**Automated Pet Feeder Instructions  
Group 6**

**Fall 2021**

**Buttons**

The automated pet feeder uses six buttons to control user input. The four blue buttons represent up, down, left, and right; each button position corresponds to its direction. The other two buttons are the green “go” button and the red “back” button. Pressing the go button saves values and settings to the Arduino, and the back button returns the user to the previous menu when the user presses it.

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Go

Back

*Figure 1: Button layout and purposes*

**Startup**

Powering the Arduino causes a few intro screens to be displayed. Then the user is prompted to enter the following information:

1. The current time and date.
2. Calories per gram for the pet food.
3. Calories to dispense per meal.

The format for the date and time is 11/27/2021 08:30 AM. Pressing the blue direction buttons on the left and right moves the cursor left and right to select different items like the month and year. The top and bottom blue buttons increase or decrease the dates and times. Once the correct date and time are selected, press the go button to set the clock.

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*Figure 2: Screen to set the current time*

To change the number of calories per gram, press up or down to increase or decrease in 0.25 increments. Pressing the go button saves calories per gram.

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*Figure 3: Screen to choose calories per gram*

Pressing up or down adjusts the calories per meal in increments of five.

Pressing the go button saves the value. The volume of dispensed food corresponds to the calories per meal and calories per gram settings.

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*Figure 4: Menu to set calories per meal*

**Navigating the Main Menu**

The main menu has five different items that the user can choose. The main menu also shows the clock time. The five main menu options are:

1. Set Feeding Times
2. Set Clock
3. Choose Calories Per Meal
4. Give Calories Per Gram
5. Monitor Consumption

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*Figure 5: Main menu showing the five options and clock*

Items two, three, and five lead to menus that adjust the three settings from the setup. The first option programs the pet feeder to feed at certain times, and the last option shows the number of calories the pet has consumed for the day and week.

**Set Feeding Times**

The set feeding times option allows the user to program up to 50 weekly feeding times into the device. The dispensing times are by specifying a weekday, hour, minute, and if the time is AM or PM. Each page shows five items. Selecting the "previous page" and "next page" items on the bottom allows the user to pan through different pages. The pet feeder dispenses food when the clock time matches a feeding time.

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*Figure 6: Menu to set feeding times or delete existing times*

After pressing go, on “Add a new feeding time,” clicking the left and right buttons swaps between different items like the weekday and hour. Pressing up and down changes the time items. Pressing go will save the feeding time, and it will become visible in the set feeding times menu.

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*Figure 7: Prompt to delete a time*

To delete an existing time, scroll to a time like in figure 6 and press "go." Once the menu shown in figure 7 appears, press "go" again to delete the time. Afterward, the time will disappear from the set feeding times menu. Pressing back once the prompt appears will return the user to the set feeding times menu without any changes.

**Monitor Consumption**

The last menu item, monitor consumption, shows how many calories a pet has eaten in calories. The menu displays calories consumed for the current day and week.

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*Figure 8: Consumption is shown in calories for the current week and current day*