

# Q.

## What are the differences between Recipe and Recipe Database?

This FAQ explains the differences on data format and function, comparing Recipe (RW, RW\_A, EM) and Recipe Database.

# A.

	Recipe	Recipe Database
Filename Extensions	*.rcp, *.rcp_a, *.emi	*.db
Tools	Recipe Editor	Recipe Database Editor SQLite third party tools
Advantages	<ul style="list-style-type: none"><li>● Cooperates with Index Registers.</li></ul>	<ul style="list-style-type: none"><li>● Recipe View object can generate a database table for easier reference.</li><li>● Import/Export object can update/backup Recipe Database into a CSV file on a USB drive or a SD card.</li><li>● The edited recipe data can be downloaded to HMI in an exob file.</li><li>● Recipe records in the database can be updated, added, and deleted dynamically on HMI by entering specific values in the recipe related registers. The registers can show execution results as well.</li><li>● Macro functions allow reading, writing, and querying recipes.</li></ul>

## Examples on Recipe and Recipe Database usages:

### 1. Build the project using RW

**Step 1.** Open Recipe Editor, enter the recipe data, and save the data in a file (\*.rcp, \*emi).

**Step 2.** Launch EasyBuilder Pro to build a project by adding the objects with corresponding RW addresses (figure 1).

To test the project file, launch Utility Manager and select [Download] to download the project file to HMI and see if all values are correct (figure 2).

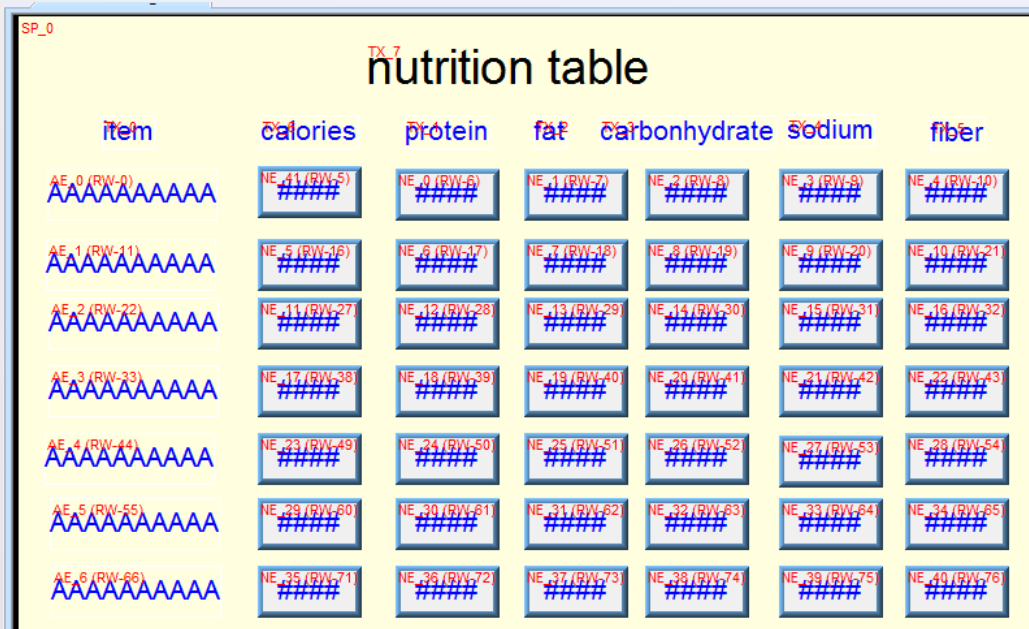


Figure 1: Create objects using RW addresses in EasyBuilder Pro

item	calories	protein	fat	carbonhydrate	sodium	fiber
coke	111	2	1	5	44	0
cake	456	8	10	54	222	3
buger	778	56	9	34	333	6
pizza	876	45	9	97	444	3
ham	109	9	6	66	89	4
egg	26	10	5	98	78	9
ice cream	122	2	8	29	24	1

Figure 2: View recipe on HMI

Index Registers enable an address offset feature in Recipe. In the following example, index register LW-9200 is used to specify address offset. By entering value 11 in LW-9200, data in address RW-11 (=RW-0+Index\_01) will be read.

When value in Index Register is 0, no offset is used.

INDEX\_0(LW9200)

item	calories	protein	fat	carbonhydrate	sodium	fiber
coke	111	2	1	5	44	0

RW0 (5word)      RW5      RW6      RW7      RW8      RW9      RW10

RW0~RW10(11 Word)

1. Entering value 11 in the index register shows the next item.

INDEX\_0(LW9200)

item	calories	protein	fat	carbonhydrate	sodium	fiber
cake	456	8	10	54	222	3

RW11 (5word)      RW16      RW17      RW18      RW19      RW20      RW21

RW11~RW21(11 Word)

2. The interval between two RW addresses is 11 words.

## 2. Build the project using Recipe Database

In EasyBuilder Pro project, by creating a Recipe View object, Recipe Database can be shown in a table form for easier reference. The user can simply run project simulation to see the value in each address. There are some objects in EasyBuilder Pro that can be used to change or view data in Recipe Database.

Please note that before using a Recipe View object, the Recipe Database should be built in EasyBuilder Pro through these steps:

**Step 1.** Open System Parameter Settings » Recipes tab and finish the settings.

**Step 2.** Open Library » Recipe Records to build the Recipe Database.

The screenshot displays a simulation interface for a nutrition table. At the top, the title 'nutrition table' is shown in orange. Below it is a table with the following data:

item	calories	protein	fat	carbohydrate	sodium	fiber
water	30	0	0	0	0	0
tea	100	5	0	3	46	0
sandwich	500	67	5	66	334	8
fries	300	35	6	54	444	5
coke	100	5	0	3	54	0
chip	400	33	9	56	400	20

Below the table, there is a form for editing a selected item. The 'burger' item is selected in a dropdown menu. The form contains input fields for the following nutrients:

- calories: 400
- protein: 23
- fat: 3
- carbohydrate: 34
- sodium: 344
- fiber: 3

There are also buttons for 'add', 'update', and 'delete'. A 'Fast Sel' button is located at the bottom left of the form area.

Figure 3: View Recipes in simulation mode