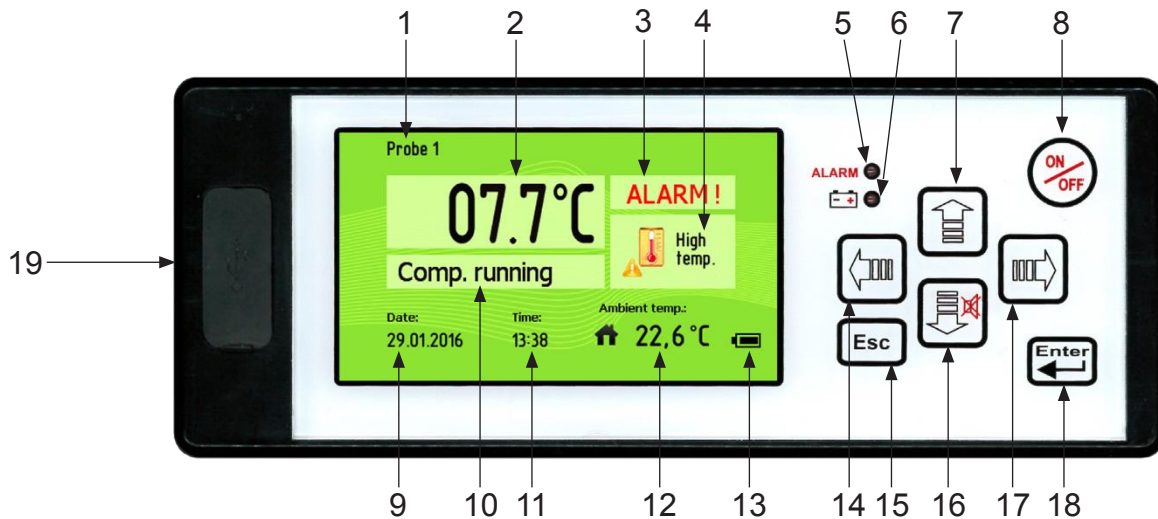


# OPERATING INSTRUCTIONS

G214 Software - Version 4

ARCTIKO

## Control Panel (G-214 Controller)



### Control Panel Description

1. Probe shown in Main screen
2. Probe temperature
3. Alarm indicator
4. Status/alarm indicator
5. Alarm LED
6. Power failure LED
7. Up button (Press to show temperature graph)
8. On/Off button
9. Date
10. Compressor status
11. Time
12. Ambient temperature
13. Battery indicator
14. Left button
15. Esc button (Hold to return to main screen)
16. Down button (Mute alarm)
17. Right button
18. Enter button (Access the menu, Accept)
19. USB Connection (Log download and software update)

Use the up and down buttons to change values in the menus. Make sure to select OK to apply the settings otherwise, the changes will not be saved!

## Settings Icons



Custom Settings  
(Page 4)



Advanced Settings  
(Page 5)



Advanced Service Settings (Only  
accessible by Arctiko Staff)



Status  
(Page 7)



Change/Reset password  
(Page 7)

## Custom Settings



Custom Settings



Enter password

Enter password to access Custom Settings.  
(Default password is "0000")



Setpoints

Change temperature set point.



Alarm Settings

Change settings for alarms and log



Select language

Select menu language  
(English, German, Russian,  
French, Spanish, Swedish,  
Turkish or Polish)



Light

Set whether light always is On,  
On when door is open or On  
when door is closed.



Probe at Main Screen

Select temperature probe shown  
on Main Screen.  
(Extra probes optional depending  
on model)



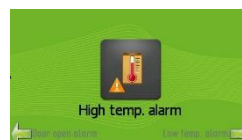
Temp. alarm delay

Change the delay before a high  
or low temperature alarm is  
activated, after exceeding the  
allowed limits. See more page 7



Door open alarm

Enable or disable  
Door open alarm.



High temp. alarm

Change the setting of the  
highest allowed temperature  
before activating the High  
temperature alarm.



Low temp. alarm

Change the setting of the  
lowest allowed temperature  
before activating the Low  
temperature alarm.



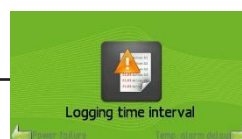
Probe eeprom failure

Enable or disable the  
Probe/Eprom failure alarm



Power failure

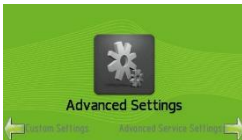
Enable or disable  
the Power failure alarm  
See more at page 9



Logging time interval

Change the interval of logging  
the data of the unit.  
Recommended setting: 1 minute

## Advanced Settings



Enter password to access Advanced Settings.  
(Default password is "0000")



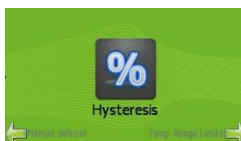
Change calibration of the temperature probes  
(See page 6)



Set the time between automatic defrost cycles on the unit.  
Recommended every 6 hours.  
(Not for ULUF series) See more at page 11



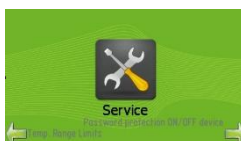
Start a manual defrost cycle immediately.



Set the temperature hysteresis of starting and stopping  
the compressor.



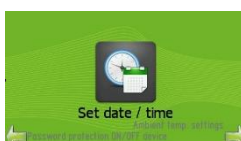
Set the upper and lower limit of the set point temperature.



Service settings.  
(See page 6)



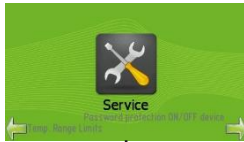
Set password protection on switching on or off the unit.



Change the date and time on the controller.



Calibrate/rescale the Ambient temperature sensor



## Service Settings



Shows how many hours the compressor has been running.



Shows how many hours the fan has been running.



Shows the temperatures of the probes installed in the unit.



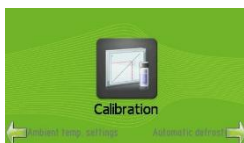
Shows the temperature of the probes inside the unit and the software versions of the Display, SD card and PCB.



Shows the temperature of compressor probes. (Not all units have compressor probes installed)



Shows the temperature of the evaporator probe.



## Calibration Settings



Change calibration of Probe 1.



Change calibration of Probe 2.



Change calibration of Probe 3.



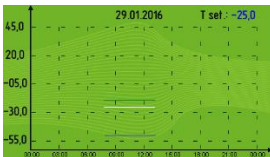
## Status



Shows a list with type, date and time for recent alarms.



Shows the highest and lowest temperature of the unit during the last 24 hours



## Graph

Use arrow up, will show the graph for the actual day. Using the left arrow, will show up to 10 days left.  
Press ESC to return to Main screen



## Change/reset password



Change the password for the Customer Settings, Advanced Settings and Advanced Service Settings.

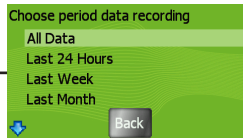


Reset the password for the Customer Settings, Advanced Settings and Advanced Service Settings.  
Contact Arctiko for the password for resetting the passwords.

## Downloading Data



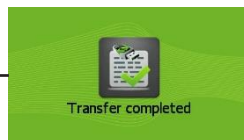
Insert a USB-drive while the unit is turned on and press the right arrow to read data from the unit onto the USB-drive.



Select time period to transfer to the USB-drive.



The display will show the Read Data icon while transferring the data



When the “Transfer completed icon” is shown, the transfer is finished and the USB-drive can be removed.

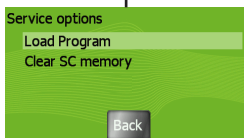
The data is saved as files named **data** and **param** with ascending numbers (e.g. 00, 01, 02 etc.) for new files. File type is a txt format.

Use Excel or a similar program to open the files for view or analyzing of the data.

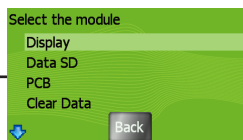
## Uploading Software and Parameters



Insert a USB-drive while the unit is turned off.  
Press the right arrow to read data from the unit onto the USB-drive (See above).  
Press the left arrow to upload new software or parameters to the unit.



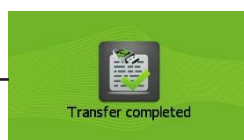
Choose Load Program to upload new software or parameters to the unit.  
Clear SC memory is only used for units with Card lock mounted and is described in the manual for the Card lock.



Select module to upload.



While the unit is uploading the data the “Data upload” icon is shown in the display.  
Do not remove the USB-drive.



When the download is completed “Transfer completed” icon is shown.  
The USB-drive can now be removed.



## Alarm/status icons on display (See #4 in page 2)

To reset an alarm, press enter on the Main screen, and press OK for each alarm.



The Door open alarm indicates that the door has not been closed correctly.



The High temperature alarm indicates that the temperature of the unit is higher than permitted in the settings of the unit.



The Low temperature alarm indicates that the temperature of the unit is lower than permitted in the settings of the unit.



The Probe/Eprom failure alarm indicates that the probe is not working correctly.



The Power failure alarm indicates that the unit has experienced a power failure. The display goes black, just for saving power from the battery. The battery icon in the display will start flashing, and an alarm bib will start sounding. Press few seconds on the On/Off button, the display will start light up, and show there is a Power failure and the actually temperature in the unit. The display will go black again after few seconds, just to save power from the Battery. When the Power returns, the display will start lightning up and show the normally set up again, and the compressor will start up after 1 minutes, and return into normally operating.



The Compressor failure alarm indicates that a compressor on unit is malfunctioning. When Compressor alarm occurs, the controller switch off the specific Compressor relay, for protecting the Compressor to prevent too high current.



The Low battery alarm indicates that the backup battery charge is too low.



The Auto defrost status indicates that an automatic defrost cycle is running.



The Manual defrost status indicates that a manually activated defrost cycle is running.

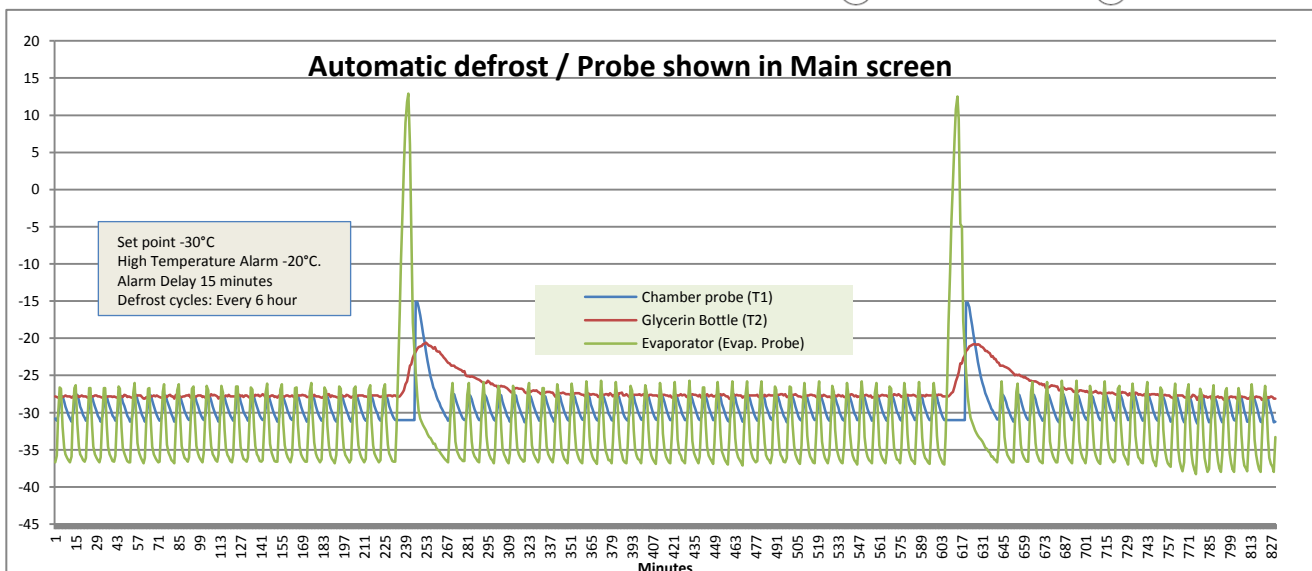
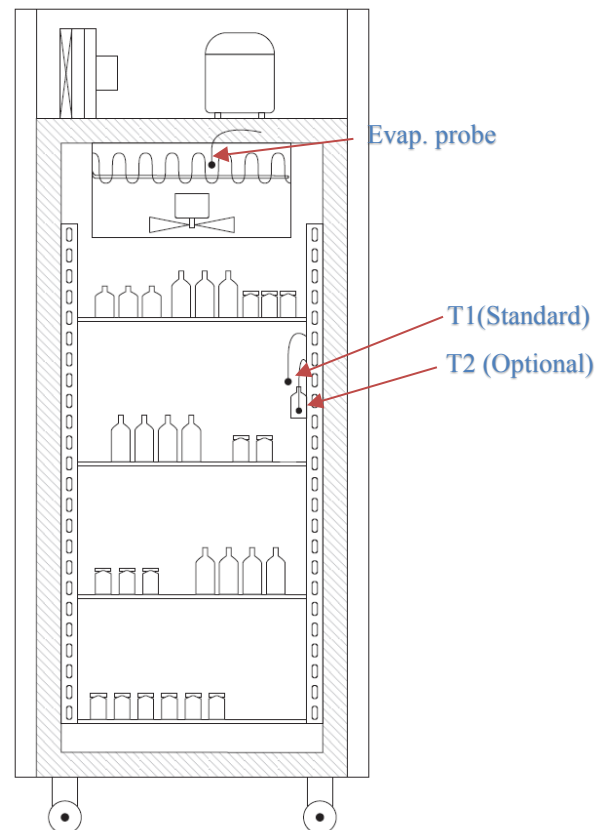
## How Automatic defrost is working.

(Not for ULUF series)

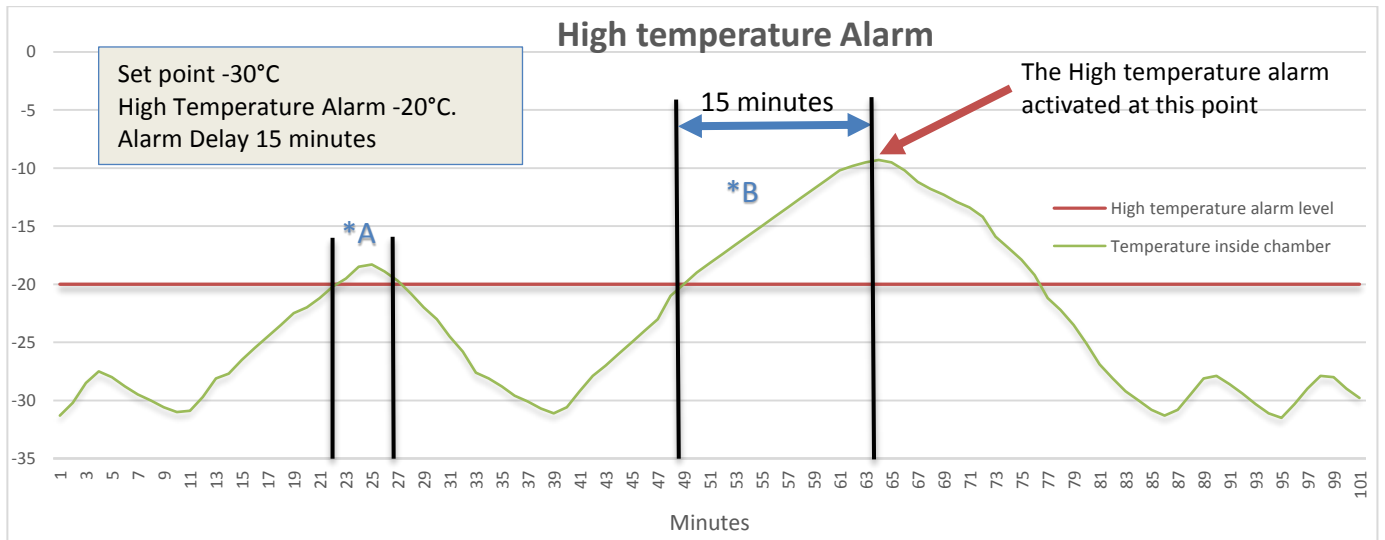
As default the controller will run automatic defrost every 6 hours.

1. The automatic defrost cycles start, the compressor stops, the evaporator-fan stops.
2. The evaporator-heat element starts heating up the evaporator.
3. The evaporator-sensor is measuring the temperature in the evaporator.
4. When the temperature in the evaporator reach approx.  $+6^{\circ}\text{C}$ ., the heat element stop. The ice which was build up in the evaporator, will get into liquid form, and start floating out of the chamber, into the water tray on the back of the unit.
5. After the dripping time, the compressor start running again.
6. When the temperature in the evaporator reach  $-15^{\circ}\text{C}$ ., the evaporator-fan start running again.
7. The automatic defrost cycles end.

It can be useful to install an additional probe and install it in a bottle of glycerin, to compare with products in the unit. As shown in the graph below, the T2 probe will not raise as much as the T1 probe, since the T2 probe be comparable with the samples, instead of the T1 probe which measure the Air temperature.



## Alarm delay



- \*A** Case 1: A door opening can cause temperature to raise inside the chamber. In this case, the temperature rises more than High Temperature alarm level, but falls again within 15 minutes. In this case, no alarm has been activated.
- \*B** Case 2: Loading sample in the chamber, can cause the temperature to raise inside the chamber. In this case, the temperature reaches more than the High Temperature Alarm Level, and the recovery time is more than 15 minutes, therefore the High Alarm temperature will be activated.



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