

Web server for the operation of the
EGIS bi-axial antenna-positioners
via Web and Browser

EGPOSER II

(EGisPOsitionSERver)



006/BC6



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EGPOSER II

What Is New About EGPOSER II?

- Software: - Software: Enhanced instruction set = Now also a bi-directional 'auto-focussing' can be initiated (oder: triggered) using the net!

The Advantages Are:

Depending on the field-strength, the most perfect alignment of the antenna is approached -subsequently and additionally- and optimised in performance!

- Hardware: - Only the 'CD-drive' has been replaced by a 'Compact Flash Card'!

The Advantages Are:

- No drive necessary
- A smaller power supply unit is needed
- No removable parts in the memory
- No noise when accessing the memory
- Lighter housing
- Reduced electric power consumption
- Less sensitive to shock



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Description

The **EGPOSER** is a Linux-based web server, which enables the operation of **EGIS EPS103-antenna-positioners** in the intranet. Two rotors can at maximum be attached via **RS232C-Interface**. The 'ProfiTracker's must have installed this interface (Option)!

The device has to be provided with an **Ethernet-network** [Twisted Pair; RJ45] and a permanent IP-address must be assigned.

The set-up of **EGPOSER** is to be carried out in two steps: In a first step the web server is addressed with the fixed IP-number via network, - to do so a predefined password is used.

In the second work step – those settings are made, which can be modified at any time, but which should only be carried out by the administrator:

Critical work steps require a safety entry. Sometimes the browser memorises this entry and provides the same in case of recurrence.

Later the server will be assigned an individual admin-password of his own and an IP-number going with the existing network. The new password will only be effective after the next booting process; the same is true for the new IP-address.

Table of Pages/Web-Hierarchy

A. <http://xxx.xxx.xxx.xxx> *User-/working-page*

B. <http://xxx.xxx.xxx.xxx/admincfg.htm> *Administrator page I*

Assign admin-password
Determine default network-IP with network-mask
NV-RAM verify
NV-RAM reset
Shut down server-system/switch-off webserver

C. <http://xxx.xxx.xxx.xxx/admin.html> *Administrator-page II*

Assign password antenna-rotor 1
Assign password antenna-rotor 2
Assign password antenna-rotor 1+2
Assign password administrator
Look into Log-Data
Read in the list of basic satellites
Create list of favourite satellites
Define park position
Set date and time
Define baud rate
Shut down server-system/switch-off

Details

- NV-Ram verify: Using this device, the non volatile memory of the system is checked for consistency and contents and is cleared up as well.
- NV-Ram reset. The non volatile memory is formatted. This means all data are deleted – also the log and settings. Afterward the latter will have to be executed again. This option is only provided for emergency.

With every booting of the system the memory is checked and

cleared-up, if necessary.

- Shut down: The system has to be switched off, respectively shut down in the administrator's part, if necessary the mechanical lock has to be unlocked first.

Settings for Administrator Operation

In the browser, the administrator calls the IP-address he himself has assigned adding the following: /admin: <http://xxx.xxx.xxx.xxx/admin>.

The settings in detail:

- Assign password for groups:

If only one interface is active, only one password group/antenna-rotor 1 will have to be assigned. This should be communicated to all users, who are authorized to dial up the antenna position.

In the case there are two antenna-rotors the same must be carried out respectively for group/rotor 2.

The 3rd group is optional and has been provided for users who are authorized to set up both rotors.

Setting Up of the Satellite Lists:

- The internal satellite list of the EPS-rotor(s) is imported into the EGPOSER and will be displayed. The sorting is made by EAST/WEST and position.
- A list of favourite satellites can be generated.

Other

- Direct approach of all admin-programmed park position(s).
- Direct approach of a angle-position being defined by the user (both axes)
- Triggering of an auto-focussing over both axes, depending on field-strength.
- View the log: Actions, which change the position of the rotor, will be protocolled in a log for one year maximum. This is where it can be called up. Of course the log can be printed out via browser or be saved as a file. Consequently statistical functions may as well be applied to the log. The storage is made on the non volatile NV-memory. After a year the log overwrites itself.

Hardware-Equipment:

1 x	Slide-in unit EGPOSER
1 x	Compact Flash Card (already inserted)
1 x	Power supply cable with main's plug with earth contact
1 x	Nullmodem-cable D-SUB 9 pol [RS232C]
1 x	This manual
2 x	Operational safety key

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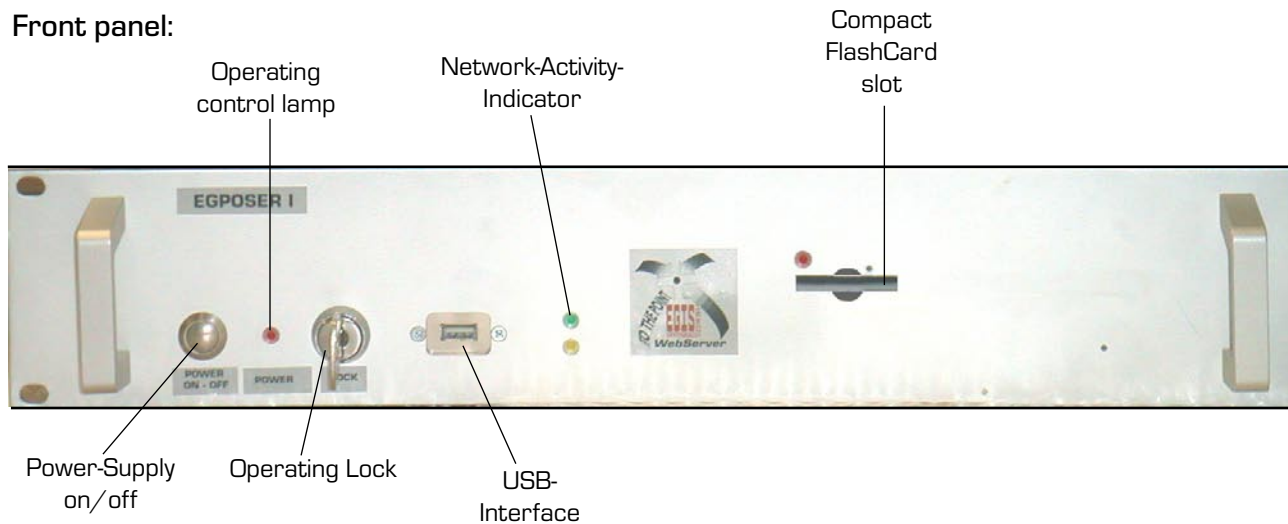
Description

Hardware:

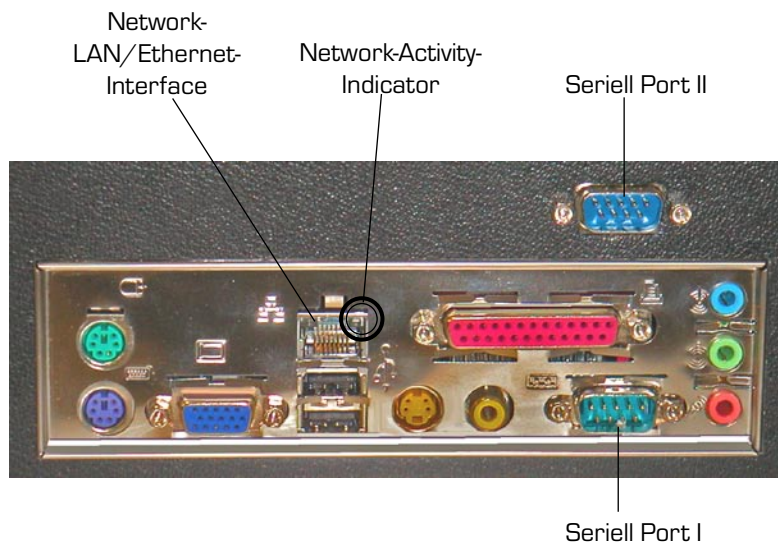
Measurements: 19"-Insert 2unit high (484 x 88 x 360mm)

Indicators, Connectors and Control Elements:

Front panel:



Backside:



The power supply takes place with a rear low heat device- mains supply-socket: AC 230 V.

006/BC06



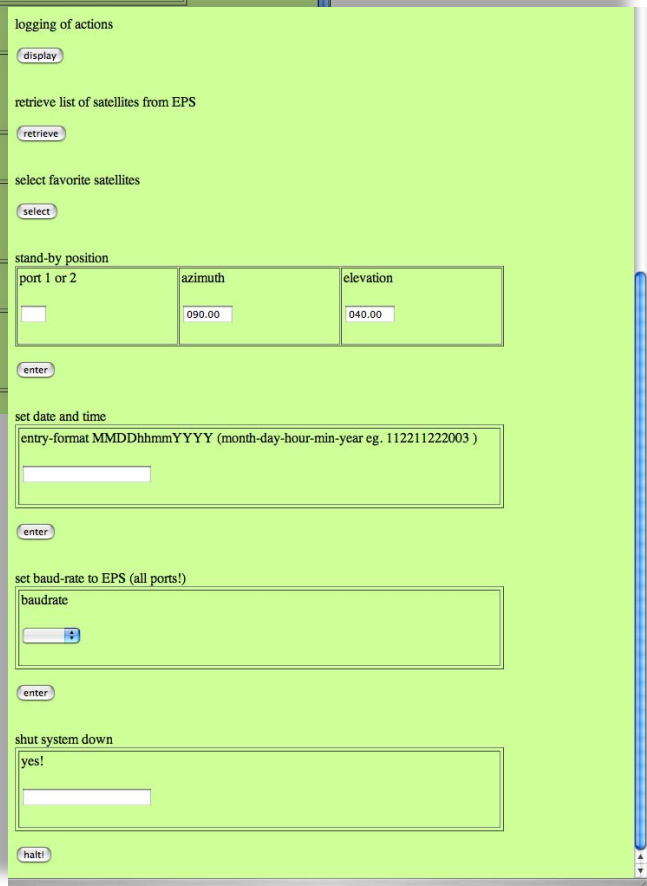
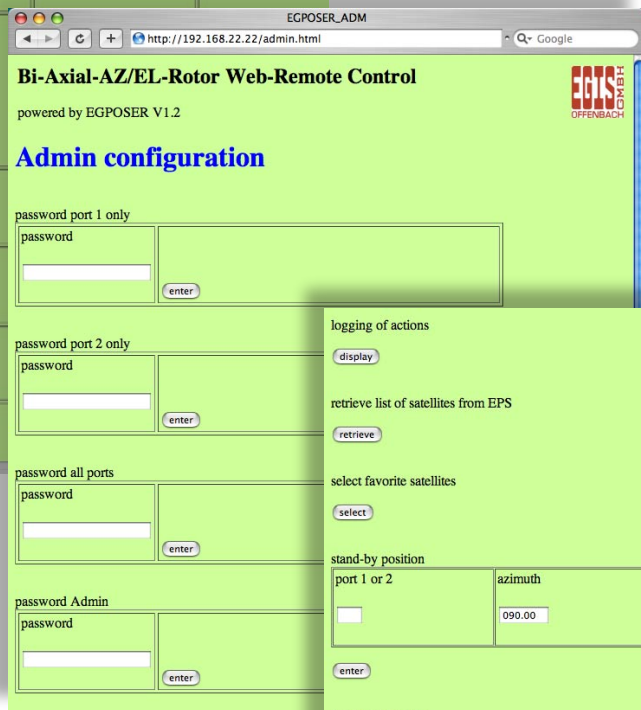
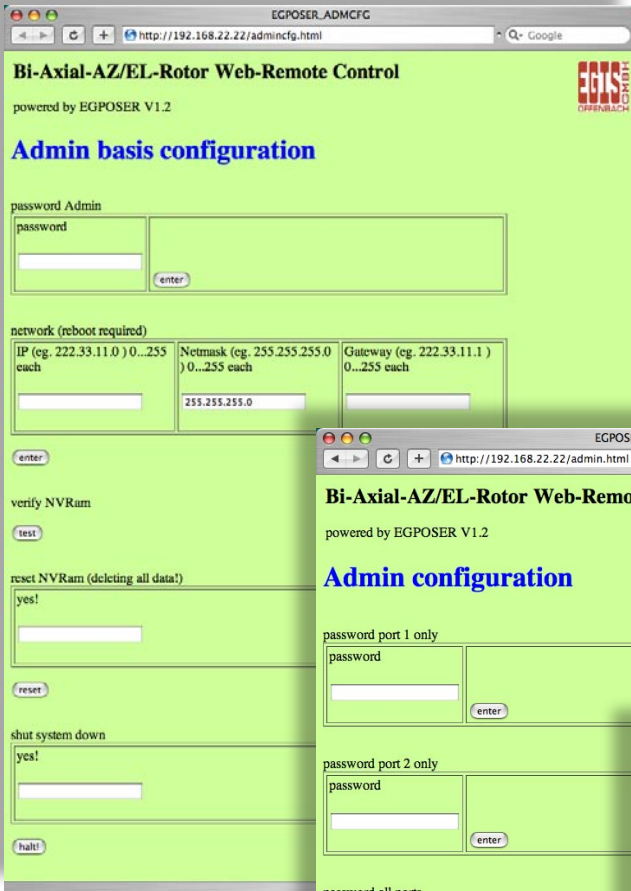
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EGPOSER II

Description



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Installation and Operating Manual

Sample of a protocol of Admin-settings: "logging of settings":

```
please look for ,clean' - this indicates success:
unmounted - OK
e2fsck 1.27 (8-Mar-2002)
/dev/hda2: clean, 22/14656 files, 1923/58464 blocks

A complete list of files indicate success:
/egis/nvram:
total 60
-rw-r--r-- 1 www-data users          20 Nov 14 17:22 apapass_admin
-rw-r--r-- 1 www-data users           5 Nov  2 02:45 baud
drwxr-xr-x 2 www-data users        1024 Nov  1 09:43 egislog
drwx----- 2 root root          12288 Sep  3 22:57 lost+found
-rw-r--r-- 1 www-data users         233 Sep  2 19:40 net.conf
-rw-r--r-- 1 www-data www-data       14 Nov 13 21:41 park0
-rw-r--r-- 1 www-data www-data       14 Nov 13 21:41 park1
-rw-r--r-- 1 www-data www-data       915 Nov 14 17:20 satfav
-rw-r--r-- 1 www-data www-data     18199 Nov 14 17:16 sat1
-rw-r--r-- 1 www-data www-data     21264 Nov 14 17:16 satlist

/egis/nvram/egislog:
total 3
-rw-r--r-- 1 www-data www-data       435 Sep 10 10:11 log09
-rw-r--r-- 1 www-data www-data     1641 Nov 14 17:29 log11
```

Sample of a protocol of user activities: "logging of actions":

```
oldest entries at the top
2006
Sun Sep 10 10:04:49 CEST 2006 AZ=090.00 error EL=040.00 error IP=192.168.22.1:49165 CH=1
Sun Sep 10 10:08:51 CEST 2006 AZ=090.00 error EL=040.00 error IP=192.168.22.1:49166 CH=1
Sun Sep 10 10:09:30 CEST 2006 SAT=Astra 1F ok IP=192.168.22.1:49168 CH=1
Sun Sep 10 10:10:11 CEST 2006 AZ=090.00 error EL=040.00 error IP=192.168.22.1:49169 CH=1
Sun Sep 10 10:11:11 CEST 2006 AZ=208.69 error EL=057.28 error IP=192.168.22.1:49171 CH=1
2006
Wed Nov  1 09:43:59 CET 2006 SAT=Astra 1F ok IP=192.168.22.2:49197 CH=1
Thu Nov  2 02:46:05 CET 2006 SAT=Astra 1E error IP=192.168.22.2:1058 CH=0
Thu Nov  2 02:47:46 CET 2006 AZ=132.02 ok EL=044.44 ok IP=192.168.22.2:1059 CH=0
Thu Nov  2 02:53:42 CET 2006 AZ=090.00 ok EL=040.00 ok IP=192.168.22.2:1065 CH=0
Thu Nov  2 15:38:09 CET 2006 AZ=111.00 ok EL=033.00 ok IP=192.168.22.2:1058 CH=0
Thu Nov  2 15:38:37 CET 2006 AZ=090.00 ok EL=040.00 ok IP=192.168.22.2:1060 CH=0
Thu Nov  2 16:28:13 CET 2006 AZ=090.00 ok EL=040.00 ok IP=192.168.22.2:1095 CH=0
Sun Nov 12 21:55:31 CET 2006 AZ=090.00 ok EL=040.00 ok IP=192.168.22.3:1106 CH=0
Sun Nov 12 21:58:28 CET 2006 AZ=166.53 ok EL=063.46 ok IP=192.168.22.3:1110 CH=0
Sun Nov 12 22:02:31 CET 2006 SAT=Astra 1C error IP=192.168.22.3:1117 CH=0
Sun Nov 12 22:03:34 CET 2006 AZ=090.00 ok EL=040.00 ok IP=192.168.22.3:1117 CH=0
Sun Nov 12 22:03:47 CET 2006 SAT=Astra 1C error IP=192.168.22.3:1119 CH=0
Sun Nov 12 22:04:54 CET 2006 AZ=166.53 ok EL=063.46 ok IP=192.168.22.3:1121 CH=0
Sun Nov 12 22:05:08 CET 2006 AZ=166.53 ok EL=063.46 ok IP=192.168.22.3:1123 CH=0
Sun Nov 12 22:07:52 CET 2006 AZ=090.00 ok EL=040.00 ok IP=192.168.22.3:1125 CH=0
Sun Nov 12 22:10:09 CET 2006 SAT=Hot Bird 1 error IP=192.168.22.3:1129 CH=0
Mon Nov 13 21:19:17 CET 2006 SAT=Thor 3 ok IP=192.168.22.3:1062 CH=0
Mon Nov 13 21:20:52 CET 2006 SAT=Hot Bird 8 >2006 ok IP=192.168.22.3:1065 CH=0
Mon Nov 13 21:21:21 CET 2006 SAT=Amos 1 ok IP=192.168.22.3:1067 CH=0
Mon Nov 13 21:47:36 CET 2006 AZ=180.00 ok EL=040.00 ok IP=192.168.22.3:1086 CH=0
Tue Nov 14 17:29:23 CET 2006 SAT=Intelsat 904 ok IP=192.168.22.3:1068 CH=0
```

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Operation by an Authorized Network-User

An arbitrary browser may be used to operate the antenna-positioner:

To access the actual user-page the user must simply enter the IP-address: <http://XXX.XXX.XXX.XXX>

- A click on "toggle ports" selects the desired antenna-rotor.

- With a click on "satellites" the favourite satellite-list is displayed. As the case may be, it is necessary to scroll up and down within the list. A satellite is selected by a click on its name. After this the user password (assigned by the network administrator) has to be entered. A click on "Go" starts the rotor and the satellite will be approached.

- If the user wishes to display the Azimuth- and elevation-angles belonging to the satellite, the key "get angles" has to be effectuated after the selection of the satellite. The angles will then be displayed in the smaller windows below. Afterwards click on "password" and "Go". "Go" will dial up the satellite.

- A satellite, which is not in the favourites-list, can be approached as follows: First select "entire sat-list", then enter your password and click on "Go".

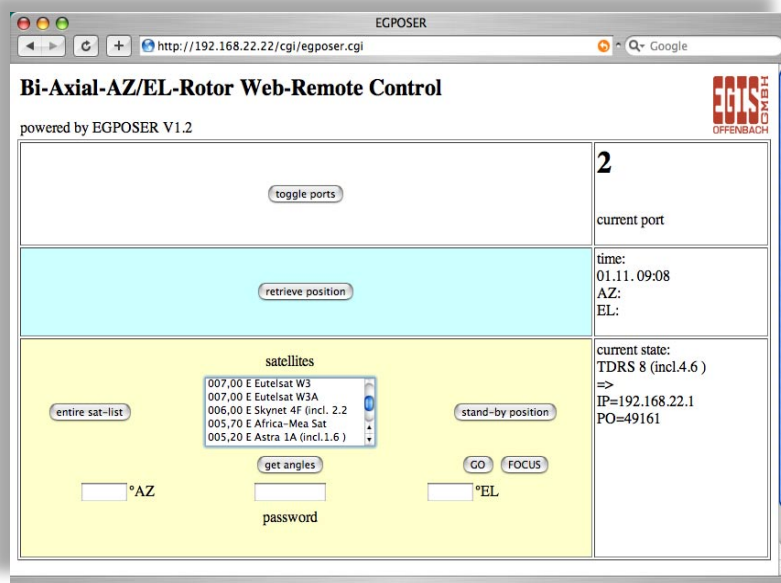
- If you want to approach a satellite which is not to be found in any of the two lists, you will have to enter AZimuth- and Elevation-angle of this satellite. Then click on "password" and "Go". With "Go" this antenna position is dialled up.

- "park position": A click on "park position", password and then on "Go" the position preset by the administrator can be approached.

- For applications such as directional radio lines/Micro Wave numeric angles can be inserted into special input-fields and can be approached afterwards with password and "Go".

- By hitting the key "retrieve position" die current alignment of the rotor can be scanned in angle grades. The angles are displayed in the corresponding status field.

- "FOCUS": By hitting the key "FOCUS", password and "Go" can initiated an automatical fieldstrength-depending position improvement. Now a sequential search is started from both axes to obtain a better antenna field-strength.



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