



CFE FUNCTIONS MANUAL

Applicable to:

CFE from VolvoTech.EU and your Volvo

To make settings and update the CFE (Canbus Function Extender) with latest firmware, you need the Updater software to be installed on your computer (PC only) and connect the CFE to your PC with the supplied USB cable.

Pre requirements for this document to be useful:

- CFE Module functioning on your PC
- Updated CFE module (please press DL Latest in Updater software)
- CFE Module functioning in your Volvo
- Functioning Updater Application



Kind	Functions manual
Title	Functions manual for CFE (Canbus Function Extender)
Language	English
Version	9.20
Date	March 2 nd 2014
Applicable to	CFE
Contents	Manual describes the functions of the VolvoTech CFE (Canbus Function Extender) and how they work.

Need to know:

- VolvoTech.EU tries to describe all possible functions of the CFE in the document, updates will be done now and then.
Note that functions are extended from time to time, you might find them in the Updater Application but not in this document still. In such case please **hover over the ? image in the Updater Application for more information.**
- NOTE that **even if functions are described here in this document, it does not automatically mean that it will work in your car. For example: if you do not have a car-preheater, the CFE and its functions will not suddenly result in a pre-heater in your car!**
- There will always be differences in implementation readiness for different model years! Some functions won't work at all, some will be implemented later, not at all or different...
- Whenever you test functions of the CFE, please make sure you test the functions like you would use them in a normal situation.
Opening/closing doors/windows/locks/mirrors for example continuously will in the end result in some fault; a mirror won't fold, a window won't open,



etc. Everything needs time, try not to interrupt a function while it is still performing!

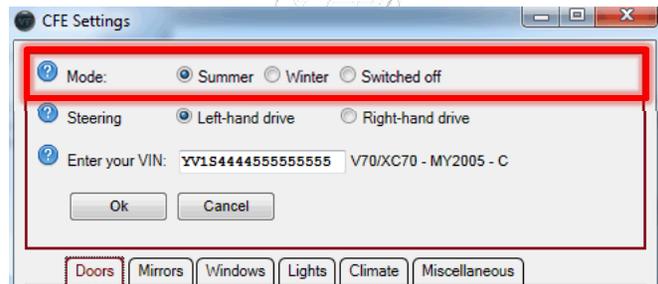
- In case you might have any questions, please email us at info@volvotech.eu

Functions, overview and explanation.

Mode:

This function is available for your convenience. For example you would want your parking heater remote function only to work in wintertime, so if you mark "Winter" as operation mode for the Parking-heater remote function in the Updater tool, this function is only active if you have set your CFE to winter-mode. If you want a function to be always active, checkmark summer AND winter for that function.

Select the CFE operating mode you want to have activated in the Updater application.



This MODE change can also be done in your Volvo by using the rear window heater switch (up to MY 2004) or the Board Computer RESET switch on the turn-signal-lever (MY 2004 and up).

NOTE:

The car does not know if it is winter or summer by itself. We called it summer and winter mode, but that's just "names" we felt would be convenient for use. If you have another CFE Connection set than the OBD Connection set, it is



possible for the Volvo dealer to connect the DICE/VIDA Tooling (to read out your car) to your Volvo without disconnecting the CFE. The CFE will not be "seen" by the dealer (or the Dealer tools), because it switches itself OFF as soon as it detects the presence of the dealer equipment. This practically means that after a dealer visit, you might have to switch back to either summer or winter-mode again, to (re-)activate the functions!



NOTE: To make the switch, the information matrix in the DIM should be clear! (No message in there like "driver door open" or so!)

With the ignition key into position I or II, press and hold the rear window heater switch or Board computer RESET Switch until the LCD display on your DIM (instrument panel) displays the desired mode.



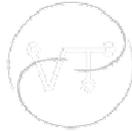
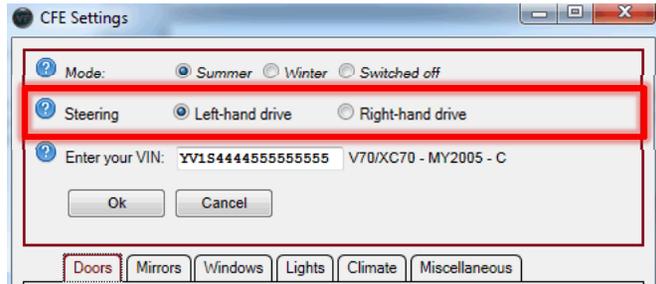
Possible statuses are:

- Switched off
- Summer
- Winter



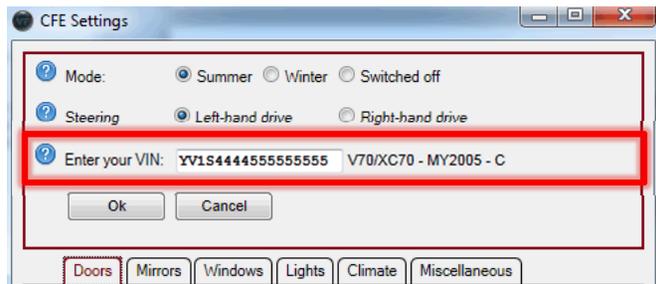
Steering:

For technical reasons, the CFE needs to be aware if you're in a right hand driven car, or left-hand driven car. Just select the appropriate please.



VIN:

Since different Volvo's and even of different ages and model years require different settings and offer different options, please enter the VIN (= Chassis number of your Volvo) here carefully and check if the given result on the right of the VIN matches the Volvo you own!

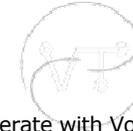
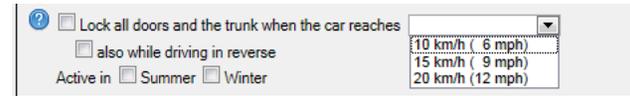


DOORS, Lock:

This function allows you to activate and set a speed, where the CFE will activate an auto door lock.
For example if the function is enabled, and set to a speed of 10Km/h; all doors will lock when the car reaches that speed.
It works the same as the original Volvo option, but allows selection of different speeds (Volvo activates at 7km/h and also locks when you reverse).

Settings possible;

Lock all doors and the trunk when the car reaches 10, 15 or 20 Km/h.
Also while driving in reverse (on or off)



DOORS, Unlock:

The function is designed to co-operate with Volvo's function (installable by your dealer) to automatically lock all doors when speed gets over 7km/h OR with the CFE function (LOCK as explained before).

When enabled, CFE will unlock all doors and trunk once after opening either the driver or passenger door.

If, afterwards, the doors are manually locked, CFE will not unlock the doors again unless the car has reached the set speed again.

Settings possible:

Unlock all doors and trunk





MIRRORS, Retract mirrors :

When the selected event occurs, the mirrors will fold.

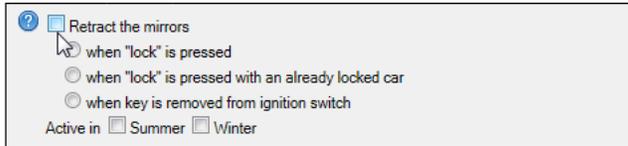
Attention: This function only works when your car is equipped with electrically foldable mirrors.

Settings possible:

when "lock" is pressed

when "lock" is pressed with an already locked car

when key is removed from ignition switch



MIRRORS, Extend mirrors :



When the selected event occurs, the mirrors will unfold.

Attention: This function only works when your car is equipped with electrically foldable mirrors.

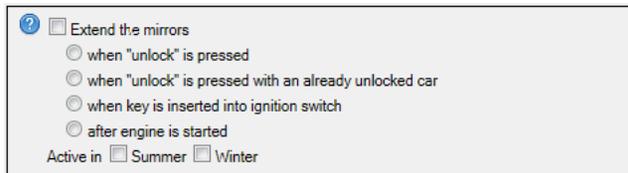
Settings Possible:

when "unlock" is pressed

when "unlock" is pressed with an already unlocked car

when key is inserted into ignition switch

after engine is started



MIRRORS, Angling when parking:

The door mirrors can be angled down for the driver to view the side of the road when parking. This may help to prevent damage to your rims and/or tires.

Attention: This function only works when your car is equipped with memory mirrors.

Programming the mirror position (IN CAR!):

Start your Volvo (to avoid battery drainage).

Store your current seat and mirror settings (for forward driving) on seat memory position 1 (MEM + 1).

Adjust the positions as you like it for the reverse position.

Store in seat memory position 3 (MEM + 3).

Select seat memory position 1 (just press 1).

Done.

Test by putting the car in Reverse and back to N, D or P or any gear (if manual).



NOTE : Seat memory position 3 is now used for reverse settings, do not use it for storing personal seat- and mirror settings.

NOTE : The mirrors will angle back to the original position :

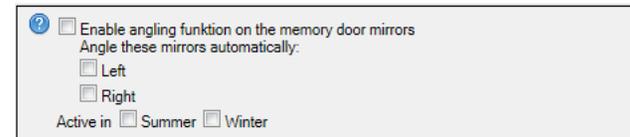
1- After ignition key is turned from position II to position I.

2- Or 8 seconds after the car has left the reverse gear.

Settings possible:

Enable or Disable angling function on the memory door mirrors

Enable automatic angling function (Left and/or Right mirror)





WINDOWS, Auto-Up:

This function enables closing the passenger window by pulling up the window switch in the driver or passenger door two clicks. It is useful in markets where Volvo has decided to not enable this function by default.

Settings Possible:

Enable or disable passenger window auto-up



WINDOWS, Enable Intermittent windows wiping:

Put in the CFE for your convenience if you have the "Rain sensor" installed in your Volvo, and therefore do not have a regular intermittent wiping function!

The intermittent wiping function is activated by performing a "single wipe" (Wiping lever upwards), but then twice, performed directly (within on second) after each other.

The wiping interval is adjusted by turning the ring on the wiping lever.

Stopping the interval is done by moving the lever into any other position or activating the rain sensor.

A single (additional) wipe or a "wash and wipe" will not cancel the function.

Settings possible:

Enable or disable the intermittent wiping function.



WINDOWS, Extra wipe after wash/wipe:

To avoid stripes on the windshield, the CFE can execute a delayed extra wipe after a complete wash/wipe action of your Volvo.

The time between the wash/wipe and the extra wipe is adjustable.

To avoid freezing in winter, a minimum outdoor temperature can be specified.



Settings Possible:

Extend wash/wipe with extra wipe after XX seconds
Only if outside temperature is above XX degrees



WINDOWS, Comfort Closing:

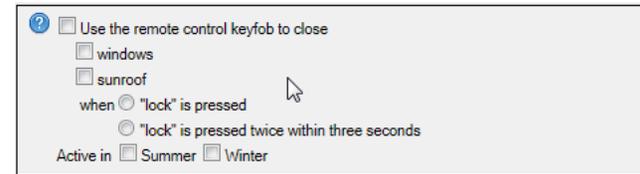
The CFE allows you to close the windows and/or the sunroof from the remote control key fob.

You can select to initiate closing on every "Lock"-press or only when you press "Lock" twice within three seconds.

Window movement is stopped by pressing "Lock" or "Unlock" again.
Roof movement cannot be interrupted.

Settings possible:

when "lock" is pressed
when "lock" is pressed twice within three seconds



WINDOWS, Comfort Opening:

Press "Unlock" twice within three seconds to open the windows and/or the sunroof. The sunroof open mode can be selected (full or vent). When vent is chosen, the roof will at first move backwards to partially open the sun screen. Next, it will move to the vent position.

Window movement is stopped by pressing "Lock" or "Unlock" again. Roof movement cannot be interrupted.



Settings possible:
vent (Roof opens in ventilation mode)
Full (Roof opens fully)

Use the remote control keyfob to open
 windows
 sunroof (vent full)
when "unlock" is pressed twice within three seconds
Active in Summer Winter

LIGHTS, Comfort Turn Signals:

By enabling this option, the turn-blinkers will blink at least the selected number of times.
Ideal for overtaking on the highway.

When the option "Only when lever ..." is enabled, additional blinks are only executed when the lever is released before the lights come on for the second blink. This gives you better grip on controlling the number of blinks.

Settings possible:
Extend indicators to blink at least XX times
Only when lever is operated briefly

Extend indicators to blink at least 4 times
 Only when lever is operated briefly
Active in Summer Winter

LIGHTS, Extend High Beam:

Whenever you use the High Beam Lights, the Fog Lights will come on, too.

Settings possible:
Enable or disable Extend High Beam to include Fog Lights

Extend High Beam to include Fog Lights
Active in Summer Winter



LIGHTS, Extend Approach Lighting:

Extend the approach lighting with Low Beam, Fog and/or Reversing Lights.

The approach lighting is switched on by the yellow button on your key fob.

To avoid draining your battery a lower limit on the battery voltage can be set.

Settings possible:
Extend Approach Lighting using Low Beam head lights
Extend Approach Lighting using Fog lights
Extend Approach Lighting using Reversing lights
Only if battery is above XX volt

Extend Approach Lighting using
 Low Beam head lights
 Fog lights
 Reversing lights
 Only if battery is above 11.5 volt
Active in Summer Winter

LIGHTS, Switch on approach Lighting:

Extend the approach light function to "automatic on". The approach lighting is switched on automatically at either a press on the unlock button on the remote or when they key is removed from the ignition switch.

Switch on the Approach Lighting
 when "unlock" is pressed
 when key is removed from ignition switch
Active in Summer Winter

Settings possible:

When unlock is pressed
When key is removed from ignition switch.



LIGHTS, Daytime Running Lights:

The CFE can use the fog lights or the auxiliary lights as daytime running lights.

NOTE : It is necessary that the 0-position of the light switch switches off all lights.
If needed, your dealer can change the setting of the switch.

Settings Possible:

Enable Daytime Running Lights

Use fog lights

Use auxiliary lights

Warn me when low beam is more appropriate

Enable Daytime Running Lights
 Use fog lights
 Use auxiliary lights
 Warn me when low beam is more appropriate
Active in Summer Winter

LIGHTS , Switch on the Approach lighting

This option allows automatic activation of the Approach lights at either unlocking of the car or removal of the key from the ignition.

Settings possible:

Enable/disable the Approach lighting

Enable when unlock is pressed

Enable when the key is removed from the ignition

Switch on the Approach Lighting
 when "unlock" is pressed
 when key is removed from ignition switch
Active in Summer Winter



CLIMATE, Comfort Parking Heater:

Pressing "Unlock" three times, the parking heater is switched on or off.

The hazard lights will blink as confirmation:

Three times: heater is now on

Four times: heater is now off

Do not forget to lock the car again.

(But note; if you do not open 1 of the doors of the car within 1 minute, the car will lock itself automatically again.)

Settings possible:

Enable or disable the parking heater on/off function.

Switch parking heater on/off when "unlock" is pressed threetimes within three seconds
Active in Summer Winter

CLIMATE, Driver and Passenger Seat Heating:

This option allows you to set the seat heating position after engine start.

By default, the car remembers the last position. Selecting "Switch off" cancels this.

Set driver seat heating after engine start

Position X when outside temperature is below XX degrees

Settings possible:

Enable or disable Passenger Seat Heating

And select the outside temperature for activation



<input type="checkbox"/> Set driver seat heating after engine start Position I when outside temperature is below 11°C (52°F) Position II when outside temperature is below 4°C (39°F) Active in <input type="checkbox"/> Summer <input type="checkbox"/> Winter
<input type="checkbox"/> Set passenger seat heating after engine start Position I when outside temperature is below 5°C (41°F) Position II when outside temperature is below 4°C (39°F) Active in <input type="checkbox"/> Summer <input type="checkbox"/> Winter

MISCELLANEOUS, Gauge Sweep:

Enabling this option will force the speedometer and tachometer to do a full swing when the key is turned into the II (on) position.

NOTE: If you select the Temperature and Fuel gauge to do a sweep also; they are slower by nature.

Settings possible:

Enable GaugeSweep at "ignition on"
Include Temperature and Fuel Gauge



<input type="checkbox"/> Enable GaugeSweep at "ignition on" <input type="checkbox"/> Include temperature and fuel gauges Active in <input type="checkbox"/> Summer <input type="checkbox"/> Winter
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INSTRUMENTS, Use display for additional information:

Enabling this option will allow the driver to see some additional information about the Volvo's status, in the DIM (The driver information display).

Only information options selected in the updater will show up in your Volvo.

First time use:

To display a function (and store for default displaying), the following procedure applies:

Start Engine, close all doors, make sure no mirror selection button is "on" and make sure the DIM is "empty" (no texts visible).
Short-press the "RESET" -button on the left lever.



There will be shown a default text; "no default value" on both lines. (this is correct, since there is no default stored yet).

Now use the cursor (joystick) of your mirror adjustment to move between functions.

Left/Right -> move trough the different pre-selected display options.
Up/Down -> move from top-to-bottom line and vice-versa.

A blinking cursor indicates that settings can be changed. The cursor is blinking on the active line.

To store settings, just leave everything untouched for 5 seconds.

Change settings:

Make sure the DIM is "empty" (no texts visible).

Short-press the "RESET"-button.

Although you will not see the cursor blinking directly (there is a delay) you can start moving the cursor from left to right and/or up/down to make your changes.

Remember: if you press too long, you'll enter the Summer/Winter/Off mode change function!

Notes:

Short-pressing "RESET" twice within five seconds, the function is suspended. Pressing "RESET" again will re-activate the display.



In case a message from the Volvo needs to be displayed in the DIM (for example a warning, incoming phone call), that particular message will always overrule the DIM Information function from the CFE.

In case one uses the steering wheel controls for audio/phone, the DIM Information function of the CFE will temporarily be interrupted.

Possible Settings:

- Engine speed in rpm/min
- Actual speed in km/h
- Actual speed in mph
- Battery voltage
- Interior temperature in C
- Interior temperature in F
- Coolant temperature in C
- Coolant temperature in F



Fuel level in liters
Fuel level in US Gallons
Acceleration 0-100 km/h
Acceleration 0/60 mph

Use the display for additional information

- Engine speed in rpm
- Current speed in km/h
- Current speed in mph
- Battery voltage
- Cabin temperature in °C
- Cabin temperature in °F
- Coolant temperature in °C
- Coolant temperature in °F
- Fuel level in liters
- Fuel level in US Gallons
- Acceleration from 0 to 100 km/h
- Acceleration from 0 to 60mph

Display language:

Active in Summer Winter

MISCELLANEOUS, Mute Audio When Reversing:

Muting the audio when reversing helps you to hear the Parking Sensors better when these sensors are not integrated with your audio system, it also makes you more aware of the fact that they are activated in case there is integration in the audio system.

You can choose from three different methods to mute the volume. Choose the method you like best **and** works in your car.
(For example in a 2005+ car, only the Telephone Mute option will work!)

"Park Distance Control" is the most elegant method. It pauses the audio source and displays an appropriate text on the standard Volvo audio system.

Method "Telephone" is second best. It operates in the same way as the "Park Distance Control", but displays the text "Telephone" on the radio.



The "Volume down" works on all audio systems that respond to the Volvo audio steering wheel controls. You can choose the sound level after unmute.

Possible Settings:

Mute HUxxx volume when Reverse Gear is engaged
Use method "Park Distance Control"
Use method "Telephone"
Use method "Volume down"
Restore volume afterwards using XX ticks

Mute HUxxx volume when Reverse Gear is engaged

- Use method "Park Distance Control"
- Use method "Phone"
- Use method "Volume down"
Restore volume afterwards using ticks

Active in Summer Winter

MISCELLANEOUS, Set Cruise Control to standby:

This function puts the Cruise Control in standby mode automatically, so there is no need any more to press "Cruise" before first use.

Possible settings:

Enable or Disable Set Cruise Control to standby after engine start

Set Cruise Control to standby after engine start

Active in Summer Winter

MISCELLANEOUS, Audio track intro:

Also called "track scan", allows you to listen to X seconds of each coming song on a CD or on the iPod/iPhone/iPad (only if used in combination with VolvoTech.EU iMIV products!).

Track scan starts if you press the Next track button and keep pressing that for 2 seconds (Long-press).

Track scan stops and continues playing the song heard if you press Previous track or Next track again.



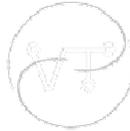
Play first seconds of each track when "Next Track" is pressed for 2 seconds or more
Active in Summer Winter

MISCELLANEOUS, Show welcome and goodbye:

Shows the welcome text and goodbye text in the Drivers Information Module (DIM).
(i.e. the display where your board computer shows its values as well)
Function Welcome; activates for 10 seconds if the ignition is turned from 0 to 1.
Function Goodbye; activates the moment the ignition is turned to 0.

Note: If your Volvo needs to show messages on the DIM, displaying either Welcome or goodbye messages are interrupted and car messaging gets priority.

Possible settings:
Enable or disable the text.
Change lines of welcome text.
Change lines of goodbye text.



Show welcome and goodbye lines
Welcome text (2 x 16 characters max):

Goodbye text (2 x 16 characters max):

Active in Summer Winter

Show welcome and goodbye lines
Welcome text (16 characters max):
Goodbye text (16 characters max):
Active in Summer Winter

MISCELLANEOUS, Adjust the timing of the safety belt chime

In some older (MY2000/2001) Volvo's, the seatbelt chime is even audible if the car not moving, the key is in the ignition and your seatbelt is not buckled.



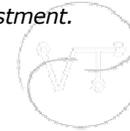
This option disables the chime below 10Km/h, after 6 seconds of standard "chiming".
Do not enable this option if your Volvo does not have the problem as described before. (It will make your DIM and warning lights/turn lights behave erratically in such case!)

THIS OPTION IS NOT MEANT AND USEFULL IF YOU DO NOT BUCKLE UP WHEN YOU START DRIVING, YOU STILL HAVE TO USE THE SEATBELT!!

NOTE: This option might result in blinkers not showing visible response inside the car, although they actually DO work. In case you have that problem, please do not enable this option or ignore the error (simply because the function is of NO use for your car then!)

Adjust the timing of the safety belt chime
Active in Summer Winter

Possible settings:
Enable or disable the timing adjustment.
Activate in Summer or in Winter.





FAQ

Q : my car was at the Volvo dealer. Now the CFE does not work anymore.

A : the CFE switches to state OFF in case the Volvo VIDA computer is connected. Just switch the CFE back to the required mode; Summer or Winter!

Q : I have set the car to Winter mode, but none of the function still work.

A: Most probably you have not selected the mode for the options to function in. I.e. if you want the goodbye lines to be active in winter, you need to select (mark) the option-box "winter"! (if none of the options is selected (neither summer, nor winter) then the function will NOT work at all.

Q : When using the "Adjust Timing Safety Belt"-function, the direction-indicator lights and sound are not visible / audible or act erratically.

A : When the CFE silences the belt-warning-chime, the direction-indicator-lights and sound also stop working. The blinkers on the outside of the car continue to function as expected. The problem ceases when the seat belt is fastened or speed increases to over 10 km/h.

Q: I can't see some of the functions in the updater tool?

A: Please always check out the list of functions tested and supported for the MY of your car, in the website (see CFE product page please!)