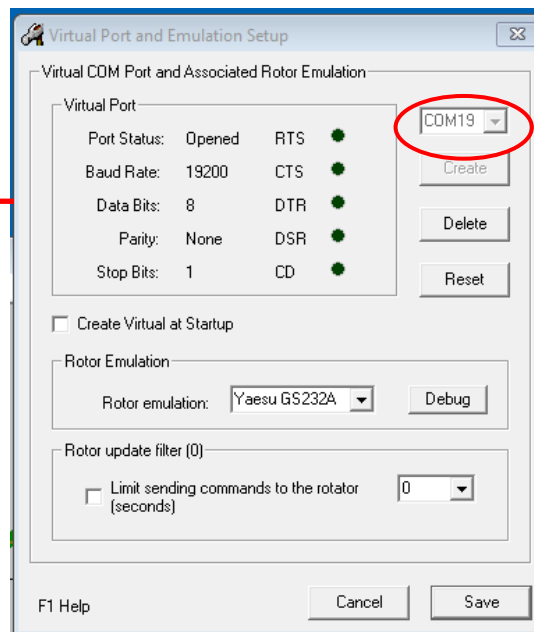
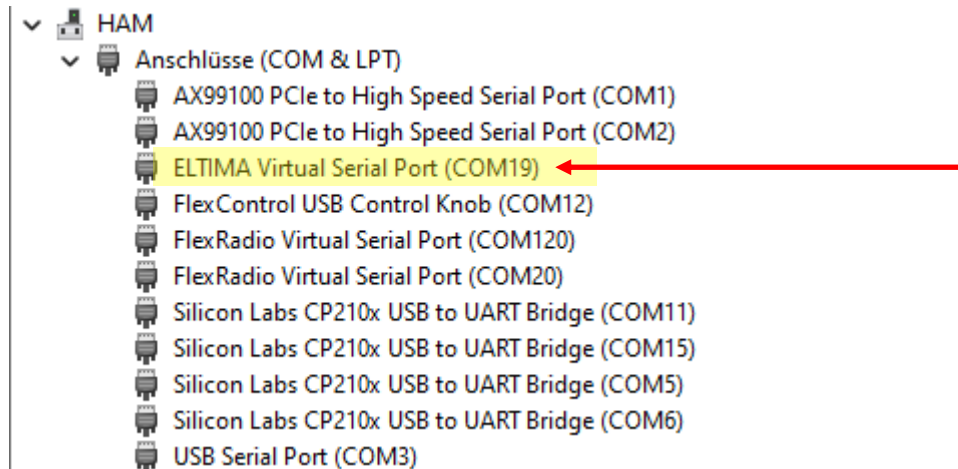
EA4TX ARS-USB Box: <https://ea4tx.com/en/tienda/antenna-rotator-system/ars-usb-ae/>
SATPC32 Software: <https://www.dk1tb.de/indexeng.htm>

SATPC32 Satellite Tracking Software from Erich DK1TB

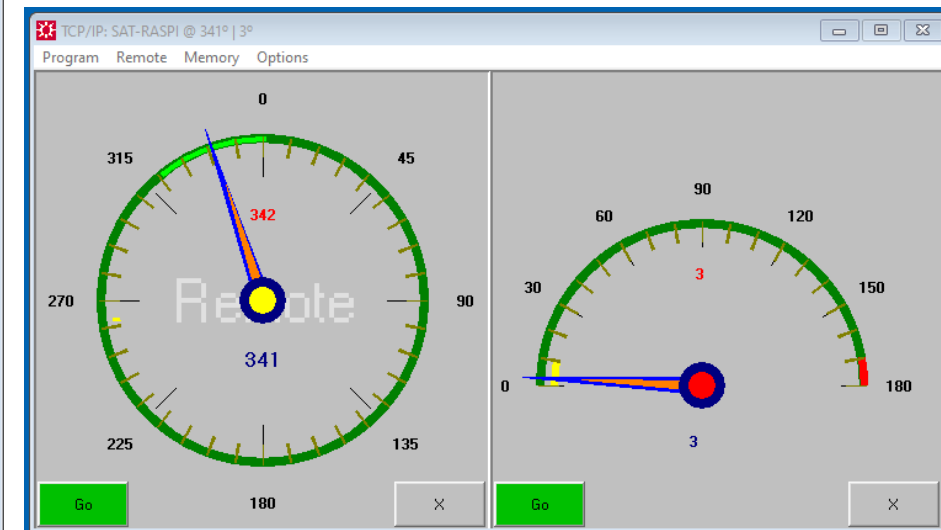


SATPC32 SAT-Tracking Software, SAT WebCam, RemoteRotator
Web-GUI, PSTRotator

EA4TX ARS-USB Box (Virtual Serial Port) and SATPC32 Setup



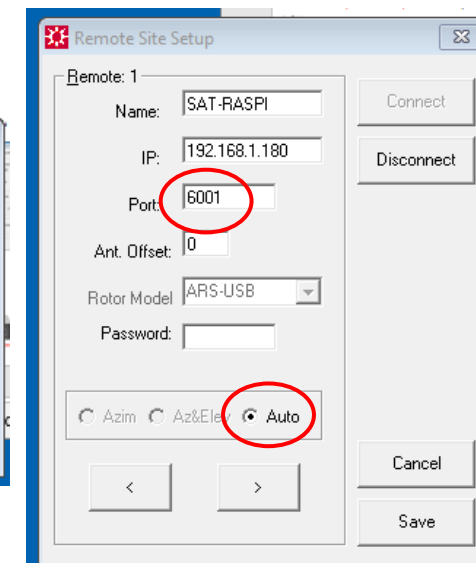
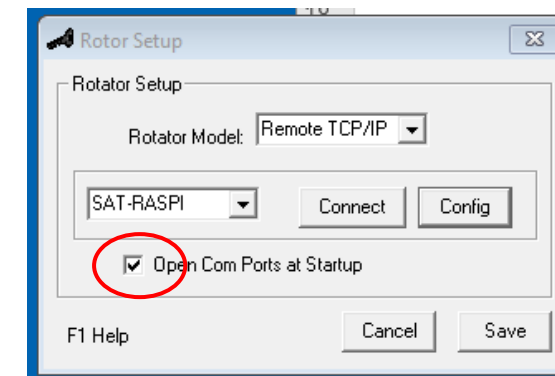
v6.10.7



The Rotators are controlled via the Virtual Serial Port COM 19 (ARSVCOM).

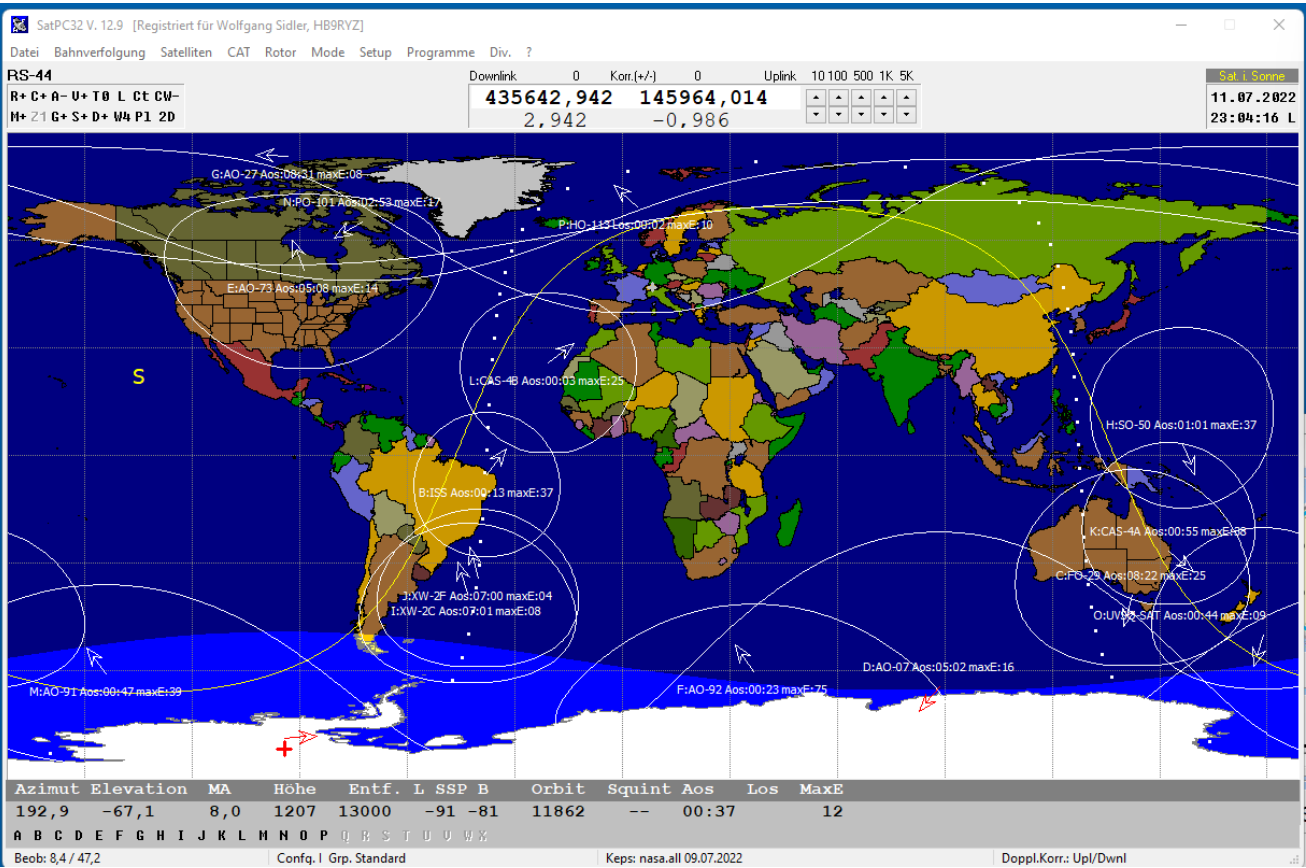


Thats for the Raspberry Pi IP-Connection



EA4TX ARS-USB Box (Virtual Serial Port) and SATPC32 Setup

SATPC32 v12.10



Beobachter-Setup

Höhe QTH ü. NN 450

QTH-Locator JN47FE

Geogr. Länge (-180..180) 8.426864

Geogr. Breite (-90..90) 47.172127

Zeitversatz zu UTC auto

Datei-Maske f. Quellfiles *

Locator > Grad

Grad > Locator

Hilfe Abbruch Speichern

Rotor-Setup

Hilfe zur Einrichtung d. Rotorsteuerung finden Sie im Menü ?/Hinweise[Rotor]

Rotor-Interface/Controller: Yaesu_GS-232

Durchsuchen

Weitere Einstellungen:

LPT (1 - 4, nur IF100, FODTrack, RiifPC) 1

Verzögerg. (nur IF100, FODTrack, RiifPC) 30

Wendemarke d. Azimut-Rotors (S or N) S

Mindest-Elevation -3

Hilfe

Adresse des LPT-Ports: \$0378

1 Decimals of Azimuth/Elevation Values (0,1,2) Speichern

Optionale Einstellungen:

Rotornachführg. anhand:

☐ Zeitabständen

☒ Winkeländerung

Max. Elevation

☒ 90 Grad

☐ 180 Grad

Azimut-Rotor

☒ 360 Grad

☐ 450 Grad

Intervall f. Rotor (Sek.) 10

Mindeständerung (Grad) 3

Optionaler Einstellungen

hor. Nachführwinkel:

☒ konstant

☐ gewinnbezogen

OK

Speichern

The Rotators are controlled via the Virtual Serial Port COM 19 (ARSVCOM).

ServerSDX

Zielpos. Aktuelle Pos.

Azimuth: 347 346

Elevation: 021 021

(C) DK1TB 2017

Symbol man.Input

Setup Pos. lesen

Hilfe Beenden

Setup

COM Port 19

Baudrate 19200

Rotor(s)

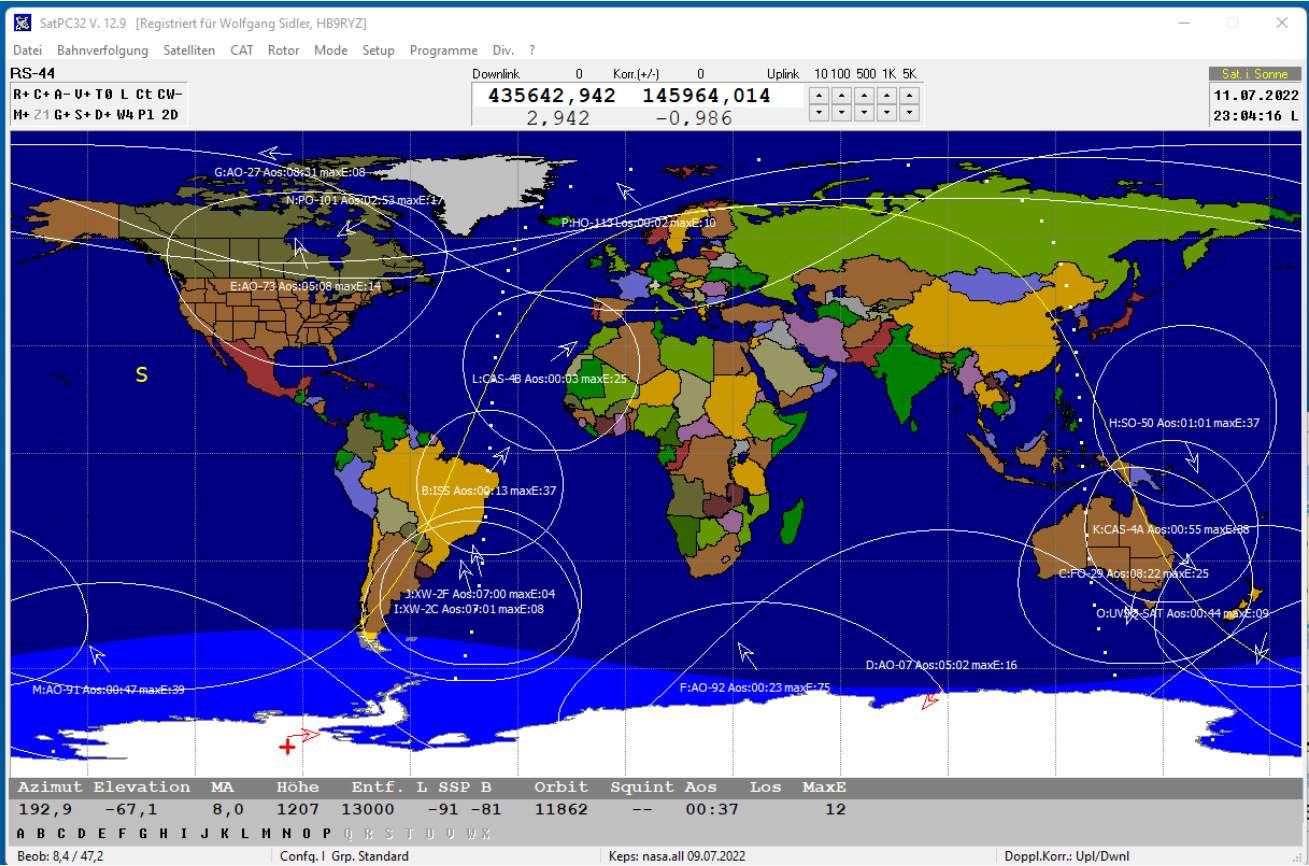
☒ Az./El.

☐ nur Az.

Abbruch Speichern

SATPC32 Setup with ICOM IC-9700

SATPC32 v12.10



Setup – Radio Setup

Radio Setup

Radio 1

☐ Yaesu ☐ Yaesu II ☒ Icom ☐ Kenwood

Model: IC-9700

COM-Port (0 - 99): 9

CAT Delay: 70

☐ RTS +12V ☐ Autom. Rx/Tx Change

☐ DTR +12V ☒ Satellite Mode

☐ KCT-Tuner IC-910H ☒ NA ☐ EU

Addresses OK

Radio 2

☒ None ☐ Yaesu ☐ Yaesu II ☐ Icom ☐ Kenwood

None

COM-Port (0 - 99): 0

☐ RTS +12V ☐ DTR +12V

Help Cancel Store

For detailed hints see menu "?" / "Hints[Radio]"

Radio Setup

Radio 1

☐ Yaesu ☐ Yaesu II ☒ Icom ☐ Kenwood

Baudrate: 115200

COM-Port (0 - 99): 9

CAT Delay: 70

☐ RTS +12V ☐ Autom. Rx/Tx Change

☐ DTR +12V ☒ Satellite Mode

Addresses OK

Radio 2

☒ None ☐ Yaesu ☐ Yaesu II ☐ Icom ☐ Kenwood

None

COM-Port (0 - 99): 0

☐ RTS +12V ☐ DTR +12V

Help Cancel Store

For detailed hints see menu "?" / "Hints[Radio]"

Radio Setup

Radio 1

☐ Yaesu ☐ Yaesu II ☒ Icom ☐ Kenwood

Addresses: \$A2 \$A2

COM-Port (0 - 99): 9

CAT Delay: 70

☐ RTS +12V ☐ Autom. Rx/Tx Change

☐ DTR +12V ☒ Satellite Mode

☐ KCT-Tuner IC-910H ☒ NA ☐ EU

Addresses OK

Radio 2

☒ None ☐ Yaesu ☐ Yaesu II ☐ Icom ☐ Kenwood

None

COM-Port (0 - 99): 0

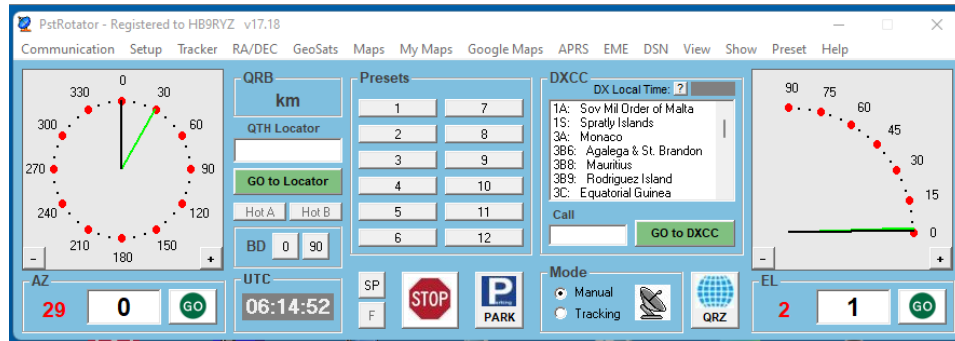
☐ RTS +12V ☐ DTR +12V

Help Cancel Store

For detailed hints see menu "?" / "Hints[Radio]"

PSTRotator Setup

PSTRotator



Communications

TCP Client = ON

EL / AZ+EL COM Port = NONE

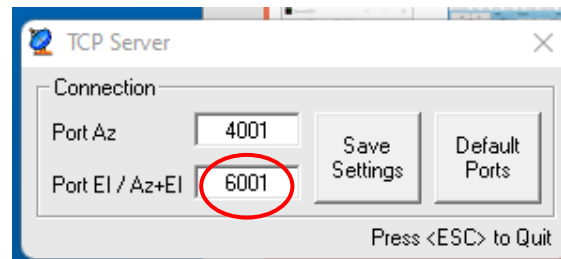
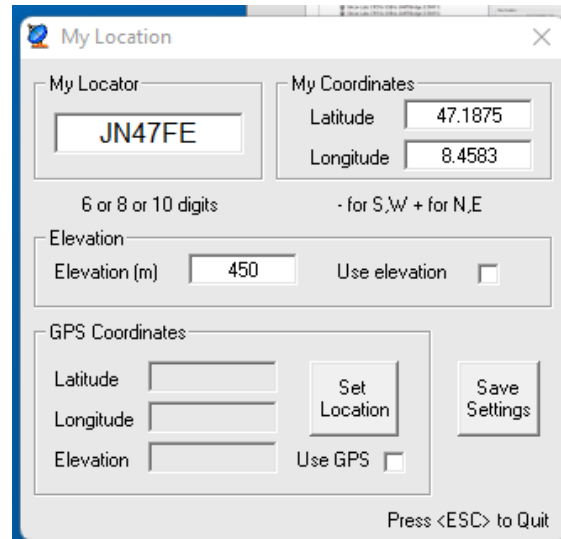
Setup

Start as TCP Client

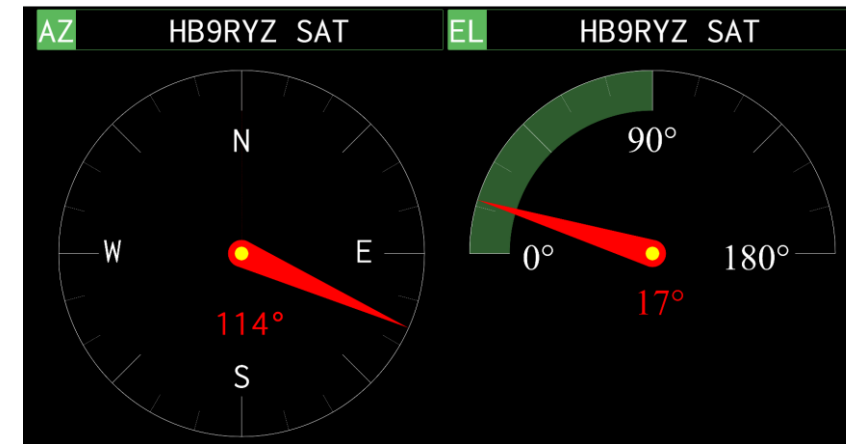
Tracker

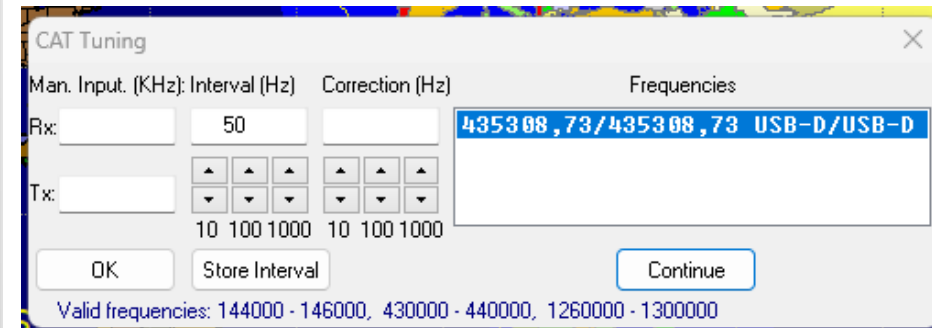
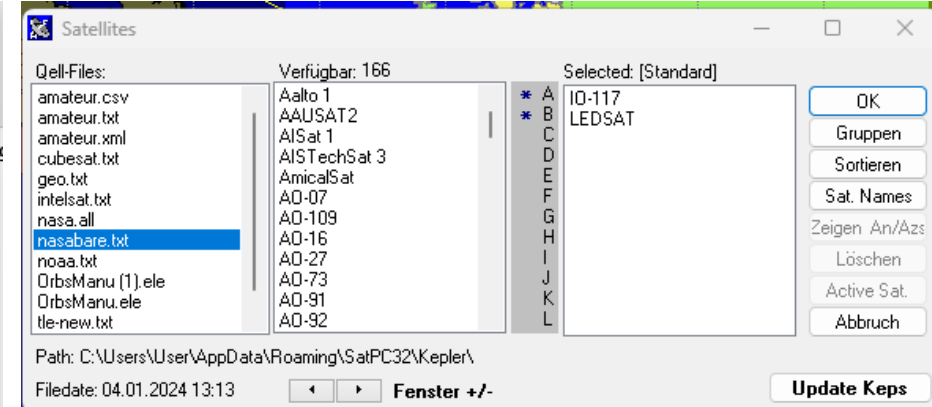
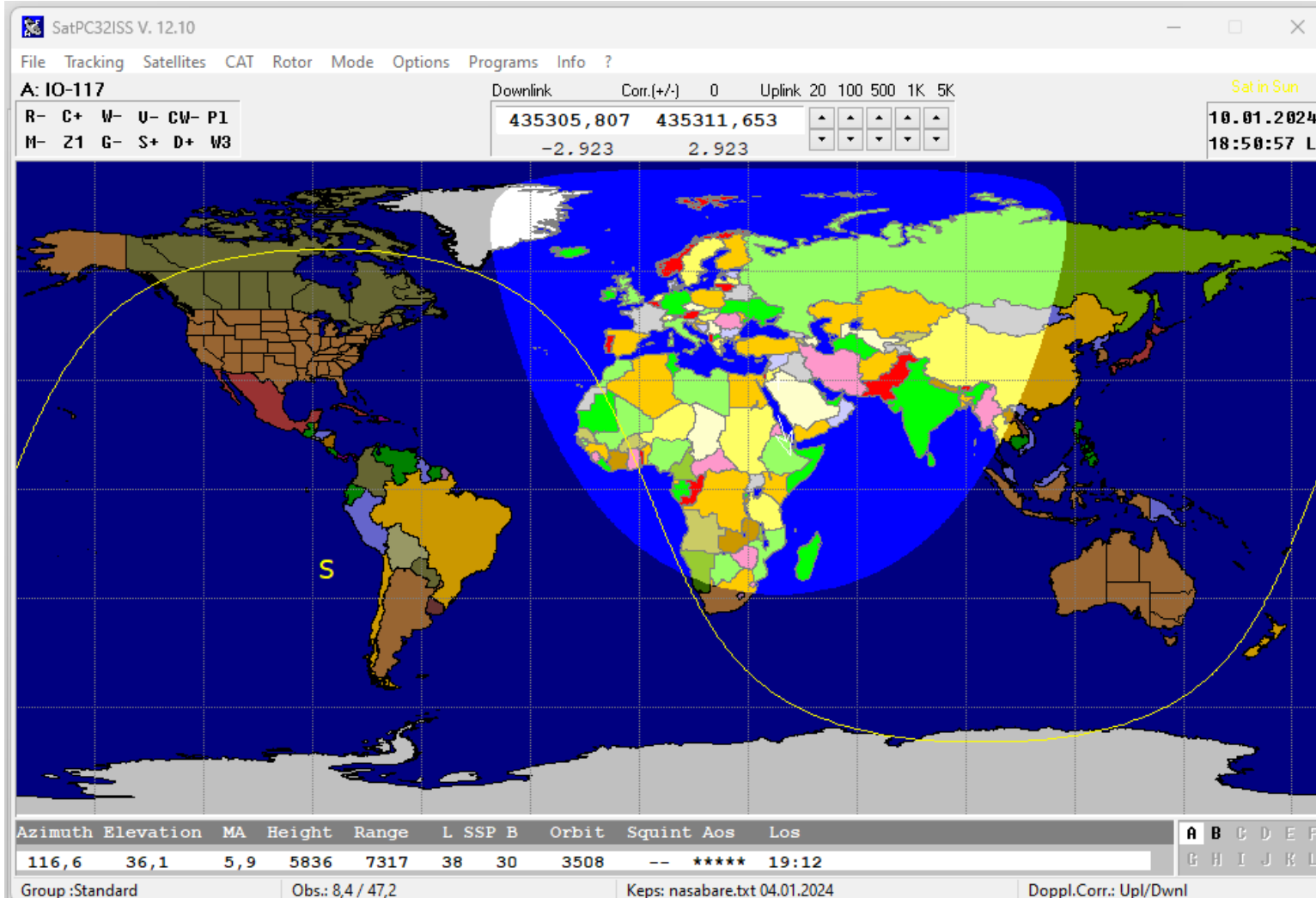
SAT = SatPC32 / SatPC32ISS

My Location



RemoteRotator Web-GUI from DH1TW running on a Raspberry Pi



GreenCube (IO-117) MEO Satellite Setup mit **SatPC32ISS**

GreenCube (IO-117) MEO Satellite Setup mit SatPC32ISS

GreenCube Application from OZ9AAK: <https://moonbounce.dk/hamradio/greencube-terminal-program.html>

SatPC32ISS V. 12.10
File Tracking Satellites CAT Rotor Mode Options Programs Info ?
A: IO-117
R+ C+ W- U- CW- P1
M- Z1 G- S+ D+ W3
Downlink: 435311,488 435305,972
2.758 -2.758
20.04.2023
13:31:02 L

Azimuth: 256,4 Elevation: 34,4 MA: 139,4 Height: 5857 Range: 7444 L SSP B: 333 34 Orbit: 1804 Squint AOS: 14:29
Group: Standard Obs: 8,4 / 47,2 Keps: nasabare.txt 12.02.2023 Doppl.Corr: Upl/Dwnl

SoundModem by UZTHO - Ver 0.07b - [GreenCube 1200bd]
Settings View Clear monitor Calibration About
A: GreenCube 1200bd 1688 DCD threshold Hold pointers

```

[priority:2 sec:1 src_port:50 dest:9 dest_port:29 len:48 RS_err:0]
82 97 72 00 1D 03 48 38 44 50 3E 4D 40 31 44 44 44 2F 50 2C 20 47 72 65 65 6E 43 75 62 65 2C 20 53 54 4F 52 45 3D 30 20 37 33 20 54 55 0A

1: [GREENCUBE] [13:30:44R]
[priority:2 sec:1 src_port:27 dest:9 dest_port:29 len:56 RS_err:0]
82 97 56 00 1D 03 45 41 36 54 43 3E 43 51 2C 20 47 72 65 65 6E 43 75 62 65 2C 20 53 54 4F 52 45 3D 30 20 43 51 20 43 51 20 66 72 6F 6D 20 4A 4D 31 39 6A 6E 2E 2E 2E 0A

1: [GREENCUBE] [13:30:54R]
[priority:2 sec:1 src_port:55 dest:9 dest_port:29 len:42 RS_err:0]
82 97 77 00 1D 03 40 4D 31 44 44 44 2F 50 3E 43 51 2C 20 47 72 65 65 6E 43 75 62 65 2C 20 53 54 4F 52 45 3D 30 20 49 4F 36 36

1: [GREENCUBE] [13:30:54R]
[priority:2 sec:1 src_port:56 dest:9 dest_port:29 len:47 RS_err:0]
82 97 76 00 1D 03 48 4F 34 4D 41 3E 47 4A 36 57 52 45 3C 20 47 72 65 65 6E 43 75 62 65 2C 20 53 54 4F 52 45 3D 31 20 52 52 52 20 45 4C 38 38

1: [GREENCUBE] [13:30:59R]
[priority:2 sec:1 src_port:27 dest:9 dest_port:29 len:48 RS_err:0]
82 97 56 00 1D 03 45 37 30 57 3E 47 4A 36 57 52 45 3C 20 47 72 65 65 6E 43 75 62 65 2C 20 53 54 4F 52 45 3D 30 20 35 39 39 20 4A 4E 39 34 69 6D

1: [GREENCUBE] [13:31:00R]
[priority:2 sec:1 src_port:32 dest:9 dest_port:29 len:55 RS_err:0]
82 97 60 00 1D 03 45 41 31 44 48 3E 57 39 53 56 2C 20 47 72 65 65 6E 43 75 62 65 2C 20 53 54 4F 52 45 3D 30 20 48 49 20 35 39 20 49 4E 38 33 42 4C 20 51 53 4C 3F

```

MyCall	DestCall	Status	Sent pkts	Sent bytes	Rcvd pkts	Rcvd bytes	Rcvd FC	CPS TX	CPS RX	Direction

Greencube Terminal - by OZ9AAR (version 1.0.0.41) - Searching ADIF file for grid/call
Settings Logfile About..
Shortcuts: F1: CQ F2: 599 + 73 F3: 599 F4: QRT
Send message: To ALL TX Delay 0 F11: Send Message
MSG CQ JN47FE
Clear traffic Edit COSI Edit Ignore Scroll to last line Show list of stations that called me Clear lists

Statistics:
Unique callsigns: 28
My own TX: 9 (00:05:04)
My own RX: 3 (00:05:00)
My digipeat success: 33.3 %
My #CQ: 3 (00:05:00)
Digipeated pkt RX: 193
Telemetry pkt RX: 20

Station info:
HB9RYZ
JN47FE
LOS: 00:57:26
Az 256,4° El 34,3°

Time (UTC)	From	To	Message	Delay
11:26:29	EAGTC	CQ	CQ CQ from J...	0
11:26:36	SP6IQW	EI5IN	599 J088H	0
11:26:37	W9SV	E4AT	QSL! RRR 73 ...	0
11:26:42	GW8POA	SP6IQW	RR QSL 73'S	0
11:26:45	KB2H	CQ	EL99 FL	5
11:26:46	LB2TG	W9SV	599 J3P3 QSL?	0
11:26:50	SP6IQW	GW8POA	TXN es vy 73...	0
11:26:55	K04HA	G36WRI	EL88, QSL?	1
11:26:56	OZ9AAR	CQ	J045	0
11:26:59	MM1000/P	KB2H	I066	0
11:27:01	SP6IQW	GW8POA	TXN es vy 73...	0
11:27:04	W9SV	E4AT	QSL! RRR 73 ...	0
11:27:05	G36WRI	K04HA	599 IN83VF QSL?	0
11:27:12	K04HA	G36WRI	RRR EL88	1
11:27:13	E70W	CQ	JN04	0
11:27:14	SP6IQW	GW8POA	TXN es vy 73...	0
11:27:18	OZ9AAR	CQ	J045	0
11:27:23	LB2TG	W9SV	599 J3P3 QSL?	0
11:27:24	W2G0J	MM1000/P	FN32 New York...	2
11:27:30	KB2H	MM1000/P	I066	0
11:27:40	MM1000/P	W2G0J	R LotW TU	0
11:27:48	W2G0J	MM1000/P	RR QSL Logge...	2
11:27:49	W9SV	CQ	EN52 MI USA	0
11:27:53	DL2GRC	W9SV	JN48	0
11:27:57	SP6IQW	GW8POA	TXN es vy 73...	0
11:27:58	SP6IQW	GW8POA	TXN es vy 73...	0
11:28:01	OZ9AAR	CQ	J045	0
11:28:04	MM1000/P	KB2H	I066	0
11:28:11	E4AT	KB2H	MM1000 PUT L...	0
11:28:17	E4AT	MM1000/P	MM1000 PUT L...	0
11:28:22	E4AT	MM1000/P	MM1000 PUT L...	0
11:28:23	LB2TG	W9SV	599 J3P3 QSL?	0
11:28:33	E4AT	MM1000/P	MM1000 PUT L...	0
11:28:34	G36WRI	ALL	CQ IN89VF	0
11:28:38	EAGTC	CQ	CQ CQ from J...	0
11:28:44	EAGTC	G36WRI	UR 599 from ...	0
11:28:50	K04HA	G36WRI	RRR EL88	1
11:28:51	E70W	G36WRI	599 JN941m	0
11:28:57	SP6IQW	GW8POA	TXN es vy 73...	0
11:29:01	MM1000/P	E4AT	LOC ES IN NY...	0
11:29:02	EAGTC	MM1000/P	599 JN11bm QSL?	0
11:29:03	KB2H	MM1000/P	RR EL99 73	5
11:29:09	EAGTC	G36WRI	UR 599 from ...	0
11:29:13	MM1000/P	KB2H	R73 TU I066 ...	0
11:29:18	DL2GRC	W9SV	JN48	0
11:29:22	MM1000/P	EAGTC	R LotW I066 TU	0
11:29:28	EAGTC	W9SV	HZ 599 IN838...	0
11:29:29	EAGTC	MM1000/P	RR TXN 73 LotW	0
11:29:36	MM1000/P	EAGTC	R73 TU I066 ...	0
11:29:40	EAGTC	MM1000/P	EN62	0
11:29:41	GW8POA	CQ	I081KH	0
11:29:46	G36WRI	EAGTC	TU 73	0
11:29:47	MM1000/P	KB2H	R LotW I066 TU	0
11:29:52	EAGTC	G36WRI	TXN QSO... 30...	0
11:29:55	W2G0J	CQ	FN32 New York	2
11:30:00	KB2H	MM1000/P	73 TU	0
11:30:04	EAGTC	G36WRI	TXN QSO... 30...	0
11:30:05	EAGTC	CQ	JN11bm	0
11:30:10	EAGTC	W9SV	HZ 599 IN838...	0
11:30:11	N9ZTS	G36WRI	EN62 QSL?	0
11:30:14	MM1000/P	KB2H	R73 TU I066 ...	0
11:30:18	E4AT	MM1000/P	MM1000 NO, P...	0
11:30:25	N9ZTS	G36WRI	EN62 QSL?	0
11:30:28	EAGTC	CQ	CQ CQ from J...	0
11:30:33	MM1000/P	E4AT	R LotW I066 TU	0
11:30:37	KB2H	MM1000/P	73 TU	0
11:30:44	EAGTC	CQ	CQ CQ from J...	0
11:30:54	MM1000/P	CQ	I066	0
11:30:54	K04HA	G36WRI	RRR EL88	1
11:30:59	E70W	G36WRI	599 JN941m	0
11:31:00	EAGTC	W9SV	HZ 599 IN838...	0

Call	Grid	Ele	LOS	
EA1JK	IN83	00:04	3	49.3°
E70W	JN94	00:05	1	24.8°
K04HA	EL88	00:10	0	10.9°
MM1000/P	I066	00:10	7	40.6°
EAGTC	JM19	00:20	5	42.5°
KB2H	IN62	00:27	0	11.7°
N9ZTS	EN62	00:39	0	15.1°
E4AT	IN70	00:46	5	51.0°
EA3TA	JN11	00:59	1	43.0°
W2G0J	FN32	01:09	1	24.4°
G36WRI	IN89	01:18	2	43.4°
GW8POA	I081	01:23	2	42.2°
DL2GRC	JN48	01:46	2	34.5°
KB2H	EL99	02:01	1	13.2°
SP6IQW	J080	02:07	3	25.9°
LB2TG	JP33	02:41	0	26.1°
OZ9AAR	J045	03:03	3	30.8°
W9SV	EN52	03:15	2	10.1°
EI5IN	I063	05:14	0	43.2°
IW7DOL	JN90	05:46	1	25.3°
KE8RUJ	—	06:52	0	—
IK3ITB	JN55	08:08	1	33.4°
EAGTC	IL28	11:10	0	66.3°
LU4FTA	FF96	12:14	0	-15.1°
LU3FCA	FF96	13:00	1	-15.1°
G0IUI	I093	13:38	0	38.0°
DL5GAC	JN47	14:47	2	34.8°
EA8TL	IL18	17:40	1	68.4°

Normal To me CQ My TX
Digipeater is ON Soundmodem connected TCP Log disconnected ACLog disconnected UTC 20.04.23 11:31:03 UTC

GreenCube (IO-117) MEO Satellite Setup mit Log4OM

HB9RYZ www.hb9ryz.ch 20.4.2023

GreenCube Application from OZ9AAK sends the LOG direct to my Log4OM Log-Program

LOG4OM 2 v.2.23.0.0 [Profile: HB9RYZ]

File Connect Contest View Utilities Settings Help

435311457 435306003 SPLIT 2

Azimuth 180° Elevation 0°

Kps: 0 (Quiet) As: 0 SFl: 147 Sunspot: 113

CALLSIGN

Operator name Grid

Band 70cm Mode FT8 Comment

Country ITU CQ

Freq 435306 003 RX Freq 435311 457 RX Band 70cm

Stats (F1) Info (F2) Awards (F3) My (F4) Extended (F5)

NEW ONE NEW BAND NEW MODE

COUNTRY - CALL BAND - CALL MODE - CALL

PH CW DIG

160 80 60 40 30 20 17 15 12 10 6 4 V U

Main (F6) Recent QSO's (F7) Cluster (F8) Propagation (F9) Worked before (F10)

Qso Date	Callign	Band	Mode	Dxcc	Country	Name	Freq	Rst Sent	Rst Rcvd	Station Callign	Address
20.04.2023 11:24:31	MM1DDD/P	70cm	PKT	279	Scotland		435310,000	599	599	HB9RYZ	
20.04.2023 08:35:45	ES1WEG	12m	USB	234	South Cook Is.	Janusz Wegrzyn	24937,000	57	57	HB9RYZ	Rarotonga South
19.04.2023 21:14:13	H9ZTS	70cm	PKT	291	United States	Justin C Sours	435310,000	599	599	HB9RYZ	3885 Anvil Dr Tro
19.04.2023 21:11:48	KD0KB	70cm	PKT	291	United States	Jeffrey C Schwartz	435310,000	599	599	HB9RYZ	3737 West O St I
19.04.2023 14:20:00	T88AQ	10m	FT8	22	Palau	Kazuyoshi Yoshinaga	28091,626	-08	+00	HB9RYZ	4-4-32, Yunguoka,
19.04.2023 14:12:19	N8RO	70cm	PKT	291	United States	Ronald G Oldham	435310,000	599	599	HB9RYZ	301 Majestic Ridg
19.04.2023 14:12:16	W3UTD	70cm	PKT	291	United States	Fraser Bonnett	435310,000	599	599	HB9RYZ	2340 Abbey Lane
19.04.2023 14:12:00	XE2YWH	70cm	PKT	50	Mexico	Jose Antonio Ceja ...	435310,000	599	599	HB9RYZ	Primo Verdad # 1
19.04.2023 14:11:53	KQ4DO	70cm	PKT	291	United States	Jean Pierre Plessis	435310,000	599	599	HB9RYZ	1105 Blackthorn F
19.04.2023 14:11:41	VE6WQ	70cm	PKT	1	Canada	Joel H Weiner	435310,000	599	599	HB9RYZ	41 Fairway Drive E
19.04.2023 14:11:34	UVVSM	70cm	PKT	288	Ukraine	Andriy Yanulyavichus	435310,000	599	599	HB9RYZ	76026 Ukraine
19.04.2023 14:10:10	K9UD	70cm	PKT	291	United States	Robert E Sours	435310,000	599	599	HB9RYZ	2949 S Us Highwi
19.04.2023 13:59:56	IZ4UFB	70cm	PKT	248	Italy	Mauro Cavedagna	435310,000	599	599	HB9RYZ	Via Rondinelli, 14
19.04.2023 13:59:46	IZ4UFB	70cm	PKT	248	Italy	Mauro Cavedagna	435310,000	599	599	HB9RYZ	Via Rondinelli, 14
19.04.2023 12:29:00	VU7W	17m	FT8	142	Lakshadweep Is.	Yuris Petersons	18107,447	-10	-08	HB9RYZ	&Nbsp; India
18.04.2023 09:05:00	ES1CKK	20m	FT8	234	South Cook Is.	Leszek Przybylak	14092,424	-15	-04	HB9RYZ	Rarotonga South
18.04.2023 06:22:00	ES1WEG	17m	SSB	234	South Cook Is.	Janusz Wegrzyn	18137,000	59	59	HB9RYZ	Rarotonga South
18.04.2023 05:41:00	VU7W	15m	FT8	142	Lakshadweep Is.	Yuris Petersons	21077,575	-14	-10	HB9RYZ	&Nbsp; India
17.04.2023 20:46:00	ES1CKK	15m	FT8	234	South Cook Is.	Leszek Przybylak	21092,687	-16	-06	HB9RYZ	Rarotonga South
17.04.2023 19:53:00	4U1UN	17m	FT8	289	United Nations HQ	United Nations Am...	18095,396	+02	+06	HB9RYZ	United Nations He
17.04.2023 14:29:00	VU7W	20m	FT8	142	Lakshadweep Is.	Yuris Petersons	14083,457	-14	-10	HB9RYZ	&Nbsp; India
17.04.2023 07:21:45	VU7W	17m	FT8	142	Lakshadweep Is.	Yuris Petersons	74923,754	-05	-06	HB9RYZ	&Nbsp; India

QSO Count 12729 Cluster Cluster server Super Cluster CAT FLDigi Chat

192.168.1.33:3307

Program Remote Memory Options

CCW 015 0 45 90 135 180 225 270

30 60 90 120 150 180

Expert 1.3k COM18

SatC32SS2 2 GreenCube

soundmodem v7

GreenCube Terminal

GreenCubeDigi v27

Telemetry Greencube

EME

Mond Tracking

wjstb EME v2.5.4

JTDX CO-100 2m 70cm

JTAlert for JTDX v2.50.0

1. ARSVCOM v6.10.7

2. SatPC32 v12.10

PatRotator

DKSWN-sat-blog

RemoteRotator GUI

SAT WebCam

SAT

7. Log4OM v2.23

Rigi PA COM.4

ARSVCOM Rigi

Synology Surveillance Station

Überwachungs-Zentrale

Wolfgang

SAT-HB9RYZ

20/04/2023 13:16:37

13:31:30

2023-04-20 THU

Sat-WebCam-HB9RYZ 2023.Apr

Layout

Settings in GreenCube Application from OZ9AAK

UDP Logging (HRD etc)

☒ Enable UDP logging

IP address: 127.0.0.1

Port: 2235 (default 2333)

☒ Add Az/EI to ADIF record

☒ Use WSJT format (port 2237)

Settings in Log4OM

UDP Inbound connections

☒ [UDP_INBOUND] [ADIF_MESSAGE] [2235] JTAlert QSO

☒ [UDP_INBOUND] [ADIF_MESSAGE] [2239] SMARTSDR MAC LOG

0 items selected

WSJT-X default port: 2237

GreenCube (IO-117) MEO Satellite Setup

GreenCube Application from OZ9AAK:

<https://moonbounce.dk/hamradio/greencube-terminal-program.html>

Greencube Terminal - by OZ9AAK (version 1.0.0.41) - Searching ADIF file for grid/call

Settings Logfile About...

Shortcuts: F1: CQ F2: 599 + 73 F3: 599 F4: QRT

Send message: To: K10KB TX Delay: 0 F11: Send Message

MSG: 599 RRR - Trx 73 - IN LOTW

Statistics: Unique callsigns: 18 My own TX: 50 (00:00:06) My own RX: 6 (07:30:33) My digipeat success: 12.0 % My CQ: 1 (07:30:33) Digipeated pkt. RX: 673 Telemetry pkt. RX: 68

Station info: HB9RYZ JN47FE LOS: 00:58:56 Az 333,2° El 10,6°

Clear traffic Edit COSI Edit Ignore Scroll to last line Show list of stations that called me Clear lists

Time (UTC)	From	To	Message	Delay
21:02:52	VA7TF	CQ	COS40b	2
21:02:59	KB1PVB	XE2NDB	FM43 QSL?	0
21:03:10	K10KB	AK3Y	UR 599 DN78 ...	0
21:03:20	AK3Y	K10KB	TU Logged Lo...	0
21:03:25	K10KB	AK3Y	R73 de Jeff ...	0
21:03:36	JEETGT	KN2X	TU 73	0
21:03:34	HB9RYZ	I24UFB	CQ JN47FE	0
21:03:45	XE2NDB	KB1PVB	599d195	1
21:04:10	HB9RYZ	I24UFB	CQ JN47FE	0
21:04:17	HB9RYZ	I24UFB	CQ JN47FE	0
21:04:17	KB1PVB	XE2NDB	QSL 73	0
21:04:26	HB9RYZ	I24UFB	CQ JN47FE	0
21:04:55	HB9RYZ	I24UFB	CQ JN47FE	0
21:05:11	HB9RYZ	I24UFB	CQ JN47FE	0
21:05:16	E41DR	ALL	IN22	0
21:05:27	HS3FS	KB1PVB	QSL UR 599 I...	0
21:05:30	K10KB	HB9RYZ	UR 599 DN78 ...	0
21:05:37	K2CYS	HB9RYZ	FM20 QSL?	2
21:05:39	VE7PTN	HB9RYZ	CM99 QSL?	1
21:05:40	XE1L	NS3FS	DL80 R?	0
21:05:48	HB9RYZ	K10KB	599 RRR - Tr...	0
21:05:56	LB2TG	4A90	599 J3P33	0
21:05:57	K7TAB	HB9RYZ	599 DN43	0
21:05:59	HB9RYZ	K10KB	599 RRR - Tr...	0
21:06:08	HB9RYZ	K10KB	599 RRR - Tr...	0
21:06:17	4A90	LB2TG	R DL80 LOG 73	0
21:06:18	JH8FIH	NS3FS	599 Q1411	0
21:06:19	HB9RYZ	K10KB	599 RRR - Tr...	0
21:06:24	HB9RYZ	K10KB	599 RRR - Tr...	0
21:06:33	HB9RYZ	K10KB	599 RRR - Tr...	0
21:06:52	HB9RYZ	K2CYS	599 RRR - Tr...	0
21:06:58	HB9RYZ	K2CYS	599 RRR - Tr...	0
21:07:10	HB9RYZ	K2CYS	599 RRR - Tr...	0
21:07:23	HB9RYZ	K10KB	599 RRR - Tr...	0
21:07:28	HB9RYZ	K10KB	599 RRR - Tr...	0
21:07:32	HB9RYZ	K10KB	599 RRR - Tr...	0
21:07:53	VA7LM	IK4PMB	COS40b	0
21:07:54	DL2GR	K10KB	599 JN48kn QSL?	0
21:07:56	HB9RYZ	K10KB	599 RRR - Tr...	0
21:08:04	HB9RYZ	K10KB	599 RRR - Tr...	0
21:08:09	K10KB	DL2GR	UR 599 DN78 ...	0
21:08:10	HP4G	IK4PMB	TNX IN LOG 73	0
21:08:11	HB9RYZ	K10KB	599 RRR - Tr...	0
21:08:14	EASTT	K10KB	73 & Logged...	0
21:08:15	HB9RYZ	K10KB	599 RRR - Tr...	0
21:08:21	EASTT	K7TAB	73 & Logged...	0
21:08:23	HB9RYZ	K10KB	599 RRR - Tr...	0
21:08:30	HB9RYZ	K10KB	599 RRR - Tr...	0
21:08:35	E41DR	K7TAB	IN22	0
21:08:36	EASTT	CQ	IN9951	0
21:08:37	HB9RYZ	K10KB	599 RRR - Tr...	0
21:08:40	HB9RYZ	K10KB	599 RRR - Tr...	0
21:08:47	XE1L	NS3FS	DL80 R?	0
21:08:48	KG80	NS3FS	R CN88	0
21:08:50	HB9RYZ	K10KB	599 RRR - Tr...	0
21:08:52	HB9RYZ	K10KB	599 RRR - Tr...	0
21:08:56	HB9RYZ	K10KB	599 RRR - Tr...	0
21:09:09	HB9RYZ	K10KB	599 RRR - Tr...	0
21:09:14	IK4PMB	VA7LM	599 JN54mm	1
21:09:15	HB9RYZ	K10KB	599 RRR - Tr...	0
21:09:17	HB9RYZ	K10KB	599 RRR - Tr...	0
21:09:32	HB9RYZ	K10KB	599 RRR - Tr...	0

Normal To me CQ My TX

Digipeater is ON Soundmodem connected TCP Log disconnected ALog disconnected UTC 19.04.23 21:09:38 UTC

GreenCube Digipeater v0.27 (the original Software)

<https://www.s5lab.space/index.php/digipeater>

GreenCube Digipeater - v0.27

KISS TNC Setup View Filter Show Log

CQ 599 + 73 599 QRT

MyCall: HB9RYZ ToCall: CQ ReTX Delay: 0 Ch: 0 Log QSO Clear Send

MSG: JN47FE

ALL FILTERED PERSONAL UNIQUE

Date (UTC)	From	To	Message	Type
19.04.23 13:44	JH0RNN	MM1DDD/P	599 PM97nv	RX:5
19.04.23 13:44	I24UFB	CQ	JN54wo	RX:1
19.04.23 13:44	JH0RNN	MM1DDD/P	599 PM97nv	RX:5
19.04.23 13:44	4X1LA	ALL	CQ de 4X1LA	RX:5
19.04.23 13:44	OZ9AAR	4X1LA	JO45	RX:0
19.04.23 13:45	OZ9AAR	4X1LA	JO45	RX:0
19.04.23 13:45	DK9JC	CQ	JN39 QSL?	RX:0
19.04.23 13:45	MM1DDD/P	JH0RNN	R LoTW TU	RX:0
19.04.23 13:45	DK9JC	MM1DDD/P	JN39 QSL?	RX:0
19.04.23 13:45	IK6GZM	4X1LA	UR 599 in JN62RV QSL?	RX:0
19.04.23 13:45	EB3SA	4X1LA	599 JN11 QSL?	RX:0
19.04.23 13:45	UV8SM	F4WDO	UR 599 KN28nv ok?	RX:1
19.04.23 13:45	OZ9AAR	4X1LA	JO45	RX:0
19.04.23 13:45	I24UFB	4X1LA	599 - JN54	RX:0
19.04.23 13:45	JH0RNN	MM1DDD/P	599 PM97nv	RX:5
19.04.23 13:45	JH8FIH	4X1LA	599 QN14qi	RX:0
19.04.23 13:45	EASTA	CQ	JN11dm	RX:0
19.04.23 13:45	SA5IKN	MM1DDD/P	599 JO89 R?	RX:0
19.04.23 13:46	AJ8D	R8CT	599 LN50 QSL?	RX:5
19.04.23 13:46	I1FOH	JH0RNN	599 JN45 QSL?	RX:0
19.04.23 13:46	JH0RNN	MM1DDD/P	599 PM97nv	RX:5
19.04.23 13:46	UV8SM	F4WDO	UR 599 KN28nv ok?	RX:1
19.04.23 13:46	JH0RNN	MM1DDD/P	599 PM97nv	RX:5
19.04.23 13:46	DK9JC	MM1DDD/P	JN39 QSL?	RX:0
19.04.23 13:46	I26WLW	4X1LA	599 JN62PB QSL?	RX:0
19.04.23 13:46	F4WDO	ISEUS	RRR 73s	RX:0
19.04.23 13:46	MM1DDD/P	JH0RNN	R LoTW TU	RX:0
19.04.23 13:46	UV8SM	F4WDO	UR 599 KN28nv ok?	RX:1
19.04.23 13:46	EB3SA	4X1LA	599 JN11 QSL?	RX:0
19.04.23 13:46	JH8FIH	4X1LA	599 QN14qi	RX:0
19.04.23 13:46	DK9JC	R LoTW TU		RX:0
19.04.23 13:46	SA5IKN	MM1DDD/P	599 JO89 R?	RX:0
19.04.23 13:46	DK9JC	MM1DDD/P	R73	RX:0
19.04.23 13:46	JH0RNN	I1FOH	RR 599 PM97NV LOGD TU 73	RX:5
19.04.23 13:46	OZ9AAR	4X1LA	JO45	RX:0
19.04.23 13:46	MM1DDD/P	SA5IKN	R LoTW TU	RX:0
19.04.23 13:47	UV8SM	F4WDO	UR 599 KN28nv ok?	RX:1
19.04.23 13:47	UV8SM	F4WDO	UR 599 KN28nv ok?	RX:1
19.04.23 13:47	DK9JC	MM1DDD/P	R73	RX:0
19.04.23 13:47	JH8FIH	4X1LA	599 QN14qi	RX:0
19.04.23 13:47	I26WLW	4X1LA	599 JN62PB QSL?	RX:0
19.04.23 13:47	F4WDO	ISEUS	RRR 73s	RX:0
19.04.23 13:47	JH0RNN	MM1DDD/P	599 PM97nv	RX:5
19.04.23 13:47	HB9RYZ	CQ	JN47FE	TX:0
19.04.23 13:47	JAT1VDJ	CQ	PM95tg	RX:1
19.04.23 13:47	JO1LVZ	F4WDO	599PM95	RX:0
19.04.23 13:47	HB9RYZ	CQ	JN47FE	TX:0
19.04.23 13:47	ISEUS	F4WDO	TNX for QSO! 73 op. Sergio	RX:0
19.04.23 13:47	HB9RYZ	CQ	JN47FE	TX:0
19.04.23 13:48	DK9JC	4X1LA	JN39 QSL?	RX:0
19.04.23 13:48	SA5IKN	MM1DDD/P	599 JO89 R?	RX:0
19.04.23 13:48	UV8SM	JAT1VDJ	UR 599 KN28nv ok?	RX:1
19.04.23 13:48	ISEUS	4X1LA	UR 599 JN54NB QSL?	RX:0
19.04.23 13:48	I26WLW	SA5IKN	599 JN62PB QSL?	RX:0
19.04.23 13:48	JH0RNN	MM1DDD/P	599 PM97nv	RX:5
19.04.23 13:48	I26WLW	SA5IKN	599 JN62PB QSL?	RX:0
19.04.23 13:48	DK9JC	4X1LA	JN39 QSL?	RX:0
19.04.23 13:48	SA5IKN	I26WLW	599 JO89 R?	RX:0
19.04.23 13:48	MM1DDD/P	DK9JC	R73 TU IO76 EU-008	RX:0
19.04.23 13:48	JO1LVZ	MM1DDD/P	599PM95	RX:0
19.04.23 13:48	OZ9AAR	4X1LA	JO45	RX:0
19.04.23 13:48	EB3SA	JAT1VDJ	599 JN11 QSL?	RX:0
19.04.23 13:48	BA1PK	CQ	ON80eb	RX:0

Digipeater Status: ON TNC: ON

ICOM IC-9700 Settings for Satellite Communication incl. GreenCube (IO-117) Digipeater

The following **IC-9700** settings are very important:

AGC = OFF

Mode = USB-D

Connectors > External Speaker Separate **"Mix"**

Connectors > ACC AF/IF Output > AF/SQL Output Select **"MAIN"**

Connectors > ACC AF/IF Output > Output Select **"AF"**

Connectors > ACC AF/IF Output > AF Output Level **"50%"**

Connectors > ACC AF/IF Output > AF SQL **"OFF (Open)"**

Connectors > ACC AF/IF Output > IF Output Level **"50%"**

Connectors > USB AF/IF Output > Output Select **"AF"**

Connectors > USB AF/IF Output > AF Output Level **"50%"**

Connectors > USB AF/IF Output > AF Output Level **"50%"**

Connectors > USB AF/IF Output > AF SQL **"OFF (Open)"**

Connectors > USB AF/IF Output > IF Output Level **"50%"**

Connectors > USB SEND/Keying > USB SEND: **"USB (B) DTR"**

Connectors > CI-V > CI-V Baud Rate **"19200"**

Connectors > CI-V > CI-V Transceiver **"OFF"**

Connectors > CI-V > CI-V USB Port **"Link to [REMOTE]"**

Connectors > CI-V > CI-V DATA Baud Rate **"19200"**

Connectors > CI-V > CI-V DATA Echo Back **"on"**

PTT Port Function **"PTT Input + SEND Output"**

Switch AGC to OFF

To switch it off, hold down the AGC button in the Function menu.

Then select one of your AGC options and with the tuning wheel you can now turn it down until it shows OFF.

