

canDO+ Technical User Guide

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Release Notes

New in Version 2

canDO+ Black Edition

This new hardware version of canDO+ integrates with both CAN and LIN busses. This is essential for iDrive 7 cars to control Sport Mode and DSC. In addition, all iDrive versions now can control the state of A/OFF, M Sound (if equipped), “Sport/Eco” (if equipped), DSC and Parking Assistant, along with using Press and Touch Triggers. These options or not available on the standard edition of canDO+.

canSPY linVIEW

canDO+ Black Edition allows you to view messages on the LIN bus corresponding to actions on the iDrive unit’s A/OFF, M Sound (if equipped), “Sport/Eco” (if equipped), DSC and Parking Assistant.

canDO Valve Controller Support

If you own a canDO Valve Controller, release 2 of the firmware will automatically detect it and offer Actions to Toggle Exhaust Flaps, OEM Exhaust Flaps, or OPEN Exhaust Flaps

New in Version 1.7 (from 1.6.x)

No longer a need to reset database un upgrade

Under most circumstances, upgrading from 1.6.x or better will no longer require a database reset, even when the database schema changes.

Beep on Touch and Long Press

When touching or using long press on one of the console buttons, an audible cue can be heard that confirms the Trigger has been registered.

UX Improvements

Associations can be modified once created (reorder and delete Actions) to make it easier to create complex flows.

Addition of Climate Toggles

This version adds the possibility of toggling Max AC on/off, along with Max Seat Heating on/off.

Addition of On Boot Trigger

You can now create an association that triggers just as soon as canDO+ is powered on (e.g. when you unlock your doors).

New in Version 1.6 (from 1.5.x)

Database Reset

Note that this update automatically resets the database. We recommend noting Associations and Custom messages, as they will have to be recreated.

New Triggers and Actions

There is now a trigger for Engine Stop, along with Actions for Climate Control, Heated Seats, and radio mute toggle.

Trigger Groupings

Triggers are grouped together in canDO, Engine, iDrive, iDrive Controller, Steering and Key Fob categories.

Action Groupings

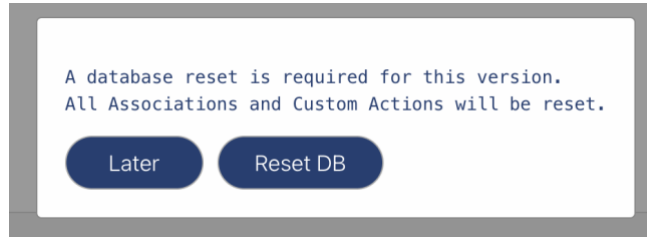
Actions are grouped together in Climate Control, Delay, DSC, Heated Seats, iDrive, iDrive Controller, M Mode, Radio and Setup categories. The “Associate” button has been removed, as an association is automatically created when clicking an Action from the dropdown menu.

canSPY Table View

An advanced view for CAN bus messages allowing users to more easily discover new functionality.

New in Version 1.5 (from 1.4.x)

A database reset is required for this update. After the upgrade, you will be prompted to reset the database. Until the database is reset, the behavior of the M1 and M2 buttons is undefined.



Responsive UI for Associations

Use your smart phone to create, edit or trigger Associations

M1/M2 Distinct Triggers (for cars equipped with M1/M2 buttons)

You are now able to trigger distinct Actions with the M1 and M2 buttons

Introduction

Congratulations on your purchase of canDO+, a cutting-edge device designed to enhance your BMW's CAN bus capabilities, offering advanced configuration options and debugging tools. This guide will walk you through the installation process, configuration settings, and how to utilize the device's advanced features effectively.

Installation

Installing canDO+ on your BMW requires a careful process due to the nature of accessing the CAN port. Follow these steps:

1. Prepare your workspace: Ensure you have enough space to work around the center console of your BMW. Gather necessary tools such as screwdrivers, and ensure the vehicle is parked safely with the ignition off.
2. Disassemble the center console: Depending on your BMW model (F-series or G-series), the process may vary slightly. Generally, you will need to locate and remove the trim pieces surrounding the iDrive controller.
3. Locate the CAN port: Once the center console is partially disassembled, locate the CAN port connected to the iDrive controller. This port is where you will connect the canDO+ device.
4. Connect the Y-cable: canDO+ comes with a Y-cable to facilitate connection to the CAN port. Connect one end of the Y-cable to the CAN port and the other end to the canDO+ device.
5. Secure the canDO+ device: Place the canDO+ device in a secure location within the center console, ensuring it does not obstruct any other components or wiring. Ensure the device is installed at least 20 cm away from any person.

6. Consult the Kies Motorsports intro video for more details on console disassembly and CAN connection on YouTube: [Control Any Button in your BMW with canDO+](#)
7. If you own the canDO+ Black Edition, see the [LIN Connection Guide](#)

To ensure that the canDO+ device is functioning properly, follow these steps:

- **WiFi Server**

When up for the first time, canDO+ will start its WiFi server so you may configure the device. To change this behaviour, please read the Update section.

- **Connect to the WiFi Network**

On your computer, navigate to the list of available WiFi networks.

Locate and connect to the "canDO" WiFi network.

Enter the password when prompted: "candobmw".

It is recommended that you change this password after first connecting to canDO+ from the "Update" window. Note that if you are also using the canDO Valve Controller, you will have to make sure the password is updated from the Valve Controller app too to maintain the connection.

- **Access the canDO+ Interface**

Open a web browser on your computer.

Enter the following address in the browser's address bar: <http://cando.local>, or <http://10.10.10.1> if your computer doesn't use mDNS.

Encrypted and secure connections are ensured by limiting the allowed number of WiFi connections to a single one (using WPA2 security). Once you are connected, canDO+ actively refuses other connection attempts, making the network a point

to point connection between canDO+ and your computer. Encrypted communication is ensured through WPA2.

- **Customize or Analyze CAN Bus**

Once connected to the canDO+ interface, you can customize settings or analyze the CAN bus data.

Explore the interface to access features such as real-time data monitoring, message logging, and interactive mode for sending custom CAN messages.

- **Verify Functionality**

Confirm that you can access the canDO+ interface and navigate its features smoothly.

Test basic functionality such as viewing live data streams or sending custom CAN messages to ensure proper operation.

Once you have verified correct operation of the canDO+ device, carefully reassemble the center console trim pieces, making sure everything is aligned correctly and securely fastened.

Configuration

The canDO+ device offers comprehensive configuration options through its intuitive web-based interface. Start by following instructions found in the Installation section to access the the canDO+ web browser interface.

Associations Window

The Associations window allows you to create customized behaviors for your BMW by associating Trigger messages with Action messages.

The screenshot shows the iCanDo+ software interface for configuring associations. On the left is a vertical blue bar with the 'iCanDo+' logo. The main window has a top navigation bar with buttons for 'Associations', 'canSPY', 'Settings', and a 'Restart' button. Below this is a large white area containing a configuration window. At the top of this window, there are two dropdown menus: 'On Boot' and 'Climate Control', connected by a right-pointing arrow. Below these are six association cards arranged in a 2x3 grid. Each card has a title, a right-pointing arrow, and a trash icon. The first row contains: 'TEL Long Press' with action 'A/C Max Toggle'; 'TEL Touch' with action 'SEAT Driver Toggle'; and 'ENGINE Start' with actions 'DSC MDM', 'Engine Sport', and 'Chassis Sport'. The second row contains: 'M1 Enable' with action 'M Road Mode'; 'M2 Enable' with action 'M Sport Mode'; and 'M1/M2 Disable' with action 'M Road Mode'. At the bottom of the configuration window is a 'Custom Actions' section with a text input field containing '111#1122334455667788', a 'Message Name' label, and a 'Create' button. In the bottom right corner of the interface, the text 'G8X ID8 1.7.4' is visible.

Creating an Association

Select a Trigger

Choose a Trigger from the dropdown menu. This Trigger will initiate the desired Action when detected by the canDO+ device.

Choose one or more Actions

Click the desired Action from the dropdown menu. This action or sequence of actions will be executed in response to the Trigger. The Association is updated for every Action selected.

UI Shortcuts

- Selecting a Trigger highlights and scrolls the Association into view if it exists
- Selecting the header of an Association also selects it from the Trigger dropdown
- The double right arrow fires the Trigger
- Delays are easily accessible from individual Associations

Custom Actions

In addition to predefined Action messages, users can create custom CAN messages based on observations made using the canSPY window. The Custom CAN message section allows users to define specific CAN messages to be sent as part of an Action sequence.

Custom CAN messages are entered in the following format: III#BBBBBBBBBBBBBBBB, where:

III represents the device ID.

indicates the start of the data bytes.

BBBBBBBBBBBBBBBB represents up to 8 bytes of hexadecimal data.

Manage Associations and Custom Messages

Associations and custom messages can be deleted or modified at any time by the user. Use the provided options to edit or remove existing associations and custom messages as needed.

Save Changes

It's important to note that changes made in the canDO+ interface are not immediately saved to non-volatile memory. Instead, a Save icon in the upper right corner becomes active when there are pending changes that the user would like to commit.

Click the Save icon to store the changes in the device's memory. This commits the changes to Flash memory, allowing for long-term application. However, modifications can still be made later on, ensuring flexibility and ease of adjustment between car starts.

By following these steps, users can easily create associations between Trigger and Action messages, as well as define custom CAN messages, to customize behaviors in their BMW. Additionally, they have the flexibility to manage associations and custom messages as needed, ensuring that the canDO+ device adapts to their preferences over time.

LIST OF TRIGGERS

Engine Start

The Engine Start Trigger is fired any time the engine is started beyond a 15 second interval. That is, if the engine is started, stopped, and started again within 6 seconds, the trigger will not fire a second time.

Engine Stop

Triggered when the engine is stopped. Note that it can take up to 6 seconds for this trigger to occur after the engine is stopped.

Steering Wheel

The M1 and M2 buttons (for cars equipped with M1 and M2 buttons) can be used as triggers, along with the steering wheel scroll wheel (scroll up, down or press).

iDrive Buttons

All iDrive buttons (MAP, MEDIA, NAV, HOME, TEL, BACK, OPTION) support three types of interactions: Touch, Press and Long Press. A Touch means lightly touching and taking your finger off without pressing. A Long Touch requires around a 3-second Press. Note that OPTION long press is reserved to toggle WIFI on and off.

canDO+ Black Edition adds support for Touch and Press for M Sound (if equipped), A/OFF, Parking Assistant, DSC, Sport/Eco (if equipped) and Parking Assistant.

iDrive Controller

You can set up triggers for the iDrive Controller's Up, Down, Left, Right, Press and clockwise and counterclockwise rotation. Generally, the iDrive Controller is used as an Action rather than a Trigger.

M Setup and M Mode (M Cars)

These buttons support Touch and Press.

On Boot

Run the Association as soon as canDO+ powers up.

LIST OF ACTIONS

M Mode (M Cars)

It is possible to set M Mode to Road, M Sport or M Track.

Sport / Sport Plus / Eco Pro (Non-M Cars)

It is possible to set Sport, Sport Plus and Eco Pro modes.

Drift Mode

It is possible to activate or deactivate Drift Mode

M Setup

All car Setup options can be changed (Engine, Shift Assist, Chassis, Steering, Brakes, 4WD/2WD)

DSC

DSC can be switched On, Off or set to M Dynamic Mode. M Traction Levels 0-10 can also be changed.

Radio

It is possible to change volume up/down, toggle mute, change stations previous/next, and to start/stop a radio channel scan, which triggers a Next Channel action every ten seconds until stopped by changing channels, or issuing the original Trigger used to start the scan.

Delays

It is sometimes necessary to add delays, mostly when the car is performing an onscreen animation.

iDrive

It is possible to issue Press the press Action on iDrive buttons (MAP, MEDIA, NAV, HOME, TEL, BACK, OPTION). It is also possible to create complex sequences of events using the iDrive controller, navigating menus automatically to automate the selection of any item on the display.

canDO+ Black Edition adds M Sound, A/OFF, Parking Assistant support.

Heated Seats

All functions for heated seats are supported for driver and passenger.

Exhaust

For vehicles equipped with the canDO Valve Controller, Toggle Exhaust Flaps, OEM Exhaust Flaps, or OPEN Exhaust Flaps are supported.

Climate Control

Most functions for climate control can be mapped as Actions

Climate Control		Climate Control	↑ MORE ↑
Delay	AIR On	Delay	A/C Max Toggle
DSC	AIR Off	DSC	AIR Sync On
Heated Seats	A/C On	Heated Seats	AIR Sync Off
iDrive	A/C Off	iDrive	AIR Fresh Air
iDrive Controller	A/C Max On	iDrive Controller	AIR Automatic Recirc.
M Mode	A/C Max Off	M Mode	AIR Recirculation
Radio	A/C Max Toggle	Radio	AIR Fan Very Low
Setup	AIR Sync On	Setup	AIR Fan Max
	AIR Sync Off		AIR Driver Temp Low
	AIR Fresh Air		AIR Driver Temp High
	AIR Automatic Recirc.		AIR Passenger Temp Low
	AIR Recirculation		AIR Passenger Temp High
	AIR Fan Very Low		AIR Upper Temp Min
	AIR Fan Max		AIR Upper Mid Low
	AIR Driver Temp Low		AIR Upper Mid High
	AIR Driver Temp High		AIR Upper Temp Max
	↓ MORE ↓		

Important Notice Regarding canDO+ Associations

canDO+ provides users with the capability to automate and streamline various features already present in their vehicle, such as, but not limited to, traction control, lane departure warning, brake assist, etc. While these features are inherent to the vehicle, canDO+ allows for automation and shortcuts, enhancing user convenience.

It is crucial for users to understand that when utilizing canDO+ to automate these configurations, the built-in safety warnings typically displayed by the vehicle will be suppressed.

By opting to enable these automated customizations, users acknowledge and accept the following:

- canDO+ facilitates the automation and streamlining of existing features within the vehicle, enhancing user convenience and control.
- The suppression of built-in safety warnings is a direct consequence of canDO+'s automation of these configurations, aimed at providing users with a seamless experience.
- Users assume full responsibility for the consequences of their automated customizations and acknowledge that the manufacturer, distributor, and any affiliated parties shall not be held liable for any resulting damages or issues.

It is imperative for users to exercise caution and discretion when utilizing canDO+ to automate their vehicle's configuration. If uncertain about the implications of any customization, users are strongly advised to refrain from making the modification altogether.

By proceeding with the use of canDO+, users signify their understanding and acceptance of these terms and conditions.

canSPY Window

The canSPY window is comprised of three main areas, each offering unique functionalities for monitoring and analyzing CAN bus data. Please note that Associations are disabled when using the canSPY window. To return canDO+ to “normal” behaviour, make sure to return to the Associations Window.

The screenshot displays the canDO+ software interface with the canSPY window active. The top navigation bar contains buttons for 'Associations', 'canSPY', 'Settings', and 'Restart'. The main interface is divided into three panels:

- canSEND:** A text input field containing the hexadecimal string '123#1122334455667788'. Below the input is a 'MARKER (MS)' field set to '100' and a 'Send' button.
- Device Management:** A panel with a hamburger menu icon. It features two radio buttons: 'NO FILTERING' (unselected) and 'BLACKLIST' (selected). Below the 'BLACKLIST' section is a list of 32 hexadecimal IDs: 6D6, 31E, 459, 055, 35C, 101, 263, 543, 18D, 64F, 708, 141, 762, 56E, 6F9, 6E6, 2C0, 02D, 6E4, 1C8, 19D, 5D8, 059, 5E9, 16D, 134, 4CF, 55F, 2F1, 57D, 277, 70D, 338, 5B5, 59A, 7B2, 48F, 74D, 2B4, 748, 178, 2F7, 789, 3C6, 7F2, 045, 154, 1D3, 11E, 6CC, 0A1, 1EA, 73F, 6F0, 0CA, 5FA, 1A3, 504, 005, 3C9, 706, 445, 1FB, 0BB, 45C, 72B, 43D, 593, 216, 0A3, 1F9, 692. Below this is a 'WHITELIST' section with a single ID '25B'.
- canVIEW:** A panel with a 'CLEAR MARK' button and a toggle switch. It displays a list of CAN messages in hexadecimal format, including IDs and data bytes. The messages are: 56B#AD 1C 35 0B 36 5D 84 5C, 1BA#15 0B B8 11 9A F1 A7 04, 6D7#07, 69F#FA 3E D5 67 6B EA 48 7A, 4E1#78 3D 35 3E 4A 85 BF, 48C#0A, 690#2E AF 7F 26 D5 12 07 35, 5D4#F7 A9 22 68 8E, 675#29 A9 63 2F 4C 9D 44 6D, 7D2#0F 7F 4D 0E 71 76 10 17, 448#DC 60 59 11 29 59 A4 66, 4F0#74 DE 63 47, 775#74 83 24 71 05 36 E9 78, 536#DB 48, 536#DB 48, 7DE#F9 0E, 2F3#5F FF 5A 7A C5 3A BB 16, 477#6B 97, 066#E4 62 3E 6D DB 9F F0 18, 15D#E1 D5 D9 11 94 C6 2D 7C, 0FB#9F 69 A3 00 33 04 69 58, 18E#E0 75 3D 39 6C B9 CA 65, 7FB#87 35 95 3A EE 2A C8 39. At the bottom of the panel, it shows 'MSG/SEC: 814/868' and 'COUNT: 1.653E+4'.

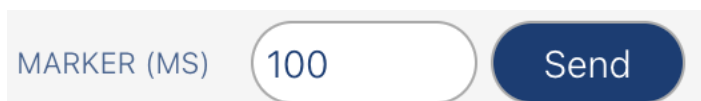
The bottom right corner of the interface shows the version 'G8X ID8 DEV_1.4'.

canSEND

The canSEND section empowers users to inject one or more CAN messages onto the bus for testing and diagnostic purposes. Users can specify the identifier and data bytes before sending messages onto the CAN bus.

Users can send multiple messages by entering each on a separate line.

Marker Section



Positioned at the bottom of the canSEND interface, the Marker section offers a valuable tool for enhancing response tracking in the canVIEW window. Here, users can set a delay in milliseconds. Upon sending a message, a marker is immediately placed in the canVIEW window. Another marker is then automatically added after the specified delay period. This functionality aids users in pinpointing responses from the vehicle within a predetermined timeframe, facilitating easier identification of relevant messages amidst a high volume of bus traffic.

Device Management

Device Management provides options for filtering messages on the bus based on device ID, enhancing users' ability to focus on specific devices or message types during debugging sessions.

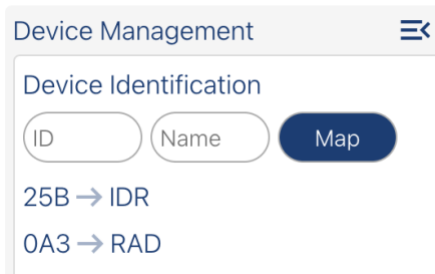
Users can toggle between "No Filtering," "Blacklist," and "Whitelist" modes using radio buttons.

With the Blacklist enabled, messages from devices included in the blacklist are filtered out in the canVIEW window, simplifying the search for relevant messages triggered by in-car events, such as button presses.

Users can modify the blacklist and whitelist by entering comma-separated device IDs, allowing for flexible customization of message filtering criteria.

The "Record" feature, represented by the "REC" icon, lets users dynamically append device IDs to the blacklist for the recording, facilitating focused analysis of specific device communications.

Device Identification



Users can access the Device Identification section, located in the upper right corner of the Device Management area. Here, users can assign three-letter identifications to specific device IDs, enhancing message readability and comprehension in the canVIEW window.

canView

The canView window provides a comprehensive view of messages on the CAN bus, allowing users to monitor and analyze data in real-time. Here's an overview of the features available in the canView window:

Filtered Message Display

Messages on the CAN bus are displayed in real-time, allowing users to observe the flow of data. Filtered messages can be displayed based on device ID filtering settings configured in the Device Management section.

linView

Press CTRL-SHIFT-M to toggle modes between LIN and CAN spying modes.

ASCII View

```
000#63 61 6E 44 4F 2B  
canDO+
```

Users can toggle an ASCII view of received message bytes using the "ctrl-shift-a" hotkey. This feature allows for easier interpretation of message contents, especially when dealing with text-based data.

Message Rate Monitoring and Message Count

```
MSG/SEC: 000 / 000 COUNT: 3.000E+1
```

The canView window shows the rate of messages per second on the CAN bus, providing insights into bus activity and data transmission rates.

Users can track the total number of messages received during the session, providing an overview of bus activity over time.

The canView window includes user interface elements for added functionality:

```
canVIEW CLEAR MARK 
```

Marker

Users can add a marker to the message stream by clicking on the marker icon. This feature helps users identify specific points of interest in the data stream.

Clear

Users can clear the message window by clicking on the clear icon, allowing for a clean slate when monitoring new data.

Start/Stop

Users can toggle message capture by clicking on the toggle switch icon. This functionality provides control over when data is being captured for analysis.

canView Table View

You can toggle canVIEW between streaming messages and table view by clicking the canVIEW title. Table view allows users to more easily find messages corresponding to in-car events. For example, users might want to discover messages associated to the iDrive controller. Table view makes this easier through the use of filters.

The screenshot displays the canView interface with the following components:

- Navigation buttons: Associations, canSPY, Settings, Restart.
- canVIEW title bar with a CLEAR button and a toggle switch.
- Table with columns: ID, Byte 1, Byte 2, Byte 3, Byte 4, Byte 5, Byte 6, Byte 7, Byte 8, Msg/s., Count, B/listed.
- Filter controls: ONLY SHOW IDs between [] and [] Apply; HIDE IDs slower than [msg/s.] or faster than [msg/s.] or having count greater than [count] Apply; HIDE Blacklisted ; ADD TO BLACKLIST IDs faster than [msg/s.] or having count greater than [count] Apply.
- Status bar: MSG/SEC: 010 COUNT: 9.900E+1
- Version: G8X ID8 1.6.0

ID	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte 8	Msg/s.	Count	B/listed
2D8	0D	3D	CF	74	5B	95	02	22	9	112	<input type="checkbox"/>
011	EC	05	29	4D	06	28	FF	45	0	1	<input type="checkbox"/>
3B3									0	1	<input type="checkbox"/>
176	28	C7	C8	76					0	1	<input type="checkbox"/>
79F	55	9A	14	50	01	E0	3E	5C	0	1	<input type="checkbox"/>
546	89	9C	19	78	E4				0	1	<input type="checkbox"/>
342	CD	8D	B2	38	48	AB	1E	51	0	1	<input type="checkbox"/>
509	8B								0	1	<input type="checkbox"/>
506	44	7E	2A	19	17	05			0	1	<input type="checkbox"/>
014									0	1	<input type="checkbox"/>
161									0	1	<input type="checkbox"/>
464	93	57	D8	66	03	84	D6	10	0	1	<input type="checkbox"/>
4D8	04	64	15	6D	1E	D2	B9	0A	0	1	<input type="checkbox"/>
40E	03	AE	05	47	51	9F	90	2B	0	1	<input type="checkbox"/>

It is possible to narrow in on device IDs by only displaying a range of IDs, for example, users can set to only display messages for devices between 0 and 0FF, or any arbitrary combination.

Users can also choose to hide messages whose ID sends too many (or too few) messages per second, or messages that have occurred too many times, based on count.

Messages can be blacklisted from the table view itself by checking the “B/Listed” checkbox, or by specifying criteria based on speed or count. Lastly, blacklisted messages can be hidden entirely from the table view.

When a message is updated, the row background is made darker, then slowly fades to white if there are no further updates. This helps users find messages more easily.

Given that there are also a lot of bytes that change on their own (eg, not through user interaction with car buttons) for a given ID, it is possible to ignore bytes by clicking on them. When ignored, the highlighting feature is not triggered even if the byte is constantly changing.

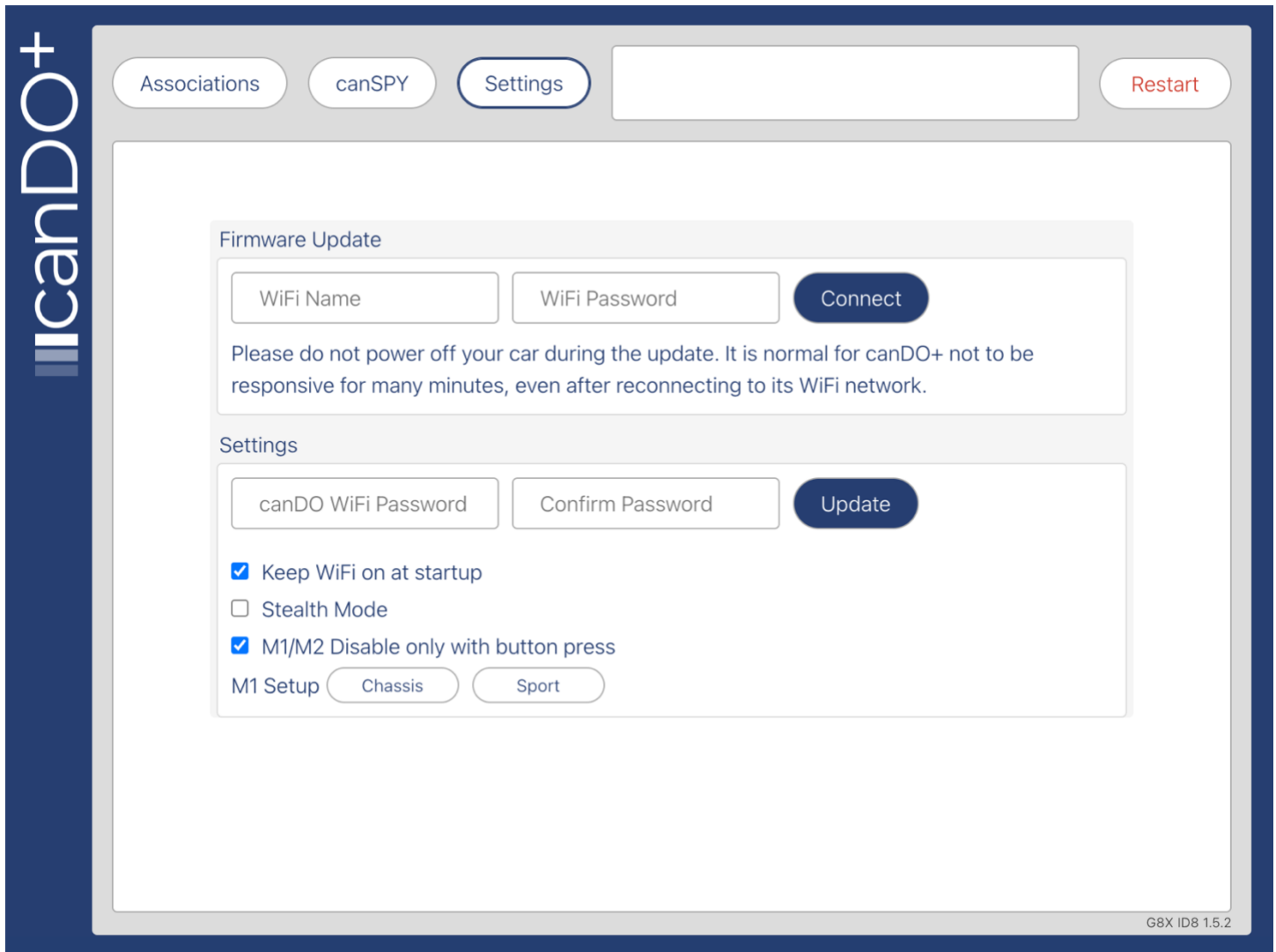
ID	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte 8	Msg/s.	Count	B/listed
001	24								0	3	<input type="checkbox"/>
002	C6	20	AB	6B	C0	4F	0C	5D	0	1	<input type="checkbox"/>
003	22	20	F4	5C	53				0	4	<input type="checkbox"/>
004	60	53	IGNORE	58	0B	28	FA	7A	9	65	<input type="checkbox"/>

Note: if you select Whitelist from the canView streaming window, only whitelisted messages will appear in the table view.

By leveraging the features and UI elements available in the canView window, users can gain valuable insights into CAN bus activity and perform real-time monitoring and analysis effectively.

Settings Window

The update process for the canDO+ device is handled through the Settings section of the user interface.



Firmware Update

Start the WiFi feature of the canDO+ device as described in the "Accessing the canDO+ Interface" section.

Open a web browser on a computer connected to the same network as the canDO+ device, as explained in the "Accessing the canDO+ Interface" section.

Access the Settings Page

In the web browser, navigate to the Settings page of the canDO+ interface. In the Firmware Update section, enter the name and password of a WiFi network with internet connectivity, then click Update.

Initiate Update Process

canDO+ will go online and check for available updates. If an update is found, it will be downloaded, and the upgrade process will begin automatically.

During the update, it is recommended not to turn off the vehicle to avoid interrupting the process. This may take a few minutes, during which time the device will not be available.

Monitor Network Connectivity

It is very likely that the computer will connect to a different network (such as your home network) during the process. Users should monitor available WiFi networks for a few minutes.

Once you see the canDO network is available, manually reconnect to it and wait for the update to complete. A message will eventually be shown that the update has completed.

Note that **it can take up to 5 minutes** for the update process to complete, even after the canDO Wifi network becomes available.

Updating WiFi preferences

canDO+ always starts its WiFi network on startup so you may connect to it for configuration. With WiFi on startup disabled, the network shuts down after a short grace period.

We recommend changing the canDO+ default password.

Stealth Mode

When enabled, Stealth Mode suppresses all Actions, making canDO+ practically undetectable.

Disable M1/M2 only with button press (for cars equipped with M1/M2 buttons)

When enabled, will only cause the M1/M2 Disable Trigger to fire when using the M1/M2 steering wheel buttons, and none of the indirect methods that take the car out of M1/M2, such as changing the car's setup, exhaust setting or DriveLogic mode.

M1 Setup (for cars equipped with M1/M2 buttons)

This setting allows canDO+ to distinguish between an M1 or M2 button press. Users must define how they have configured Engine, Chassis or Steering in M1 mode and ensure that the corresponding M2 option is different.

For example, if you have set up M1 Engine to Comfort, and M2 Engine to Sport or Sport Plus, you can use Engine -> Comfort as your "M1 Setup". However, if M2 Engine is also set to Comfort, you will have to use a differing Chassis or Steering setting.

Troubleshooting

If you encounter any issues with your canDO+ device, follow these troubleshooting steps to resolve common problems.

Resetting Associations and Custom Messages

If you experience issues related to associations or custom messages, you can reset the databases to factory default through the canDO+ interface. To do this, press CTRL-SHIFT-D while accessing the relevant section of the interface. This action will reset all associations and custom messages to their default settings.

Contacting Support

If you're unable to resolve the issue using the troubleshooting steps provided, contact canDO+ support for further assistance. You can reach out to support@cando.plus for any inquiries or troubleshooting help. Provide detailed information about the issue you're experiencing, including any error messages or symptoms observed.

By following these troubleshooting steps, you can effectively address common issues with your canDO+ device and ensure smooth operation.

Technical Specifications

Dimensions: Approximately 65 x 42 x 15 mm (L x W x H)

Made of glass fiber-reinforced ABS

Compatibility: BMW iD7, iD8, iD8.5 GXX-series vehicles

Power Supply: 12V DC

Supported Protocols: CAN & LIN

API-driven browser interface

Warranty & Support

The canDO+ device comes with a 6-month exchange warranty. This warranty covers defects in materials and workmanship under normal use. If you encounter any issues with your device during the warranty period, you are eligible for an exchange.

For warranty claims and inquiries, please contact our support team at support@cando.plus. Provide detailed information about the issue you're experiencing, including any error messages or symptoms observed. Our support team will assist you in processing your warranty claim and arranging for a replacement device if necessary.

Disclaimer: Use of canDO+

By using canDO+, the user acknowledges and agrees to the following terms and conditions:

Limited Warranty: The manufacturer warrants that canDO+ will function as intended for a period of six (6) months from the date of purchase. However, the user acknowledges that there is no guarantee that canDO+ is free of software defects. If the device fails to function within this warranty period due to defects in materials or workmanship, the manufacturer will, at its sole discretion, repair or replace the device.

Assumption of Risk: The user acknowledges and understands that canDO+ provides the capability to configure various functionalities within the vehicle, including but not limited to, automatically disabling safety features such as Dynamic Stability Control (DSC), enabling Sport Mode, and suppressing built-in warning messages. By using canDO+, the user assumes all risks associated with configuring the device to perform these actions, and they accept full responsibility for any consequences arising from such configurations.

Limitation of Liability: In no event shall the manufacturer, distributor, or any affiliated parties be liable for any direct, indirect, incidental, special, or consequential damages arising out of or in any way connected with the use or performance of canDO+. This includes, but is not limited to, damages for loss of profits, goodwill, use, data, or other intangible losses, even if advised of the possibility of such damages.

Indemnification: The user agrees to indemnify and hold harmless the manufacturer, distributor, and any affiliated parties from and against any and all claims, liabilities, damages, losses, costs, or expenses (including reasonable attorneys' fees) arising out of or related to the use of canDO+.

Jurisdiction: Any legal action or proceeding arising out of or related to the use of canDO+ shall be instituted exclusively in the provincial courts of Quebec, Canada. The user waives any objection to such jurisdiction and venue.

User Responsibility: The user is solely responsible for ensuring that the use of canDO+ complies with all applicable laws, regulations, and manufacturer guidelines. The user agrees to use the device responsibly and to exercise caution when making any modifications to the vehicle's settings or systems.

Modification of Terms: The manufacturer reserves the right to modify or update these terms and conditions at any time without prior notice. It is the user's responsibility to review these terms periodically for any changes.

Regulatory

FCC Compliance Statement

Contains FCC ID: 2AC7Z-ESPC6MINI1

CAUTION: The manufacturer is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. Such modifications could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

ISED Compliance Statement

Contains IC: 21098-ESPC6MINI1

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe [B] est conforme à la norme NMB-003 du Canada.

CAN ICES-003(B) / NMB-003(B)

Supplier's Declaration of Conformity
47 CFR § 2.1077 Compliance Information

Product Name: canDO+

Product Model: canDO+

Manufacturer:

9512-5837 QUEBEC INC.

engineering@cando.plus

<https://cando.plus>

Importer:

Kies Motorsports

bryan@kiesmotorsports.com

<https://www.kiesmotorsports.com>

Modular Components Used:

NAME: 2.4GHz Wi-Fi & BT IoT Module

MODEL: ESP32-C6-MINI-1

FCC ID: 2AC7Z-ESPC6MINI1

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.