



Valueweigh
7XXSoftware

Operation Manual and User Guide

Recipe System

2005 M

Cardinal 788 Indicator

INDEX

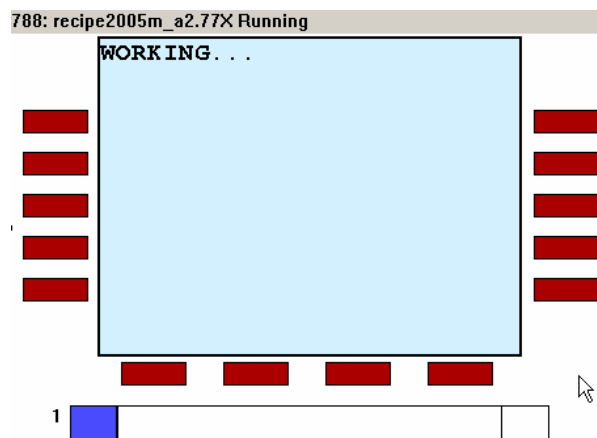
1. Introduction	3
2. Indicator Main Screen.....	3
2.1. <i>Explanation of the Features on the Indicator Main Screen</i>	4
2.2. <i>Explanations of the system menu options</i>	5
3. Creating batch plans	6
3.1. <i>Creating 788 batch plans</i>	6
3.2. <i>Cache feature</i>	7
3.3. <i>Search type selection</i>	7
3.3.1. <i>Search recipe by name</i>	8
3.3.2. <i>Search recipe by code</i>	8
4. General Operating Procedure.....	10
4.1. <i>Mix process</i>	10
4.2. <i>Weight in tolerance</i>	10
4.3. <i>Weight out of the tolerance</i>	11
4.4. <i>LOAD PC PLAN option</i>	12
5. PC software.....	13
5.1. <i>Scheduler</i>	14
5.2. <i>Making a PC batch plan</i>	15
5.3. <i>Edit a PC batch plan</i>	17
5.4. <i>Ingredients</i>	17
5.5. <i>Recipes</i>	19
5.7. <i>Add ingredient to the selected recipe</i>	20
5.7. <i>Reports</i>	21
6. Advanced information on the PC software.....	22
6.1. <i>Auto import option</i>	22
6.2. <i>CSV file example for auto import mode</i>	23
6.3. <i>Intelligent append</i>	24
6.4. <i>Editing of the ingredient code</i>	24
6.5. <i>Clear logs</i>	24
6.6. <i>Report files</i>	24

1. Introduction

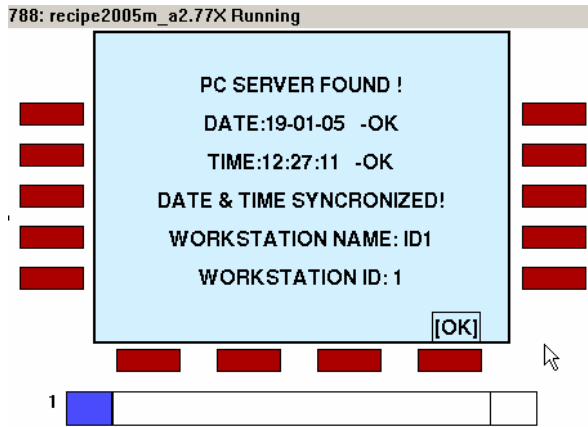
This recipe system weighing application consists of a PC software program designed to create and edit recipes and batch plans, and send them via an Ethernet connection to the Cardinal 788 indicator. The indicator software displays the batch plans and guides the operator through the steps of the required recipe. The indicator checks if the amount of mixes required for the selected recipe is done before proceeding and helps the operator to select the order of ingredients to be filled. It is possible to select batch plans on the 788 indicator from the system menu. This selection allows the operator either to load prepared batch plans for the day from the PC or to create his/her own 788 local batch plan from existing recipes. The indicator stores all process events and ingredients usage and sends that information to the PC at the end of each completed mix. The PC software stores all incoming data from the indicator and allows the PC operator to run various reports.

2. Indicator Main Screen

On power up the Cardinal 788 indicator will run through a start up sequence. The indicator will search for the Network connection.

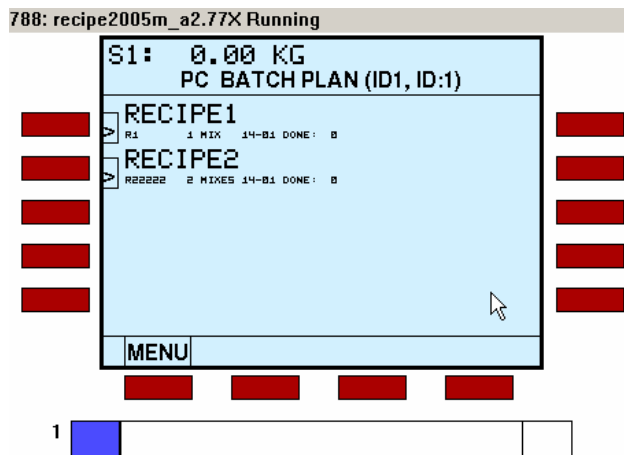


If the indicator is connected to the network and the PC server software (recipe2005m.exe) is running with all installation settings completed the indicator will automatically connect to the server, and synchronize its internal date and time with the PC's calendar and clock. The following connection screen will be shown for about 3 seconds:



If the connection is not possible then the following message will be displayed: **“ERR: NO SERVER REPLY”**

2.1. Explanation of the Features on the Indicator Main Screen

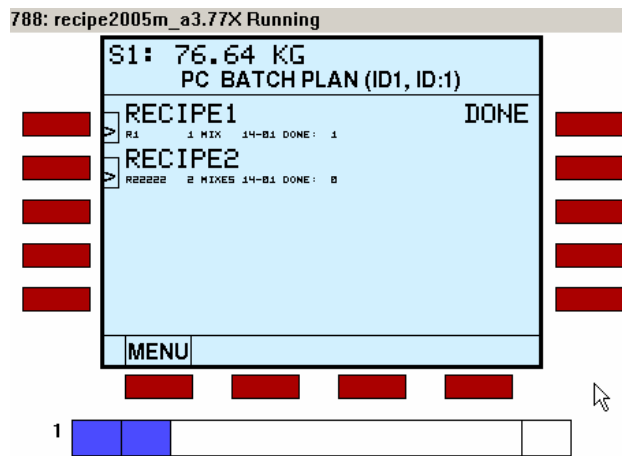


The following table explains the features that can be seen on the main screen, beginning with the features at the top of the screen.

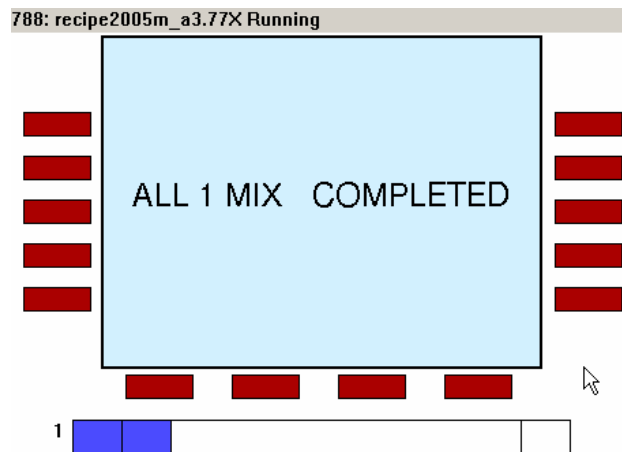
FEATURE	EXPLANATION
S1	Displays the weight on the 1 st scale. The display shows the GROSS weight.
PC BATCH PLAN	Type of the plan currently loaded into the 788 indicator. This may also be ‘788 batch plan’.
ID1, ID:1	Name of the 788 workstation and its ID number which are read from the server during start up. This may also show NO SERVER, ID:1 in which case there is no connection.

RECIPE1,RECIPE2 ...	Recipe name in the batch plan (which can be any name). This list also has details such as recipe code, amount of mixes to be done, date and month of plan creation and amount of mixes already completed.
MENU	Press to enter the System Menu

When all the mixes for the recipe are completed the recipe in the current batch plan is marked with word ***DONE*** .

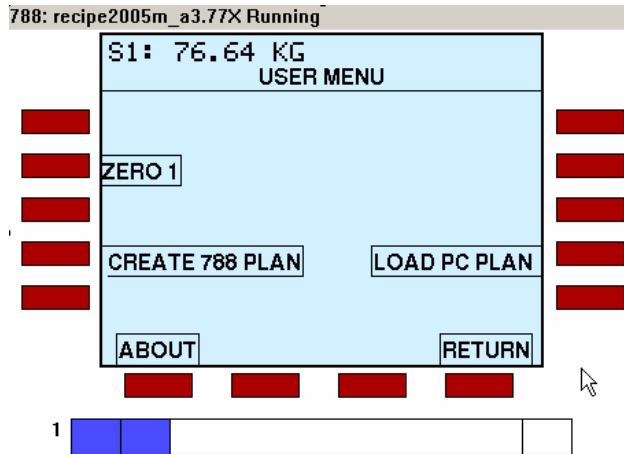


A recipe that is already completed in the current batch plan can't be executed again, if this is attempted the screen will show:



2.2. Explanations of the system menu options

To enter the system menu from the main screen press the MENU button. The screen will display,



The following table explains the features that can be seen in the system menu, beginning with the features at top of the screen.

FEATURE	EXPLANATION
S1	Displays the weight on the 1 st scale. The display shows the GROSS weight.
ZERO1	Press to zero the scale. Ensure the scale is at the centre of zero before each batch is started.
ABOUT	Press to see registration and version details of the program.
CREATE 788 PLAN	Press to create local 788 batch plan.
LOAD PC PLAN	Press to load batch plan already prepared on the PC.
RETURN	Press to return to the Main Menu

3. Creating batch plans

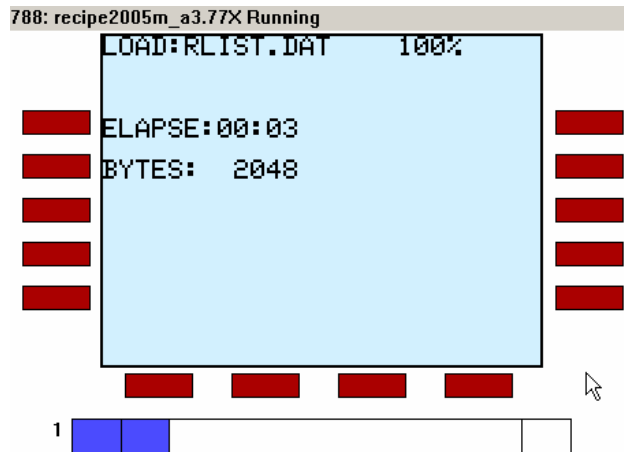
Batch data is handled in the following way.

On the PC, ingredients are placed in the recipes and recipes are placed in batch plans. Batch plans are created on PC and loaded in to the 788 indicator when the “**LOAD PC PLAN**” key is pressed. Alternatively batch plans may be created directly on the 788 indicator.

3.1. Creating 788 batch plans

PLEASE NOTE THAT THE 788 BATCH PLANS TAKE PRIORITY OVER ANY EXSISTING BATCH PLANS AND WILL BE RUN IMMEDIATELY.

Press the “Create 788 plan” key. The following screen will be displayed,

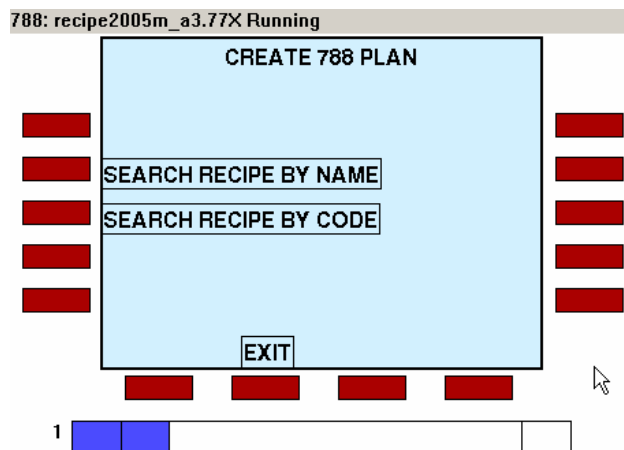


During this operation the 788 loads the list of recipes stored on the PC. The length of this operation depends on the amount of stored recipes and usually takes approximately 3-4 seconds. (The system loads 10-15 recipes per second.)

3.2. Cache feature

As some files are big they may take a long time to be loaded in to the 788 indicator. Therefore the indicator has a cache feature build into the recipe software. Each time the file is requested the 788 looks to see if it has an up to date local copy of the file already stored and if so the PC file is not loaded.

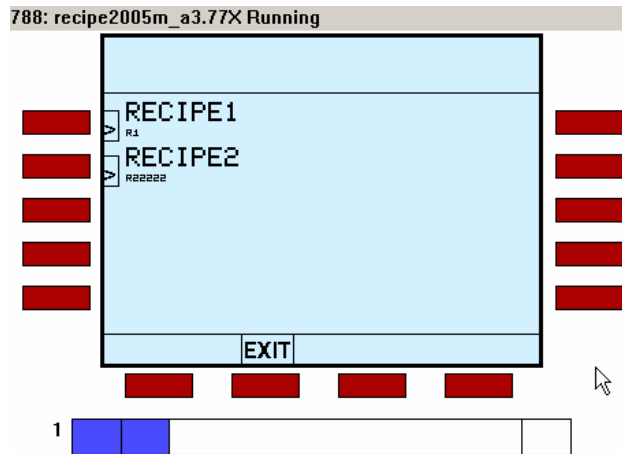
3.3. Search type selection



From this screen the recipe can be selected using two different search options.

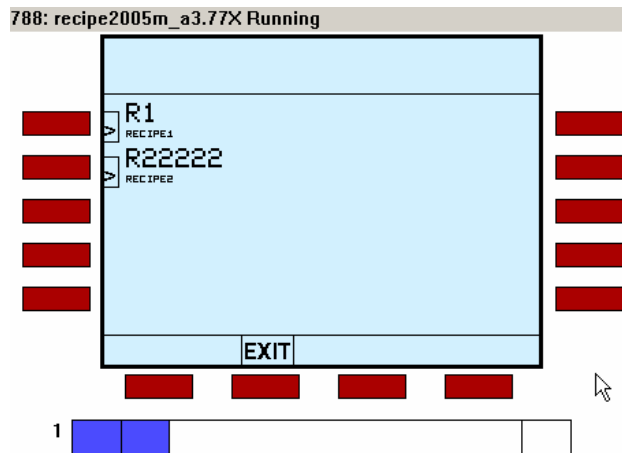
3.3.1. Search recipe by name

When search recipe by name is selected the screen shows,



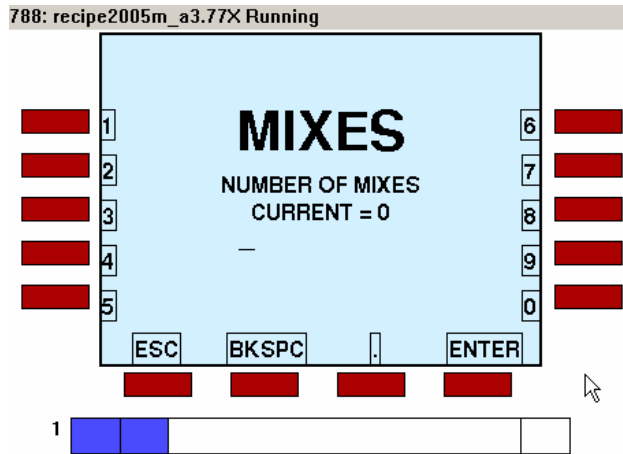
3.3.2. Search recipe by code

When search recipe by code selected then screen shows,



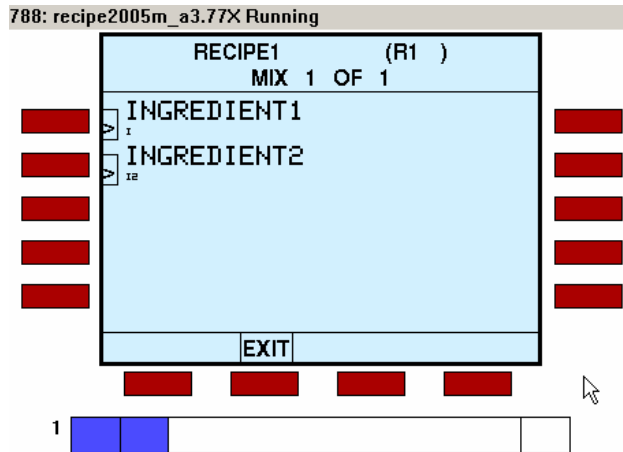
Please note that “quick search” is supported, for example, if the letter ‘B’ is pressed the list will jump to the recipe that starts with ‘B’ (if such a recipe exists).

After the required recipe is selected the following prompt is shown:



The number of required mixes of that recipe can then be entered.

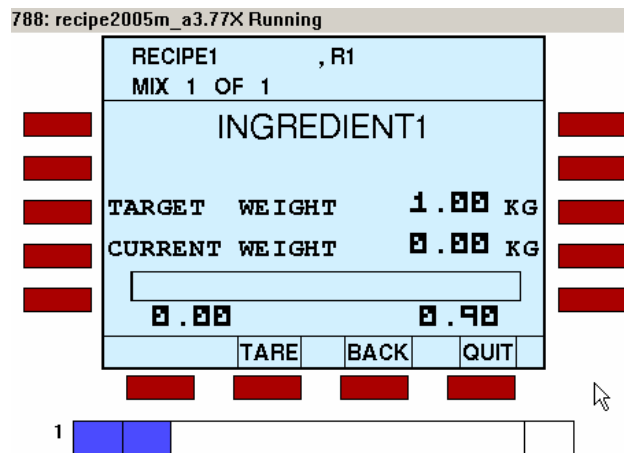
Finally, the 788 loads the selected recipe and ingredients and prepares for a 788 mix to be run:



Any ingredient from the current list may be selected. The order of ingredient filling is fully flexible.

4. General Operating Procedure

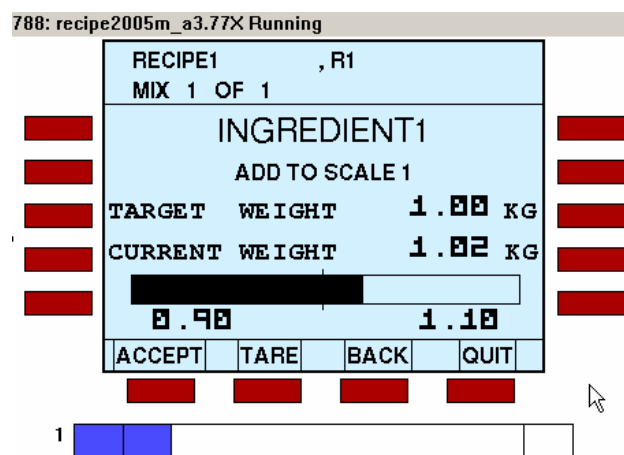
4.1. Mix process



The scale auto tares each time that a new ingredient is selected. The current weight of the scale during the filling process always displays the **NET** weight. The weight may also be tared at any time by pressing the **TARE** button. If the ingredient is wrongly selected then the **BACK** button may be used to return to the list of the recipe's ingredients. The **QUIT** key is used to exit from the mix process.

4.2. Weight in tolerance

When the weight is in the required tolerance range it may be accepted by pressing the flashing **ACCEPT** button.



Although the **ACCEPT** button can be pressed as soon as the tolerances are reached, please remove or add the ingredient until the target weight is reached (as accurately as possible.)

4.3. Weight out of the tolerance

If weight is out of tolerance the screen shows,

788: recipe2005m_a3.77X Running

RECIPE1 ,R1			
MIX 1 OF 1			
INGREDIENT1			
ADD TO SCALE 1			
TARGET WEIGHT	1.00 KG		
CURRENT WEIGHT	4.10 KG		
OVER TOLERANCE			
0.00	0.90		
ACCEPT	TARE	BACK	QUIT

1

Detailed description: This is a screenshot of a scale's control interface. The main display area is light blue with black text. It shows the recipe name 'RECIPE1, R1' and 'MIX 1 OF 1'. Below that, it identifies 'INGREDIENT1' and 'ADD TO SCALE 1'. The target weight is 1.00 KG and the current weight is 4.10 KG. A red bar at the bottom of the display indicates the weight is 'OVER TOLERANCE'. Two numerical values, 0.00 and 0.90, are shown below the bar. At the bottom of the display are four buttons: ACCEPT, TARE, BACK, and QUIT. Below the main display is a horizontal bar with a '1' on the left and a mouse cursor pointing to the right.

The **ACCEPT** button may still be pressed, but in this case the following screen is shown,

788: recipe2005m_a3.77X Running

WEIGHT OVER TOLERANCE	
MAX WEIGHT	1.10 KG
CURRENT WEIGHT	4.10 KG
OVER TOL. BY	3.00 KG
[Progress Bar]	
ACCEPT	

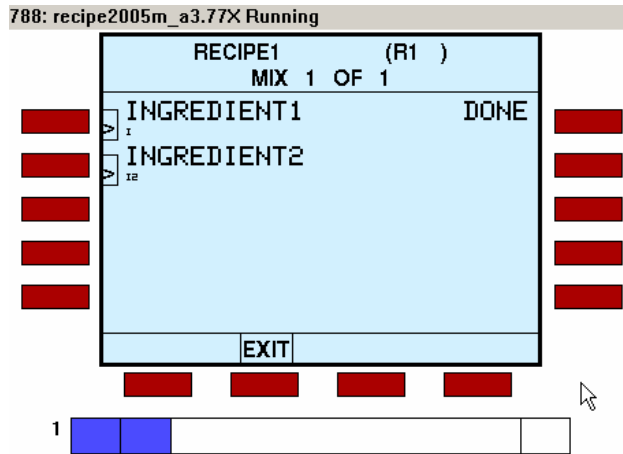
1

Detailed description: This is a screenshot of a scale's control interface showing a 'WEIGHT OVER TOLERANCE' warning. The main display area is light blue with black text. It shows 'MAX WEIGHT' as 1.10 KG, 'CURRENT WEIGHT' as 4.10 KG, and 'OVER TOL. BY' as 3.00 KG. Below the text is a black progress bar. At the bottom of the display is an 'ACCEPT' button. Below the main display is a horizontal bar with a '1' on the left and a mouse cursor pointing to the right.

If the **ACCEPT** key is pressed the current over-weight is stored. This over fill will be marked with the following message on the supervisors PC log notepad:

OVER TOLERANCE ACCEPTED

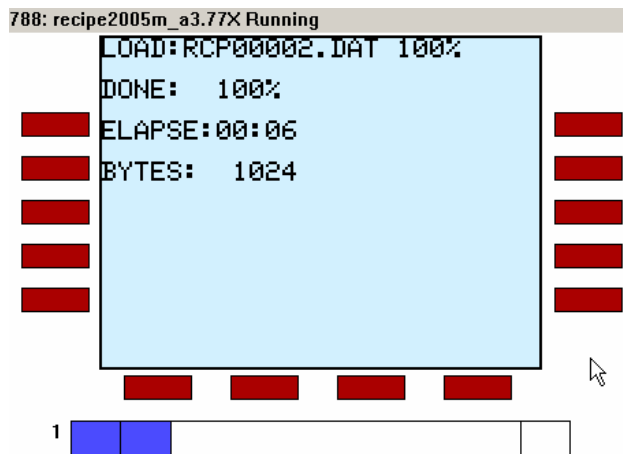
When the ingredient filling is completed the program returns back to the ingredient list for the current recipe and marks the previously filled ingredient as **'DONE'**.



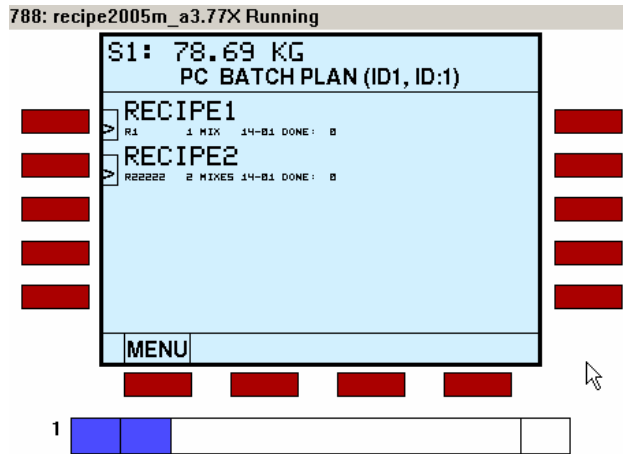
4.4. LOAD PC PLAN option

PLEASE NOTE THAT ALL BATCHES MUST BE COMPLETED BEFORE DOWNLOADING A NEW PC PLAN, ALL UNCOMPLETED BATCHES WILL BE OVER WRITTEN WITH THE NEW PC BATCH PLAN.

Press the **LOAD PC PLAN** key on the setup screen and the indicator will load the PC plan,



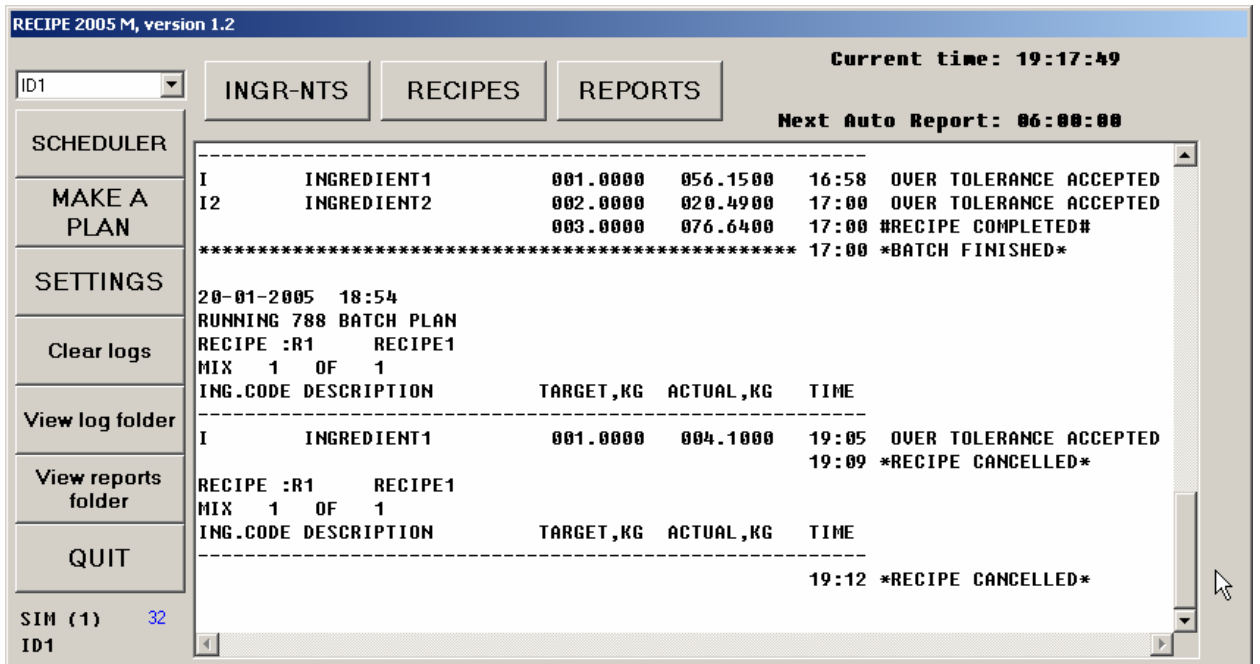
After the PC plan is loaded, the program automatically returns to the MAIN SCREEN:



The ingredient filling process of the PC batch plan runs in the same way as for the 788-batch plan. The only difference is that the PC plan may have more than one recipe to be mixed. The 788-batch plan only ever has one recipe to be mixed.

5. PC software

After the PC software is opened then main screen is displayed:

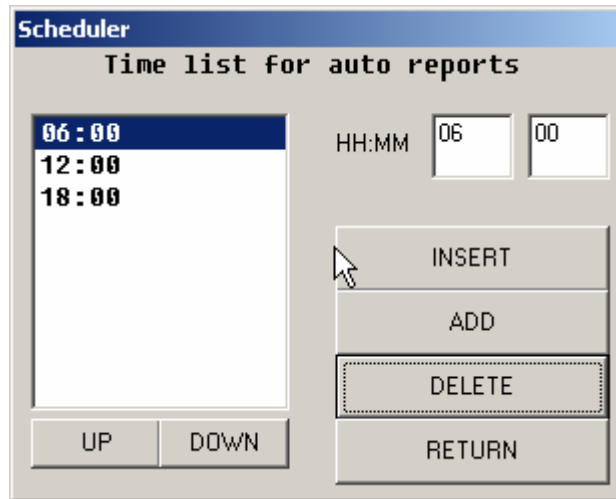


The following table explains the features that can be seen on the PC software main screen, beginning with the features at top of the screen.

FEATURE	EXPLANATION
ID1	Displays the currently selected workstation name.
INGR-NTS	Press to access ingredients list.
RECIPES	Press to access recipes.
REPORTS	Press to access reports.
CURRENT TIME	Displays current system time.
NEXT AUTO REPORT	Displays time for next auto report according to the report scheduler
SCHEDULER	Press to access auto report times
MAKE A PLAN	Press to access PC batch plan
SETTINGS	System settings of the PC software. This option is password protected.
CLEAR LOGS	Clears logs for all workstations and adds information to log archives.
View folder	Opens the specified folder via windows explorer for analysis.
QUIT	Exit from PC software.
SIM (1) / NET (1)	PC server work mode. SIM – simulation, NET – real network. Digit in the brackets is amount of workstations connected.
ID1	ID name for last transaction.

5.1. Scheduler

The time list for when auto reports are generated can be entered here.



Scheduler is a special screen that sets the time for when an auto report of ingredients usage will be made. Use Up or Down to move the selected time in the list, if required.

Be sure that the times in the list are in increasing order before pressing the RETURN key.

5.2. Making a PC batch plan

Click on the button labelled "MAKE A PLAN". The screen will show,

Batching Plan

ID1

BATCH PLAN IS LOADED BY INDICATOR

BATCHING PLAN ID1

Name	Code	Name	Code	Count	Date
RECIPE1	R1	RECIPE1	,R1	,MIX: 1	14-01
RECIPE2	R22222	RECIPE2	,R22222	,MIX: 2	14-01

ADD RETURN UP DOWN EDIT REMOVE

On this screen the stored recipes are located on the left hand side of the screen. The top left corner displays the currently selected workstation name for which the batch plans are being created. The right-hand side panel shows the recipes already added to the PC batch plan. To put a recipe into the batch plan double click on the recipe name.

Use **Up** or **Down** to change the selected recipe place in the batch plan. Press **REMOVE** to delete the recipe from the batch plan.

This option does not delete the recipe itself. It simply removes the selected recipe from the current PC batch plan.

5.3. Edit a PC batch plan

Press **EDIT** to change the amount of mixes for the selected recipe.

The screenshot displays the 'Batching Plan' software interface. At the top, there is a dropdown menu showing 'ID1' and the text 'BATCH PLAN IS LOADED BY INDICATOR'. The main title is 'BATCHING PLAN ID1'. Below this is a table with the following data:

Name	Code	Name	Code	Count	Date
RECIPE1	R1	RECIPE1	,R1	,MIX: 1	,14-01
RECIPE2	R22222	RECIPE2	,R22222	,MIX: 2	,14-01

An 'Add New Recipe To Batching Plan' dialog box is overlaid on the table. It contains the text 'RECIPE1' and a field for 'Count(max 3 digits):' with a cursor. There are 'CANCEL' and 'OK' buttons in the dialog. At the bottom of the main window, there are buttons for 'ADD', 'RETURN', 'UP', 'DOWN', 'EDIT', and 'REMOVE'.

Enter amount of mixes to be done from 1 up to 999. Maximum number, which is recommended, is 99. Use the **OK** button to confirm the entry or the **CANCEL** button to reject the edit.

5.4 Ingredients

Use this option to add, edit or delete the ingredients. Note that you must enter the ingredient name and the ingredient code. Maximum characters reserved for the ingredient name is 20, maximum characters for the ingredient code is 6. It is recommended that unique information is used for the name and for the code fields.

Please note when using **EDIT** if the ingredient code is changed to another one, then the software searches all the recipes for the presence of the old code and changes the it to the new code in all existing recipes. It is possible to print out a copy of the all list of the ingredients. By pressing '**PRINT**' all the information will be placed in the windows notepad program. Use print option to print information from notepad to your printer.

Ingredients options

97 INGREDIENTS

NAME	CODE
APPLE & BLACKBERRY A	R0413
APPLE & BLACKBERRY F	R0725
APPLE CRUMBLE FILLIN	R0721
BAKING POWDER	R0920
BANANA FLAVOURING	R0394
BLACK CHERRY BCPR	R0738
BLACK TREACLE	R0431
BLACKCURRANT FILLING	R1130
BLACKCURRANT JAM BBR	R1151
BLUEBERRY FLAVOURING	R0393
BRANDY	R0366
BREAD	R0030
BURNT SUGAR SYRUP	R0433
BUTTERY CRUMB DCF401	R1161
CARAMEL POWDER	R0351
CAROTENE	R0367
CHARTER FLOUR	R0120
CHOCOLATE BISCUIT CR	R0501

ADD

UP DOWN

EDIT

DELETE

PRINT

RETURN

It is possible to use the PC keyboard to jump to the required in the list. Press 'C', for example, to be taken to the beginning of all the ingredients beginning with C.

5.5 Recipes

Select this option to display the PC recipes. The following screen will be displayed,

The screenshot shows a software interface titled "Add, Edit and Delete Recipes". At the top, it displays "5 RECIPES" and "CHOCOLATE SAUSAGE WITH CR". On the left, a list of recipes is shown with columns for Name and Code. The first recipe, "CHOCOLATE SAUSAGE WITH CR", is selected. On the right, a table lists ingredients for the selected recipe with columns for Code, Weight, g, Min tol, Max tol, and Scale. Below this table, the recipe name "CHOCOLATE BRIOCHE" is shown, followed by a list of ingredients with their codes. At the bottom, there are buttons for ADD, EDIT, DELETE, PRINT, and RETURN. On the right side, there are buttons for UP, DOWN, EDIT, and DELETE, along with a numerical display showing "6000".

Name	Code
CHOCOLATE SAUSAGE WITH CR	RCHOCK
CREAMY SPLUDGE	RCREAM
DIP BREAD IN PUDDING	RDIPB
HOT & STEAMY	RUHOT
NICE AND FRUITY	URNICE

Code	Weight, g	Min tol	Max tol	Scale
R1163	1000	30	150	1
R0376	2000	50	100	1
R0362	3000	30	100	1

6000

CHOCOLATE BRIOCHE

APPLE & BLACKBERRY A	R0413
APPLE & BLACKBERRY F	R0725
APPLE CRUMBLE FILLIN	R0721
BAKING POWDER	R0920
BANANA FLAVOURING	R0394
BLACK CHERRY BCPR	R0738
BLACK TREACLE	R0431
BLACKCURRANT FILLING	R1130
BLACKCURRANT JAM BBR	R1151
BLUEBERRY FLAVOURING	R0393

ADD EDIT DELETE PRINT RETURN

UP DOWN EDIT DELETE

On this screen the list of recipes is located on the left hand side of the screen. At the top of the screen the amount of stored recipes and the currently selected recipe are shown. The top right window shows the list of ingredients in the currently selected recipe. That list has ingredient details such as code, weight (grams), minimal tolerance, maximal tolerance, and scale number.

Please note that all the weight information must be entered in grams (1000 g = 1 KG). When an ingredient code is selected in the recipe ingredients list then the name of the ingredient relating to that code is shown under the list window.

The bottom right hand window of the screen is the common list of all ingredients. Each time a recipe is selected the top right hand screen shows a list of the items in that recipe. All changes are saved automatically and all final changes will be saved when the **RETURN** button is pressed.

The digit in bold text under the **DELETE** key shows the total weight of all the ingredients in the current recipe.

5.7. Add ingredient to the selected recipe

The screenshot shows a software interface titled "Add,Edit and Delete Recipes". The main window displays "5 RECIPES" and "CHOCOLATE SAUSAGE WITH CR". A table lists ingredients with columns: Name, Code, Code, Weight, g, Min tol, Max tol, Scale. The table shows:

Name	Code	Code	Weight, g	Min tol	Max tol	Scale
CHOCOLATE SAUSAGE WITH CR	RCHOCK	R1163	1000	30	150	1
CREAMY SPLUDGE	RCREAM	R0376	2000	50	100	1

A dialog box titled "Add ingredient to recipe CHOCOLATE SAUSAGE WI" is open, showing "BAKING POWDER" as the selected ingredient. The dialog has input fields for:

- Weight (max 7 digits) GRAMS: 0000000
- Scale (1 digit): 1
- MIN Tolerance (max 5 digits) GRAMS: 00000
- MAX Tolerance (max 5 digits) GRAMS: 00000

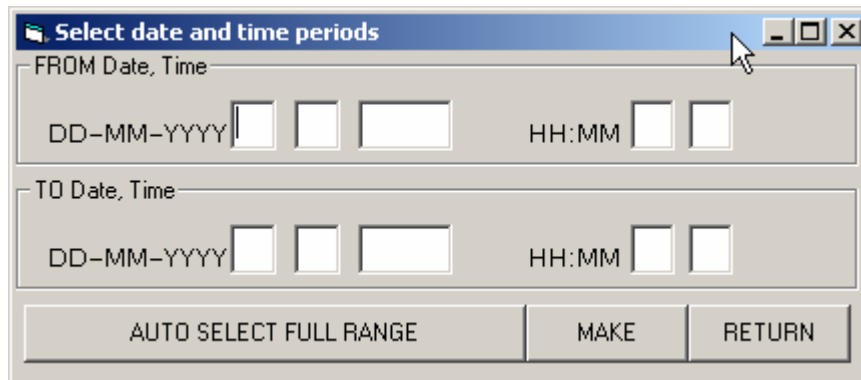
Buttons for OK, CLEAR, and CANCEL are present. A list of ingredients is shown at the bottom right of the dialog:

BAKING POWDER	R0920
BANANA FLAVOURING	R0394
BLACK CHERRY BCPR	R0738
BLACK TREACLE	R0431
BLACKCURRANT FILLING	R1130
BLACKCURRANT JAM BBR	R1151
BLUEBERRY FLAVOURING	R0393

At the bottom of the main window are buttons: ADD, EDIT, DELETE, PRINT, and RETURN.

Select the recipe name that you wish to create and double click on the required ingredient in the bottom right hand panel to add the ingredient to highlighted recipe. Enter the required weight of the ingredient and the minimum and maximum tolerances. If the 788 has more than one scale platform, the scale number may be specified. To jump quickly the next field the TAB key on the PC keyboard can be pressed. Click OK to finish editing and return to the recipes edit screen.

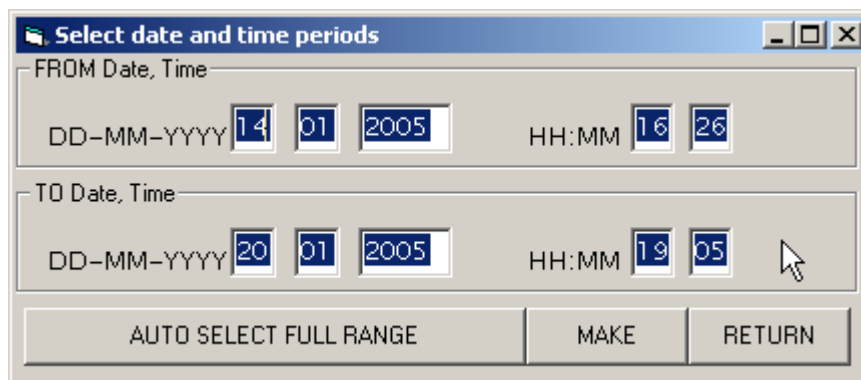
5.7. Reports



The screenshot shows a dialog box titled "Select date and time periods". It has a title bar with a folder icon and standard window controls. The dialog is divided into two main sections: "FROM Date, Time" and "TO Date, Time". Each section contains two input fields: "DD-MM-YYYY" and "HH:MM". The "FROM" section has empty input fields, while the "TO" section also has empty input fields. At the bottom of the dialog, there are three buttons: "AUTO SELECT FULL RANGE", "MAKE", and "RETURN".

Use the 'REPORTS' option to generate ingredient analysis for different date and time periods. If a report for the total amount of stored data is required then click on 'Auto Select Full Range'.

This following screen will be displayed:



The screenshot shows the same dialog box as above, but with values entered in the input fields. The "FROM" section has "14", "01", and "2005" in the "DD-MM-YYYY" field, and "16" and "26" in the "HH:MM" field. The "TO" section has "20", "01", and "2005" in the "DD-MM-YYYY" field, and "19" and "05" in the "HH:MM" field. The "AUTO SELECT FULL RANGE" button is highlighted with a mouse cursor.

Click on the '**MAKE**' button to start execute the report process. After some time (depending on the amount of stored data) windows notepad appears with the report data loaded.

REPORT_MANUAL_21-1-2005_17-33.txt - Notepad

File Edit Format View Help

Ingredient Usage Report

Manual report
 From :24-11-2004 18:05
 To :18-01-2005 14:27

Ingredient Name	Theoretical Usage (Kg)	Actual Usage (Kg)	Deviation (Kg)	Efficiency (%)
BAKING POWDER	0006.5200	0008.9500	0002.4300	037.27
CAROTENE	0000.2240	0000.2335	0000.0095	004.24
CHARTER FLOUR	0364.5600	0364.8500	0000.2900	000.08
CORN FLOUR STARCH - C	0250.0000	0294.3500	0044.3500	017.74
RAPESEED OIL	0025.7200	0028.5000	0002.7800	010.81
SOFT DARK BROWN SUGA	0214.5600	0221.3500	0006.7900	003.16
TOFFEE SAUCE	0025.2000	0025.4000	0000.2000	000.79
VANILLA FLAVOURING	0071.4000	0084.4000	0013.0000	018.21
VEG FAT SPREAD	0140.6000	0141.6000	0001.0000	000.71
VEG SUET	0065.6000	0068.1000	0002.5000	003.81
WATER	0162.0000	0246.5000	0084.5000	052.16
WHITE SUGAR	2054.0000	2086.0000	0032.0000	001.56
WHOLE EGG	0314.5600	0317.4500	0002.8900	000.92

end of report

The ingredient usage report has the following details. Ingredient name, theoretical usage, actual usage (real amount of product used during the mix), deviation and efficiency. The lower the percentage of efficiency, the lower the deviation.

Less deviation means that the actual usage is close to the theoretical usage.

6. Advanced information on the PC software

6.1. Auto import option

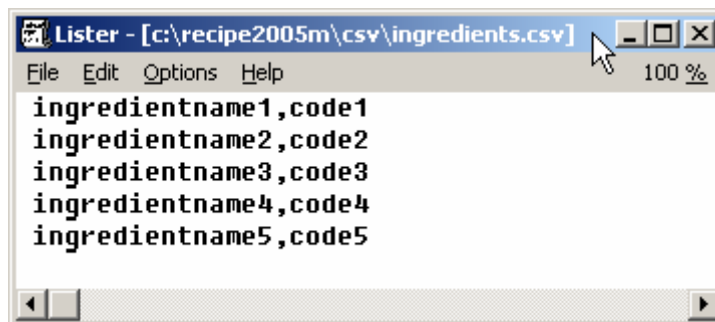
Ingredients may be added automatically to the PC software ingredients internal database via auto import option. All that is required to execute this operation is to place an already prepared file (named **INGREDIENTS.CSV**) in a folder on the PC hard disk drive and run the PC software. During the start up, the PC software checks whether the **ingredients.csv** file is present in the CSV folder, located as a sub folder of the main folder of the system. Please note that the default installation main folder of the system is called **RECIPE2005M**. However it may be changed to something else via 'SETTINGS'.

When the system adds new ingredients via the method described above the following message is shown:

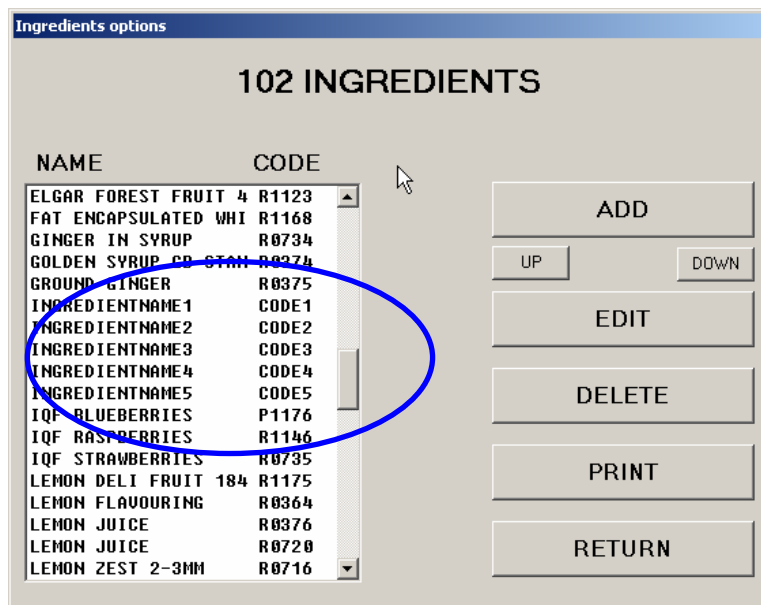


6.2. CSV file example for auto import mode

As an example, the possible contents of the file "ingredients.csv" may be as below.



As the result of this operation, 5 new records are added to the present ingredients list:



6.3. Intelligent append

It is important that the auto import process adds only unique records to the main ingredients database, so once used, the incoming file INGREDIENTS.CSV will be deleted. If the same file is used again no new records will be added.

6.4. Editing of the ingredient code

The ingredient code is a very important field in the PC software and must be unique. However there is a the possibility of editing the ingredient code. Please note that recipes are directly connected to the ingredients list via the ingredient code. If an item is deleted from the ingredients list it will not exist in the created recipes.

When an ingredient code is changed to a new one, the old code is automatically searched through all recipes and is changed to new one.

When editing the ingredient code please note that the existing code cannot be used as a new code. If so then the following error message is shown,



6.5. Clear logs

The "CLEAR LOGS" option clears the current notepad for all workstations as well as the stored log files in the folder LOG. Log out information, loaded from the 788 indicator, is stored in the files with extension .LOG. When 'clear logs' option is used the log files to be deleted are updated to files with a .TXT extension. This saves all the information for each workstation in an individual log out file, with a .TXT extension and only clears the current log out information.

6.6. Report files

Report files are always created in the folder recipe2005m\REPORT on the hard drive of the PC system.

For ease of use, date and time of the report and its type are used in the name of the file. For example the file:

REPORT_AUTO_21-1-2005_18-00.txt

indicates that this report was done automatically on 21-01-2005 at 18:00.

REPORT_MANUAL_18-1-2005_19-46.txt

indicates that this report was done manually on 18-01-2005 at 19:46.