DIGI★STAR

PRECISELY



TST7600 with TMR Tracker

Operators Manual

Ft. Atkinson, Wisconsin USA

DIGI★STAR

Panningen, the Netherlands

www.digi-star.com

Thank you for your purchase of a Digi-Star TST7600 scale indicator. Your TST7600 is the culmination of more than 30 years of agricultural weighing engineering and expertise. With proper operation and preventative maintenance the TST7600 will last for many years.

The Digi-Star TST7600 is primarily designed for weighing agricultural animal feed products during the loading and unloading of mobile and stationary feed mixers and feed delivery boxes.

The TST7600 is not for use with applications for which the TST7600 is not intended, or as outlined in this manual.

Use of the TST7600 outside of its intended purposes may result in inaccurate weight measurement or damage to instrument.

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SAFETY DURING USE



Caution

Cleaning

Do not use running water, pressure washers or hoses to clean the indicator or touch screen.

Charging Battery and Welding

Disconnect all cables from the indicator and touch screen before charging the battery or welding on the machine. If cables are left connected, the indicator, touch screen and connected load cells could be damaged.

Hardware:

TST7600 ISOCAN 2 Touch Screen—P/N: 409633

Operating voltage: 10 – 30 Volts DC

Temperature range: -20 to +70 C operating

EMC protection: Complies with 2004/108/EC ISO 14982

ENV protection: Display sealed to IP54

Power Cable—P/N: 408479

Serial Extension Cable—P/N: 406834

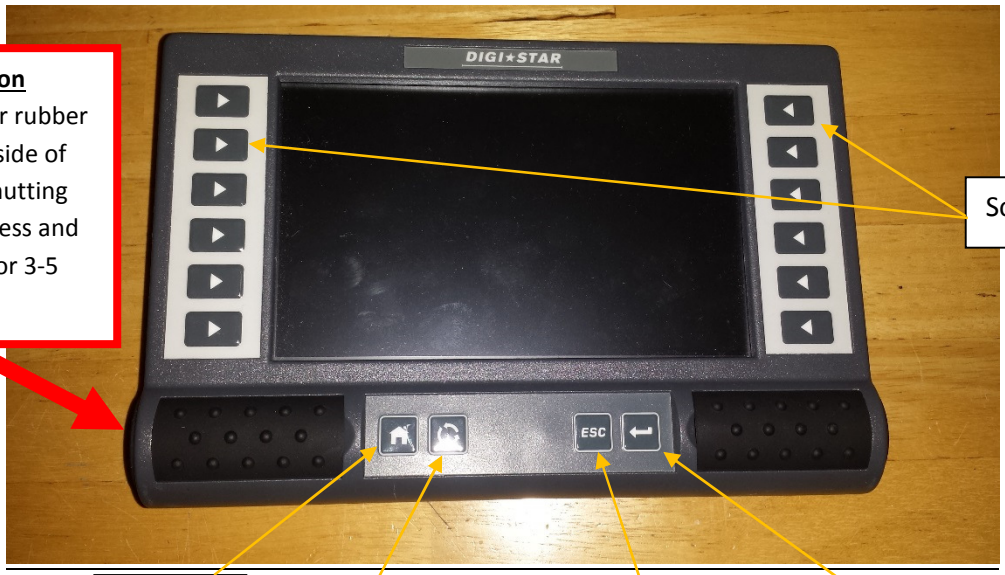
Cable-TST to ERM---P/N: 409632

Digi-Star Indicator Setup: The TST7600 device must be connected to the serial port of a Digi-Star late model Scale Indicator or ScaleLink running software version 8.B or newer. See page 48 for cable connection information.

In addition the following settings in the Indicator must be setup as noted:

FEATURE	Direct Access Number (DAN)	SETTING
OPSTAT	253	2
Computer in Mode	215	EZ2CMD

Overview of Touch Screen:



On / Off Button
Located under rubber cover on left side of unit. When shutting unit down, press and hold button for 3-5 seconds.

Soft buttons

Home Screen

Enter user password

Escape Key

Soft Key Enter



USB insert found under right side rubber lid

SD Card located under left rubber lid

DO NOT REMOVE the SD Card included with TST7600

Contact tech support before removing card



Speaker

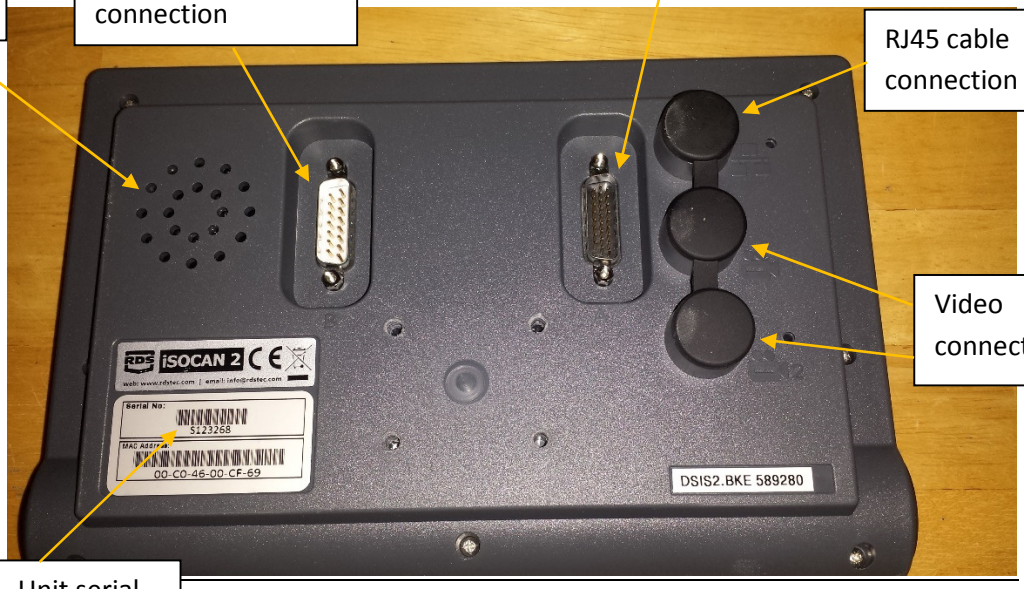
ERM (external radio module) serial cable connection

Serial power cable connection

RJ45 cable connection

Video connections

Unit serial number



ICONS BRIEF DESCRIPTION:



User Access – Used to setup access to icons. 4 levels available and a custom setting



Weighback (Refusal) Ingredients - Name that will be loaded in place of ingredients



Timer – Set Mix time



Pens - List Mode Select



User ID – Create new users from this screen



Weighback (refusal) substitutions – Load weighback as the first ingredient and the selected ingredients will be resized proportionately



Weighback (Refusal) – Record weighback amounts manually or by loading them into the mixer



Partial Drop – Unload partial amount of recipe to a pen.



Tare – Gives a temporary zero set point



Net/Gross – Toggles between net mode and gross mode



Mixer ID number – Set Mixer ID to match TMR Tracker or Beef Tracker mixer ID



Change weight amount of ingredient to be loaded



USB Transfer



Dry Matter % - Changes ingredient dry matter % for individual ingredients



Rations – Go to select ration screen



Hold – Freezes weight while moving mixer from one location to another



Home Screen



Substitute current ingredient with new ingredient



Settings – Load new software, customize button locations, set-up, calibration, cab control key mapping, and feeding settings are all found here



Zero



3 Day History – Access feeding data from previous 3 days



Feeding Number – Select Feeding Number



Enter – Accepts changes and moves to next screen

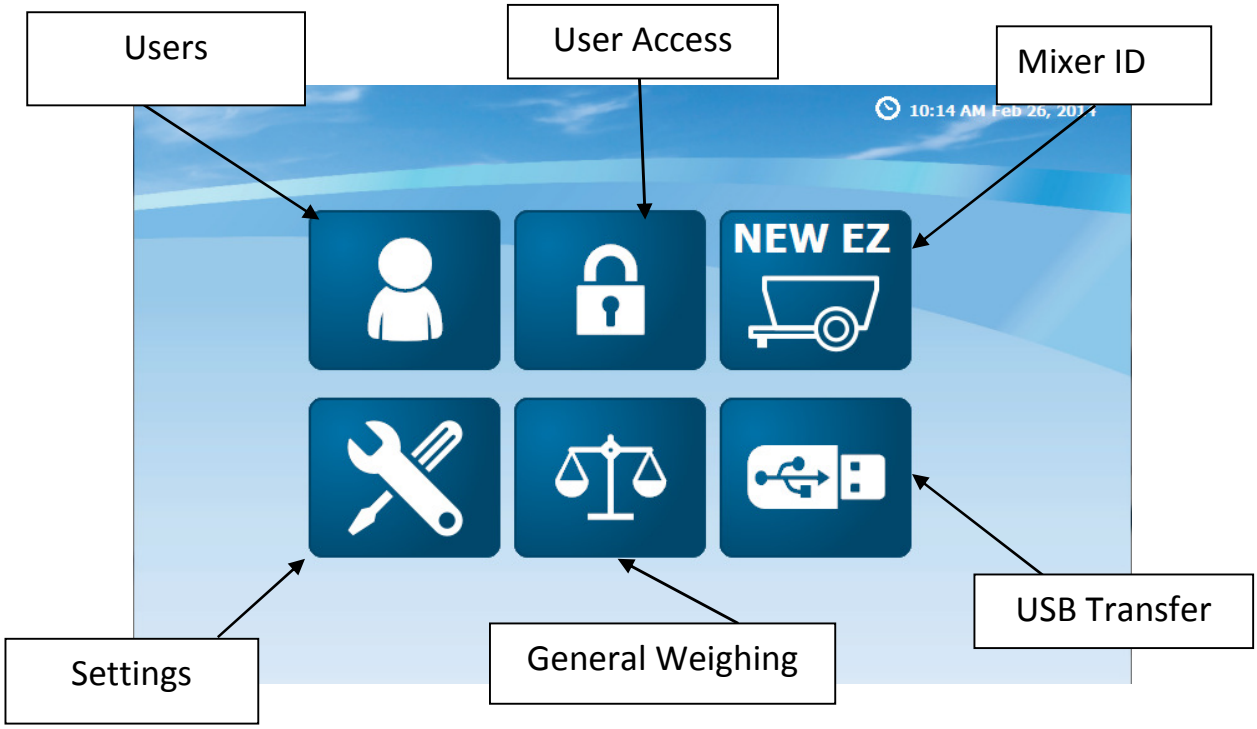


Cancel – Moves back a screen and cancels selection



Expand to Ration Details – Shows all pens associated with current recipe selected

Home screen:



Users: Setup and manage multiple users

User Access: Set security levels for all users

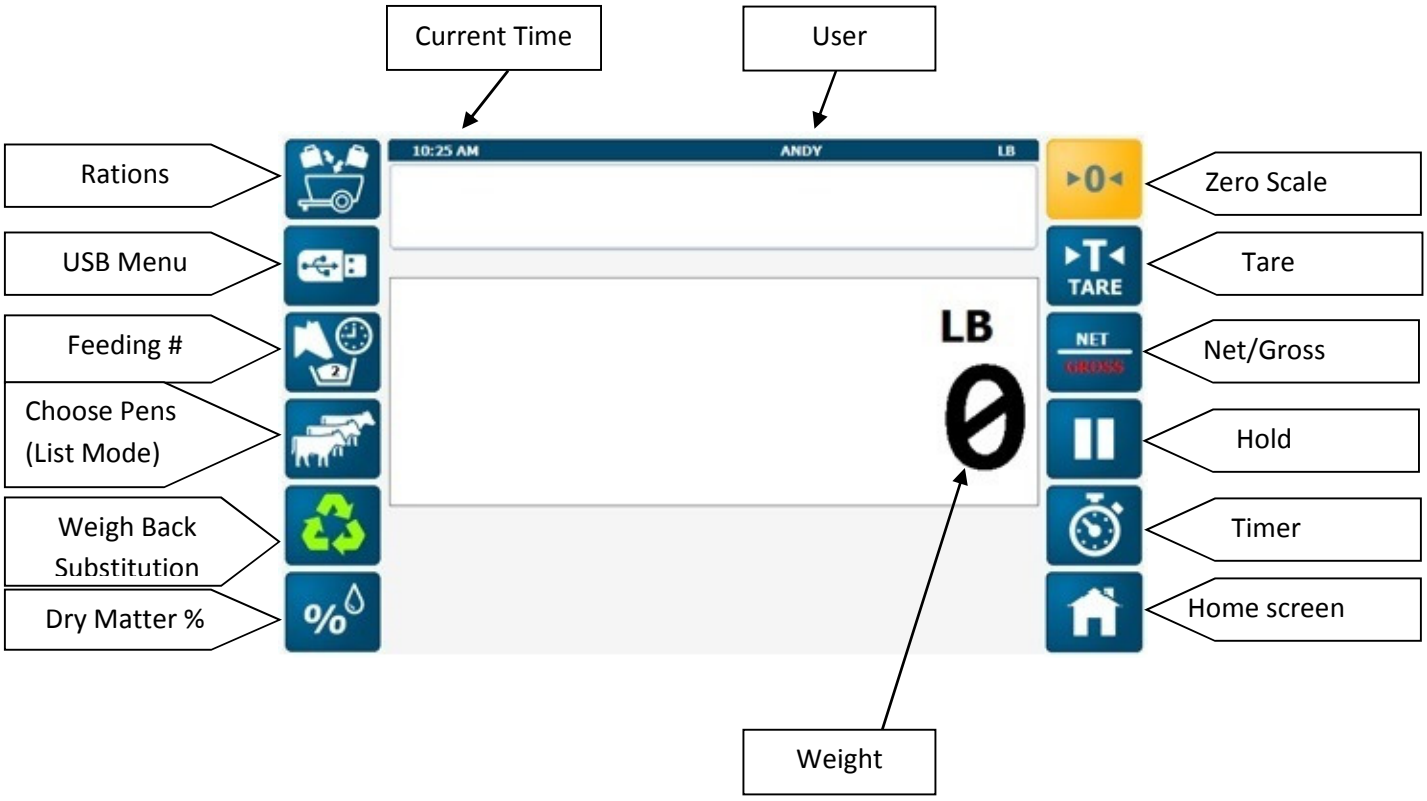
Mixer ID: Used to manage multiple mixers

Settings: Access setup calibration settings, software update page, personalize screens and advance batching options.

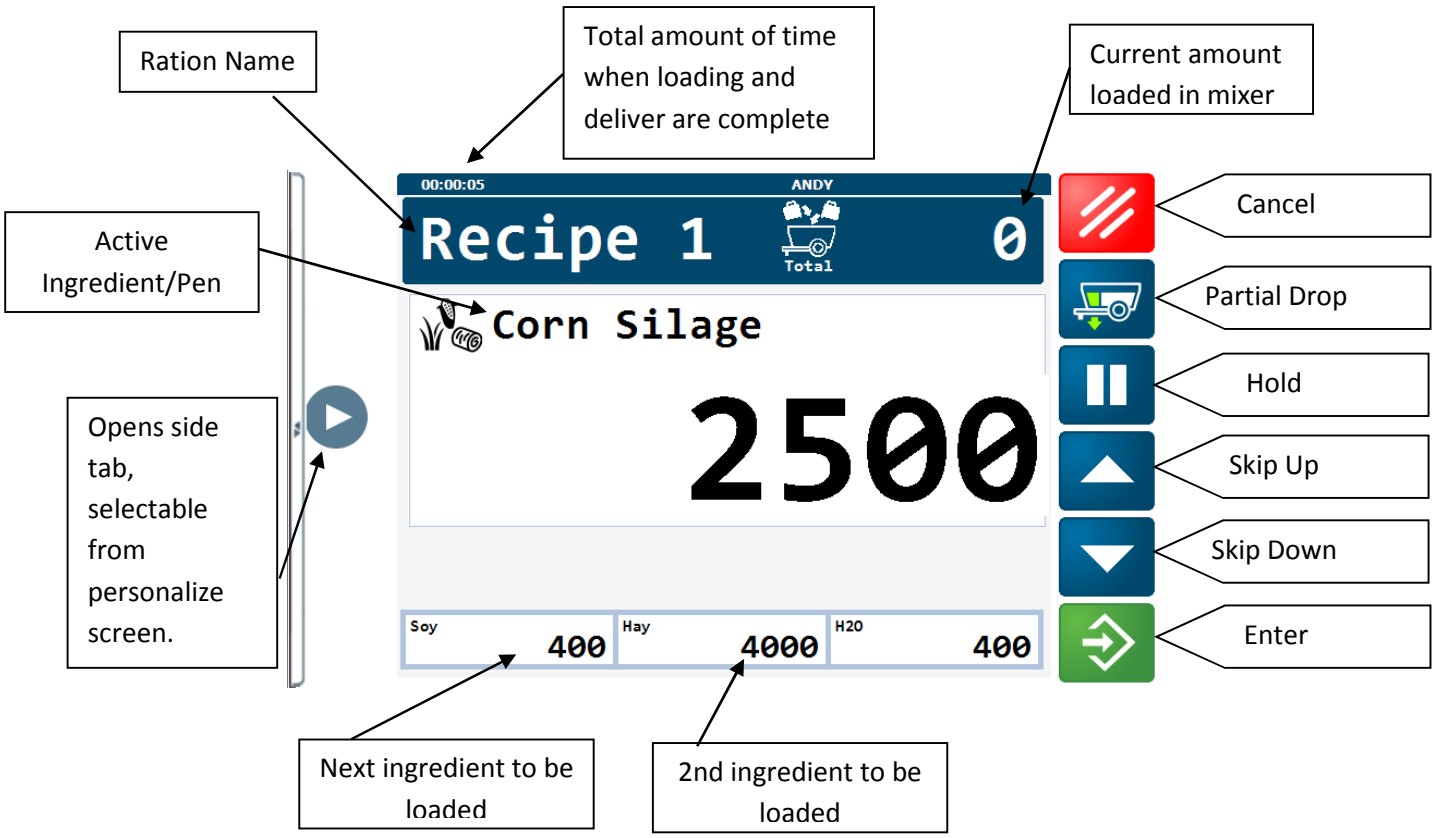
General Weighing: Main page to select ration, change dry matters, record weigh-backs, feed pens and use general scale options.

USB Transfer: Used to transfer data to and from TST and transfer information to other TST's devices.

General Weighing :

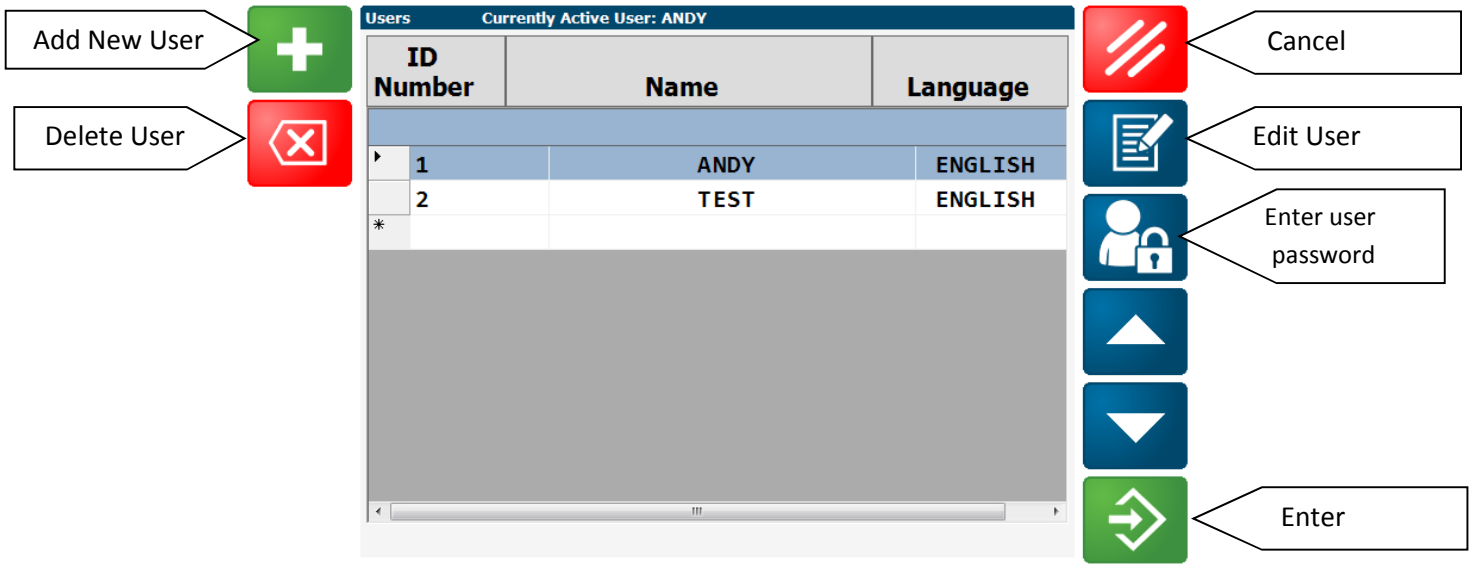


Loading/Unloading:



- **Partial Drop:** User can feed partial drop. (Example; starting weight 5000 lbs. Fed 2500 lbs. to pen 13 in the morning, then select . Then feed the other 2500 lbs. to pen 13 in the afternoon. Dates and time will be recorded on the Touch Screen.)
- **Skip up/down:** User can manually move down through ingredients.

User ID :



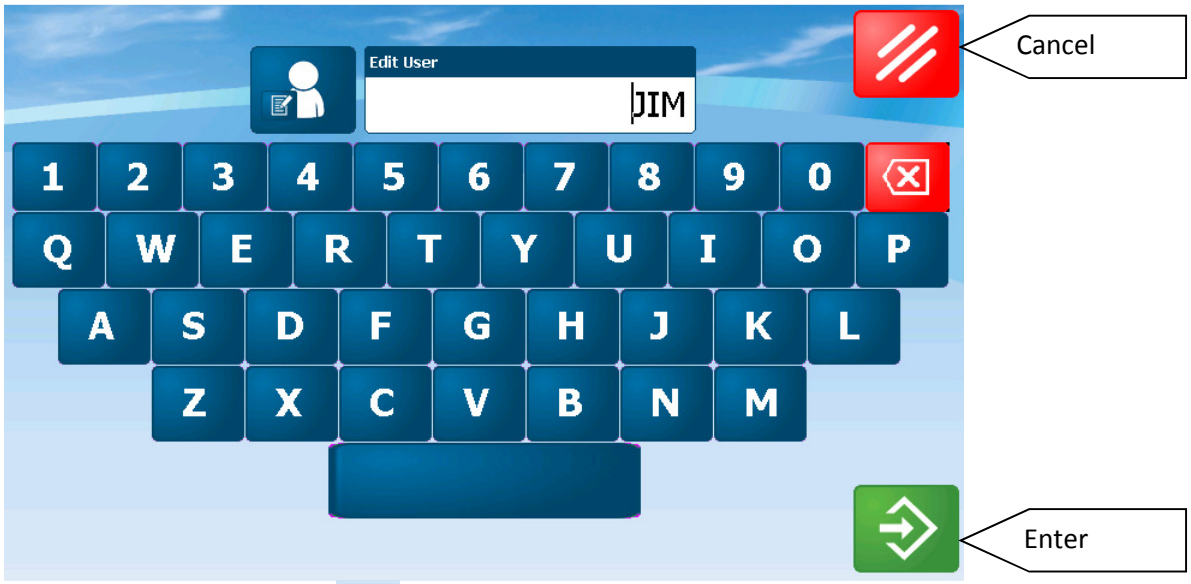
- **ID Number:** ID number and name on Touch Screen must match in TMR Tracker software.
- **Delete User:** All users cannot be deleted from Touch Screen. One user must remain on Touch Screen unit by default.
- **Edit User:** Edit users name using key pad.
- **Edit User's password:** Edit user's password using number key pad.

Add New User ID:



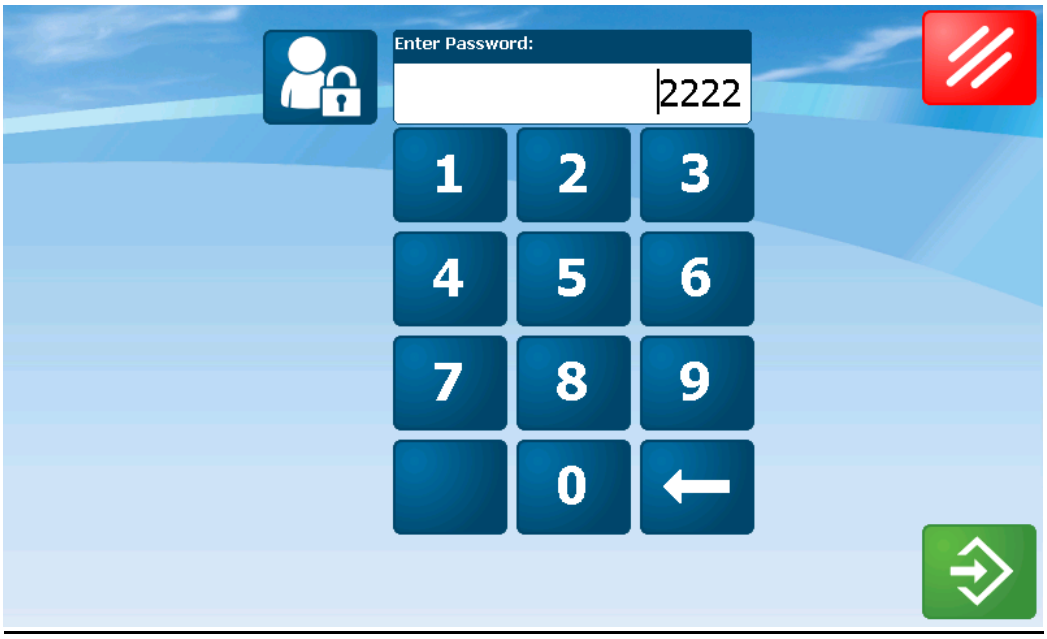
Key in new user ID number using key pad. (Max. 6 digits) Then press .

Enter New User Name:



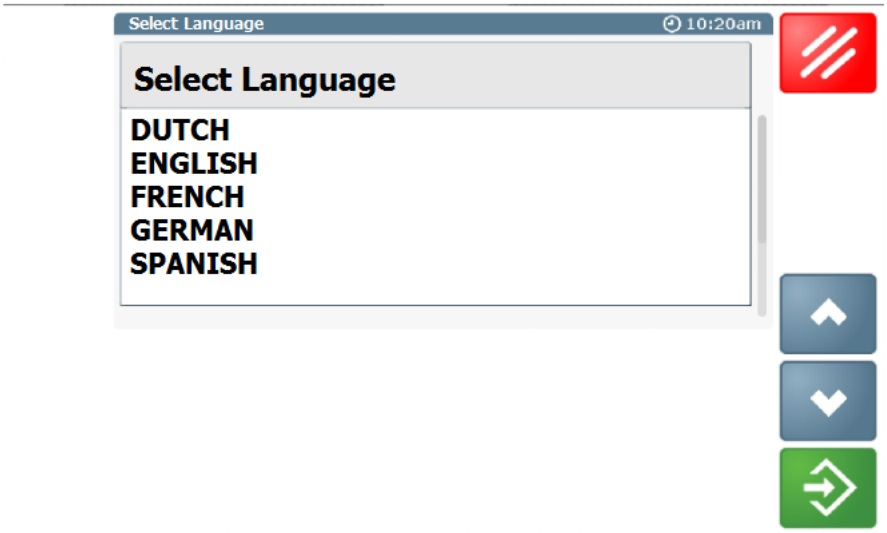
Enter new user's name. Then press .

Enter User Password:



Enter user password using number key pad. (Max 15 digits) Then press .

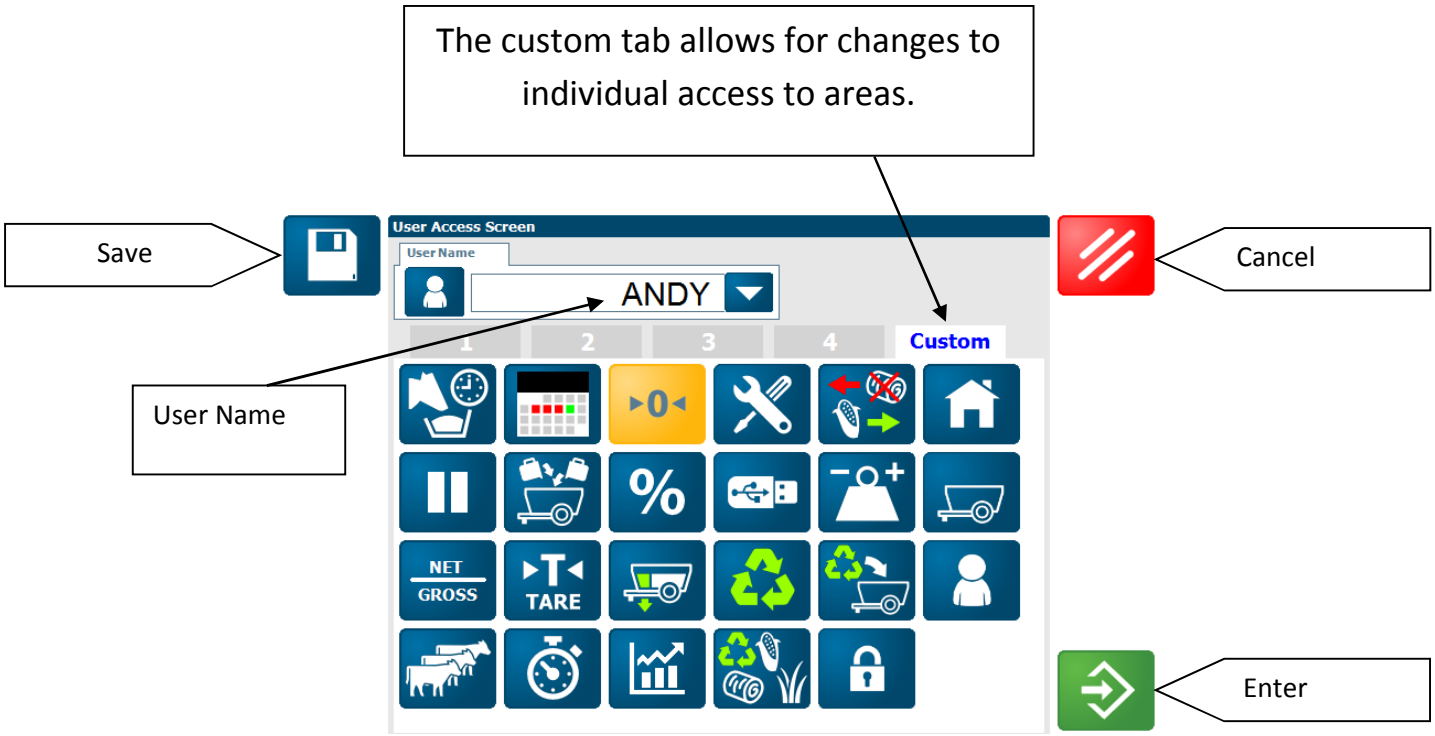
Select language:



Select a language from list and press .

User Access :

This feature will allow or disallow users to have access to certain features.

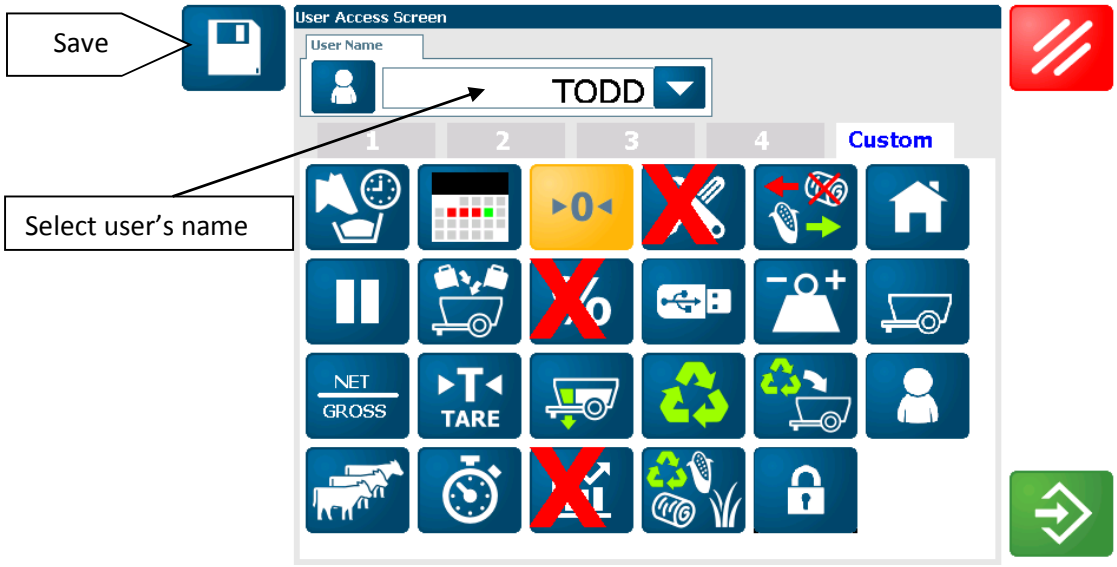


Save: When changes are made, then select **Save.**

Selecting the icon under the Custom tab will allow or disallow access to that area.

Tabs 1-4 are predefined levels of access. Changes cannot be made.

Customize User Access:



Select user's name, then select the "CUSTOM" tab. Press on ICONS for features that the user will not have access too. A red "X" will be shown. To unselect features press ICON again. Then select "SAVE". Then select .

Mixer ID 

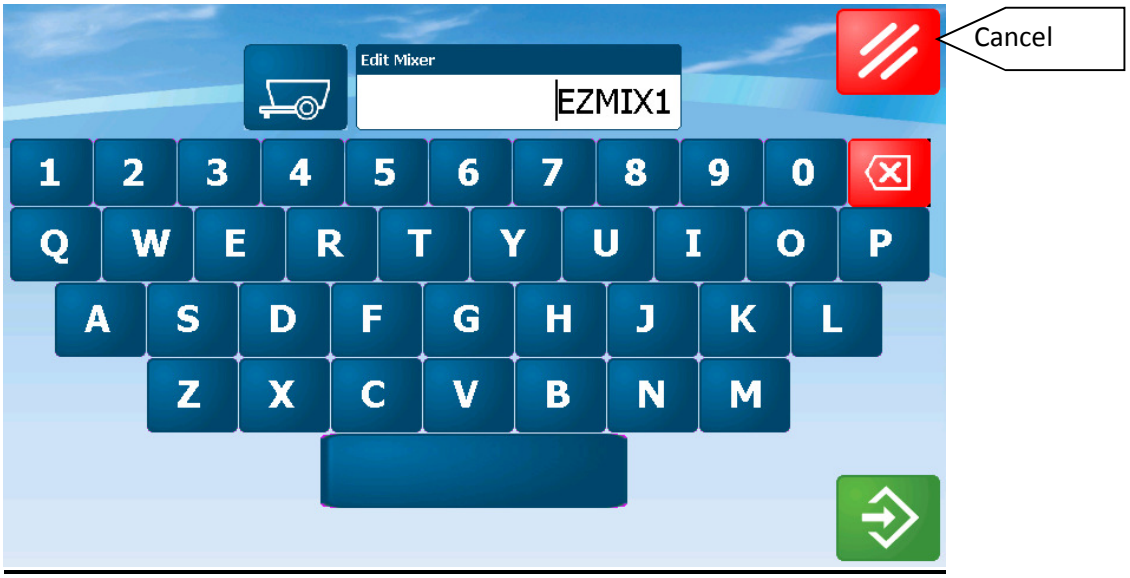
:



- **Mixer ID:** Mixer ID must match TMR Tracker ID for data tracking
- **Edit Mixer:** Edit mixer name using key pad.

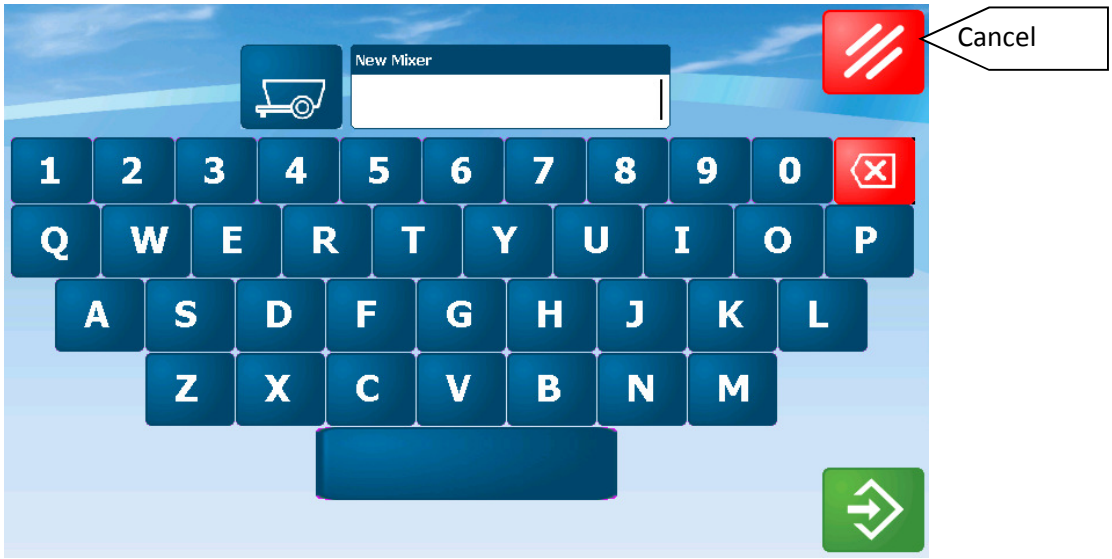
Edit Mixer ID:

Use key pad to edit mixer ID and press .

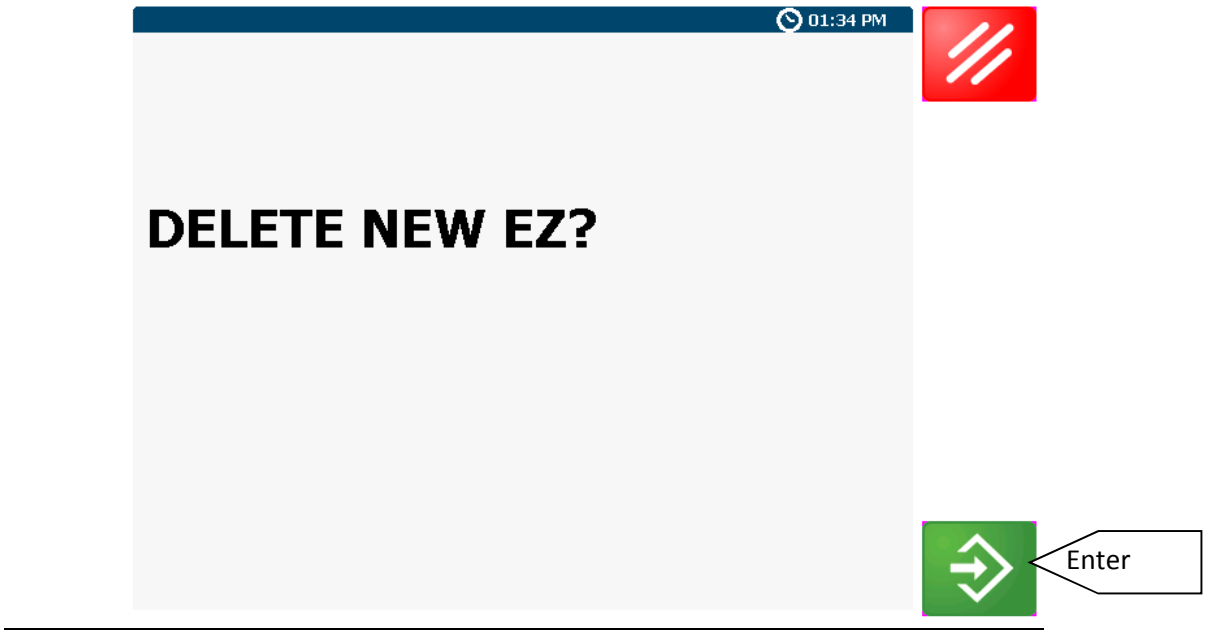


Add New Mixer:

Use key pad to add new mixer and press .



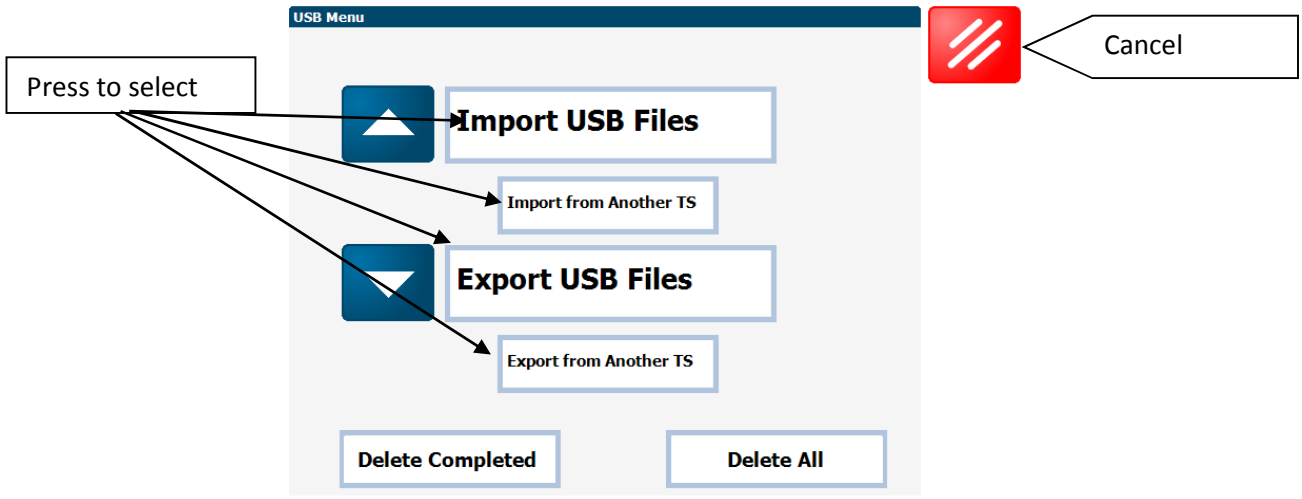
Delete Mixer:



Choose mixer ID from list on page 21. To remove mixer ID from list, select  on page 21.

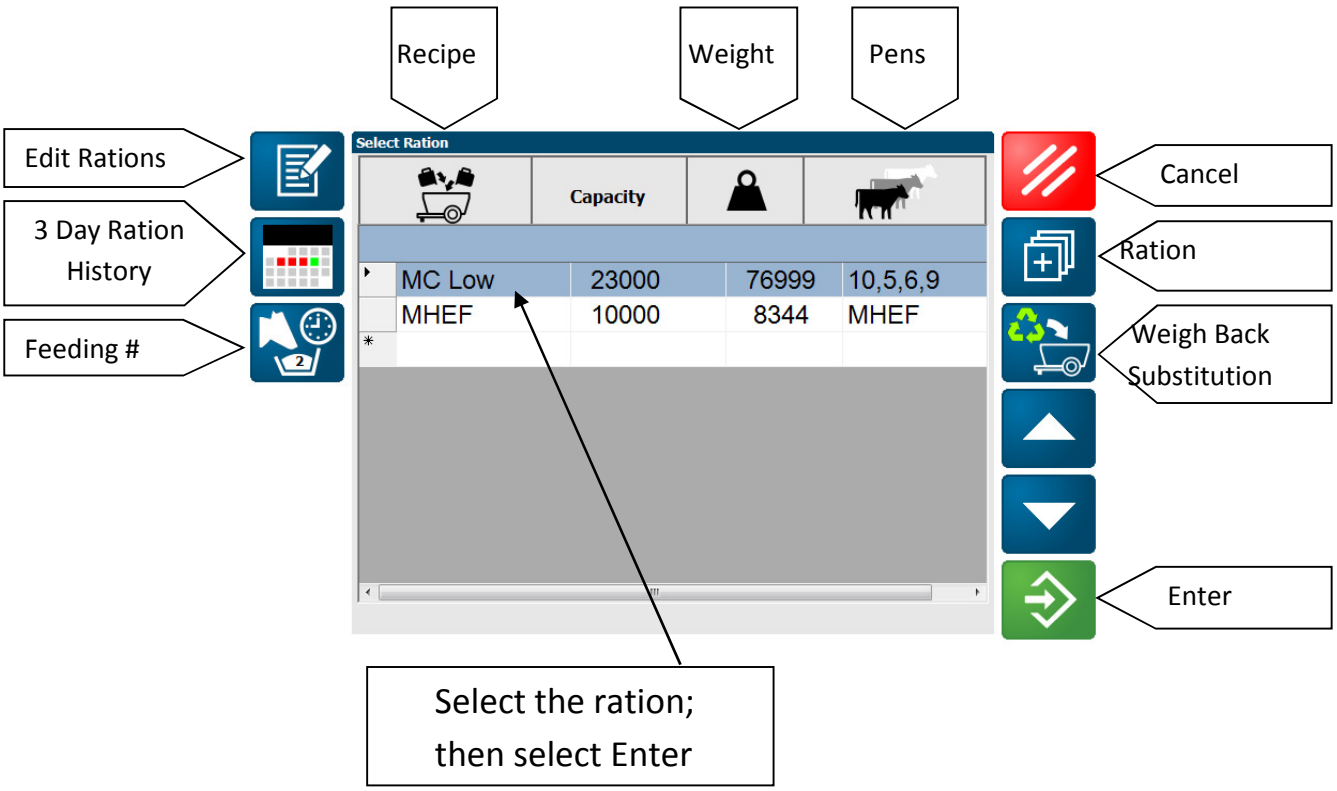
Then select  shown above.

USB Menu :



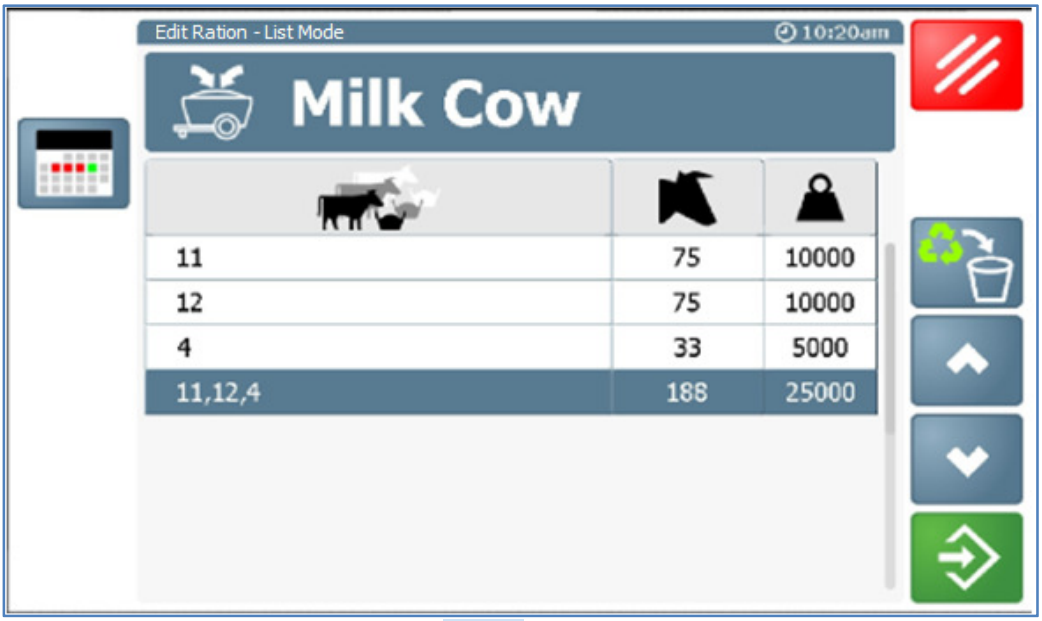
- **Import USB Files:** This will import files from USB stick to Touch Screen
- **Export USB Files:** This will export files to USB stick, then transfer to TMR Tracker software.
- **Import from other TS**: This will overwrite all data and settings in the current Touch Screen device. Upload from USB stick to Touch Screen.
- **Export from other TS:** This allows data and settings to be downloaded from Touch Screen to USB stick.
- **Delete Completed:**
- **Delete All:**

Select Ration (List Mode) :



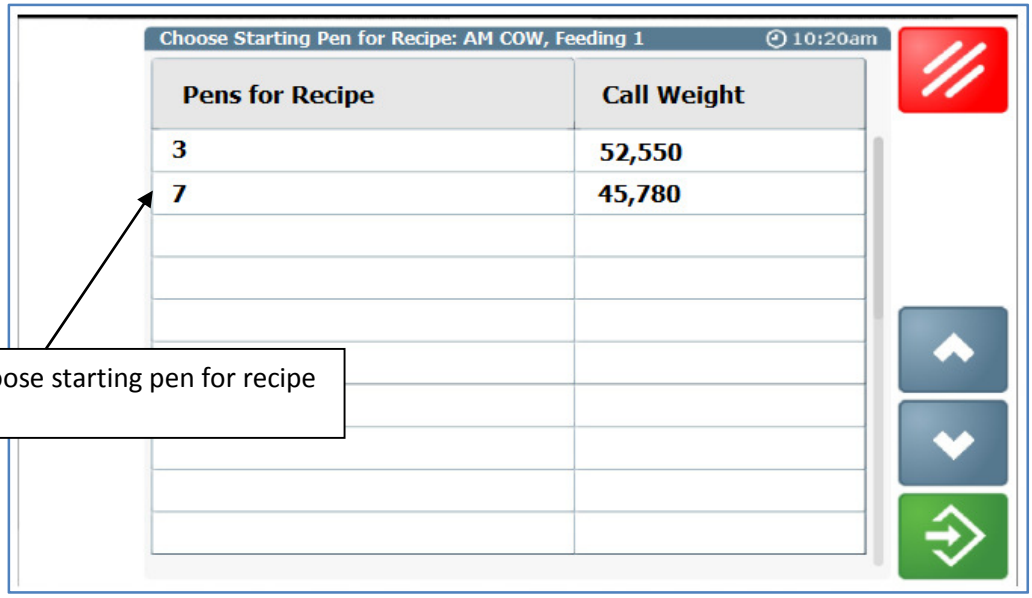
Edit Ration: See page 25
Ration History: Shows previous 3 days of feeding amounts
Feeding #: Used to select feeding period as setup in TMR Tracker
Cancel: Takes user back to General Weight screen
Ration Details: shows the details of how much feed should be delivered to each pen/group
Weigh-Back Substitution: See page 29

Edit Ration (List Mode):

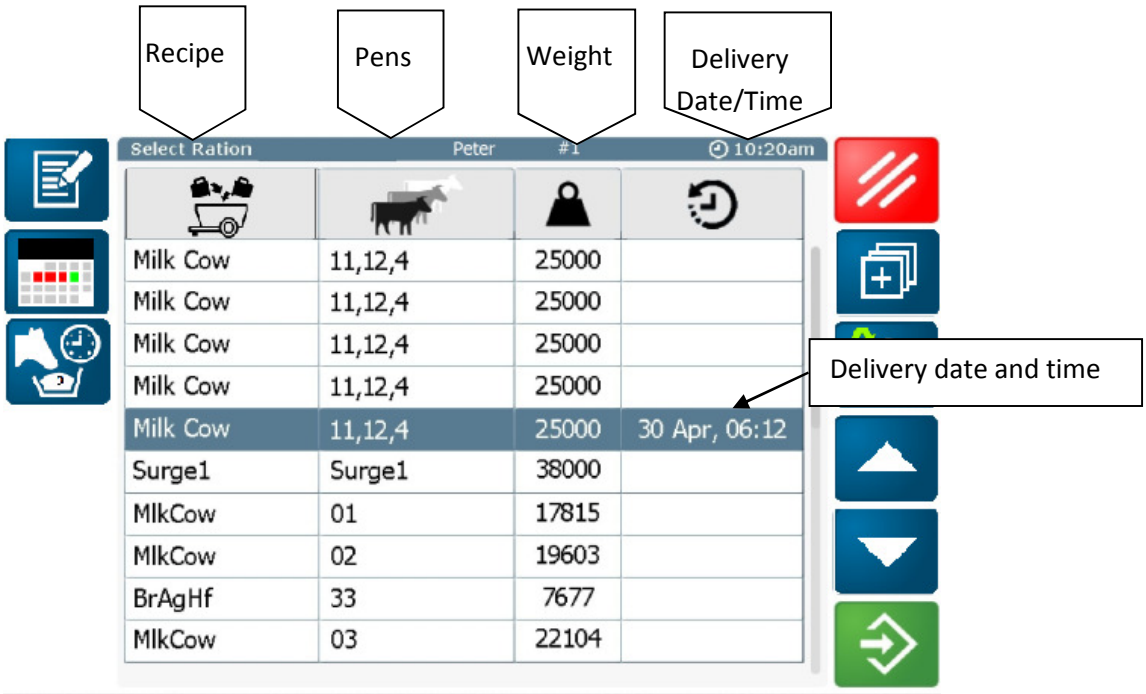


Select ration to be edited and then press .

Pens List (List Mode):

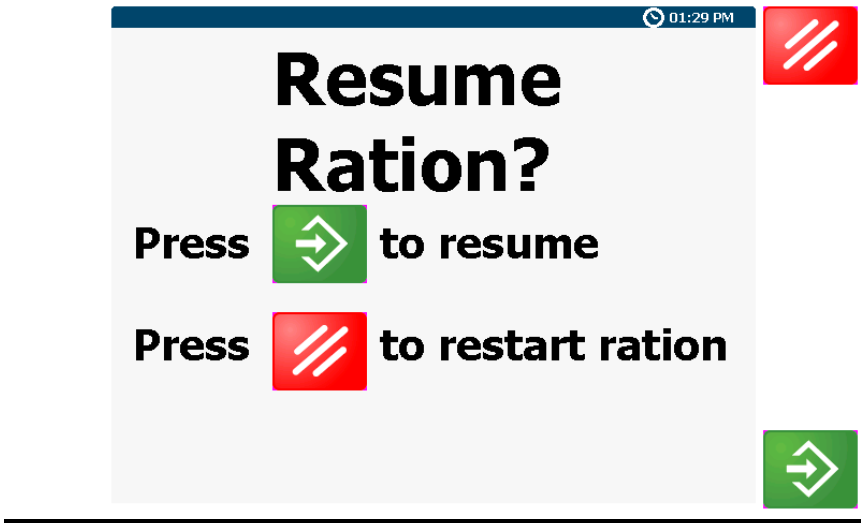


Select Ration (Loads Mode):

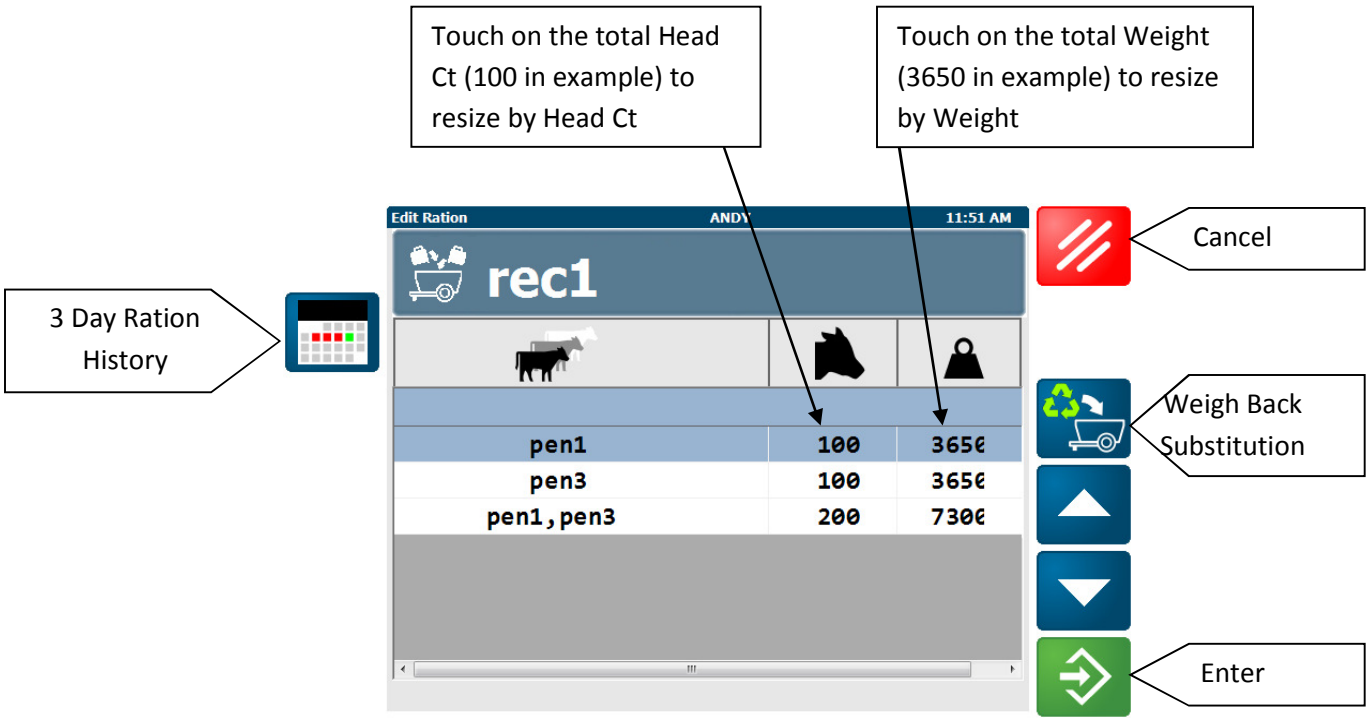


Resume/Restart Ration:

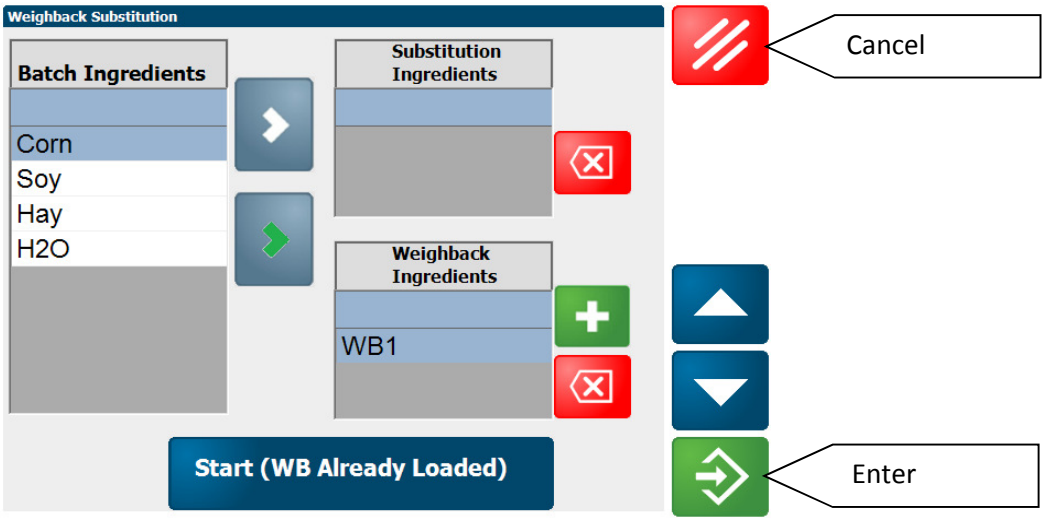
After user has started loading ingredients for ration, the user may cancel out of the ration. When user chooses to return to the ration, user will be prompted to choose to resume or restart ration.



Edit Ration :


Touch on the total Head Ct (100 in example) to resize by Head Ct
Touch on the total Weight (3650 in example) to resize by Weight
Edit Ration
ANDY
11:51 AM
rec1
pen1 100 3650
pen3 100 3650
pen1,pen3 200 7300
Cancel
3 Day Ration History
Weigh Back Substitution
Enter

Weigh-Back Substitutions :

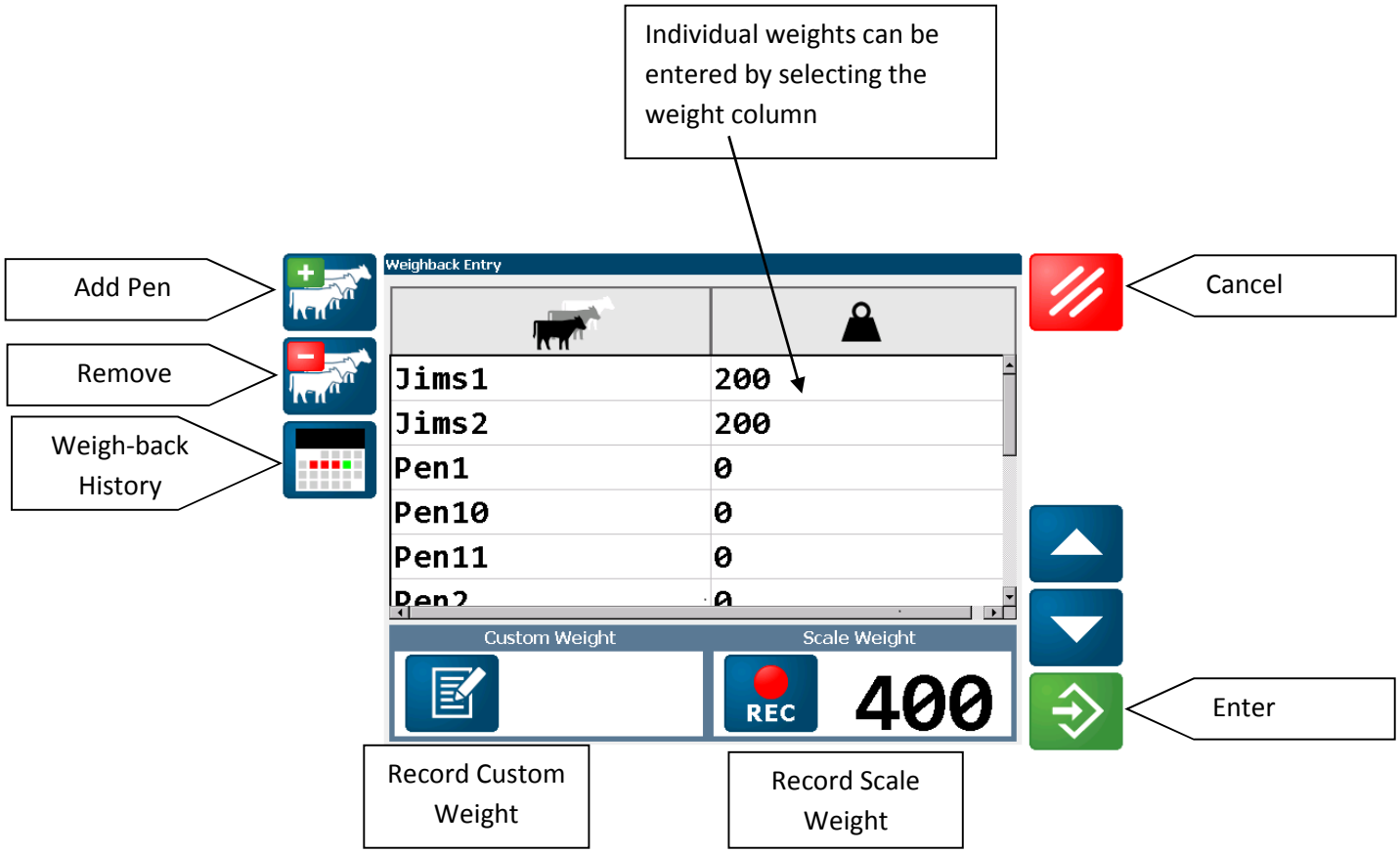


Select the arrow to move one ingredient, select Enter

Select the arrow to move all ingredients, select Enter

Select Start (WB Already Loaded) if you've already loaded & recorded WB for this pen that you are now feeding.

Weigh-back Entry :

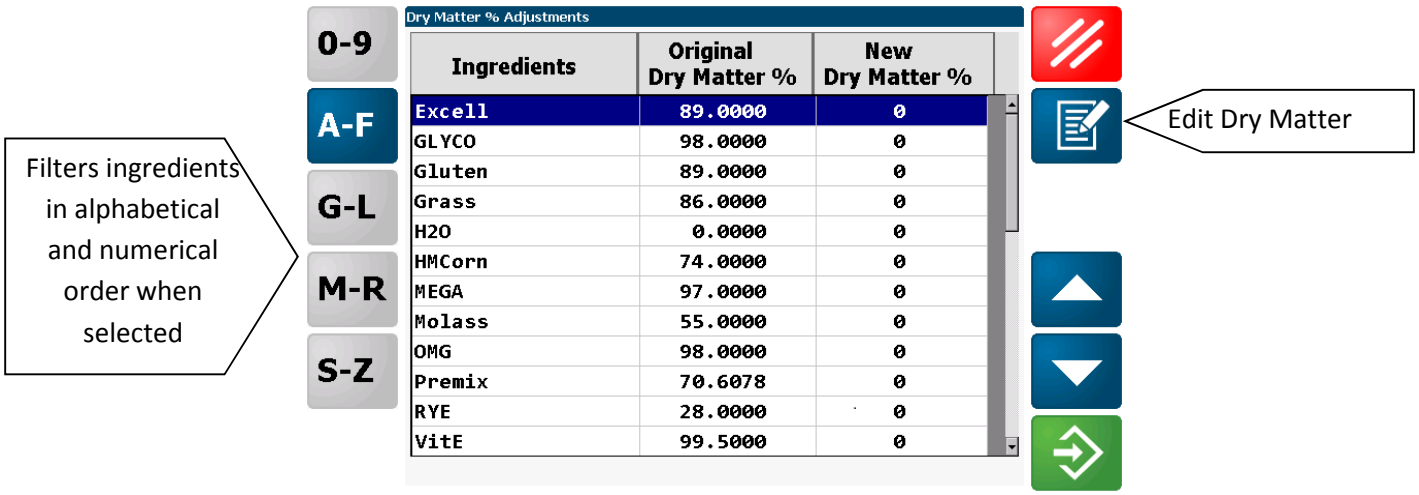


Select the arrow to move through the list. To select multiple pens click on the pen/group.

To enter a weight manually click on the icon, enter estimated or known weight, select enter.

To record the amount of weigh-back loaded in the mixer select REC icon.

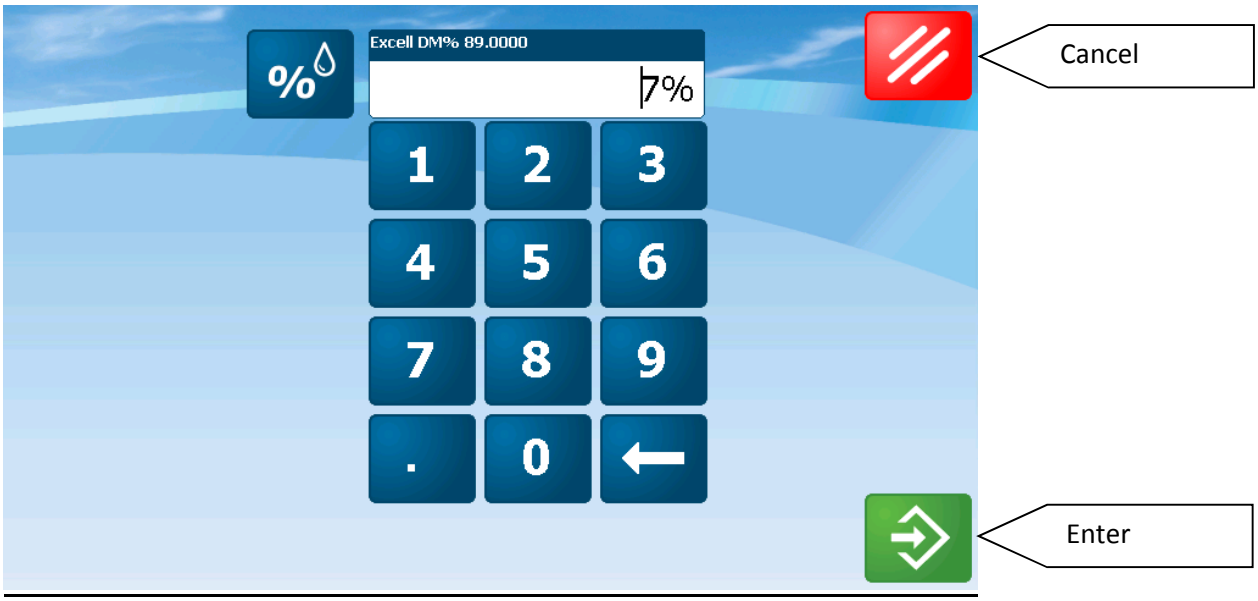
Dry Matter %:



Select the ingredient to change and then select the "Edit Dry Matter %".

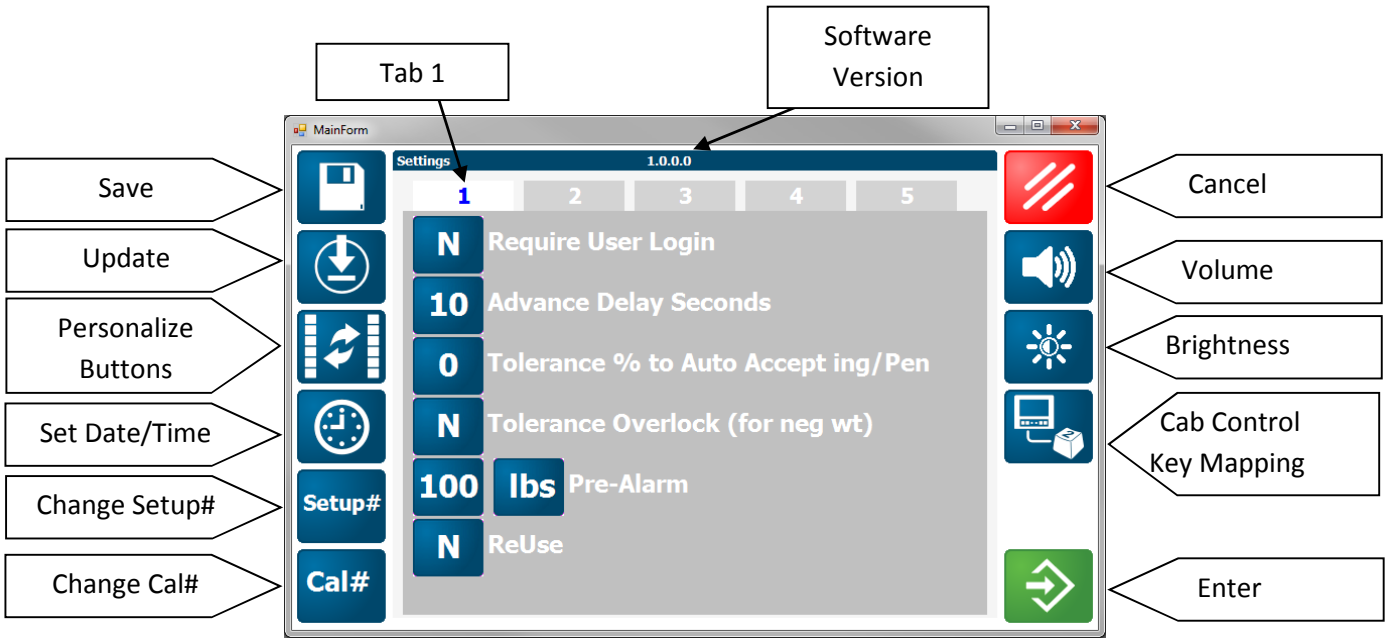
When Dry Matter % is changed, the ingredient will be automatically resized in all the recipes that the ingredient is used. Also TMR Tracker will detect changes to the DM% and the user has an option to save or reject the changes.

EDITING DRY MATTER:



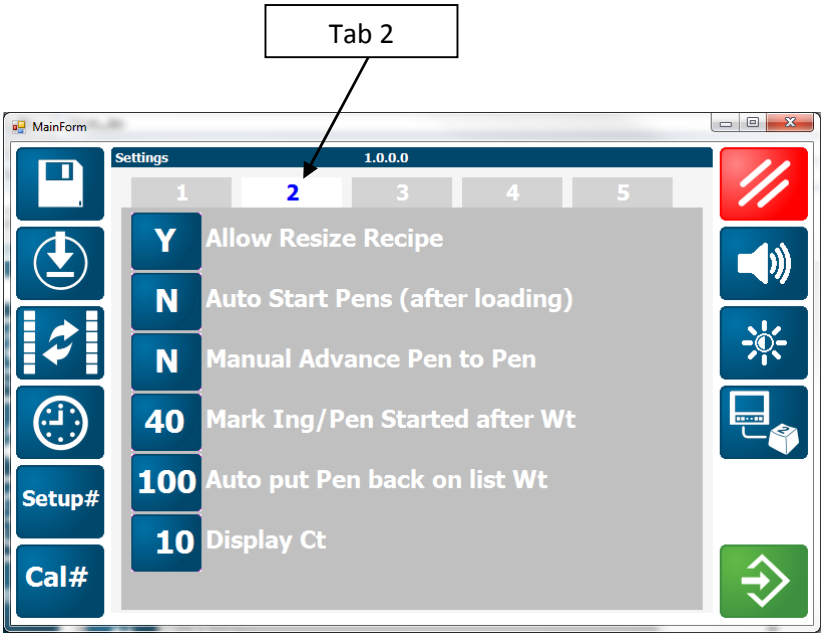
Enter in new dry matter % using number key pad. Then press .

Settings:



Require User Login: When enabled, requires password to log on unit at start up.
Advance Delay Seconds: Number of seconds prior to automatically advancing ingredient/pen.
Tolerance % to Auto Accept ingredient /Pen: % of Ingredient/Pen that must be met before auto advance (0 is the same as disabled).
Tolerance over Lock (for negative weight): Prevents the scale from auto-advancing if the amount being loaded or unloaded has exceeded the preset tolerance amount and has caused the scale to display “OVER”.
Pre-Alarm: Enter a value to activate an early warning that scale is reaching the preset weight.

Re-Use: (Only works with loads mode) When set to enable, "Loads Mode" recipes will remain active in the Touch Screen so they can be “re-used” for additional loads. The information for each load is also stored with a new, individual batch number that is different from the original batch number sent to the indicator. This allows each “re-used” load to be identified by TMR Tracker.



Allow Resize: When enabled, the resize batch/recipe option is available

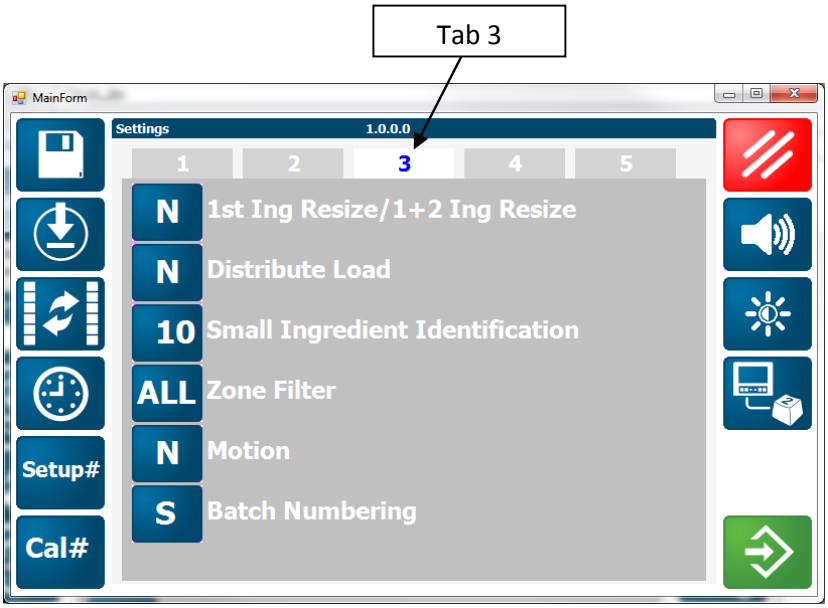
Auto Start Pens: When enabled, will start 1st pen after last ingredient is loaded.

Manual Advance Pen to Pen: Force user to select Enter between pens

Mark Ingredient/Pen Started after Weight: Won't allow a skip if weight reached

Auto put Pen back on list Weight: If not fed within Weight, puts Pen back on list.

Display Ct: Display in the count



1st Ingredient Resize/1+2 Ingredient Resize: Will resize the batch based on the loading of the first ingredient.

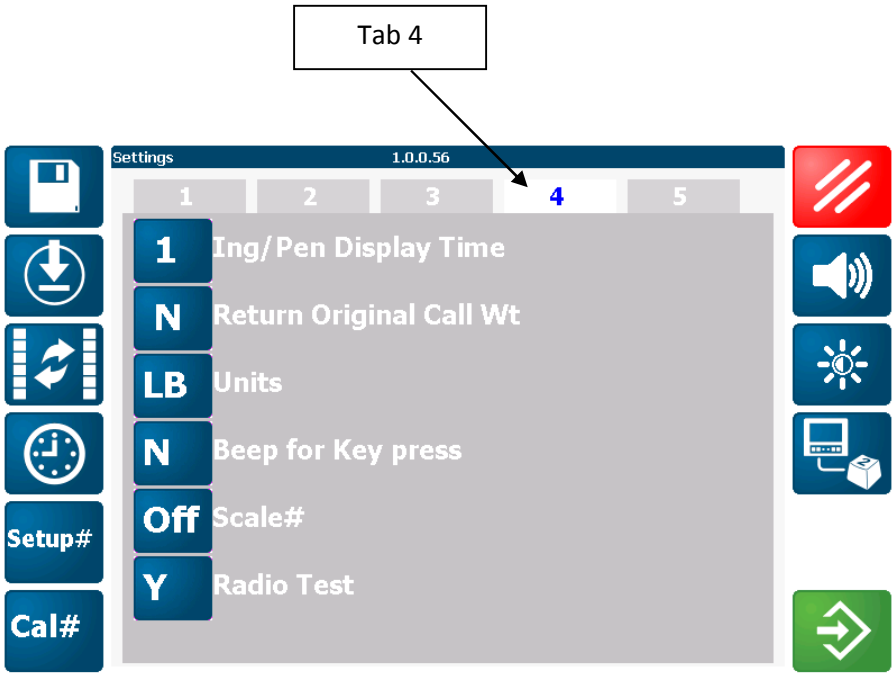
Distribute Load: After the Delivery of each Pen, will distribute the remaining loaded Weight to remaining Pens equally.

Small Ingredient Identification: If call Weight is less than amount, the screen will display the call Weight (and not count down). Ingredients will need to be hand loaded

Zone Filter: Filter by zones – As set up in TMR Tracker

Motion: When enabled, Weight moves 2 counts ingredient/Pen won't advance

Batch Numbering: Select either PC or TST to control the batch number. When P, batch number info set by PC (TMR Tracker) When S, batch number info set by TST.



Ingredient /Pen Display Time: Delay time after Weight is met, then scale will advance to the next ingredient

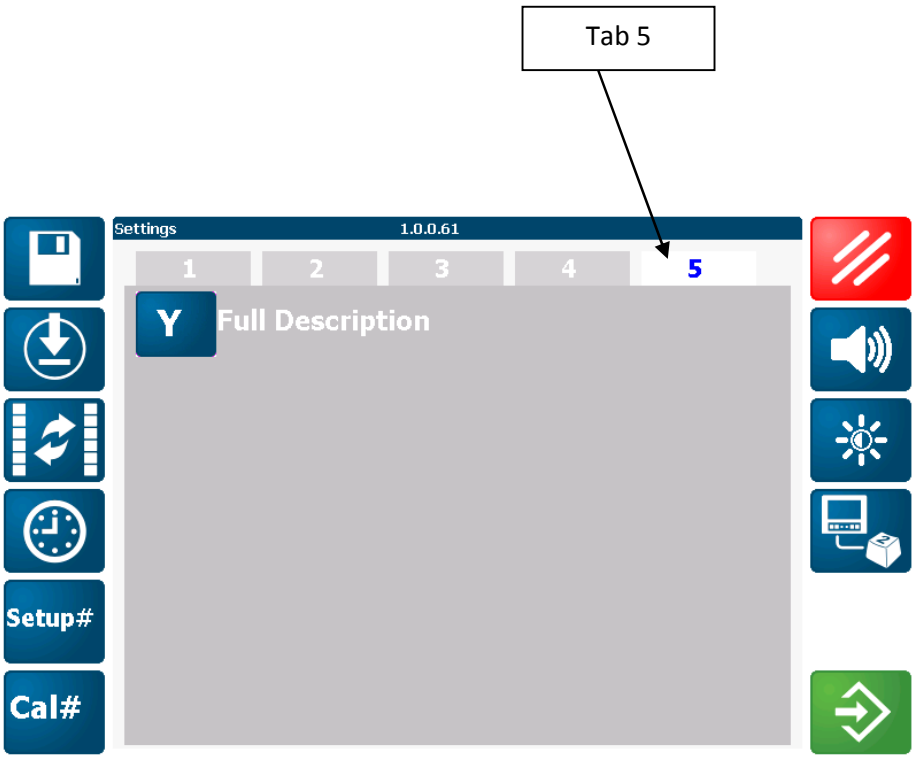
Return Original Call Weight: The TST will return the original ingredient/pen call weight when using the split load function

Units: LB or KG

Beep for key press: Turn sound off or on for key pressing.

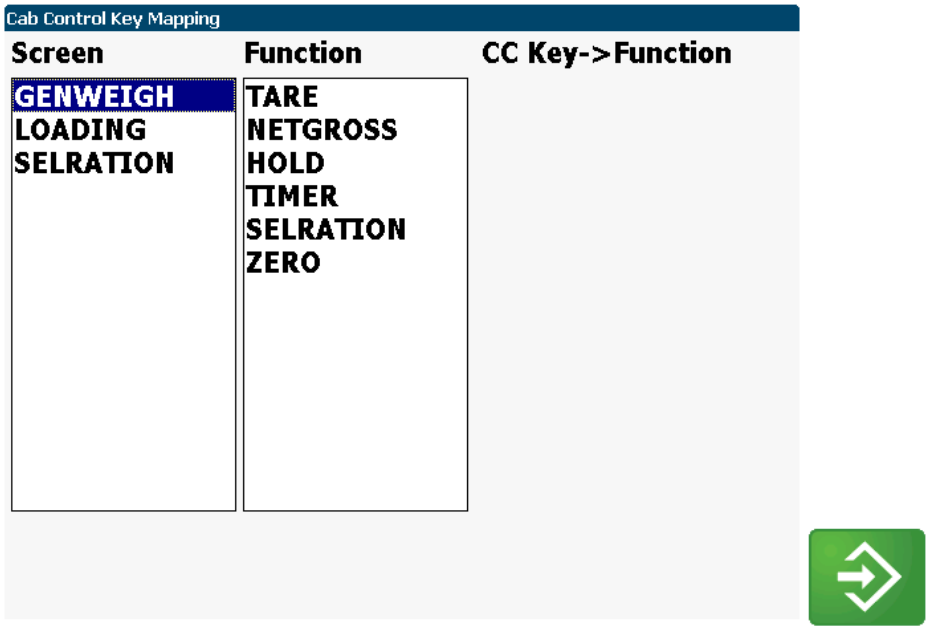
Scale#: Select scale head number, have up to 24 scale heads connected to system.

Radio Test: Checks for radio to be present at boot up. This can be turned on or off.

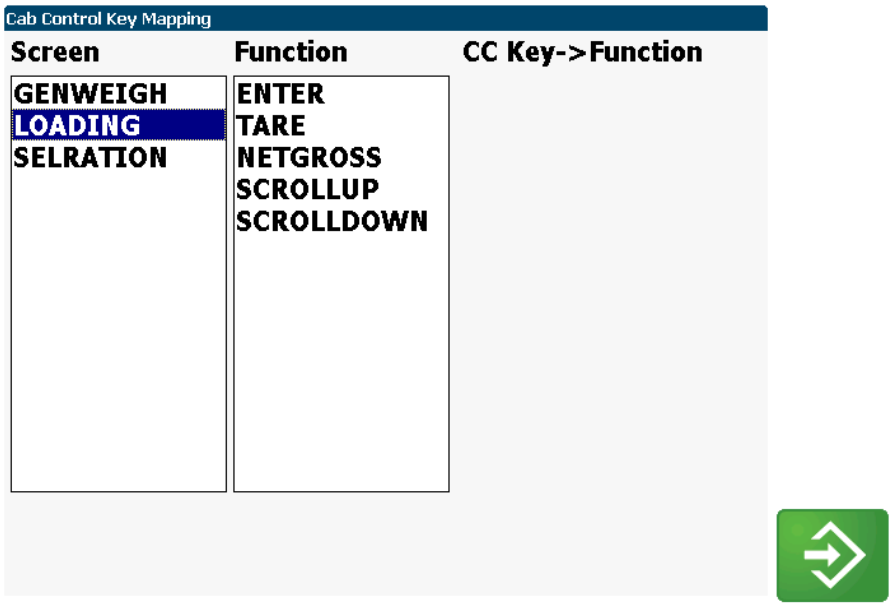


Full Description: when set to “N” the ingredients are shown as the “display name” per TMR Tracker application. When set to “Y” the ingredients are shown as a “description” per TMR Tracker application.

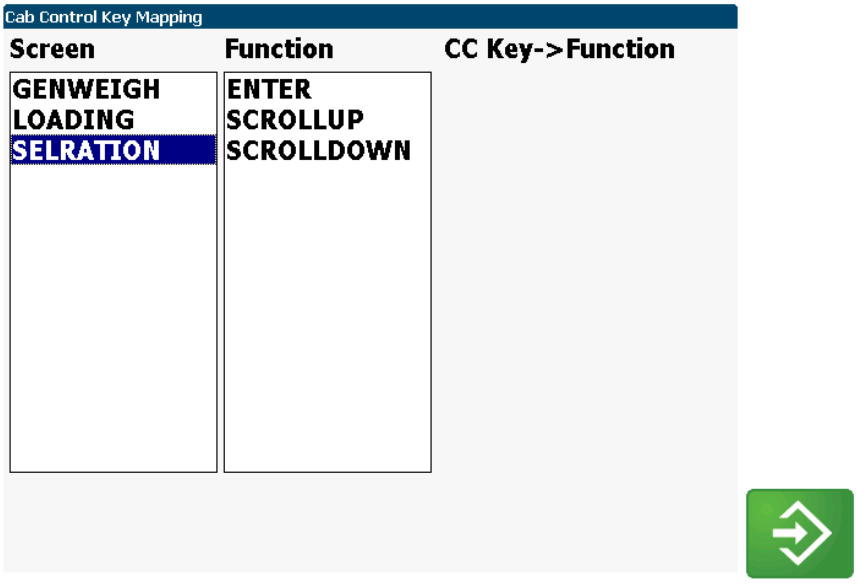
Cab Control Key Mapping:



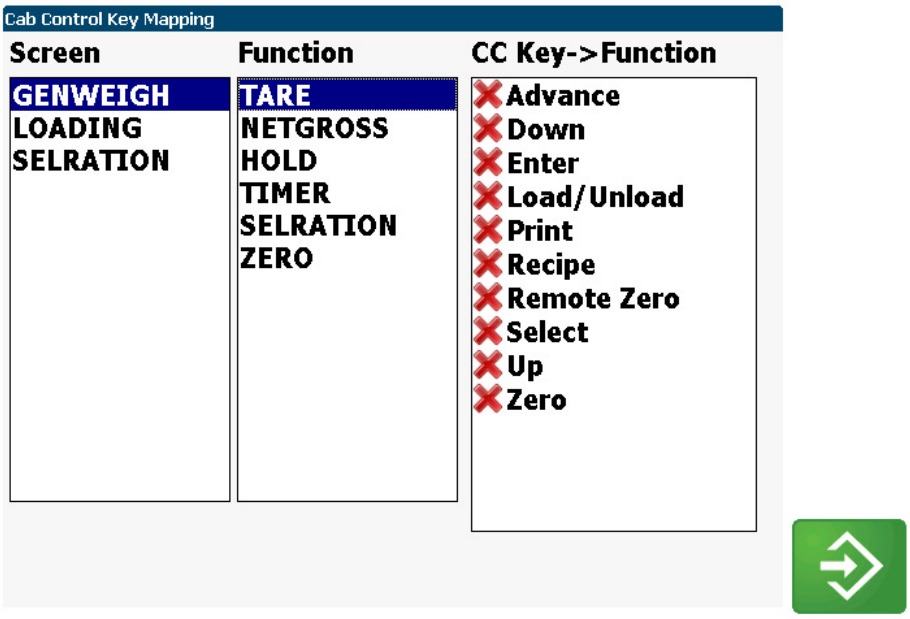
GENWEIGH: Shown above are functions for general weighing.



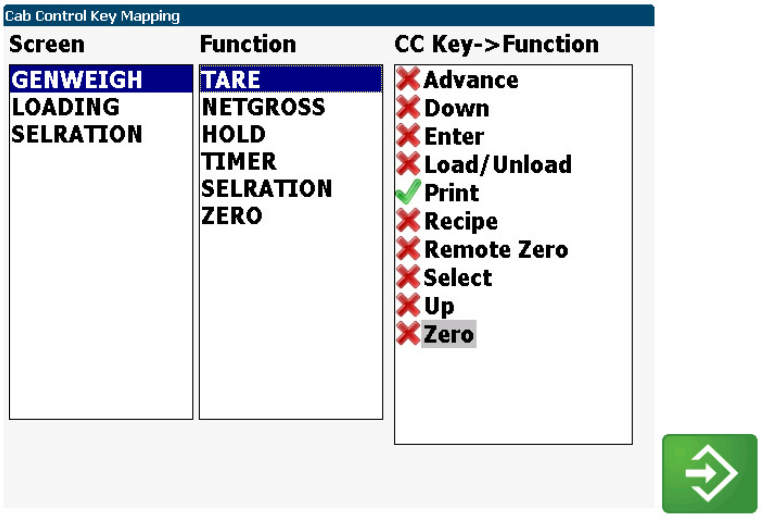
LOADING: Shown above are functions for loading.



SELRATION: Shown above are functions for selecting rations.



CC Key->Function: Shown above are the cab control key functions available.

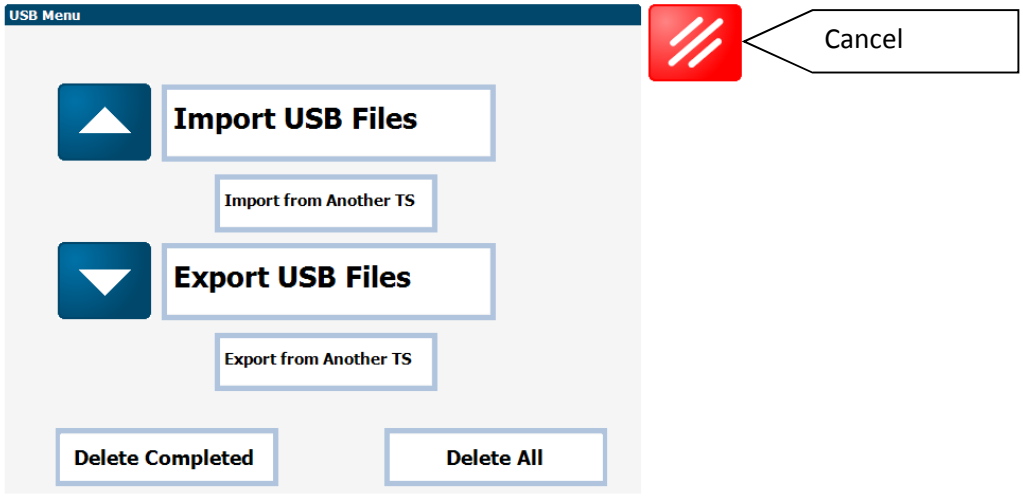


Cab Control Key Mapping: The user has the ability to perform functions from the Digi-Star Cab Control unit when used in conjunction with the TST7600 touch screen. Example shown above; when pressing the "print" key on the cab control, the "tare" function will be done on the TST7600 touch screen unit.

To select the CC Key ->Function, double touch the red "✖", it will change to a green" ✔ " check mark. Then press .

Updating system software:

When installing USB stick, Screen shown below comes up. Select “CANCEL”:

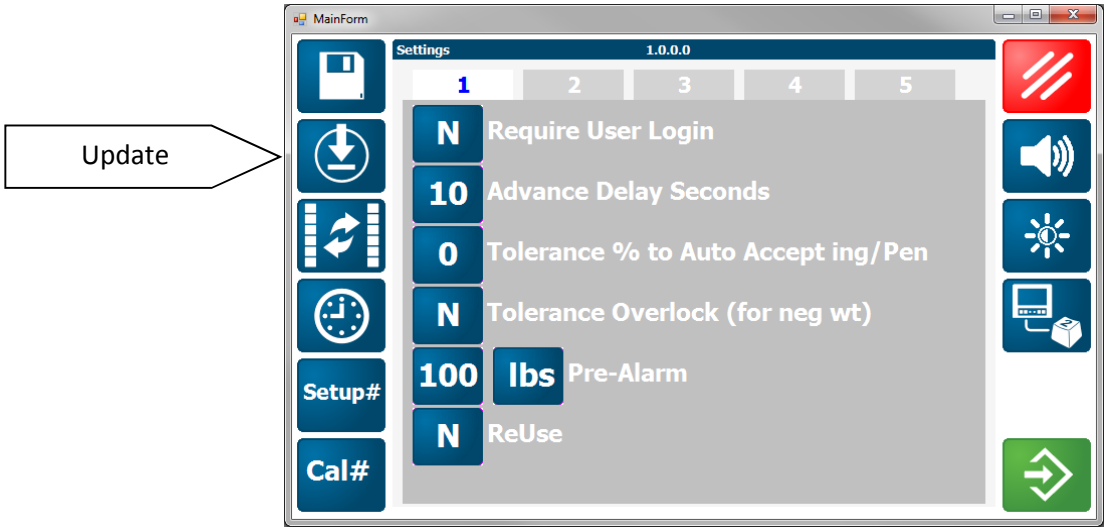


This will take the user back to the “HOME” screen:

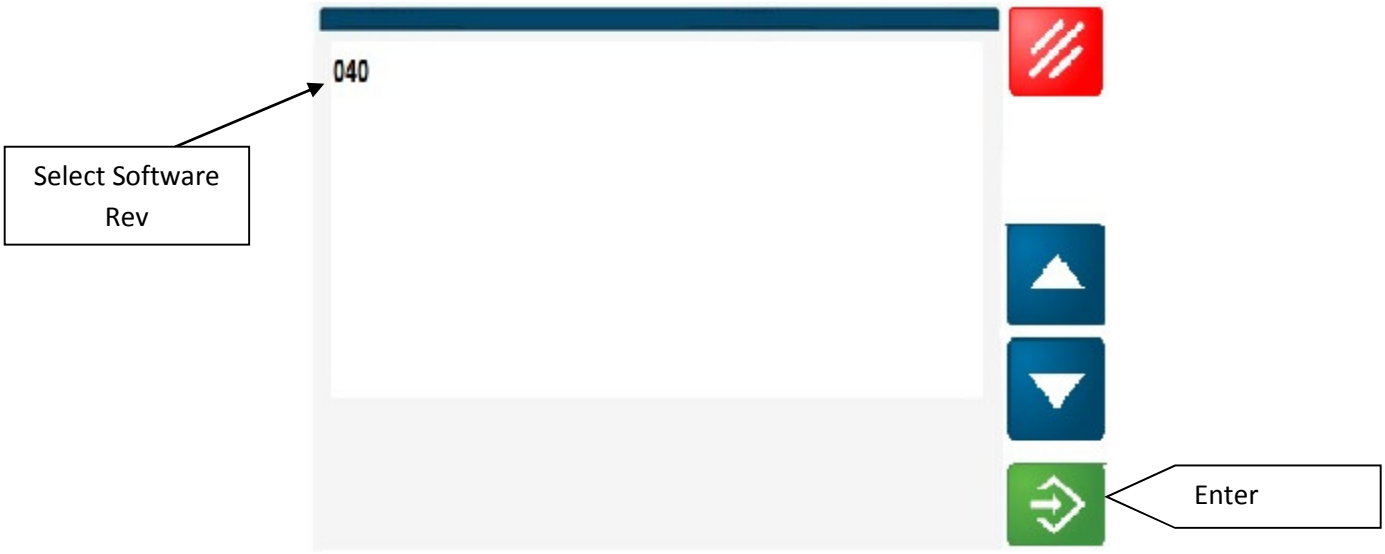


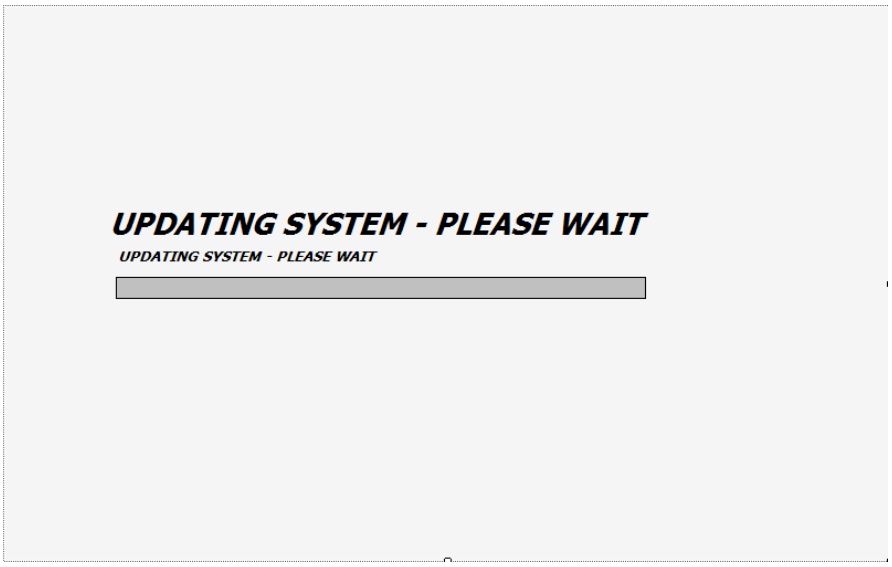
Next select “Settings”

Next select “Update Software” shown below:



Next select “Software Rev” and select “Enter” shown below:





When software update is complete, remove the USB stick.

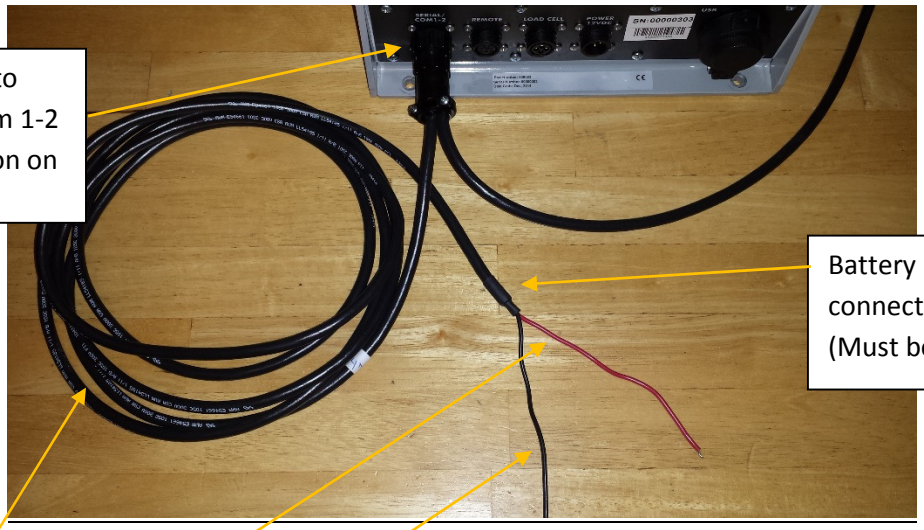
(Software Updates will not change the user's settings)

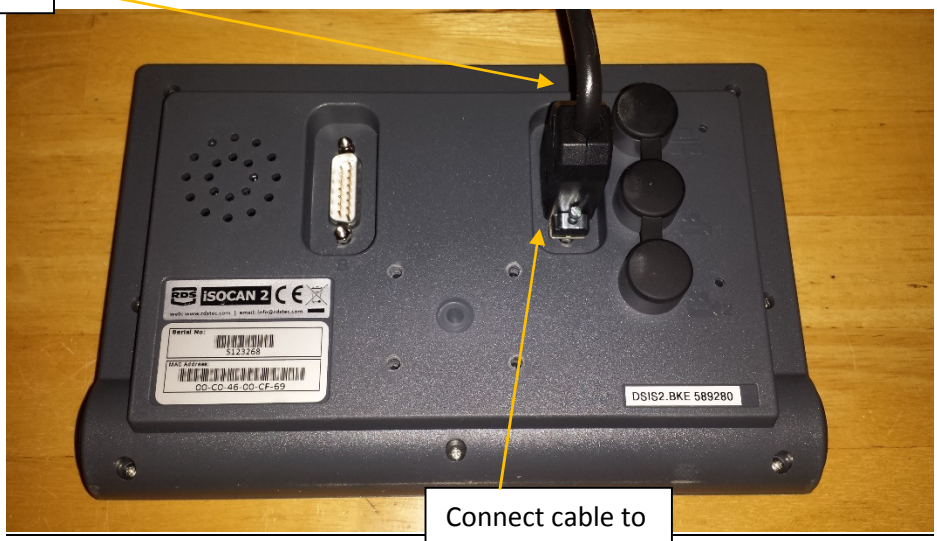
Default Settings for touch screen:

Features	Default Setting	Options
Required User Login	**N**	Yes/**N**o
Advance Delay Seconds	**2**	0,1,**2**,3,4,5,10,15,20,25, 30,35,40,45,50,55,60
Tolerance % to Auto Accept Ingredient/Pen	**0.5**	0,**0.5**,1,2,3,4,5,7,10
Tolerance Over-lock (for Negative Weight)	N	Yes/**N**o
Pre-Alarm	**100 lbs.**	**Lbs.** / Off / Percent
Re-Use	**N**	Yes/**N**o
Allow Resize Recipe	**Y**	No/**Y**es
Auto Start Pens (after loading)	**Y**	No/**Y**es
Manual Advance Pen to Pen	**N**	**N**o/Yes
Mark Ingredient/Pen Started After Weight	**40**	0,10,20,30,**40**,50,100,200
Auto put Pen back on list Weight	**0**	**0**,50,100,150,200,250,500
Display Count	**10**	1,5,**10**,20,50

1st Ingredient Resize/1+2 Ingredient Resize	**N**	Yes/**N**o
Distribute Load	**N**	Yes/**N**o
Small Ingredient Identification	**5**	Enter weight using numerical key pad
Zone Filter	**ALL**	1,2,3,4,5,6,7,8,9,**ALL**
Motion	**N**	Yes/**N**o
Batch Numbering	**P**	**P** / S
Ingredient/Pen Display Time	**1**	**1**,2,3,4,5
Return Original Call Weight	**N**	Yes/**N**o
Units	**LB**	**LB**/KG

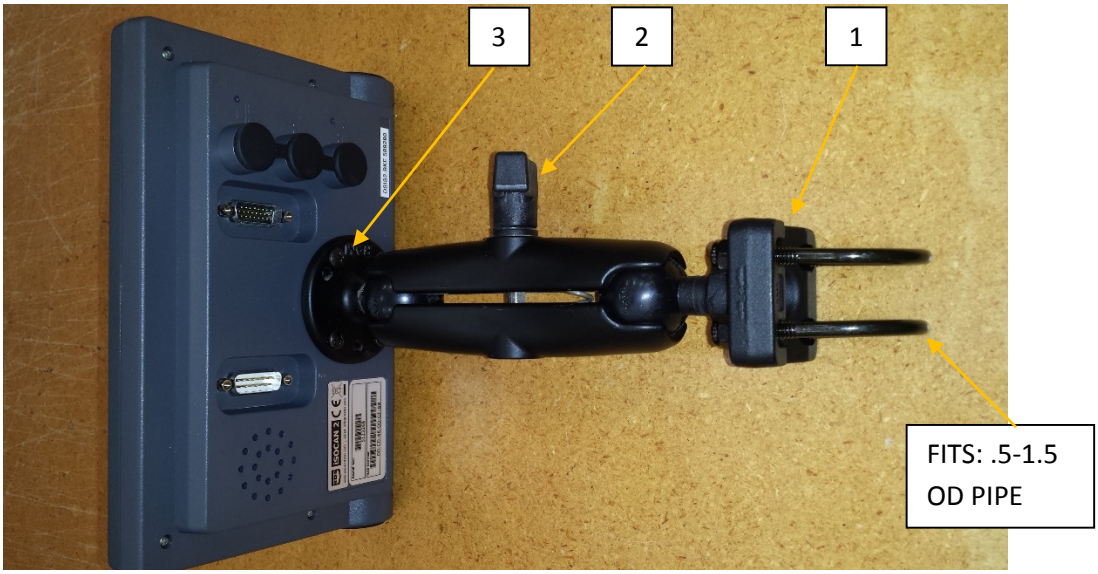
Cable Connections:





TST RAM MOUNT:





KEY	PART NUMBER	DESCRIPTION
	409399	RAM MOUNT KIT
1	406981	MOUNT-1.5 RAM W/U-BOLT
2	406947	MOUNT-1.5” RAM X 5.2”(101U-B)
3	403775	SCR-#8X3/4 PHSTS 48-2 SS

ERM CABLE CONNECTION:



NOTES