The proper adjustments of an EndZone (EZ) grain bin fan control for adding moisture and equilibrium humidity to soybeans with Grain Temp Guard (GTG) monitors.

To properly adjust an EndZone (EZ) grain bin fan control for adding moisture and achieving increased equilibrium humidity (EH) in soybeans monitored with the Grain Temp Guard HT monitors, follow these steps:

1. On the EndZone (EZ) front panel, Switch the top switch UP to “Automatic Control”. Switch the bottom switch DOWN to “Weather Station Only”.

2. Determine the target moisture content: Start by determining the desired moisture content for your soybeans. This will depend on factors such as the intended use of the soybeans and the storage duration, specific end use of the soybeans and the moisture requirements for that purpose. For example, if you are storing soybeans for long-term storage, a moisture content of around 12-13% is typically recommended, commercial sale is typically 13% or slightly under, and seed beans are typically 14%.

3. Install Grain Temp Guard monitors: Ensure that Grain Temp Guard monitors are installed strategically throughout the grain bin. These monitors measure both the temperature and equilibrium humidity (EH) levels within the bin and are positioned at multiple even layers. 2 or more should be used with a minimum of 1 per 7,500 bu of beans (20K bin requires 3 or more).

4. Monitor the initial conditions: Before making any adjustments, monitor and record the initial EH levels in the grain bin. This will serve as the baseline for adjustments.

5. Check the moisture levels: Use a moisture meter to determine the initial moisture content of the soybeans. Slight variations in EH result from varieties and crop year. This will help you assess how much moisture needs to be added, and provide an acute baseline relative to the EH chart (provided with you GTG and EZ).

6. Set the target relative humidity (RH) level: Determine the target RH goal for the bin. This will depend on the desired equilibrium moisture content starting point and end goal for the soybeans. Consult grain EH chart or talk to tech support for recommended levels.

7. Adjust EndZone Weather Station (EZWS) control settings: Access the EZWS control system and adjust the settings accordingly. Some general adjustments to consider include:

a. Choose the fan size: 1 hp/1,000 bu of grain will circulate air most effectively throughout the bin, 0.5 hp/1,000 bu is a minimum for satisfactory results. This will help distribute moisture evenly and rapidly.

b. Level the bin top: Bins that are center piled or cored out allow for uneven air flow through the beans. Air will travel the path of least resistance, through the shallowest depth more successfully.

c. Monitor and adjust: Continuously monitor the temperature and EH levels using the Grain Temp Guard monitors. Adjust the EZWS settings as needed to maintain the target bottom humidity and 1 or 2 points higher than the EH of the lowest GTG monitor in the bin. Set the EZWS top humidity reading at 85% (88% if you have 1hp/1,000 bu).

7. Regularly check GTG EH levels: Periodically check the moisture levels in the soybeans using the moisture meter for maximum accuracy. Adjust the EZWS base target as necessary (step c) until the desired moisture content is achieved. If layers are uneven, at your end point, set the WSRH bottom and top settings 2-3 pints above and below the target respectively.

8. Maintain ventilation: It is important to continue proper ventilation during the storage period to prevent the development of hot spots and optimize soybean quality. Monitor the temperature and RH levels regularly and make any adjustments to the EZ control settings as needed. Run the fan 2-4 hrs once/month fall winter and spring. 2 to 3 times per month, in the summer. Adjust the WSRH up and down in slight adjustments to reflect the season and temperatures. Maintain the grain temp within 10 degrees of the average ambient temp.

Remember to consult the user EL moisture chart provided with your GTG and EZ of your grain bin fan control system for more detailed goals. Additionally, it is always beneficial to seek guidance from tech support experts or other professionals to ensure optimal grain storage conditions.