Control Award Instructions

To be considered for the Control Award, Teams must submit a Control Award Submission Form. On this form, Teams identify and summarize the key control elements that make their *Robot* unique. Included is a description of key observable actions for Judges to look for as well as the sensor and algorithm use that make it all possible. Judges will use this form for both evaluating control designs and when observing *Robots* on the competition field. Information on this form will typically fit on one page, with an additional page for each autonomous mode described. Optionally, additional summary pages may be added at the end to help the judges understand key developmental activity.

Autonomous Objectives
List the overall actions that the *Robot* is capable of completing. These should include scoring actions as well as other positioning and defensive operations. The *Robot* does not have to do accomplish all these in every program, but should be demonstrable in at least one autonomous program.

Sensors Used
List the sensors used to control the *Robot* and a brief description of how they are used.

Key Algorithms
List the key algorithms that make your *Robot* unique or are vital to its success on the field. Particularly complex or unique algorithms or those that integrate the use of multiple sensors are good candidates to highlight here.

Driver Controlled Enhancements
List any advanced control elements that are used during the driver controlled period to enhance performance. These may include signaling operations when a certain condition is detected on the field, auto-complete functions, fail-safe algorithms, or just any enhancements that make the control of the *Robot* easier or more efficient for the driver.

Engineering Notebook References
Judges also use the *Teams* Engineering Notebook to evaluate details of the Control elements. To help guide this effort, Teams should provide pointers to where in the Engineering Notebook control related information is located.

Some things to consider including as pointers are: Team goals for control activities, strategies for autonomous mode, *Robot* performance with and without added sensors, requirements for successful autonomous operation, performance improvements using algorithms and sensors, and testing results.

Autonomous Program Diagrams
For autonomous operations, Teams should draw and label a typical path the *Robot* takes. The labeled points identify key observable actions the *Robot* makes. For each labeled point, a brief description of what is taking place should be noted (see example below). Especially describe those key operations where adjustments are made to ensure accurate and repeatable performance.

For Teams with multiple autonomous programs, it is not necessary to document every program on a separate sheet. It is sufficient document the most commonly used or complex programs and note variances for the rest.

Additional Summary Information (optional)
For those Teams that have developed many different control features, they may want to provide additional information to assist the judges in understanding their work. This is a place where Teams can provide more detailed information about their designs. It should be organized such that separate topics are easily identified and can be quickly found.