



Quick Start

WARNING

Modifying the Motor Controller parameters can damage equipment, property and cause INJURY/DEATH to yourself/others. Modifications may VOID your WARRANTY

Factory/Dealer settings should only be performed by trained technicians

Questions? Feedback? Send email to: BlueJayTuning@gmail.com

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BlueJay is a non-OEM tuning application for motor controllers used in electric golf carts and utility vehicles.

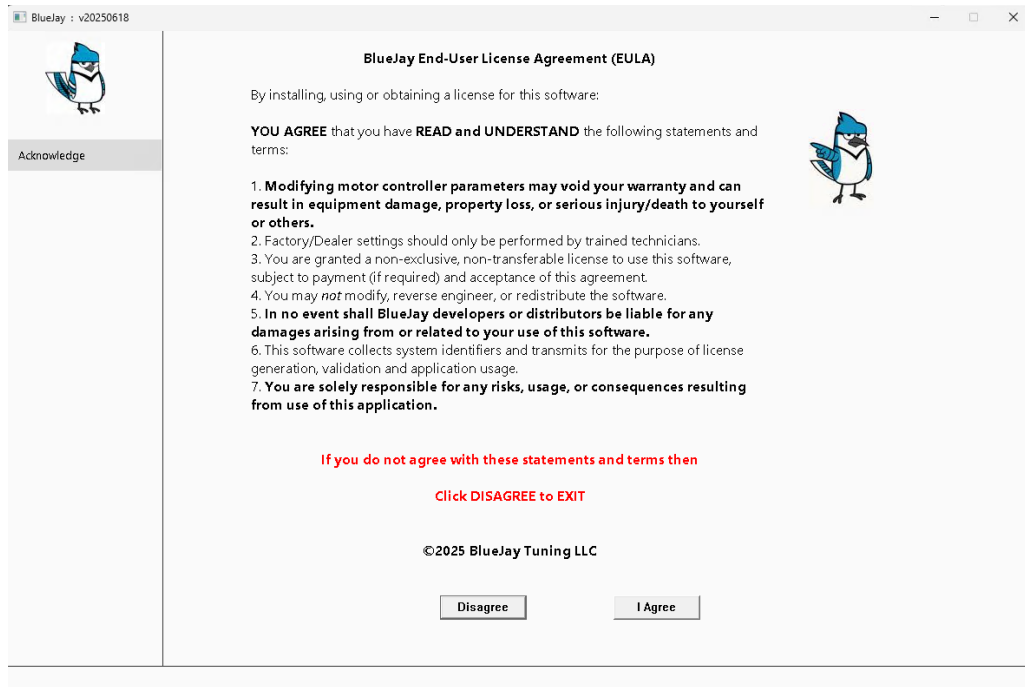
What BlueJay Does

- **Automatic controller detection:** BlueJay queries your connected controller to detect the exact brand/model/type
- **One application for many controllers.** No manual guesswork of which Chinese OEM tuning application to use
- **Highlights the most important and commonly adjusted tuning parameters,** making them quick and intuitive to edit.
- **Save and Restore:** Snapshot your current configuration or roll back to a known-good one
- **Supports tuning profiles,** including:
 - Sporty and Fast
 - Casual About Town
 - Hill Climber
 - Many other community supported
- Fully **English interface** with simple and clear parameter descriptions

BlueJay works with a wide range of vehicles using compatible AC motor controllers, including Evolution / HDK, Tao, Denago, PDG, EZKruiser, Racka, Coleman, Gotraxx, Gorilla and others with FJ, 400-C or Icon controllers

Getting Started

BlueJay requires no installation. Just unzip the BlueJay distribution anywhere on your computer and double-click the BlueJay.exe file!



EULA End-User License Agreement

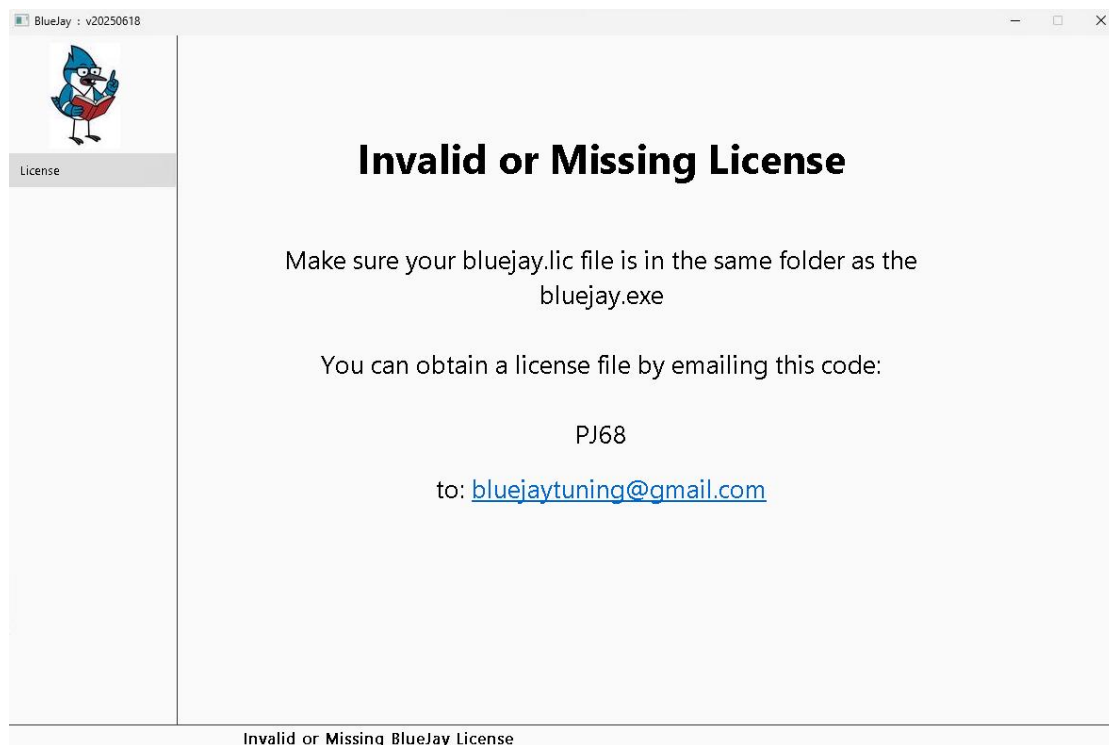
Before you can use BlueJay, you must review and agree to the EULA. If you disagree with these statement and terms, simply click the Disagree button and don't use BlueJay.

If you do agree to the EULA statement and terms, click Agree button and BlueJay will begin.

Licensing

BlueJay is NOT a free application. Once you agree to the EULA, BlueJay will generate a unique code for your PC. Send that code to BlueJayTuning@gmail.com and obtain a license.

The bluejay.lic file is simply put in same directory as the bluejay.exe



Settings

By default, BlueJay is configured to probe for all supported controllers. You may or may not want this and instead just have it look for your specific cart's controller.

Click the Setting selection on the left side and then check or uncheck the controllers that you want.

Be sure to click Save if you make changes to the settings.



Communications

BlueJay communicates to your controller via a USB cable. The cable is specific to your controller brand/model/type so you must first identify your controller. The easiest is to go to:

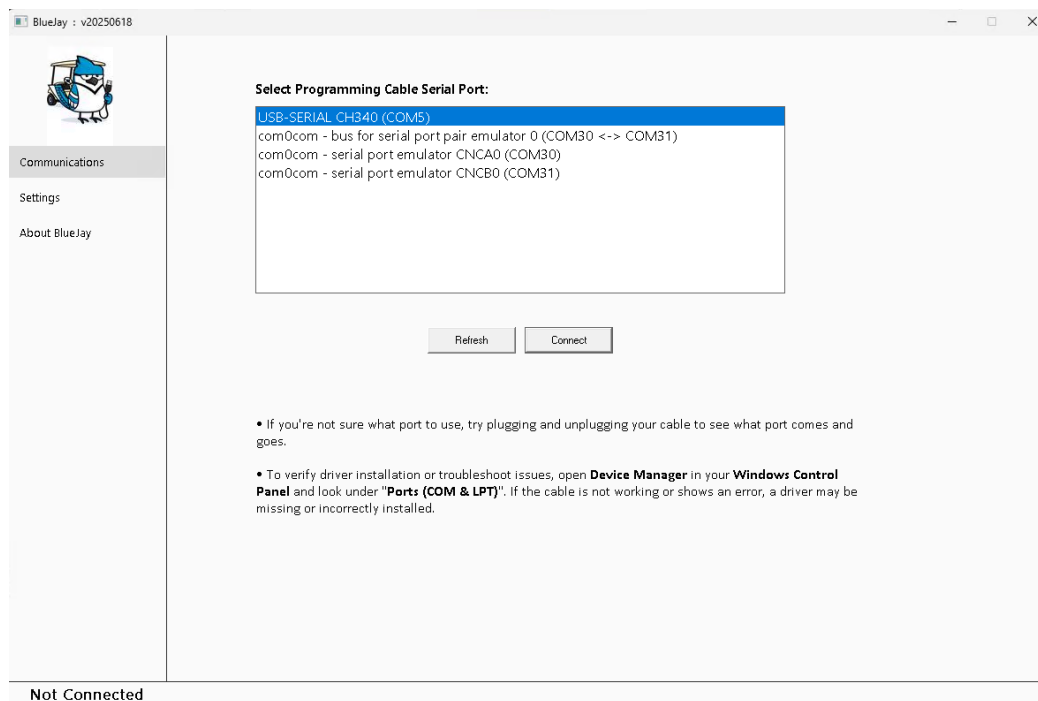
<https://www.cartcables.com/pages/controller-id-guides>

and find your cart. You can purchase a cable for your controller from Cart Cables or eBay or other sources.

USB Device Drivers

Most cables require a Windows Device Driver to be installed. If you purchased from Cart Cables, go here to find the appropriate driver:

<https://www.cartcables.com/pages/drivers>



Once you've installed the cable's device driver, you need to select the associated serial COM Port and click Connect

Controller Probing

BlueJay will attempt to identify your connected controller using the selections in the Settings section.

Once identified, BlueJay will query tuning parameters and load into the Tuning tables.

If BlueJay can't identify your controller:

- Make sure your cart is powered on. The controller must have power in order to communicate
- Make sure that you installed your cable's device driver
- Make sure your controller is supported by BlueJay

Saving

Before making ANY changes to your controller's tuning, you should save a snapshot. And then after making changes, save into a different file being careful not to overwrite any other files.

By default, BlueJay will save file in folders where your BlueJay.exe is running, using the controller's name:

FJ/backups

EV48-400-C/backups

etc

The suggested save filename contains the controller name and today's date. You can edit as needed.

The saved files are text files and can be examined using a text editor like notepad but DO NOT make changes to the saved files or they will not be able to be reloaded at a later time.

Loading

You can load 2 types of files into BlueJay:

- Backups
- Profiles

Backups

Backups are files that you previously saved and now you want to restore your controller to that previous parameter configuration.

You must only load backup files for your connected controller brand/model/type (eg only FJ for an FJ, not a EV48-400-C into an Icon controller).

By default, BlueJay will look for backup files in the folder of the BlueJay.exe and in the controller's named folder (eg FJ or EV-48-400-C).

After loading, the Tuning tables will highlight any changes in yellow. This indicates differences of your current controller's configuration and what was in the loaded file.

In order to restore these changes, you **MUST** press the Write button.

You can abandon any changes by clicking the Reset button.

Reset

You can abandon any changes loaded or manually edited by clicking the Reset button. After confirming that you want to discard changes, the controller will be read and the current configuration will be displayed in the tuning tables.

Profiles

Profiles are files that contain **suggested or community suggested** parameter settings.

Use intelligence and examine every parameter that was modified by a loaded profile before writing to the controller. Especially if you loaded a profile from an unknown and/or untrusted source.

You must only load profile files for your connected controller brand/model/type (eg only FJ for an FJ, not a EV48-400-C into an Icon controller).

By default, BlueJay will look for profile files in the folder of the BlueJay.exe and in the controller's named folder (eg FJ or EV-48-400-C).

After loading, the Tuning tables will highlight any changes in yellow. This indicates differences of your current controller's configuration and what was in the loaded file.

In order to write these changes to the controller, you MUST press the Write button.

You can abandon any changes by clicking the Reset button.

Tuning

This section describes generic motor controller tuning. For details on individual parameters, refer to your specific controller brand/model/type in the User Guide Appendixes.

Tuning is not complicated but it does come with risks that **MUST** be understood and accepted:

Modifying the Motor Controller parameters can damage equipment, property and cause INJURY/DEATH to yourself/others.

Modifications may VOID your WARRANTY

Factory/Dealer settings should only be performed by trained technicians

In BlueJay, use the Tuning page to review, edit, write, save, load parameters.

Parameter Name	Value	Set	Unit	Min	Max
Speed					
Motor Maximum Speed	7500	7500	RPM	0	8000
Forward High Gear Max Speed	6300	6300	RPM	0	8000
Forward Slow Gear Max Speed	2500	2500	RPM	0	8000
Reverse Max Speed	1500	1500	RPM	0	8000
Acceleration					
Forward Acceleration 0->500 RPM	30	30	RPM/S	0	100
Forward Acceleration 500->1000 RPM	30	30	RPM/S	0	100
Forward Acceleration 1000->2000 RPM	30	30	RPM/S	0	100
Forward Acceleration 2000->3000 RPM	25	25	RPM/S	0	100
Forward Acceleration 3000->4000 RPM	25	25	RPM/S	0	100
Forward Acceleration 4000->5000 RPM	20	20	RPM/S	0	100
Forward Acceleration 5000->MAX RPM	20	20	RPM/S	0	100
Forward Deceleration 500->0 RPM	10	10	RPM/S	0	100
Forward Deceleration 1000->500 RPM	9	9	RPM/S	0	100
Forward Deceleration 2000->1000 RPM	8	8	RPM/S	0	100
Forward Deceleration 3000->2000 RPM	7	7	RPM/S	0	100
Forward Deceleration 4000->3000 RPM	7	7	RPM/S	0	100
Forward Deceleration 5000->4000 RPM	6	6	RPM/S	0	100
Forward Deceleration MAX->5000 RPM	5	5	RPM/S	0	100
Reverse Acceleration	10	10	RPM/S	0	100
Reverse Deceleration	3	3	RPM/S	0	100
Torque					
Driving Torque Factor 0->500 RPM	100	100	%	0	100
Driving Torque Factor 500->1000 RPM	100	100	%	0	100
Driving Torque Factor 1000->1500 RPM	100	100	%	0	100
Driving Torque Factor 1500->2000 RPM	100	100	%	0	100
Driving Torque Factor 2000->2500 RPM	100	100	%	0	100
Driving Torque Factor 2500->3000 RPM	100	100	%	0	100
Driving Torque Factor 3000->MAX RPM	95	95	%	0	100
Regenerative Torque Factor 1000->0 RPM	95	95	%	0	100
Regenerative Torque Factor 2000->1000 RPM	48	48	%	0	100
Regenerative Torque Factor 3000->2000 RPM	36	36	%	0	100
Regenerative Torque Factor 4000->3000 RPM	33	33	%	0	100
Regenerative Torque Factor 5000->4000 RPM	30	30	%	0	100
Regenerative Torque Factor MAX->5000 RPM	20	20	%	0	100

Save Load Reset Write

Connected Loaded EV48-400-C Backup: BlueJay-EV48-400-C-Backup-20250622.bjdata

Before you make any changes, you should make a backup of the current parameters by clicking the Save button.

To change a parameter, double-click on the the “set” cell of the parameter row. Make sure your change is between the valid min and max for that parameter. After editing, the “set” cell will highlight in yellow to show that it has changed.

Changes are not written to the connected controller until you click the Write button. If you decide not to write and you want to discard changes, click the Reset button.

You can return to a previous saved state by clicking the Load button and choosing a previously saved file for the connected controller. After loading, differences from the current state and the loaded files will be highlighted in yellow. Be sure to review both the Tuning and Sink tables to see changes. Changes are not actually written to the controller until you click the Write button.

Common tuning areas are:

- Speed
- Acceleration/Deceleration
- Torque
- Everything else aka Kitchen Sink

Speed

Speed tuning controls how fast the golf cart can travel under various conditions. This involves adjusting the maximum RPM limits and forward vs. reverse and selected gear.

Acceleration/Deceleration

Acceleration and deceleration tuning determine how quickly the cart speeds up or slows down. This is managed by ramp rate settings in the controller. A smoother, slower acceleration may be ideal for comfort and safety, while a sharper ramp gives a snappier, sportier feel.

Deceleration tuning can also affect how aggressively the cart slows down when throttle is released - important for both driving feel and regenerative braking behavior (if supported).

Torque

Torque is the rotational force that the motor produces to turn the shaft. Think of it like how hard you twist a wrench - torque is that "twisting" force. Torque tuning affects how well the cart can climb hills, carry loads, or launch from a stop. Torque can be mapped across multiple ranges

(e.g., low-RPM vs. high-RPM) or split between driving torque and regenerative torque. Adjusting torque levels can help balance power, efficiency, and battery life.

Everything Else (The Kitchen Sink)

This catch-all category includes all the less-obvious but available tuning options. The experienced/advanced tuner will find useful but uncommon tuning parameters here.

Trouble Shooting

BlueJay can't identify controller

- Make sure your cart is powered on. The controller must have power in order to communicate
- Make sure that you installed your cable's device driver
 - Most cables require a Windows Device Driver to be installed. If you purchased from Cart Cables, go here to find the appropriate driver:
 - <https://www.cartcables.com/pages/drivers>
- Make sure your controller is supported by BlueJay.
 - Identify your controller brand/model/type here:
 - <https://www.cartcables.com/pages/controller-id-guides>

Can't edit a parameter

- Make sure you are double-clicking the “set” cell of the parameter row.
- Grey Parameter rows are read-only and can not be edited.

Won't load backup

- Make sure you are loading the correct controller brand/model/type
- Make sure you haven't hand edited the backup file

Won't load profile

- Make sure you are loading the correct controller brand/model/type
- Make sure you have the parameter named spelled correctly
- Make sure the parameter value is within min/max range

Something Else

- Send email describing issue to: BlueJayTuning@gmail.com

FAQs

Why isn't BlueJay free?

Since the OEM controller programs like GEF12Host or Fj Programming tool are free, why isn't BlueJay also free?

- Actually those OEMs programs are NOT free. They are licensed applications that have been pirated and copied onto various download sites.
- BlueJay is supported multi-controller application that provides many features that the OEMs applications do not, such as:
 - Save/Restore
 - Profiles
 - User Guide
 - Every common tuning parameter defined and described in the User Guide
 - Email application support, bug fixes, new versions

Where can I find the latest BlueJay version?

- The latest version can be found at: <https://bluejay.lizard43.com>

Where can I find a list of reported bugs?

- Go to: <https://bluejay.lizard43.com>
- Report bugs to: BlueJayTuning@gmail.com

Will you give me personal support to tune my controller?

- No, we can give application support via email and bug fix support but we cannot tell you what parameter values to use for tuning your controller.
- Read the user manual for general guidance
- Get community support by posting tuning questions for the various Golf / Utility Cart forums and sites.

Comments, questions, corrections? Send email to: BlueJayTuning@gmail.com

