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- 2. Warranty is void if **all components** of the system are not original equipment supplied by the **Manufacturer**.
- 3. This product must be purchased from and installed by an authorized distributor or certified representative thereof or the Warranty will be void.
- 4. Malfunctions or failure resulting from misuse, abuse, negligence, alteration, accident, or lack of proper maintenance shall not be considered defects under the Warranty.
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Effective: September 2006

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Thank You

The employees of CTB Inc. would like to thank your for your recent C-Collect[®] purchase. If a problem should arise, your C-Collect[®] distributor can supply the necessary information to help you.

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General

The Breeder/Pullet Bird Scale is specially designed for use in Breeder and Pullet (Rearing) applications. The Control's software sets it apart from the Broiler Bird Scale in the following ways:

- 1. It can support up to eight different scale inputs (8 platforms for Pullet Houses, 4 platforms for Breeder/Dual Sex houses)
- 2. The algorithm is designed to handle little or no daily growth
- 3. The scale platforms can be configured to take to two separate ranges of weights to accommodate both the males and females in the breeder house. Since each platform tracks two different weight ranges over 4 scale platforms can be used.

Safety Information

Caution, Warning and Danger Decals have been placed on the equipment to warn of potentially dangerous situations. Care should be taken to keep this information intact and easy to read at all times. Replace missing or damaged safety decals immediately.

Using the equipment for purposes other than specified in this manual may cause personal injury and/or damage to the equipment.

Follow Safety Instructions

Carefully read all safety messages in this manual and on your equipment safety signs. Follow recommended precautions and safe operating practices.

Keep safety signs in good condition. Replace missing or damaged safety signs.

Decal Descriptions

DANGER: Electrical Hazard



Disconnect electrical power before inspecting or servicing equipment unless maintenance instructions specifically state otherwise. Ground all electrical equipment for safety.

All electrical wiring must be done by a qualified electrician in accordance with local and national electric codes.

Ground all non-current carrying metal parts to guard against electrical shock.

With the exception of motor overload protection, electrical disconnects and over current protection are not supplied with the equipment.

Introduction to Control

Here is a diagram to help you get more familiar with the various parts of your Breeder/Pullet Scale Control.



Item	Description
1	Bird Scale Control
2	Viewing Screen
3	Subject Key Pad
4	Navigation Keys
5	Scale LED's
6	Index Key
7	Alarm Key
8	Scale Keys
9	Edit Key

Figure 1. Intro to Control



Viewing Screen

The Viewing Screen (**Item 1, Figure 3**) contains up to four lines and up to 20 characters per line. What is displayed on the screen is determined by which Subject Button is pressed and which platform the information refers to. A cursor will be present when any of the information is editable.



Scale LED's

The LEDs indicate when a weight has been accepted. For example, if the second LED lights up, that indicates that a weight has been accepted on either scale platform 2 or 6.



Index Keys

The Index Keys (**Item 1, Figure 5**) help you to move quickly through a screen with multiple lines of data like the History Screen. The Index keys are also used in the Growth Standard screen (**Button 13**) to choose different types of growth standards (rearers(pullets), hens, cocks, etc) to be viewed.



Item	Description
1	Index Keys
Figure F. Index Kove	

Figure 5. Index Keys

Alarm Key

If the Alarm Key (**Item 1, Figure 6**) is blinking, it is indicating that an alarm condition has occurred. To view the alarm, press the button. The **Table below** explains what the number codes mean.

		1	
Value	Situation	Explanation	
0	Alarm stand by	There is no alarm.	
1	Alarm test	Set alarm to 1 to test it; then reset alarm to stand by by entering the value 0.	
5	Alarm Cancelled	There was an alarm, which has been cancelled. The computer switches off the alarm, but the alarm code remains visible.	
6	Silent alarm	Alarm message shown on display only.	SETUP FLOCK
7	Alarm temporarily off	Set value to 7 to temporarily switch off the current alarm. When the alarm situation has been cancelled, this value will automatically become 0 again. Always check that the value has reverted to 0.	
8, 9	Alarm blocked	Set the value to 8 or 9 to switch off the alarm entirely. Only do this when houses are unoccupied. Do not forget to reset value to 0	ItemDescription1Alarm Key
10	Alarm	The type of alarm is shown on the display.	Figure 6. Alarm Key

Scale Keys

The Scale Keys (**Item 1, Figure 7**) indicate which scale's data is being shown in the screen. If none of the keys are lit when a subject button is pressed, then the data represents all of the platforms. To reference a particular scale, press the key with the number you are interested in.



Figure 7. Scale Keys

Subject Keys

The subject keys are used to display a selected subject on the screen. The subjects are listed next to the 22 buttons. Buttons 14 and 15 are initially left blank. The LED behind the number will light indicating which subject is being displayed on the screen.

The following is a brief description of the subject keys:





Navigation Keys

The Navigation Keys, (**Item 1, Figure 9**), will move the cursor around the screen. Use the Up, Down, and Side arrows to move the cursor in the appropriate direction. These Keys also allow you to scroll up or down within a screen. To scroll rapidly, use the scroll up and down Keys. (**Item 6, Figure 8**).



Item	Description
1	Navigation Keys

Figure 8. Navigation Keys

Installation

- Wire control to a 220vac power supply only
- When possible, wire the control to a dedicated circuit breaker
- Mount the control in a dry, warm area with the screen at a comfortable viewing height
 - Ground the control properly. Refer to local electrical code requirements
- When attaching the external power, enter the box from the bottom side and use water tight connectors. Bring the scale wires into the box from the side again using the water tight connectors
- To avoid damage to your Control from voltage spikes, the use of surge suppression devices is strongly recommended
- Do not run scale wires together with line voltage wires. If you have to cross line voltage wires with the scale wires, do so at 90°
- When wiring the scale platforms, there is an SJB box that is mounted between the control and the platform. Each scale platform requires an SJB box. Six conductors, 22 gauge with shield is required between the SJB box and the platform. Twisted pair, 220 gauge wire is used between the SJB box and the Control. The total length of twisted pair used must be less than 2000 ft.Refer to "Wiring Diagrams"
- 24 Vdc must also be supplied to every SJB. The Breeder/Pullet Scale Control can supply 24Vdc to a MAXIMUM of 2 SJB's. If more than two SJB's are connected to the Control, then a separate 24 Vdc supply (CTB part number 43288) must be used for the additional SJB's.
- Position the scale platforms close to the feeders and drinkers towards the center of the house. This will vary depending on the type of feeder and if the scale is installed in a house with slats. The goal is to position the scale in high traffic areas. See the following diagram for mounting the Control and running the wires:



Figure 9. Installation

Mounting the Control

Breeder/Pullet Scale Control requires a minimum mounting area of 21 in. [53 cm] x 21 in. [53 cm] (See Figure 10). This dimension allows extra room for the Control doors to open. The Control should be mounted level and square on a solid backing using the mounting holes provided.



Figure 10. Mounting the Control

Wiring the Control

When wiring the Breeder/Pullet Scale Control it is recommended that the line voltage wires be brought into the bottom of the Control Box and the low voltage wires (Wires to the Load Cell) be brought in the side of the Control Box (See Figure below). When routing the Twisted Pair Wire be sure to keep it a minimum of 12"(305mm) away from line voltage wiring. If there is a need for the Twisted Pair Wire to cross line voltage wires cross them at a 90° angle to each other as shown.



Control Setup

Installation Setup

At the time of installation, either all or part of the setup process can take place. At a minimum, the installer needs to follow the setup steps in Subject Screen 22 and 21. The following is a step by step instruction for Subject 22 and 21. The balance of the Setup process is covered in the Scale Setup Section.

1. Press Subject Key 22 SYSTEM 22 .Next you will be asked to enter a pass-

word. The default password is handled by pressing Subject Key

- 10 10 HISTORY UNIFORMITY , then the Edit Key.
- 2. This will bring up a screen with the following three subject:
 - a.Configuration
 - b.Installation
 - c.Internal Ram
- 3. The cursor will be on "Configuration". Open Configuration by pressing the right navigation arrow.
- 4. Move the cursor to "Communication" and press the right navigation arrow.
- 5. Edit the computer number to match the house number. When the cursor is over the number, press Edit, use you up and down arrows to change the number, and press Edit to enter your selection
- 6. Use the down arrow to move the cursor to Type. This should read "N" and "Slave". If it doesn't, press Edit and use the arrows to toggle to the right selection, then press Edit to enter your selection
- 7. Press the left arrow twice to exit these screens.
- 8. Move the cursor to Installation and press the right arrow
- 9. The cursor will be on General. Use the right arrow to open the screen
- 10. Edit the number of Scales you will be wiring to the Control and choose which application applies; Rearers (Pullets), or Parents.
- 11. The next step is to calibrate the platforms. Proceed by pressing Subject Key 22 SYSTEM 22 .
- 12. Each platform has to be individually calibrated. Press the Scale Key (**Figure 7**) that represents the Scale number you want to calibrate.
- 13. Raise the Scale Platform to insure the birds cannot get on
- 14. Press Edit, toggle to "yes" for agreed, and press Edit to enter selection. The screen will return to "no" and the weight will show 0.00
- 15. Press the down key to advance to the next screen. Place the 5 pound weight on the Scale, enter 5.00 for weight and press Edit. Place the cursor on "no", toggle to "yes" and press Edit. The Control will enter the data and return the screen to "no".
- 16. Press the down arrow one time and the next screen will indicate that the calibration procedure was successful by showing the current date.
- 17. This completes the installation part of the setup procedure

Control Setup

The Control Setup section will be broken down into two parts to help make the process more user-friendly. The first section deals with setting up the control when there is only one bird sex occupying the house as in a pullet house. The second section deals with those installations that house both male and female such as a breeder house or a pullet house with the males and females separated.

Same Sex House (Pullet) Setup

1. 1.After the initial installation has been performed now the control has to setup

for the specific flock. First press Subject Key 12 **SETUP FLOCK** (12). Fill in Day, Flock Number, and Initial Weight pressing the edit key after each entry. When this is completed, change "no" to "yes" and push edit. The screen will return to its original state if the data has been accepted.

- 2. Press Subject key 16 DATE/TIME 16 to check if date and time is correct. If not, make the corrections using the edit key after entering the date and after entering the time. The date is entered as month-day-year.
- 3. Now press Subject Key 17 TIME CLOCK (17) which will allow you to choose when you want to be taking weights. Enter the from-to times and press edit. The second line of this screen will indicate if the current time fall into the time you have selected to take weights by showing "active" or "inactive".
- 4. Press Subject Key 18 WEIGHT COLLECTION 13. This is an important screen because here is where you instruct the control how you want the birds to be weighed which will in the end have an impact on you statistical data. First press the edit key and the cursor will highlight the first line. By toggling you choose how you want to weigh the birds: when they get on the scale; when they get off the scale; both on and off; and blocked. The next two lines let you choose the percent above and below the standard weight that you want to accept.
 - a. Once you have made your selection by pressing the Edit key, press the down arrow once to view the range you have created based on you input and the current weight.
 - b. Now press the down arrow once. This screen will let you curve the accepted weights by percentages over 10 bend points of the flock life.
 - c. Press the down arrow once and this screen will allow you to pick your range above and below the standard for the uniformity calculation. You have a choice of either 10% or 15%.
 - d. Press the down arrow once again and you will see the corrected amount after changing the accepted weights. This is displayed as the Actual Weight Offsets
- 5. Press Subject Key 19 SCALE DATA (9) to examine scale data. Here you can check and make the needed modifications for each individual scale by pressing the scale numbers 1 thru 8 located beneath the screen. This step is especially important in a breeder house (see Setup for Mixed Sex House)
- 6. Press Subject Key 20 SCALE DESCRIPTION 20. Select "Scale Description" by pressing the right arrow. Here again as above this screen gives you the opportunity to see how each scale is setup by pressing the scale numbers 1 thru 8 under the screen. Make needed modifications by moving your cursor by pressing the edit key, adjusting the value and enter your selection by again pressing the edit key. Pay close attention to the growth standard selections by pressing edit and toggling between the options. Return to the key 20 home screen by pressing the left arrow. Now press the down arrow (House Description) and then press the right arrow and the screen that appears will verify the house number. Modify this number by using your edit key before and after making the change

- 7. Press key 13 **GROWTH STANDARD** (13). Here is where we enter the growth standard for the type of birds being housed. In this screen in the upper right hand corner you will see the standard type starting with "Broilers". To make another selection, press the index key which is located to the left of the number row below the screen. You will then be asked to insert a number that corresponds with the standard type by using your up arrow key and pressing edit. The following are your selections:
 - a. Broilers1
 - b. Turkey hens2
 - c. Turkey cocks3
 - d. Rearers (Pullets)4
 - e. Parent Stock Hens5
 - f. Parent Stock Cocks6

You will now have a curve screen with the heading that you have selected. There are 20 bend points assigned to this curve. For each bend point you select a day number and press edit, and then you assign a corresponding anticipated weight for that day and press edit. Your integrator or primary breeder are good sources for the growth standard weights. Repeat these steps for as many bend points as needed up to a total of 20 Move to beginning.

This completes the setup for a single sex house.

Breeder (or Mixed Sex Pullet) Setup

Since we have both males and females in the same house we have to setup the Control to accept both weights. For example, if we chose to have two platforms for the entire house and both male and females have access to those platforms, we need to make sure the control will accept weights from both weight ranges being recorded on either scale. For example, let's say one platform is located on the slats and the second platform is in the scratch area. We will call the platform on the slats scale 1 and scale 2. The platform in the scratch area will be called scales 3 and 4. Scale 1 and 3 will be female (hen) scales and 2 and 4 will be the male (cocks) scales. While physically there are only two platforms, the Control will handle it as if there are four. You can use up to four actual platforms in this manner, and they need not be in the same house to do so.

To make this happen, we have to make the following changes to the above setup:

- 1. In screen 19 for each scale we need to make sure it has the correct corresponding initial weight. Using the above example, we will insert the hens' initial weight in scale 1 and 3. The cocks weight will be inserted in scale 2 and 4.
- 2. In screen 20 for each scale you have to assign it a growth standard. Again in our example, scales 1 and 3 will be "Par. Hens" and for scales 2 and 4 it will be "Par. Cocks".
- 3. Go to screen 22 (this step may have been already performed during the installation setup). When asked for a password, press Subject Key

10 HISTORY UNIFORMITY (unless you have chosen another password) end then press edit. The cursor will be on "General" so press the right arrow key. Press the down arrow so it is on "Applicat". Now press the edit key and toggle with the up and down arrows until you find "Parents". Then press the edit key.

4. Now press Subject Key 13 GROWTH STANDARD 13. As we did in the above setup, we need to insert the growth standards. The difference here is that we need standards for both the hens and the cocks. After entering screen 13, press the index key which is left of the numbered keys below the screen. For hens enter 5 and press the edit key which will bring up the curve screen for the hens. After filling in the anticipated weights for up to 20 bend point days, return to the main screen and repeat the procedure, but this time enter 6 for the parent cock growth standard screen.

Weighing a New Flock

At the beginning of a new flock, as long as the type and purpose of the house hasn't changed, the following adjustments need to be made:

- 1. Enter the information for the new flock in screen 12.
- 2. Make any needed adjustments to the growth standard in screen 13.

This concludes the setup portion of this manual.

Wiring Diagrams

Wiring

When distances from the load cells to the Control are greater than 120 feet, a signal booster or SJB (**Chore-Time part no. 40733**) is required. To wire this, 22 gauge twisted pair non-shielded wire is required. The following is how this setup is wired:

Wiring at the Breeder/Pullet Scale Control



Wiring at the Load Cell:



Wiring at the SJB:



Sample Wiring Installation



PC Connection

The Controls in each house are connected together at the FNET Terminal Connectors as shown below. Use only Twisted Pair Wire (Chore-Time Part No. 42208). The Interface Box can be wired in anywhere either at the beginning of your string, at the end, or between Controls; but not to more than one Control as **shown below**.



47660 FNET/ALARM & 47661 Telephone Line Surge Suppressor Wiring



Note: There must be a ground rod within 10 ft. of the Ground Terminal of each Surge Suppressor. The wire size from the Suppressor to the ground rod should be 12 gauge or larger.

20

Technical Specifications

Maximum Power Consumption... External Power Output Voltage......24 Vdc +/- 1.5V Load......500 mA max.

Sensor Wire / PC Wire.....20 gauge single Twisted Pair Wire, 1 twist every 2 inches, unshielded wire. Use of Chore-Time part number 42208 is strongly recommended.

Load Cell Wire: 22 gauge 6-conductor shielded wire. Use of Chore-Time part no 42208 is strongly recommended.

FNET Data Voltage Range (C-Central).....+/- 5 V

Alarm Relay Voltage.....30 Vac 50 Vdc Current .5A @ 250 Vac .5A @ 30 Vdc

Parts List





Item	Description	Part No.
1	14" x 16" Electric Box	42684
2	Control Box Latch Pivot	30863
3	Control Box Latch	30862
4	Bird Scale Bottom Plate	50604
5	3.15" Grounding Rail	43384-2
6	IMC714 PC Board	50715
7	IMC715 Power Supply	50712
8	IMC720 CPU Board	50728
9	Breeder/Pullet Scale Top Plate	50603
10	IMC735 Key Board	50714
11	4 x 20 LED Display	50709
12	Breeder Pullet Scale Wiring Harness	50720
13	1" x 1" Aluminum Hinge	49482
14	Bird Platform Support	47671
15	Load Cell	48724
16	J-Hook	1214
17	Hook, 5/16" Spring Clip	48729

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Revisions to this Manual

Page No. Description of Change

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Printed in the U.S.A.