

MANUAL

for

Monitoring & Control

Antenna Control Unit

HACU

Date: 14.02.2012		Rev.: B



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CE Declaration of Conformity

MANUFACTURER	Hiltron GmbH Emil-Rathenau-Strasse 1, D 71522 Backnang
MODEL NUMBER	HMAM
DESCRIPTION	Hiltron Controller System
YEAR WHICH THE CE-MARK WAS AFFIXED	2009
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Helmut Hayer
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Monitoring & Control via Web-Interface

1 Web-Interface

1.1 Prerequisites

The Antenna Heater System can be monitored and controlled via its Web interface. The following section describes this interface in detail.

In order to use the Web interface, the following prerequisites must be met:

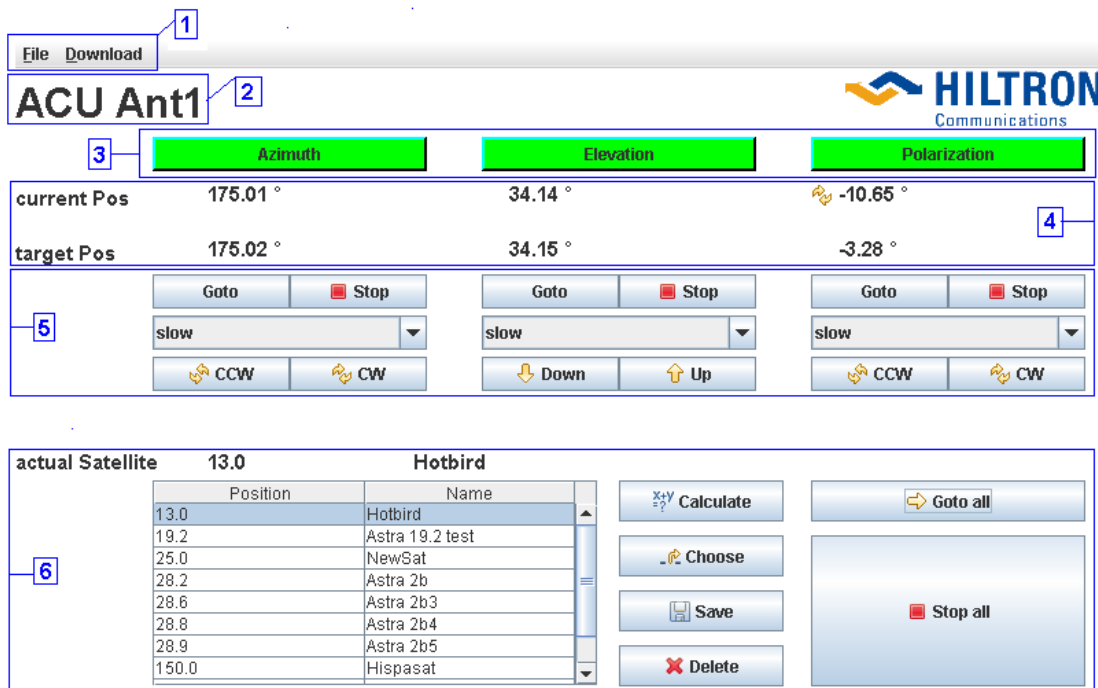
- A PC directly connected to the controller or via an IP network.
The default IP address is given in chapter 4.3 "Menu: Download / HCS Tool"
- A standard web browser (e.g. Internet Explorer version 6 or higher) installed on this PC
- Java Runtime Engine (JRE version 1.5 or higher) installed (can be downloaded from www.java.com)
- Appropriate IP settings (please refer to chapter 4.3)

The Web interface is started by typing the correct IP address into the Web browser.

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1.2 View on the Web Interface.

The figure below shows the top view of the web interface.



The screenshot displays the top view of the web interface. It features a navigation menu (1) with 'File' and 'Download' options. The main title is 'ACU Ant1' (2). Below this, there are three green buttons for 'Azimuth', 'Elevation', and 'Polarization' (3). The current and target positions are shown in a table (4):

current Pos	175.01 °	34.14 °	-10.65 °
target Pos	175.02 °	34.15 °	-3.28 °

Below the table are control buttons for 'Goto' and 'Stop' (5) for each parameter, along with speed settings (slow) and directional controls (CCW, CW, Down, Up). At the bottom, there is a satellite selection table (6) for 'actual Satellite 13.0 Hotbird':

Position	Name
13.0	Hotbird
19.2	Astra 19.2 test
25.0	NewSat
28.2	Astra 2b
28.6	Astra 2b3
28.8	Astra 2b4
28.9	Astra 2b5
150.0	Hispasat

Additional controls include 'Calculate', 'Choose', 'Save', 'Delete', 'Goto all', and 'Stop all' buttons.

1.3 Functional Blocks:

The table below gives a short overview on the elements of Web interface, summarizes the items to be set, monitored and controlled and gives a reference to the chapter the items are described.

Item No.	Item	Elements	Reference chapter
1	Menu	<ul style="list-style-type: none"> Open Logger SNMP Mib-File HCS Tool Help (Documentation) 	4
2	Equipment name (Button function)	<ul style="list-style-type: none"> Equipment name setting Access to parameters (Security). SNMP parameter setting Logging time base reference setting Geographical coordinates setting 	6

Item No.	Item	Elements	Reference chapter
3	Buttons for drive control: Azimuth Elevation Polarization	<ul style="list-style-type: none"> Module – Control Azimuth <ul style="list-style-type: none"> - Software Limits - Limits for Goto Steps - Calibrate Angle - Speed Steps - Motor Nameplate - Motor Adjustment Module – Control Elevation <ul style="list-style-type: none"> - Software Limits - Limits for Goto Steps - Calibrate Angle - Speed Steps - Motor Nameplate - Motor Adjustment Module – Control Polarization <ul style="list-style-type: none"> - Software Limits - Limits for Goto Steps - Calibrate Angle - Speed Steps 	5 5 6
4	Indications for positions: Azimuth Elevation Polarization	<ul style="list-style-type: none"> Indication of current position Indication of target position 	(2, 3)
5	Buttons for manual operation	<ul style="list-style-type: none"> Selection of speed (not always on Polarization) Selection of pos. direction (up/down, CCW/CW) and control for AZ, EL & POL antenna positioning. 	2
6	Target memory operation (automatic positioning)	<ul style="list-style-type: none"> Selection of memorized satellite positioning calculation of new satellite positioning data. edit and safe function start / stop operation 	3

2 Manual operation

Operating the ACU is mostly self-explanatory. Nevertheless, the 'Operation' chapters describes the meaning of each alterable parameter and how to operate the equipment.

2.1 Elements & Operation

To operate the antenna control manually only few element from the Web-interface are required and described briefly below.

current Pos	155.41 °	31.37 °	-5.28 °	1						
target Pos	155.40 °	31.36 °	-5.29 °	2						
3	<table border="1"> <tr> <td>Goto</td> <td>Stop</td> <td>Goto</td> <td>Stop</td> <td>Goto</td> <td>Stop</td> </tr> </table>			Goto	Stop	Goto	Stop	Goto	Stop	
Goto	Stop	Goto	Stop	Goto	Stop					
4	<table border="1"> <tr> <td>slow</td> <td>slow</td> <td>slow</td> <td></td> <td></td> <td></td> </tr> </table>			slow	slow	slow				
slow	slow	slow								
5	<table border="1"> <tr> <td>CCW</td> <td>CW</td> <td>Down</td> <td>Up</td> <td>CCW</td> <td>CW</td> </tr> </table>			CCW	CW	Down	Up	CCW	CW	
CCW	CW	Down	Up	CCW	CW					

1 In this line the actual antenna pointing angles for Azimuth, Elevation and Polarization are displayed as read from the position sensors.

2 In this line the target antenna pointing angles for Azimuth, Elevation and Polarization are displayed. Clicking on the indicated value for the target position (AZ; EL or POS) a window is opening and a new target value can be entered.

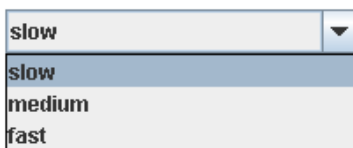


Input dialog box showing: Please, type in new Angle for Azimuth. The input field contains 155.40. Buttons: OK, Cancel.

After confirmation with OK the new target value is entered

3 With "Goto" (AZ, EL or POL) the antenna position will change to the new target value within the position accuracy and the stop threshold. The button "Stop" stops immediately the positioning process.

4 The speed for the manual positioning for Azimuth, Elevation and Polarization can be selected in the combo box from slow to fast.



Dropdown menu showing speed options: slow, slow, medium, fast.

5 The buttons "CW", "CCW" and "UP", "Down" can be used for manual positioning. They will change immediately the current position for Azimuth, Elevation or Polarization which is indicated in the line of actual antenna pointing angles.

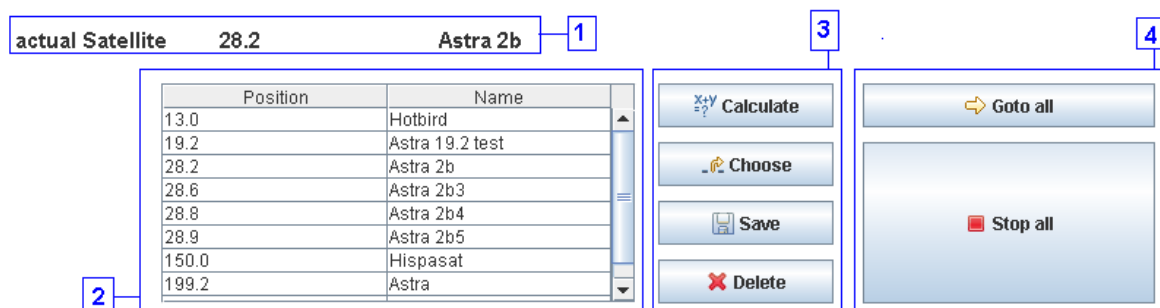
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3 Target Memory Operation

Below the measured angles the ACU displays the target values of the antenna pointing. The target values are the angles which have been commanded to the ACU. Now the target values can be assigned to the name of the satellite where the antenna is pointing to.

3.1 Elements & Operation

To operate the antenna via a list with memorized targets some additional elements in the Web-interface are required and described briefly below.



The screenshot shows a web interface for satellite pointing. At the top, there is a status bar with 'actual Satellite 28.2' and 'Astra 2b'. Below this is a table with columns 'Position' and 'Name'. The table contains several rows of satellite data. To the right of the table are four buttons: 'Calculate', 'Choose', 'Save', and 'Delete'. Further right are two more buttons: 'Goto all' and 'Stop all'.

Position	Name
13.0	Hotbird
19.2	Astra 19.2 test
28.2	Astra 2b
28.6	Astra 2b3
28.8	Astra 2b4
28.9	Astra 2b5
150.0	Hispasat
199.2	Astra

- 1** In this line the actual satellite with name and orbit position is out of the list of satellites is displayed. The Azimuth, Elevation and Polarization values are displayed under target position.

actual Satellite is displayed when the **current position** of antenna pointing is within the target range ($\pm 0.25^\circ$) with respect to the **target position**.

selected Satellite is displayed when the **current position** of antenna pointing is outside the target range with respect to the **target position**.

- 2** In the list there are all calculated and pointed satellites. All data (satellite names, sat. position, calculated and saved Azimuth. Elevation and Polarization values for antenna pointing are filed up in a database. Only the key figures Satellite name and position is shown in the list.

- 3** The buttons (Calculate, Choose, Save and Delete) are required to point a new satellite, to create a new data set for pointing and edit an available data set.



confirms the selected satellite out of the satellite list. The available Azimuth, Elevation and Polarization values will be entered in the display for target positions.

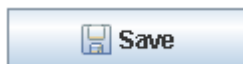


opens the Input-window for calculation of antenna pointing data.



Put in a new satellite position and confirm with OK. On base of the location coordinates (latitude and longitude are filed) the program will calculate the Azimuth, Elevation and Polarization values. This values will be entered in the **target position** display.

Now it is possible to optimize the performance of pointing.



After optimization the new antenna pointing together with the satellite position and name can be saved in the database.



The new entry will be visible in the list of pointed satellites.



removes an entry in the list of pointed satellites. Select an entry for an antenna pointing and click on the button delete. The pointing values, the satellite position and the name will be removed from the database.

4



The button starts the pointing process for Azimuth, Elevation and Polarization in parallel.



The button stops immediately the pointing process.

3.2 Access to the System

To manage the controller via Web-interface there are three different user access settings:

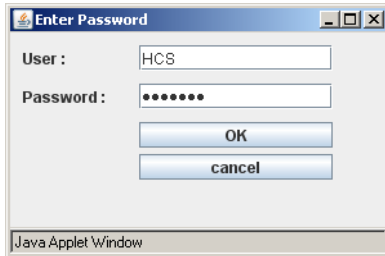
- a “default” access mode
- a “no password” access mode
- a “user level” access mode

More detailed information you will find in paragraph 6.xx System Control.

The controller is configured in “default” access mode when it is delivered.

When you want to change a parameter first click on the button "Control" and you will be asked for a user name and a password, which are the same for all parameters and which you only have to enter once per open web interface. This protects the system against unauthorized parameter changes.

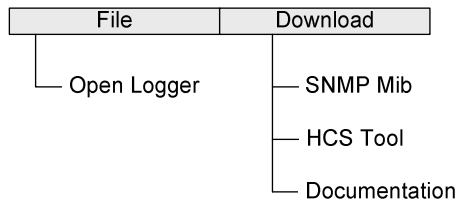
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Enter the default setting for access

User: **HCS**
Password: **hiltron**

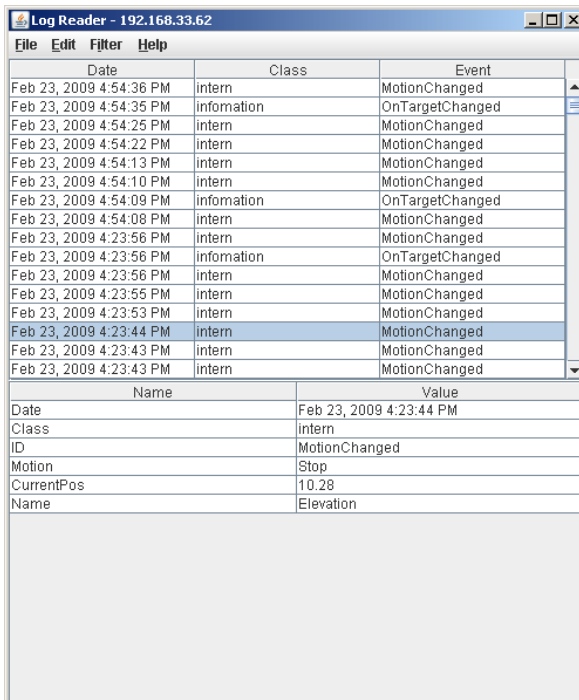
4 Menu – Functions



The menu consists of 2 main items File and Download. The main menu is split in directories according Fig. 2-1

Fig. 2-1

4.1 File / Open Logger



Date	Class	Event
Feb 23, 2009 4:54:36 PM	intern	MotionChanged
Feb 23, 2009 4:54:35 PM	information	OnTargetChanged
Feb 23, 2009 4:54:26 PM	intern	MotionChanged
Feb 23, 2009 4:54:22 PM	intern	MotionChanged
Feb 23, 2009 4:54:13 PM	intern	MotionChanged
Feb 23, 2009 4:54:10 PM	intern	MotionChanged
Feb 23, 2009 4:54:09 PM	information	OnTargetChanged
Feb 23, 2009 4:54:08 PM	intern	MotionChanged
Feb 23, 2009 4:23:56 PM	intern	MotionChanged
Feb 23, 2009 4:23:56 PM	information	OnTargetChanged
Feb 23, 2009 4:23:56 PM	intern	MotionChanged
Feb 23, 2009 4:23:55 PM	intern	MotionChanged
Feb 23, 2009 4:23:53 PM	intern	MotionChanged
Feb 23, 2009 4:23:44 PM	intern	MotionChanged
Feb 23, 2009 4:23:43 PM	intern	MotionChanged
Feb 23, 2009 4:23:43 PM	intern	MotionChanged

Name	Value
Date	Feb 23, 2009 4:23:44 PM
Class	intern
ID	MotionChanged
Motion	Stop
CurrentPos	10.28
Name	Elevation

When in the menu “file” the directory “open Logger “ is selected a table with all events with their classification and a time stamp is depicted. When a line is selected in the area below the table more details on the event are given.

In the table there are the menu items

- File
- Edit
- Filter (if a line is selected)
- Help

The menu item “File” with the option “Print” allow the printout of the Log-file. (all other options are not active and cannot be used)

The menu item “Edit” enables with the option “Refresh” an refresh of the contents of the list.

The menu item “Help” informs about the Version:

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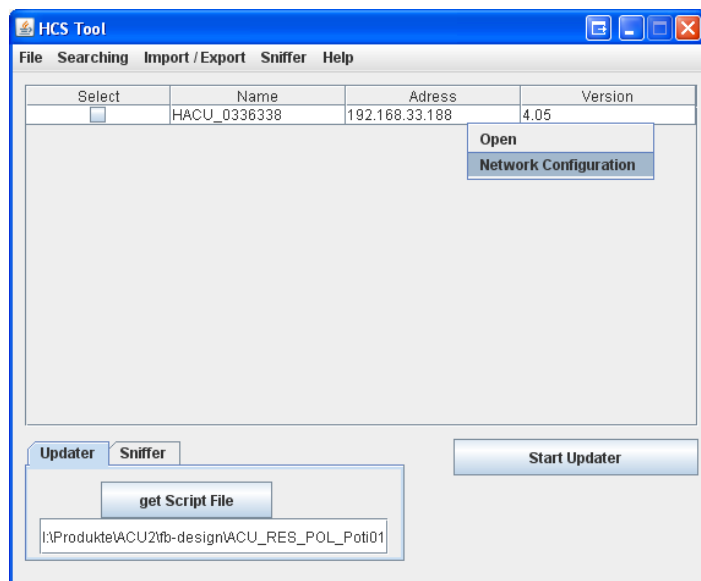
4.2 Download / SNMP Mib

When in the menu “Download” the directory “SNMP Mib “ is selected in an internet explorer the SNMP Mib – File is shown and can be downloaded.

4.3 Download / HCS Tool

Per default every HILTRON HMAM Control Unit is configured and delivered with following addresses:

IP: 192.168.33.181
Network Mask: 255.255.255.0
Gateway: 192.168.33.2



With the menu item **Download / HCS Tool** an extra tool is loaded which allows to reconfigure the IP address.

A table with all tin the network connected equipment with information on their IP addresses including the Hiltron Deicing Control Unit is shown.

Select in the table the equipment “ACU_ xxxx” (Hiltron Antenna Control Unit) and an additional window is opened which allows to set the required addressed.






Name	HACU_0336338
Serial Number	015AF
DHCP	<input type="checkbox"/>
IP	192.168.33.188
Network Mask	255.255.255.0
Gateway	192.168.33.2
<input type="button" value="Config"/> <input type="button" value="Cancel"/>	

4.4 Download / Documentation

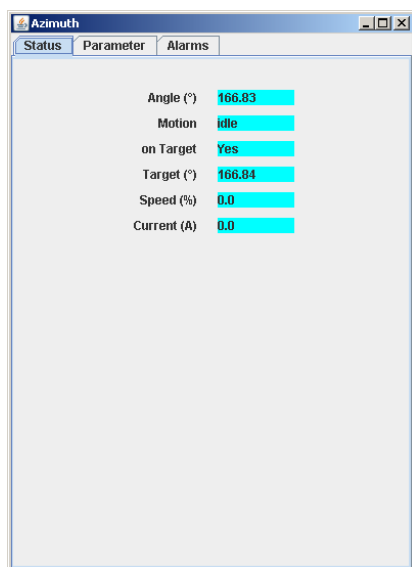
When in the menu “Download” the directory “Documentation “ is selected the operator is guided to a collection of available documentation on the Hiltron Antenna Control Unit.

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5 Module – Control Azimuth, Elevation & Polarization

The button   respectively  opens the interface for monitoring and control of parameters for the azimuth, elevation or polarization drive. The colour of the button informs about the status of the drive. (Green: OK, red: Alarm).

5.1 Status Tab



Clicking on the buttons mentioned above a window with 3 tabs (Status, Parameter and Alarm) is opening.

The status tab show the status of the six most important parameters for the azimuth resp. elevation control:

Angle [°]: current position

Motion: idle,
 for azimuth: CW or CCW, (fast / normal / slow)
 for elevation: UP or DOWN, (fast / normal / slow)
 for polarization: CW or CCW, (fast / normal / slow)

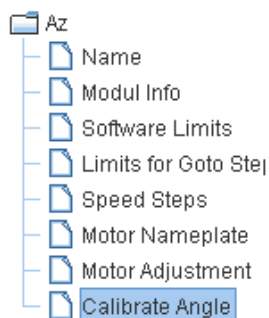
Current [A]: present current for azimuth or elevation drive

on Target [°]: Yes / No

Speed [%]: 0100%

5.2 Parameter Tab

Selecting the tab **Parameter** the available parameter groups are presented and listed below:



Please note:

The parameter group can consist of at least one or more parameters. The system is protected against unauthorized parameter changes. When the operator wants to change a parameter he will be asked for User name and a password.

5.2.1 Name

When **Name** is selected the *name* of the antenna control module is displayed.

Name of Azimuth	
Name	Azimuth

The name can be changed by overwriting. With control. the changes are active. This “name” is shown on the control button “Azimuth”

5.2.2 Module Info

The parameter group **Module Info** gives information on applied software (program version) and the unique card ID.

Modul Info of Azimuth	
Firmware Version	1.00
Software Version	0.01
Card ID	336204

Modul Info of Elevation	
Firmware Version	1.00
Software Version	0.01
Card ID	336205

The parameters cannot be changed by the operator

5.2.3 Software Limits

The parameter group “Software Limits” comprises three parameters:

Software Limits of Azimuth	
Actual Angle(°)	166.84
upper Limit	260.00
lower Limit	100.00

- Actual Angle [°]:** present measured value (Resolver) – read only
Upper Limit [°]: defines the upper limit of the tolerance window – soft limit
Lower Limit [°]: defines the lower limit of the tolerance window – soft limit

The azimuth resp. elevation angle control are active all the time. When the measured current is within the lower and upper soft limit no alarm is detected and indicated. Any measured value below the lower threshold or higher than the upper threshold will provoke an alarm message and will stop all the drives.

This software limit (Upper limit / Lower limit) prevents the ACU from running the antenna to the limit position under normal conditions.

5.2.4 Limits for Goto Steps

The ACU controls a motor at three speeds for azimuth and elevation control. If the actual position is far away from the target value, the ACU commands the motor to use the fast speed. Coming closer to the target position the speed is lowered to the middle speed. Being very close to the target the speed is lowered to the (minimum) slow speed. Reaching the target within the given tolerances (Target range) the drive is stopped. This prevents the antenna from oscillating around the target value.

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The figure below show the moving profile of the Axis in Goto.

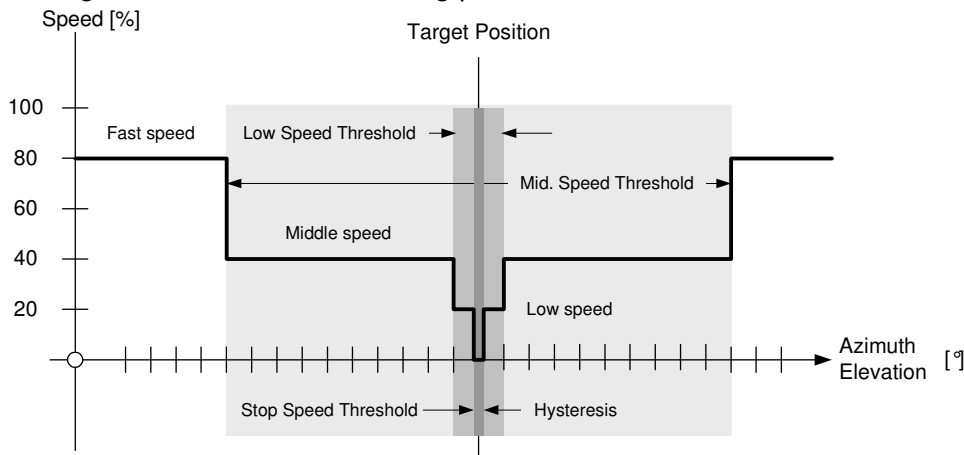
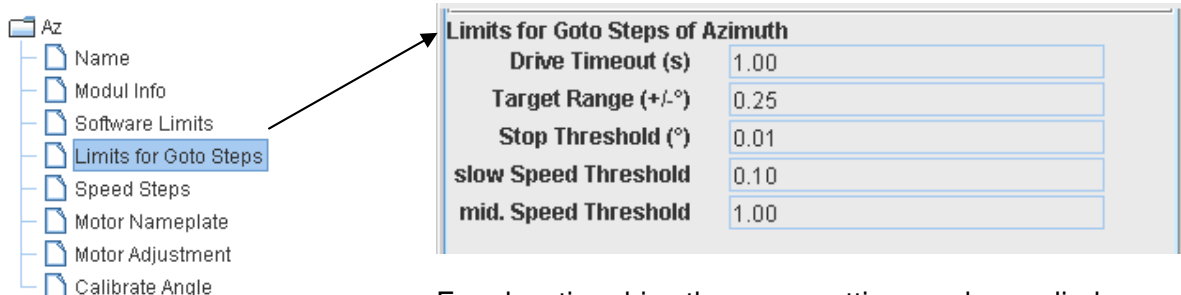


Fig.: 5-1

The parameter group “Limits for Goto Steps” comprises following parameters:



For elevation drive the same setting can be applied.

Drive Timeout [s]

The parameter defines timeout for a drive. In case a pointing angle (azimuth, elevation or polarization) is not moving in the required direction within the configured timeout time an alarm message is generated and the drive is stopped on safety reasons.

Target Range [+/-°]

The parameter defines the tolerance range of pointing angels (azimuth, elevation or polarization) of the antenna which clearly identifies a pointing to a dedicated satellite out of the list of selectable satellites.

A typical value is +/-0.25°.

Mid Speed Threshold [+/-°]

The ACU controls a motor at three speeds. If the actual position is far away from the target value, the ACU commands the motor to use the fast speed. Once the antenna comes close to the target value, the ACU slows down to the mid speed. This threshold is defined by the parameter “mid Speed Threshold”.

A typical value is +/-1°.

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Low Speed Threshold [+/- °] When the ACU controls the antenna with mid speed into the target position and comes very close to the target value, the ACU slows down again to the slowest speed. This threshold is defined by the parameter “slow Speed Threshold”.

A typical value is +/-0.1 °.

Stop Threshold [+/- 0.01 °] Pointing hysteresis: The ACU performs the motor control as a closed loop: if the angle reading and the target value differ, the motor is switched on to compensate the difference. If the difference is less than the hysteresis value, the ACU leaves the motor switched off. This prevents the antenna from oscillating around the target value.

A typical value is +/-0.01 °.

(for variable speed only)

5.2.5 Speed Steps

Speed Steps of Azimuth	
slow Speed (%)	20.0
middle Speed (%)	40.0
fast Speed (%)	80.0

For elevation drive the same setting can be applied.

The speeds are referred to the max. speed available (and adjusted) on the on the frequency converters for the motor drive for Azimuth.

5.2.6 Motor Nameplate

(AC-Inverter only)

Clicking on the parameter group a list of parameters are presented which should be identical to the data to be found on the motor nameplate. Therefore the parameter group has been called “Motor Nameplate”.

These parameters are used to configure without additional effort directly the AC variable motor drive (AC drive inverter). Therefore a correct setting of these parameters is very important.

Motor Nameplate of Azimuth	
Motor Voltage	230.0
Base Frequency	50.0
Motor Current	4.00
Power (kW)	0.75
RPM	1400.0
Power Factor	0.70

Motor Nameplate of Elevation	
Motor Voltage	230.0
Base Frequency	50.0
Motor Current	4.00
Power (kW)	0.75
RPM	1400.0
Power Factor	0.70

Example for motor name plate for azimuth control.

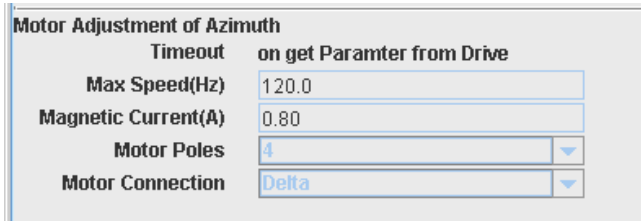
Please note:

The parameter for elevation motor can be different

5.2.7 Motor Adjustment

(AC-Inverter only)

Additionally to the parameter from the Motor Nameplate furthermore to configure the AC variable motor drive are required. Clicking on the parameter group a list of parameters are presented:



Motor Adjustment of Azimuth

Timeout	on get Paramter from Drive
Max Speed(Hz)	120.0
Magnetic Current(A)	0.80
Motor Poles	4
Motor Connection	Delta

Timeout:

The status of the drive control is indicated. (e.g. on get Parameter from Drive)

Max Speed:

max. speed / rotating field of electric motor

Magnetic Current:

(Data sheet of used electric motor)

Motor Poles:

Setting of poles: from 2 to 12

Motor Connection:

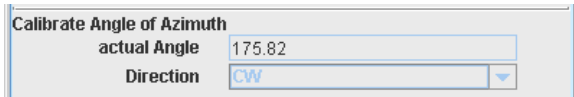
Configuration can be set either of star or to delta configuration.

5.2.8 Calibrate Angle

With the help of this parameter the measured and indicated value for azimuth, elevation resp. polarization position can be calibrated.

The measuring and setting range is -90° to $+270^{\circ}$.

With the setting of "Direction" the direction CW or CCW can be selected.



Calibrate Angle of Azimuth

actual Angle	175.82
Direction	CW

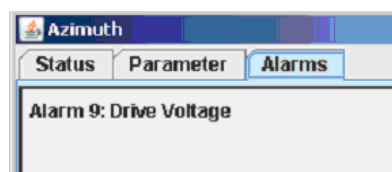
Similar to resolver for azimuth the elevation resolver can be calibrated.

Point the antenna to a know satellite and optimize the position. Verify if the setting of the geographical coordinates (see chapter 7.1.9) is correct. Calculate the target position. Set the actual angle for azimuth resp. elevation to the target value. The azimuth resp. elevation resolver is now calibrated.

5.3 The Alarm Tab

In the alarms tab the alarms - if any - related to the function of the module is displayed.

Example for an Azimuth drive alarm



In case of an alarm the button to open the Azimuth resp. elevation drive relevant window is colored red.



5.3.1 List of possible alarms

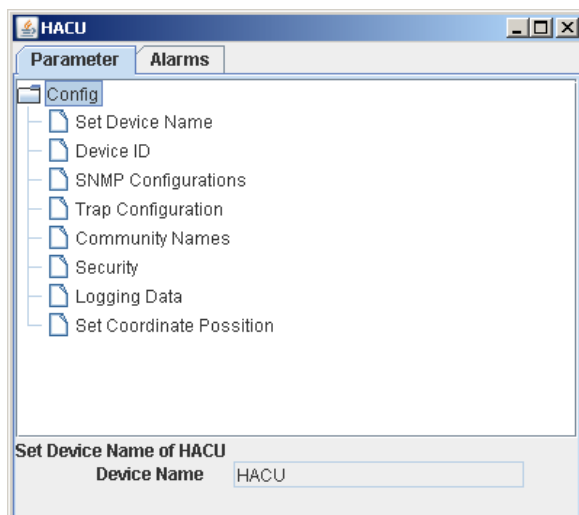
Alarm	Description
Alarm 0:	CW Software Limit
Alarm 1:	CW Hardware Limit
Alarm 2:	CCW Software Limit
Alarm 3:	CCW Hardware Limit
Alarm 4:	Motor drive is not ready => The motor drive is not activated
Alarm 8:	Emergency Stop => The emergency Stop switch is active.
Alarm 9:	Drive Voltage => The supply to the motor (interface) is missing (e.g. The cable is not connected.)
Alarm 10:	Resolver Signal lost => The resolver is not connected. The antenna can be pointed only manually. Take care: The software limits are not active.
Alarm 11:	Maintenance Mode => A direct manual control on motor drive (FU) will cause the alarm message.
Alarm 13:	Drive fail => Timeout (in automatic mode) In case a pointing angle (azimuth, elevation or polarization) is not moving in the required direction within the configured timeout time an alarm is generated. => The automatic control is stopped. => A reset of the alarm is required.
Alarm 14:	Communication to Drive fail => The communication to the motor drive interface (e.g.: FU) is failing
Alarm 15:	Communication to ACU fail => No communication to the system ACU.RES

6 Module – System, SNMP & Security



The active headline (e.g. ACU Ant1) opens the interface for monitoring and control of parameters for the System, SNMP and Security parameter setting.

6.1 The Parameter Tab



Clicking on the “active Headline” button the window with 2 tabs (Parameter and Alarms) is opening.

In the parameter tab you can set and edit SNMP and Security related parameters and set the geographical coordinates for antenna position calculation.

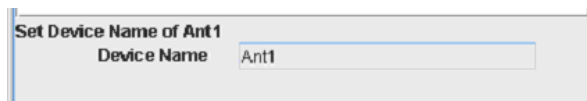
The parameters are filed in parameter groups.


Please note:

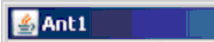
The parameter group can consist of at least one or more parameters. The system is protected against unauthorized parameter changes. When the operator want to change a parameter he will be asked for User name and a password.

6.1.1 Set Device Name

When **Set Device Name** is selected the *name* of the antenna control Unit ACU is displayed.



The name can be changed by overwriting. With control.  the changes are active. This “name” is shown in the main GUI as a substitute of ACU **xxxxxx** of the headline (see Fig. Above)

Furthermore it is the general name of the system windows. 

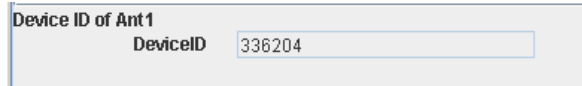
This parameter “Device Name” is used for SNMP communication under the node name **sysName** with OID (.1.3.6.1.2.1.1.5.0).

When traps are sent this name will be included in the trap message

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6.1.2 Device ID

The parameter (group) **Device ID** informs about the unique equipment ID.



The parameters cannot be changed by the operator

6.1.3 SNMP Configurations

In the parameter group “SNMP Configuration” additional information like system description, location and contact address are managed. This parameter are sent in the trap message in case of a malfunction or change of setting. Therefore they are important.

Example:



Explanation of parameters

Parameter	Description
System Description	Input for system information and is present under the node name sysDesc with the OID (.1.3.6.1.2.1.1.1.0) and is sent in every SNMP trap
Location	Input for information on location of the equipment and is present under the node name sysLocation with the OID (.1.3.6.1.2.1.1.6.0). The information is sent in every SNMP trap.
Contact	Input for contact information (address). e.g. in case of malfunctions It is located in the SNMP Node sysContact with the OID (.1.3.6.1.2.1.1.4.0). The information is sent in every SNMP trap.

6.1.4 Trap Configuration

Clicking on the parameter group folder the top parameter setting becomes visible.



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Trap Version:

The sending of traps can be disabled. With the selection of the SNMP-version the traps management is enabled.

There are three settings:

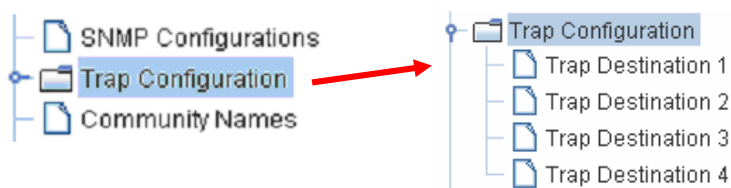
- disable
- SNMPv1
- SNMPv2

Authentication Traps:

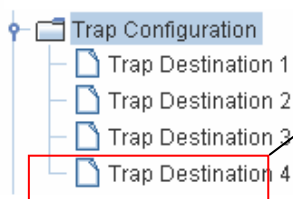
When **Authentication Traps** function is enabled an additional warning trap message is generated when a wrong community name is set.

6.1.5 Trap Configuration / Destinations

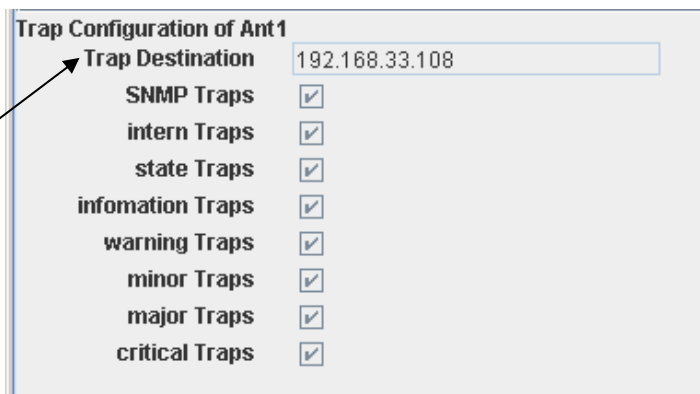
Opening the “Trap Configuration” folder up to four groups “Trap Destination 1 to 4” are visible. Four different trap destinations (with IP-address and additional trap property settings) with can be configured.



Example for trap destination 4



Make the choice what kind / level of traps should be sent to the selected destination.



Trap / Type	Description
Trap Destination	IP Address of the trap receiver
SNMP Traps	Enable / disable the sending of traps
Intern traps	Internal traps are enabled or disabled
State traps	Any change of state in the control parameters will be sent by a trap

Trap / Type	Description
Information trap	Any “alarm” message with the lowest level “information” will be sent by a trap
Warning trap	Alarms with the level “warning” will be sent by a trap
Minor trap	Alarms with the level “minor” will be sent by a trap
Major trap	Alarms with the level “major” will be sent by a trap
Critical trap	Alarms with the level “critical” will be sent by a trap

6.1.6 Community Names



The parameter group “Community Names” enables the setting of community names for different SNMP user.

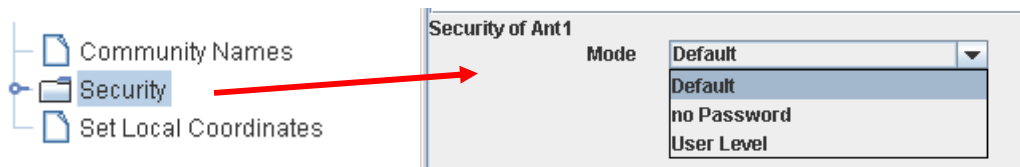
Explanation of parameters

Parameter	Description
Write Community	Definition of the community for setting of parameters.
Read Community	Definition of the community for getting of parameters.
Trap Community	The Trap Community will only sent by the traps.

The Community names should fit exactly to the names used in the system. Please mind capital and small letters.

6.1.7 Security

The parameter group “Security” allows to set different user access rights for managing the controller.



With the parameters **mode** the operator can choose between tree different access options.

Default:

When "Default" is selected and set the operator has to enter the default setting

User: **HCS**

Password: **hiltron**

when he wants to change any parameter.


No Password:

When "no password" is selected there is no registration necessary if the want to change any setting of parameters. Everybody is allowed to change parameters without restrictions.

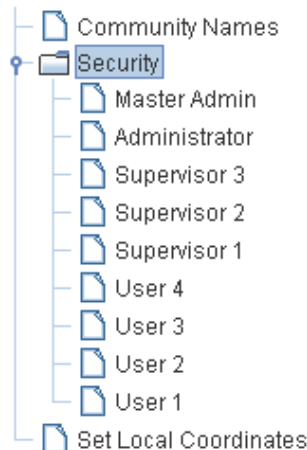
User Level:

When "User Level" is selected the administrator can assign the user rights in three categories.

- User,
- Supervisor,
- Administrator

User Level Management

Clicking on the "Security" folder further



parameter groups for the definition of access rights are opened.

- To change any user rights the operator should have administrator rights or
- if restricted changes in user rights are required only the user should have at least rights which are higher in level than the level he want to change.

Types of User
User:

The category "user" allows the user only operational activities, e.g. to configure a switch, switch on or off.

Supervisor:

The category "Supervisor" allows the user to edit parameter limits.

Administrator:

The category "administrator" allows the operator high level work, e.g. to configure modules.

Master Admin:

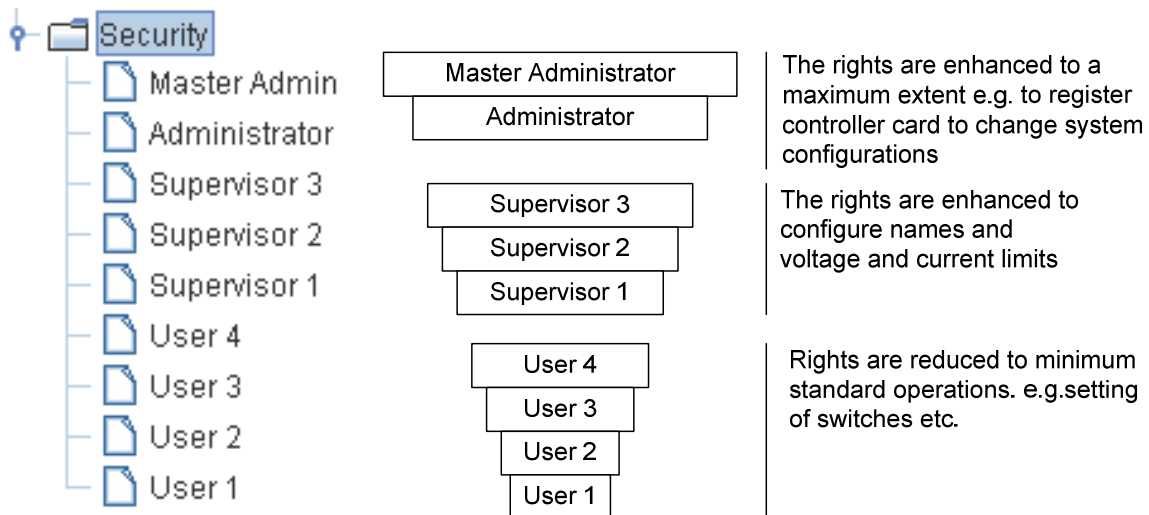
The category "administrator" allows the operator high level work, e.g. to configure modules

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Overview on different security levels

According to the hierarchical structure of the user rights the user 4 posses more rights than user 3, e.g. the user 4 can change the passwords of user 3, 2 and 1 but not vice versa.

The next figure show the hierarchical structure.



How to set a User Level?

Security of System Name
Mode

User Level
Default
no Password
User Level

Select the parameter group "Security" and choose "User Level".

Administrator of System Name
User Maintenance
Password

Choose below the parameter group **Security** the group with the required access level. e.g. **Administrator**.

Put in the user(name) and the password.
The access right now configured. The user is logged in on the administrator level.

Supervisor 1 of System Name
User Control
Password

Choose below the parameter group **Security** the group with the required access level. e.g. **Supervisor**.

Put in the user(name) and the password.
The access right now configured. The user is logged in on the supervisor level.

User 1 of System Name
 User
 Password

Choose below the parameter group **Security** the group with the required access level. e.g. **User**.

Put in the user(name) and the password.
 The access right now configured. The user is logged in on the user level.

How to log in?

User 1 of System Name
 User
 Password

Choose below the parameter group **Security** the group with the required access level. e.g. **User**.

Put in the user(name) and the password.
 The user is logged in on the user level.

Contingency Solution

In case the passwords are lost/forgotten or generally there is no access to manage the controller, a master password could be generated with the help of the ID of the module.
 Please contact: **support@hiltron.de**

6.1.8 Logging Data

In order to synchronize the event logger's database a Network Time Protocol NTP is used. The information for the time stamp can be obtained via the connected network either from a NTP Server (from Web) or a locally connected computer using its internal time reference.

Logging Data of HACU
 NTP Server IP

Put in the NTP Server IP using either an external network address or the IP address of a computer or NTP Server.

6.1.9 Set Local Coordinates

The parameter group "Set Local Coordinates" comprises two parameters

- the geodetic latitude and
- the geodetic longitude

of the antenna

Set Local Coordinates of Ant1

Latitude	<input type="text" value="48.57"/>
Longitude	<input type="text" value="9.26"/>

For a precise orbit to pointing calculation this values should be entered with 0.01 ° accuracy.

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