

General Announcements

E09 Image Solution Posted

As noted in *Team Update 01* , some teams are experiencing an issue traced to a defective boot loader on the USB Key when attempting to image their E09 Classmate with the E09 USB Key distributed at Kickoff.

A solution to this issue has been posted on the 2012 FRC Robot Driver Station Information page. Please post any questions to the E09 Image section of the *FIRST* Forums.

Jaguar Firmware Update


Please note that Texas Instruments has released a new version of the Jaguar firmware , relevant to teams who use CAN. While this new version has not been mandated by in the competition manual, we **strongly** recommend teams using CAN update the firmware. Details on what changes are implemented are posted on the *FIRST* Forums .

Throughout the Manual


Misprints have been corrected.

The Arena 
The Bridges

A Bridge will count as Balanced if it is within 5° of horizontal and ~~any~~-all Robots touching it are fully supported by it.

Robot-Robot Interaction 
[G26]

Strategies aimed at the destruction or inhibition of Robots -via attachment, damage, tipping or entanglement of Robots are not in the spirit of the FRC and are not allowed.

Scoring 
[G40]

When the final score is assessed per [G37] , a Balanced Alliance Bridge will earn points based on the number of Alliance Robots completely supported by the Bridge , ~~a Balanced Alliance Bridge~~, per Section 2.2.5 , ~~earn points~~ as follows:

[G38]

Alliances will be immediately awarded points for each Basketball that passes completely through ~~a~~ their Hoop s as follows:

Power Distribution 
[R36]

The only legal source of electrical energy for the Robot during the competition is one MK ES17-12 12VDC non-spillable lead acid battery, or one EnerSys NP 18-12 battery, as provided in the 2012 KOP. This is the only battery allowed on the Robot.

Batteries integral to and part of a COTS computing device are also permitted (i.e. laptop batteries), provided they're only used to power the COTS computing device.

Non-electrical sources of energy used by FRC Robots, (i.e., stored at the start of a Match), shall come only from the following sources:

- A. Compressed air stored in the pneumatic system, stored at a maximum pressure of 120 PSI.
- B. A change in the altitude of the Robot center of gravity.
- C. Storage achieved by deformation of Robot parts.

[R39]

Figure 4-8 was revised to allow wire larger than 6AWG between the battery terminals and the Power Distribution Board terminals.

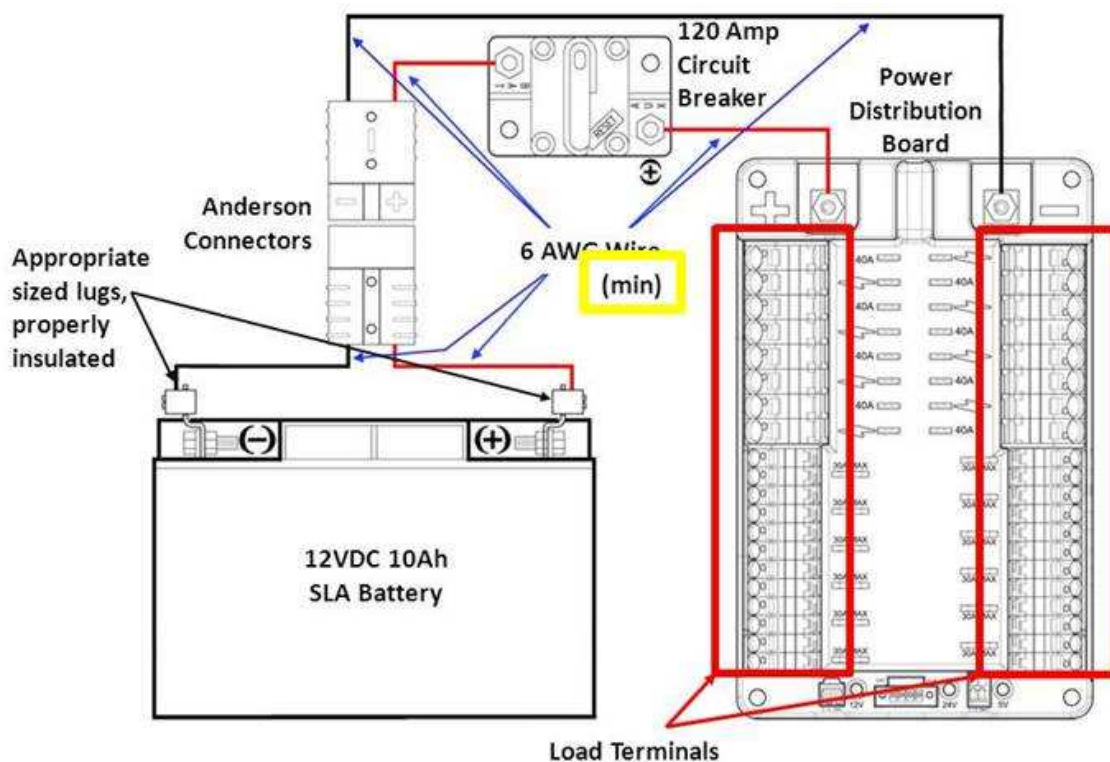


Figure 4-8

Control, Command & Signals System ↑ [R58]

The control system is designed to allow wireless control of the Robots. The Driver Station software, FirstTouch I/O module, cRIO, speed controllers, relay modules, wireless bridge, and batteries shall not be tampered with, modified, or adjusted in any way (tampering includes drilling, cutting, machining, gluing, rewiring, disassembling, etc.), with the following exceptions:

11. If CAN-bus functionality is used, the Jaguar firmware ~~may~~ (must) be updated as required by *FIRST* (see Rule [R61]-D).

General Robot Design ↑ [R02]

The Robot must satisfy the following size constraints:

1. horizontal dimensions must not exceed 28 by 38 in.,
2. the absolute height must not exceed 84 in.,
3. the height of the Robot at the start of the match must not exceed 60 in.,
4. any appendage may not extend more than 14 in. beyond the frame perimeter, and
5. no other part of the Robot may extend beyond the vertical projection of the Frame Perimeter (with the exception of minor protrusions permitted per [R01-2]).

For the purposes of determining compliance with the volume limitations, the Bumpers are not included in the size assessment.

Bumper Rules [R27]

Figure 4-3 has been revised to clarify that example padding is legal, but not considered an official Bumper based on its placement.

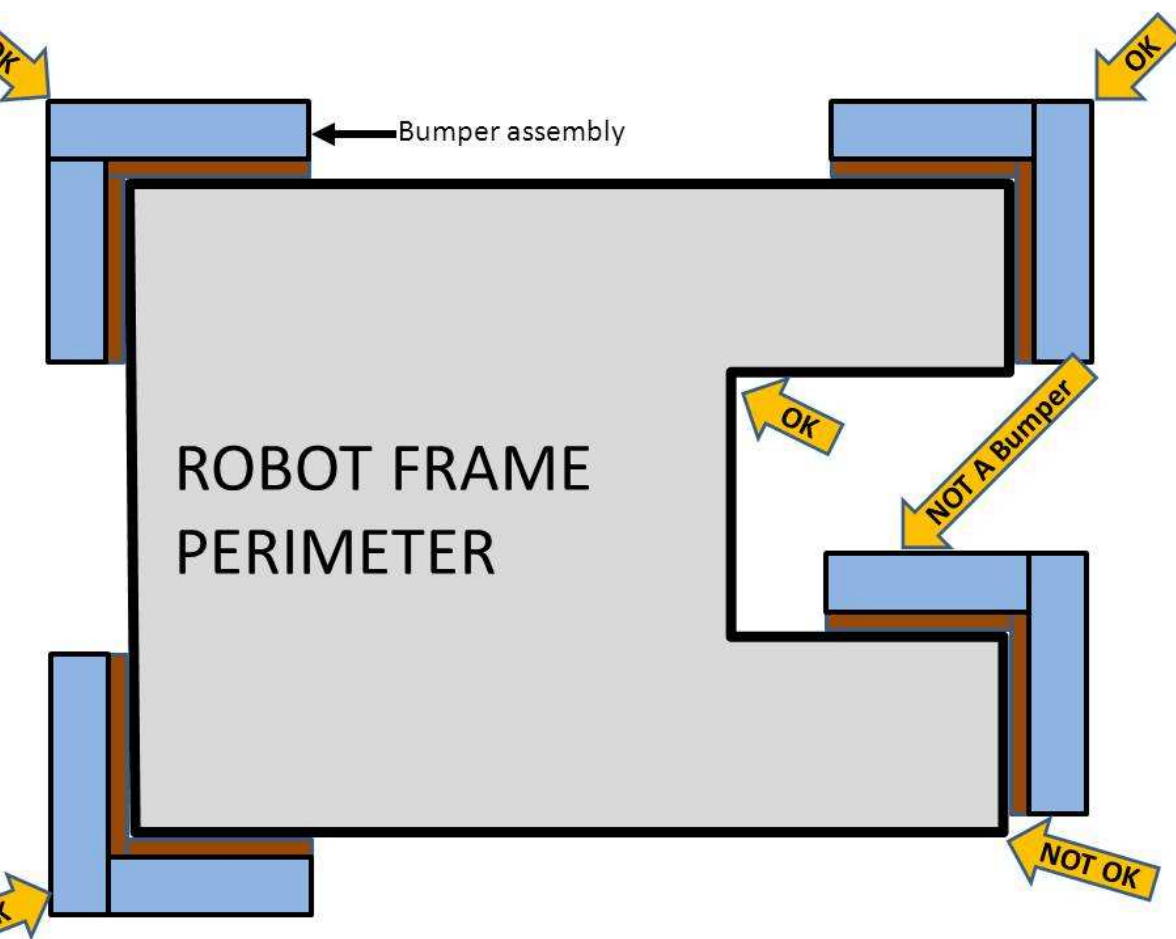


Figure 4-3

Motors & Actuators

[R48]

The only motors and actuators permitted on 2012 FRC Robots include:

4. up to 2 FisherPrice motors (acceptable part #s are 000968-9012 , 00968-9013, 00801-0673, and 00968-9015),