



Software update

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Introduction to the topic

You can update the software of the generator control »fpControl Generator Control - Servo« (fpControl [GC-S](#)) and the software of the bus modules on the [fpCAN](#). For this purpose, the software update files are transferred to the »fpControl GC-S«, which distributes the updates to the other bus modules.

Objective of the procedure

You will copy update files from the PC / laptop to the »fpControl Control Panel - Generator« (fpControl [CP-G](#)). You will then connect the »fpControl CP-G« to the fpCAN in order to transfer one or more update files to the »fpControl GC-S«. In the end you will update a bus module. Finally, you will update a bus module.

Transferring update files to the »fpControl CP-G«



Each »fpControl CP-G« behaves like an USB removable disk on which you can store update files for all fpCAN modules. Therefore, you can use the generator's »fpControl CP-G« to carry out a software update. In order to reach the USB socket of the »fpControl CP-G«, it may be necessary to remove the »fpControl CP-G«. Alternatively, you can use a separate »fpControl CP-G« for the software update to which you transfer the update files.

- ▶ Connect the »fpControl CP-G«, which you will use for the software update, to a PC / laptop using a cable with an USB mini connector.
- ⇒ The »fpControl CP-G« is opened as drive »XC_PANEL« in Windows-Explorer.
- ▶ Copy the update files (*.upd) to this drive.
- ▶ Disconnect the drive securely from the PC / laptop.

Connecting the separate »fpControl GC-P« to the fpCAN

If you carry out the software update with a separate »fpControl CP-G«, you need to connect this panel to the internal fpCAN. The »fpControl Connection Board - Generator« (fpControl [CB-G](#)), which is located on the outside of the generator capsule, provides an interface for connecting the »fpControl CP-G« to the internal fpCAN (RJ45 socket). Alternatively, depending on the availability, you can also use the fpCAN interface

- on the »fpControl CP-G« of the generator or
 - on a measuring module »fpControl MU-3ph / DC« or »fpControl MM-3«.
-
- ▶ Depending on the availability, use one of the fpCAN interfaces.
 - ▶ If you use the fpCAN interface of the »fpControl CB-G«, disconnect the [fpCAN patch cable](#) of the generator panel from the RJ45 socket »FP CAN BUS« of the fpControl CB-G.
 - ▶ Connect the separate »fpControl CP-G« by an fpCAN patch cable to the RJ45 socket of the »fpControl CB-G« or one of the alternative fpCAN interfaces.
 - ▶ Check whether the second RJ45 socket of the »fpControl CP-G« is terminated with an [fpCAN terminating resistor](#) and, if necessary, insert it into the free socket.
 - ⇒ The separate »fpControl CP-G« can be used for the update.

Transmitting update files to the »fpControl GC-S«

Requirements

- ✓ The update files must be on the »fpControl CP-G«.
- ✓ The »fpControl CP-G« must be connected to the fpCAN.

Controls

Symbol	Function
	use the »on / off« button to switch on / off »fpControl CP-G«
	use the »arrow up« button to navigate menu up or to abort the update
	use the »arrow down« button to navigate down menu, start the update or cancel the countdown
	use the »start / stop« button to confirm the selected menu item

Step by step guide

- Switch on »fpControl CP-G«.
- Open submenu »panel«.

```

-----
panel
generator
service
back
-----

```

- Select option »update« and confirm.

```

-----
add. start function
update
reset to standard
back
-----

```

- Select option »select destination« and confirm.

```

-----
select destination
transfer all files
select files
allow manual update
back
-----

```

- Select »fpControl GC-S« (»ID 12«, dev.-id: 12) from the list and confirm.

```

choose target:
adr.  device-info
0x07 dev.-id:    12
0x13 version:   0.02
0x0F s/n:      1900298
Configurable
OK      back

```

- ▶ Select option »transfer all files« and confirm.

```
select destination
transfer all files
select files
allow manual update
back
```

- ⇒ **Intermediate result:** The transmission of all update files to the »fpControl GC-S« begins.

```
FILETRANSFER ACTIVE
please wait...
name: GWY_M009V002R10.upd
size: 42 / 147 kB
[Progress bar] 29%
```

NOTICE

File transfer aborts due to power supply interruption.

- ▶ Do not switch off the supply voltage until the progress bar has reached 100% and the "FILETRANSFER ACTIVE" window is closed.

- ▶ Wait until the progress bar has reached 100% and the "FILETRANSFER ACTIVE" window is closed.
- ▶ Switch off »fpControl CP-G«.
- ⇒ **Intermediate result:** The update files are now on the »fpControl GC-S«.



At this point, no module has been updated.

Carrying out software update

After switching on the supply voltage again, you can carry out the updates of the bus modules. For each bus module the »fpControl CP-G« shows by a pop-up window that a new firmware is available if there is an update file on the »fpControl GC-S« available for this module type.

Requirement

- ✓ The update files must have been transferred to the »fpControl GC-S«.

Step by step guide

- Switch on »fpControl CP-G«.

⇒ **Intermediate result:** The »fpControl CP-G« shows the first available update. You see

- the module type and the [module ID](#),
- the address of the module at the fpCAN,
- the serial number of the module and
- the previous and the available new software version.



Opportunities for action:

- You can start the software update of the displayed bus module (»arrow down« button, ok).
- You can cancel the software update of the bus module (»arrow up« button, abort).



If the update is canceled, the »fpControl CP-G« shows the next available update if there are further update files on the »fpControl GC-S«.

- Confirm the start of the software update pushing the »arrow down« button (ok).

NOTICE

Property damage to the bus module due to an interruption in the supply voltage.

If the supply voltage is interrupted during the software update, the bus module can be damaged.

- Do not switch off the supply voltage until the software update has been completed.

⇒ **Intermediate result:** The update process of the bus module has started and is running automatically.

Sequence of the update using the example of a »fpControl CI-SAE J1939«.

Display of the »fpControl CP-G«	That goes on in this step.
	»FILETRANSFER ACTIVE«: The update file is transferred from the »fpControl GC-S« to the bus module. A progress bar shows the percentage of data that has already been transferred.
	»SYSTEM-COMPONENT ABOUT TO REBOOT INTO BOOTLOADER!«: The »fpControl CP-G« announces that the bus module will restart. The restart will take place in 10 seconds, the time until the restart is counted down. After restarting the bus module, a start program (bootloader) is executed that writes the update file transferred to the bus module into its program memory. The »arrow down« button aborts the countdown – the module is restarted immediately. The »arrow up« button cancels the update completely – the previous software version is retained on the bus module.
	»PLEASE WAIT & DON'T INTERRUPT POWER-SUPPLY«: In this step, the bus module is restarted and the software update is carried out. The start program (bootloader) is executed to write the update file to the program memory of the bus module. The »arrow down« button only acknowledges the info page, while the module update continues.
	»COMPONENT SUCCESSFULLY RETURNED FROM BOOTLOADER«: In this step, the update of the bus module has been successfully completed. The updated bus module has restarted. The »arrow down« button acknowledges the info page.

Result

- ⇒ The update was successfully completed.
- ⇒ The updated bus module has restarted.

If you have updated a generator control »fpControl GC-S« or a control panel »fpControl CP-G«, you will see the new software version on the info page after the restart. The upper part of the page shows the bus address, software version and serial number of the »fpControl CP-G«, the lower part shows the corresponding information of the »fpControl GC-S«.

```
addr.: 7
vers.: V5.02~RC5
serial: 0000001

***addr.: 15
vers.: V0.00
serial: 1900298
```



You can check the software versions of all other bus modules after performing an update in the device browser under *generator > show system-devices*.

```
device-browser
adr.  device-info
0x07 dev.-id: 9
0x13 version: 2.10
0x0f s/n: n/a
Configurable
OK back
```

Fischer Panda Knowledge Base

You can find more interesting content on current Fischer Panda generator controls in our Knowledge Base: <https://knowledgebase.fischerpanda.de/>



Glossary

B		
Bootloader		Start program that writes the update file transferred to the bus module into the module's program memory during the software update process.
C		
CAN		Abbr. Controller Area Network.
CB-G		Abbr. Connection Board - Generator. Establishes the connection between the system components within the generator capsule and the external components. The CB-G is located on the outside of the generator capsule.
CP-G		Abbr. Control Panel - Generator. Display and control element for the fpControl system.
F		
fpCAN		Abbr. Fischer Panda CAN bus. The fpCAN is used in the fpControl system for communication between the system components. The fpCAN is based on the SAE J1939 standard.
fpCAN patch cable		Red RJ45 twisted pair cable. Only patch cables approved by Fischer Panda may be used on the fpCAN. There are cable lengths from 0.2m to 25m.
fpCAN terminating resistor		120-ohm terminating resistor with RJ45 connector to terminate the fpCAN.
G		
GC-S		Abbr. Generator Control - Servo. Generator control, the main component of the fpControl system, takes over all monitoring and control functions.
M		
Module ID		Unique identification number of the bus module types on the fpCAN. For example, the »fpControl GC-S« is assigned the module ID »12«, the »fpControl CP-G« participates in fpCAN under the module ID »2«.
S		
SAE J1939		Standard for a network protocol that describes the communication on a CAN bus for commercial vehicles.
U		
.upd		File extension of the update files for the components of the fpControl system.