# User Manual

# ArmaRecon
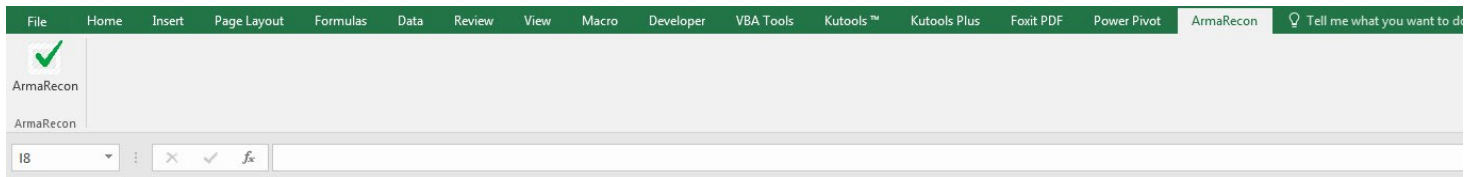
Creative solution for accounts and bank reconciliation
www.armarecon.com

# Contents

# How to Install and run Armarecon

Armarecon does not require any installation to run. You just need to copy Armarecon file in XLSTART folder then run the excel software same as usual. A tab named "Armarecon" with Armarecon icon inside it, will appear.
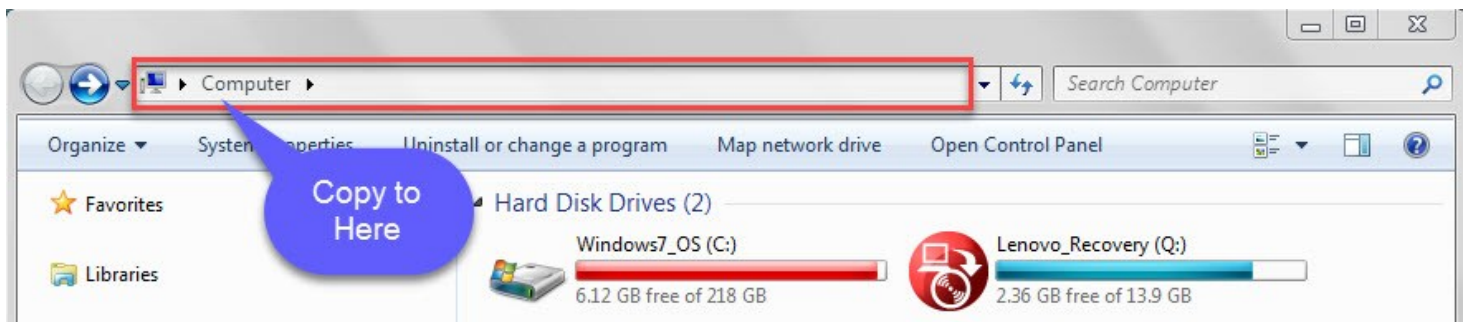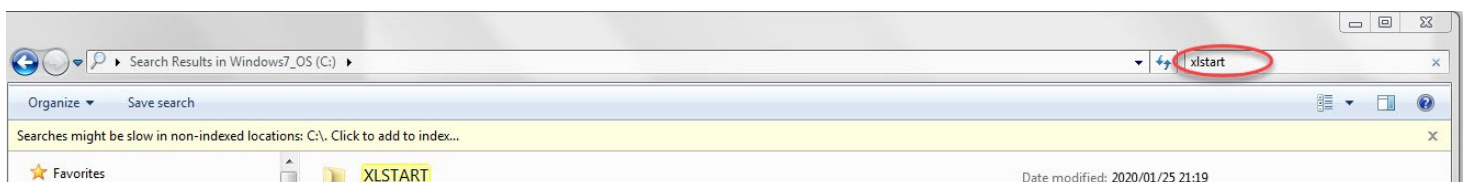


XLSTART path is as below:

C:\Users\Your Computer User Name\AppData\Roaming\Microsoft\Excel\XLSTART

Or you can copy the following address into address bar of your File Explorer:
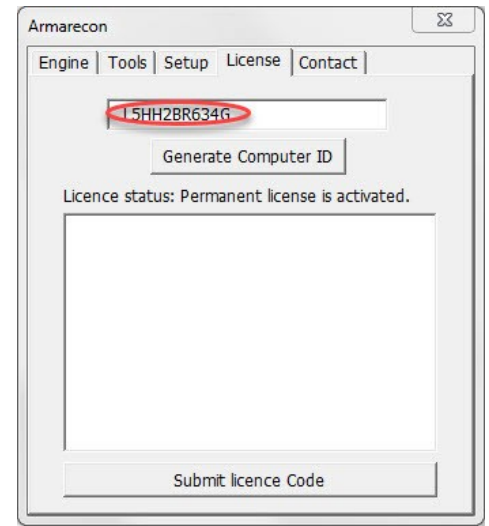
%appdata%\microsoft\excel\xlstart



Alternatively, you can search XLSTART in C drive.



Run the program from Excel, tab "Armarecon". Now you need to get one of the following registration codes from www.armarecon.com website:

- 30 days free trial license
- Dated license code such as 1 year or more
- Permanent license

Go to license tab and click "Generate Computer ID" then you will be led to the website.



Select your desired license then click "Purchase License" button.

Note: If you select free trial license, price of order will be zero so you will not pay money within creating order process.



### License

30 Days Free Trial

**Purchase Licence**

### How to install

- Download program
- Copy program in XLSTART folder
- Run program and get your computer ID in license tab
- Select purchase type in this page then click purchase license
- Enter your Email and Computer ID in next page then place your order
- Make your payment (not required for trial license)
- license code will be sent to your email
- Enter license code in license tab inside of program
- Run and enjoy

Enter your computer ID and your email in website then click "Place order" button.

Note: Within promotion time, you may require extra information such as link of your activity in social network about Armarecon then you will be deserved to receive free trial license more than 30 days.

## Billing details

Email address *

Arma2020@gmail.com

Hardware ID *

L2HF7BR017G

Link of your post about Armarecon (optional)

Enter link of your social network post here to get 6 months free trial license

## Your order

| Product | Subtotal |
|---|---|
| Armarecon - 30 Days Free Trial × 1 | $0.00 |
| Subtotal | $0.00 |
| Total | $0.00 |

Your personal data will be used to process your order, support your experience throughout this website, and for other purposes described in our privacy policy.

Place order

You will see detail of your order as below image.

Thank you. Your order has been received.

| ORDER NUMBER: | DATE: | EMAIL: | TOTAL: |
|---|---|---|---|
| 869 | April 15, 2020 | Arma2020@gmail.com | $0.00 |

## Order details

| Product | Total |
|---|---|
| Armarecon - 30 Days Free Trial × 1 | $0.00 |
| Subtotal: | $0.00 |
| Total: | $0.00 |

| Hardware ID: | L2HF7BR017G |
|---|---|

## Billing address

N/A
✉ Arma2020@gmail.com

Armarecon team will process your order then you will receive your desired license code via email. Enter the license code in below box of license tab then click "Submit License Code" button.
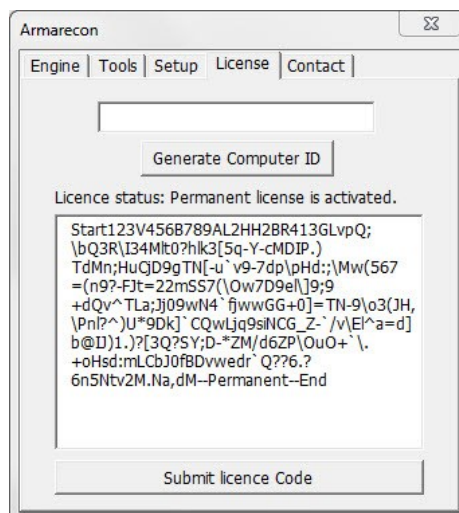
Armarecon

# Concept

The main concept of Armarecon is to match figures which can be matched with each other and then present unmatched figures as open items.

Imagine we have an account with the below movement details:

| Voucher No | Effective Date | Cheque No | Type | Description | Debit Amt. | Credit Amt. | Balance |
|---|---|---|---|---|---|---|---|
| V 0001 | 2020/01/01 | 1001 | JL | Journal Entries- Anjelina | 34 | - | 34 |
| V 0008 | 2020/01/08 | 1009 | JL | Journal Entries- James | 21 | - | 55 |
| V 0009 | 2020/01/03 | 1008 | JL | Journal Entries- Emma | - | 97 | (42) |
| V 0010 | 2020/01/08 | 1009 | JL | Journal Entries- James | - | 21 | (63) |
| V 0011 | 2020/01/14 | 1004 | JL | Journal Entries- Natalie | 81 | - | 18 |
| V 0012 | 2020/01/10 | 1004 | JL | Journal Entries- Natalie | - | 81 | (63) |

For finding open items, we need to match figures which are related to each other like:

- Debit and credit amounting $ 21 is related to James
- Debit and credit amounting $ 81 is related to Natalie

As you can see in the below table we have added a new column called "Matching" in which the matched figures have been connected by numbers. For example number 1 is used as an indicator to show a debit amount of 21 $ and its related credit amount.

| Voucher No | Effective Date | Cheque No | Type | Description | Debit Amt. | Credit Amt. | Balance | Matching |
|---|---|---|---|---|---|---|---|---|
| V 0001 | 2020/01/01 | 1001 | JL | Journal Entries- Anjelina | 34 | - | 34 | |
| V 0008 | 2020/01/08 | 1009 | JL | Journal Entries- James | 21 | - | 55 | 1 |
| V 0009 | 2020/01/03 | 1008 | JL | Journal Entries- Emma | - | 97 | (42) | |
| V 0010 | 2020/01/08 | 1009 | JL | Journal Entries- James | - | 21 | (63) | 1 |
| V 0011 | 2020/01/14 | 1004 | JL | Journal Entries- Natalie | 81 | - | 18 | 2 |
| V 0012 | 2020/01/10 | 1004 | JL | Journal Entries- Natalie | - | 81 | (63) | 2 |

In the next step, we will filter matching column for empty cells so we will have the below picture:

| Voucher No | Effective Date | Cheque No | Type | Description | Debit Am | Credit Am | Balance | Matching |
|---|---|---|---|---|---|---|---|---|
| V 0001 | 2020/01/01 | 1001 | JL | Journal Entries- Anjelina | 34 | - | 34 | |
| V 0009 | 2020/01/03 | 1008 | JL | Journal Entries- Emma | - | 97 | (42) | |

We removed matched figures and only open items are remained by filtering empty cells in matching column. This process is very simple. Armarecon provides a powerful engine and some other useful tools, to enable you to match figures and exclude them from the matching process.

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# Using Engine in simple example

The engine performs a query among figures and suggests different combinations of items that can be matched with each other and you can choose which item(s) to be matched with the other item(s), based on each item's unique information such as explanations, signs, dates, checking numbers …

Armarecon features make you enable to handle matching process based on your own assumptions and rules in order to have effective reconciliations.

Let's look at the first example. We want to reconcile concept example with Armarecon engine.

| | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Voucher No | Effective Date | Cheque No | Type | Description | Debit Amt. | Credit Amt. | Balance | Matching |
| 2 | V 0001 | 2020/01/01 | 1001 | JL | Journal Entries- Anjelina | 34 | - | 34 | |
| 3 | V 0008 | 2020/01/08 | 1009 | JL | Journal Entries- James | 21 | - | 55 | |
| 4 | V 0009 | 2020/01/03 | 1008 | JL | Journal Entries- Emma | - | 97 | (42) | |
| 5 | V 0010 | 2020/01/08 | 1009 | JL | Journal Entries- James | - | 21 | (63) | |
| 6 | V 0011 | 2020/01/14 | 1004 | JL | Journal Entries- Natalie | 81 | - | 18 | |
| 7 | V 0012 | 2020/01/10 | 1004 | JL | Journal Entries- Natalie | - | 81 | (63) | |

For the first step, we need to run Armarecon. For this, you must add a new column to your worksheet named "Movement". This column shows Debit amounts minus Credit amounts in a specific column.

| J2 | | | $f_x$ | =F2-G2 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|

| | A | B | C | D | E | F | G | H | I | J |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Voucher No | Effective Date | Cheque No | Type | Description | Debit Amt. | Credit Amt. | Balance | Matching | Movement |
| 2 | V 0001 | 2020/01/01 | 1001 | JL | Journal Entries- Anjelina | 34 | - | 34 | | 34 |
| 3 | V 0008 | 2020/01/08 | 1009 | JL | Journal Entries- James | 21 | - | 55 | | 21 |
| 4 | V 0009 | 2020/01/03 | 1008 | JL | Journal Entries- Emma | - | 97 | (42) | | (97) |
| 5 | V 0010 | 2020/01/08 | 1009 | JL | Journal Entries- James | - | 21 | (63) | | (21) |
| 6 | V 0011 | 2020/01/14 | 1004 | JL | Journal Entries- Natalie | 81 | - | 18 | | 81 |
| 7 | V 0012 | 2020/01/10 | 1004 | JL | Journal Entries- Natalie | - | 81 | (63) | | (81) |

As you can see in above table the cell J2 is equal to F2-G2. Copy formula to all rows and select figures of this column then click Armarecon icon.

| File | Home | Insert | Page Layout | Formulas | Data | Review | View | Macro | Developer | VBA Tools | Kutools™ | Kutools Plus | Foxit PDF | Power Pivot | ArmaRecon |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

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| I17 | | | $f_x$ | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|

| | A | B | C | D | E | F | G | H | I | J | K | L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Voucher No | Effective Date | Cheque No | Type | Description | Debit Amt. | Credit Amt. | Balance | Matching | Movement | | |
| 2 | V 0001 | 2020/01/01 | 1001 | JL | Journal Entries- Anjelina | 34 | - | 34 | | 34 | | |
| 3 | V 0008 | 2020/01/08 | 1009 | JL | Journal Entries- James | 21 | - | 55 | | 21 | | |
| 4 | V 0009 | 2020/01/03 | 1008 | JL | Journal Entries- Emma | - | 97 | (42) | | (97) | | |
| 5 | V 0010 | 2020/01/08 | 1009 | JL | Journal Entries- James | - | 21 | (63) | | (21) | | |
| 6 | V 0011 | 2020/01/14 | 1004 | JL | Journal Entries- Natalie | 81 | - | 18 | | 81 | | |
| 7 | V 0012 | 2020/01/10 | 1004 | JL | Journal Entries- Natalie | - | 81 | (63) | | (81) | | |

Armarecon will ask you Matching column then you should select one cell of Matching column then click OK.

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After selecting Matching column, Armarecon will ask you Date column so you should select one cell of Date column then click OK. (Note: If there is no date column, select another column. in this way you will miss some parts of the program features that are related to date.)
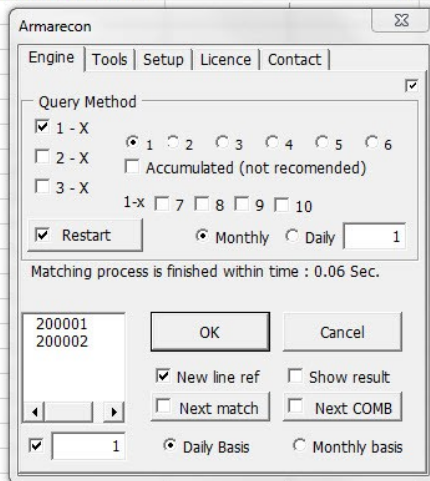
At Engine tab in Query Method section, select 1-X and at the right side select 1 then click Ok. Now engine performs query and suggests all the probable one to one combinations.
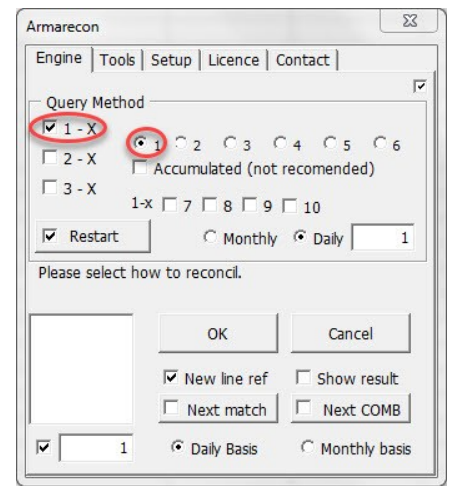


After clicking OK, you will see the below status:

| | A | B | C | D | E | F | G | H | I | J | K | L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Voucher No | Effective Date | Cheque No | Type | Description | Debit Amt. | Credit Amt. | Balance | Matching | Movement | | |
| 2 | V 0001 | 2020/01/01 | 1001 | JL | Journal Entries- Anjelina | 34 | - | 34 | | 34 | | 202001 |
| 3 | V 0008 | 2020/01/08 | 1009 | JL | Journal Entries- James | 21 | - | 55 | | 21 | 200001 | 202001 |
| 4 | V 0009 | 2020/01/03 | 1008 | JL | Journal Entries- Emma | - | 97 | (42) | | (97) | | 202001 |
| 5 | V 0010 | 2020/01/08 | 1009 | JL | Journal Entries- James | - | 21 | (63) | | (21) | 200001 | 202001 |
| 6 | V 0011 | 2020/01/14 | 1004 | JL | Journal Entries- Natalie | 81 | - | 18 | | 81 | 200002 | 202001 |
| 7 | V 0012 | 2020/01/10 | 1004 | JL | Journal Entries- Natalie | - | 81 | (63) | | (81) | 200002 | 202001 |
| 8 | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | |
| 26 | | | | | | | | | | | | |
| 27 | | | | | | | | | | | | |

At lower left box, it shows that Armarecon has found two "one by one" combinations (20001, 200002). You are able to see each combination by selecting mentioned numbers in the box.

Combination will be matched by clicking "Next match" button.



For the next combination, you can either select next number in box or click "Next COMB" button.

| | A | B | C | D | E | F | G | H | I | J | K | L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Voucher No | Effective Date | Cheque No | Type | Description | Debit Am | Credit Am | Balanc | Matching | Movemer | | |
| 6 | V 0011 | 2020/01/14 | 1004 | JL | Journal Entries- Natalie | 81 | - | 18 | | 81 | 200002 | 202001 |
| 7 | V 0012 | 2020/01/10 | 1004 | JL | Journal Entries- Natalie | - | 81 | (63) | | (81) | 200002 | 202001 |

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Query Method
☑ 1 - X     ◉ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6
☐ 2 - X     ☐ Accumulated (not recomended)
☐ 3 - X
            1-x ☐ 7 ☐ 8 ☐ 9 ☐ 10
☑ Restart          ◉ Monthly ○ Daily    1

Matching number : 200002

200001
200002          OK          Cancel

            ☑ New line ref    ☐ Show result
            ☐ Next match      ☐ Next COMB
☑    1      ◉ Daily Basis     ○ Monthly basis

Now click "Next match" button to match two figures.

| | A | B | C | D | E | F | G | H | I | J | K | L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Voucher No | Effective Date | Cheque No | Type | Description | Debit Am | Credit Am | Balanc | Matching | Movemer | | |
| 6 | V 0011 | 2020/01/14 | 1004 | JL | Journal Entries- Natalie | 81 | - | 18 | 2 | 81 | 200002 | 202001 |
| 7 | V 0012 | 2020/01/10 | 1004 | JL | Journal Entries- Natalie | - | 81 | (63) | 2 | (81) | 200002 | 202001 |

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Query Method
☑ 1 - X     ◉ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6
☐ 2 - X     ☐ Accumulated (not recomended)
☐ 3 - X
            1-x ☐ 7 ☐ 8 ☐ 9 ☐ 10
☑ Restart          ◉ Monthly ○ Daily    1

Matching number : 200002

200001
200002          OK          Cancel

            ☑ New line ref    ☐ Show result
            Next match        ☐ Next COMB
☑    1      ◉ Daily Basis     ○ Monthly basis

Delete yellow columns, which were created by the program. Then filter Matching column for empty cells to get open amounts.

| | A | B | C | D | E | F | G | H | I | J | K | L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Voucher No | Effective Date | Cheque No | Type | Description | Debit Am | Credit Am | Balanc | Matching | Movemer | | |
| 2 | V 0001 | 2020/01/01 | 1001 | JL | Journal Entries- Anjelina | 34 | - | 34 | | 34 | | |
| 4 | V 0009 | 2020/01/03 | 1008 | JL | Journal Entries- Emma | - | 97 | (42) | | (97) | | |

Yes, you did it.

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# Engine detail

Now it is the time to get more details on engine parts:
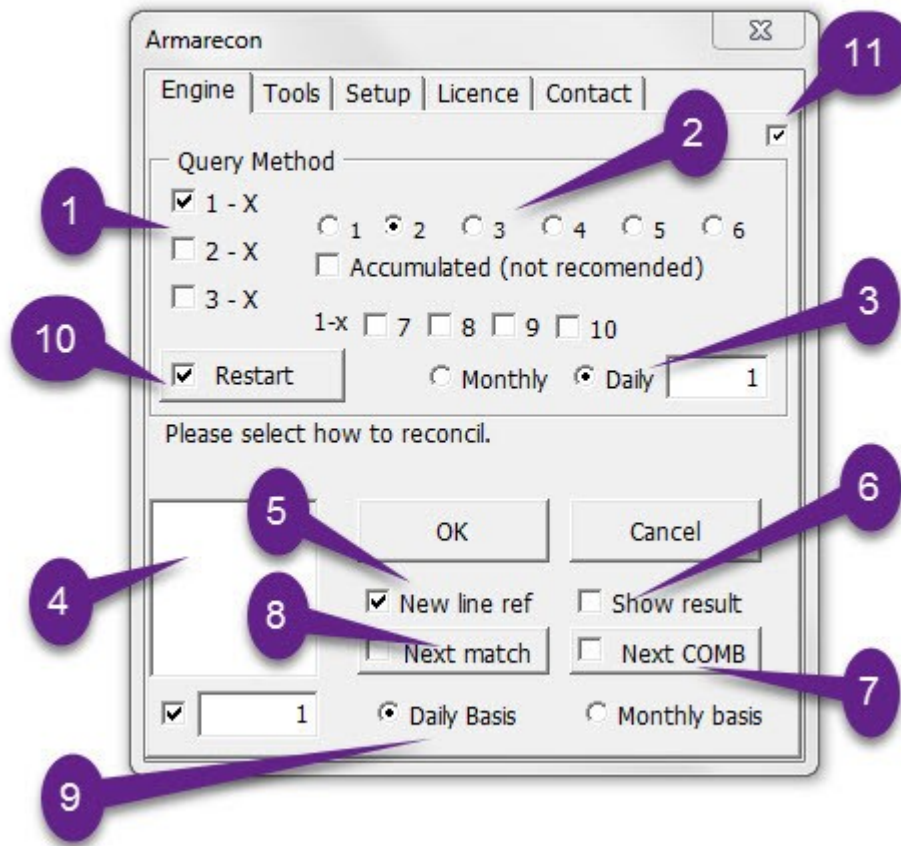


**Part 1 and part 2:**

You can decide how the engine perform the query on figures and present the combinations.

We use some abbreviations in query method as below:

One by one method means one positive figure against one negative figure or vice versa

One by two method means one positive figure against two negative figures or two positive figures against one negative figure

Two by three method means two positive figures against three negative figures or three positive figures against two negative figures
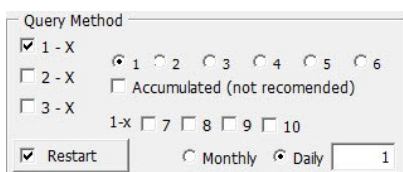


Engine shows all combinations of one by one.

Engine shows all combinations of one by two.



Engine shows all combinations of one by five.



As accumulated check box is selected the engine shows all combinations one by two, one by three, one by four and one by five.

**Note**: One by one will not be processed when accumulated method check box is selected



Engine shows combination of two by four.



As accumulated check box is selected so engine shows all two by two, two by three and two by four combinations.

It same for 3-x



If you select each of 7, 8, 9 and 10 engine do not consider any other process and only take action for these combinations.

**Part 3:**



Engine loads figures day by day if you select daily and enter 1. It means all the figures related to first day are loaded to engine and related combinations will be processed then these figures are unloaded and second day figures will be processed. Figures are processed separately on a daily basis.



Engine loads figures 3 days by 3 days if you select daily and enter 3. It means that all figures which are related to the first 3 days are loaded to engine and related combinations will be processed then these figures are unloaded and the second 3 days figures will be processed. Figures are processed separately for each 3 days.

Armarecon
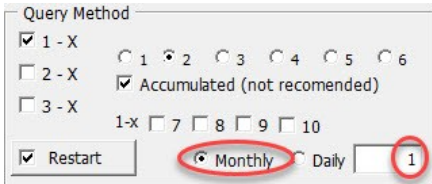
Engine loads figures month by month (on a monthly basis) if you select monthly and enter 1. It means that all the figures relating to the first month are loaded to engine and related combinations will be processed then these figures are unloaded and second month figures will be processed. Figures are processed separately for each month.
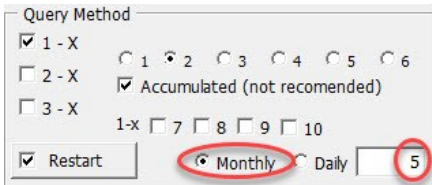


Engine load figures 5 months by 5 months if you select monthly and enter 5. It means all figures related to the first 5 months are loaded to engine and related combinations will be processed then this figures are unloaded and second 5 months figures will be processed. Figures are processed separately for each 5 month.

## Part 4:
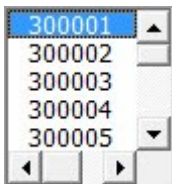


This box shows list of the combinations. First digit shows the number of the figures in each combination and the other figures show the order of combinations. For example, 300001 means that this is the first combination and 3 figures are included in this suggested combination.

You are able to see each combination by selecting related references in this box then related figures will be filtered and presented.

## Part 5:



If you are interested to filter the outputs of the engine process and match them together, you will need to select "New line ref" check box.

## Part 6:



If you are interested in having a written report for each combination, you should select "Show result" check box.

|  | K |
|---|---|
| Result 1 \| 300001 \| -13 + -21 <=> 34 \| | J24 , J11 <=> J2 |
| Result 2 \| 300002 \| -13 + -29 <=> 42 \| | J24 , J7 <=> J20 |
| Result 3 \| 300003 \| -21 + -34 <=> 55 \| | J11 , J6 <=> J17 |
| Result 4 \| 300004 \| 19 + 25 <=> -44 \| | J16 , J21 <=> J23 |
| Result 5 \| 300005 \| 19 + 58 <=> -77 \| | J16 , J14 <=> J18 |
| Result 6 \| 300006 \| 42 + 55 <=> -97 \| | J20 , J17 <=> J10 |

This report is presented in sheet "Matching control". The column of presentation will be determined in tab "Setup" as below picture.
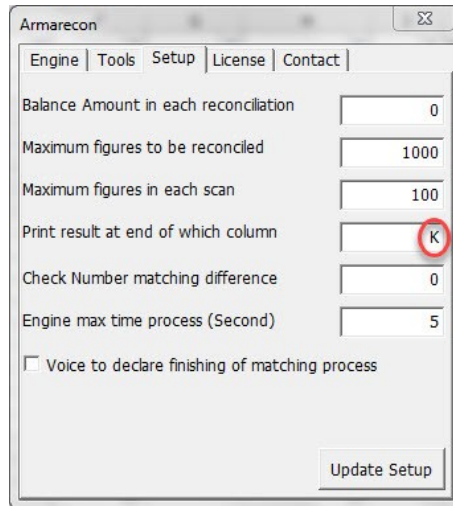


Note: You can select both "New line ref" and "Show result" at the same time to have two outputs together. At least on check box must be selected.

## Part 7:



As it has been mentioned in part 4, the engine will present all suggested combinations and you can select them to see the filtered figures. You also can click "Next COMB" button to go to the next combination in the box.

If you tick the button then click it, the engine will show you the next possible combination which none of the figures have been matched with.

## Part 8:



You can match figures of one combination by clicking the "Next match".

If you select check box then click the button, engine matches the current combination and goes to the next combination automatically.

**Part 9:**



This part is used to how to present next desired combination from processed combinations. The Figure in the box shows highest difference between first and last date or months in each combination.

If you enter 1 and select the daily basis, the engine shows only those combinations that have happened in the same day.

If you enter 7 and select daily basis, the engine shows only those combinations which have happened in only 7 days and not more. Shows those combinations that Difference of lowest and highest date are less than 7 days.

Un-checked box means that this part is disabled.

**Part 10:**



You need to double click "Restart" button to restart the program. If check box is not selected, you must select figures, which you are interested to process them then double click "Restart" button.

If check box is selected, the engine considers prior (previous) selection and restarts the program then shows only un-matched figures in order to do more processes.

**Part 11:**

This tick means that the program will be launched from this tab.

**Note:** engine captures only those figures and values that are visible and not zero. Engine does not capture any errors and texts within selection.

As engine captures only visible figures, you will need to filter un-matched figures then run the engine for processing.

Some fields in the setup tab that enable you to control matching process in order to get efficient output:
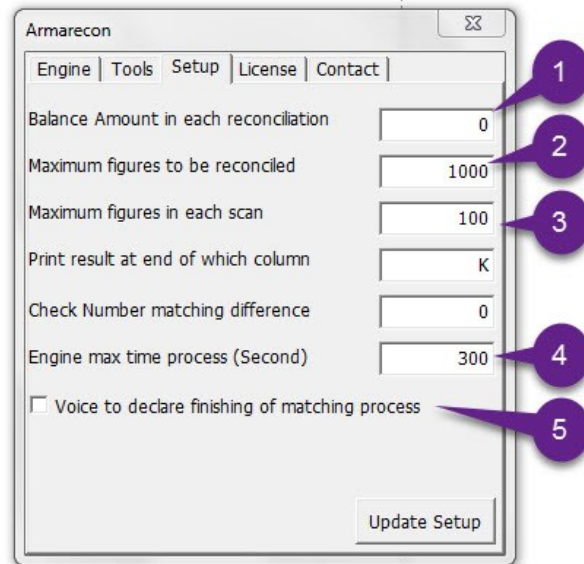
## Part 1 (Balance Amount in each reconciliation):

In some cases, you need to find some combinations that their balance are not zero. You can determine balance of combinations can be other than zero in this field. If you enter 50, engine shows you all combinations, which their balance amount are equal or less than 50.

## Part 2 (Maximum figures to be reconciled):

You can determine maximum quantity of figures that can be selected for the engine process.

## Part 3 (Maximum figures in each scan):

This box is very important for effective reconciliation. Imagine this box value is set to 100 then you ask the engine to process figures each 5 days and at first 5 days there are 264 figures. Engine loads 100 figures and processes them. Unloads the first 100 figures then loads the second 100 figures and processes them. Again unloads them and loads the last 64 figures for processing. After that, the engine starts processing the second 5 days.

If you increase the quantity of this box, quantity of possible combinations and time of processes goes up astronomically. Optimized quantity depends on your computer's CPU hard drive speed, RAM and other hardware's capacity. You must find optimized quantity by your own experience.

## Part 4 (Engine max time process):

This box asks the engine to stop processing after elapsing of determined minutes.

## Part5 (Voice to declare finishing of matching process):

If you tick this part, the engine informs you the end of the process by system voice.

# Quick sort detail

Quick sort helps you to find one by one combinations without running engine. It is highly recommended that match all one by one combinations by quick sort then run engine for other combinations.

Select figures that you want to reconcile then run the Armarecon. Go to Tools tab and then double click the "Quick Sort" button. Seven new yellow columns will be created which assist you to reconcile one by one combinations.

| | F | G | H | I | J | K | L | M | N | O | P | Q | R | S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | Debit Amt. | Credit Amt. | Closing Balance | Ref | Movement | Reviewed | No of Opens | Ref Balance | Movement | Ref count | Absolut Movement | Rec Row | |
| 2 | | 34 | - | 34 | | 34 | to be reviewed | - | - | 34 | 4 | 34 | 2 | |
| 3 | | | | | | (95) | OK | (1) | (95) | (95) | 1 | 95 | 3 | |
| 4 | | | | | | 17 | OK | 1 | 17 | 17 | 1 | 17 | 4 | |
| 5 | | | | | | 29 | to be reviewed | - | - | 29 | 2 | 29 | 5 | |
| 6 | | | | | | (34) | to be reviewed | - | - | (34) | 4 | 34 | 6 | |
| 7 | | | | | | (29) | to be reviewed | - | - | (29) | 2 | 29 | 7 | |
| 8 | | | | | | 69 | OK | 1 | 69 | 69 | 1 | 69 | 8 | |
| 9 | | | | | | 21 | to be reviewed | (1) | (21) | 21 | 3 | 21 | 9 | |

**Rec Row**: This column presents row of data which if you are interested to sort back your data to before process.

**Absolute movement**: This column shows absolute of selected figures. This column presents positive amount of selected figures without considering their sign.

**Ref count**: This column shows the frequency of each figure, no matter what is their sign.

**Movement**: This column is exactly as same as selected figures.

**Ref Balance**: this column shows the balance of positive and negative of each figures. For example, if we have 5 figure 7 and 3 figure -7 this column show 14. (7+7+7+7+7-7-7-7=14)

**No of Open**: it shows how many figures will not be matched considering positive and negative sign of these figures. For this example (7+7+7+7+7-7-7-7) this column shows 2.

**Reviewed**: the phrase "to be reviewed" means that there is a possibility that this row can be matched. If you see, "OK" means that there is no possibility to match this figure with opposite sign.

Now sort "Absolute Movement" column.

Filter "Reviewed" column by "to be reviewed"

Note: In some cases, sorting of date column before sorting of "Absolute Movement" column helps the matching progress.

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As you see, figures are sorted (no matter the sign).

For matching figures, you just need to select one of cells of each row together then click "Next Match" button.

Note: "Next Match" button is activated when check box is selected.



In this example, I noticed figure 21 is debited one time and credited two times. Based on description I decided to match rows no 6 and 7 together and leave row 8 so I selected E6 and E7 then clicked "Next Match" button. Armarecon entered 1 in "ref" column means that these two figures have been matched with each other.

Repeat this action to match other figures.

Note 1: I selected E6 and E7 then clicked "Next Match" button. I also could select any of columns other than the E column, and the result was the same.

Note 2: when I run the program, I selected "ref" column as matching column so this Armarecon consider this column for matching.

Note 3: If we do not consider the sign of figures you can notice frequency of figures are different as below:

21      three times
29      two times
34      four times
58      three times

You can filter "Ref count" column by two then you will have only figures with frequency of two no matter of their sign. It helps you to do your reconciliations faster. You can filter for other frequencies in the next step of matching process.



As you see only figures with frequency of 2, are presented.

Note 4: you can select all desired figures then match them with one matching number. It does not need to match each figure separately. For example in this picture I matched all figures 29, 77, 81 together with one match figure.



Note 5: button "Same Date" highlights rows with the same date.

Note 6: "Quick Sort" captures only those figures which are visible, neither zero nor error. It means that un-matched figures (Empty cells in matching column here is "ref") can be filtered then "Quick Sort" to be applied for un-matched figures.

Note 7: Data can be sorted back to first order by soring "Rec Row" column.

# Zero Movement Analysis

Select figures then click "Zero Move" button.



Figures other than zero in column "Number of zero movement" tell us how many movements with zero balance are ended until this row. In this picture cell M30 is equal to 2 means that there are two movements (K29:K30 and K24:K30) with zero movement.

If you select a cell other than zero located in column "Number of zero movement" then click "Show Moves", Armarecon shows you the beginning and the end of each zero movement by arrows same as above picture. Now you can select one of cells of rows 24 or 29 then click "Match move" to match the zero movement.

## Automatic matching by "zero Move" button:

Tick check box then click "zero Move" button. Armarecon will find all zero movements then automatically match them together.



This functionality is useful for certain accounts such as net salary payable, SSO and … which are settled periodically.

# Check Match

If check number column is available, click "Check Match" button and select one cell of "Check number" column then Armarecon matches all figures with the same check number with balance less than field "Check number matching difference" box in setup tab. The value of this box is set zero as default so Armarecon matches those figures with the same check number and balance zero.





Note: "Check Match" button main function is matching figures with same check number but it can be used for any common data other than check number such as supplier code, customer code, etc.

# Extract Check Number

If check number is embedded within text, you can extract check numbers from text by clicking "Extract chk No" button and select the check column then Armarecon will create a new column, which includes only check numbers.
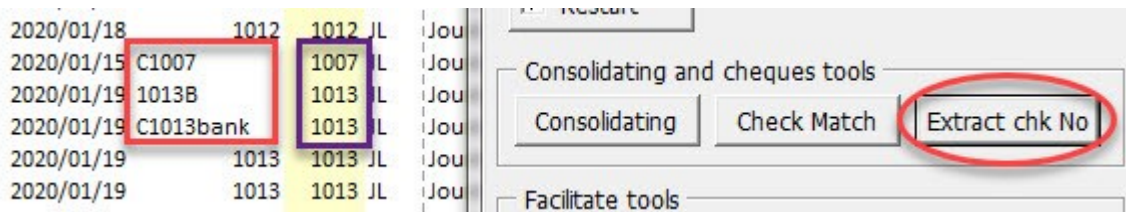


# Consolidation

For bank reconciliation, you need to consolidate GL account and Bank statement in on sheet then perform the matching process.

Let's show the process by an example.

Imagine we have GL account details as below:

| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 1 | Voucher No | Effective Date | Cheque No | Type | Description | Debit Amt. | Credit Amt. | Closing Balance |
| 2 | V 0001 | 2020/01/01 | 1001 | JL | Journal Entries- Anjelina | 34 | - | 34 |
| 3 | V 0002 | 2020/01/03 | 1003 | JL | Journal Entries- Leonardo | - | 25 | 9 |
| 4 | V 0003 | 2020/01/04 | 1010 | JL | Journal Entries- Amy | 17 | - | 26 |
| 5 | V 0004 | 2020/01/04 | 1005 | JL | Journal Entries- Lionel | 29 | - | 55 |

And bank statement as below:

| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 1 | Cheque No | Customer | Code | Effective Date | Description | Debit Amt. | Credit Amt. | Closing Balance |
| 2 | 1001 | Company 1 | A1 | 2020/01/01 | Receipiant - Sam | | 43 | (43) |
| 3 | 1003 | Company 1 | A2 | 2020/01/03 | Receipiant - Leonardo | 25 | | (18) |
| 4 | 1010 | Company 1 | A3 | 2020/01/04 | Receipiant - Amy | | 17 | (35) |
| 5 | 1005 | Company 1 | A4 | 2020/01/04 | Receipiant - Emily | 8 | | (27) |

In first step, we have to determine the order of the consolidated sheet. We assume the order should be as below:

| | A | B | C | D | E |
|---|---|---|---|---|---|
| 1 | Effective Date | Cheque No | Description | Debit Amt. | Credit Amt. |

Now we must use # sign in each statement and give the order of the column to the program. In this step add a blank row above of first line and write order of column by #1, #2, #3,..

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| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 1 | #1 | | #2 | | #3 | | #4 | #5 |
| 2 | Voucher No | Effective Date | Cheque No | Type | Description | | Debit Amt. | Credit Amt. | Closing Balance |
| 3 | V 0001 | 2020/01/01 | 1001 | JL | Journal Entries- Anjelina | | 34 | - | 34 |
| 4 | V 0002 | 2020/01/03 | 1003 | JL | Journal Entries- Leonardo | | - | 25 | 9 |
| 5 | V 0003 | 2020/01/04 | 1010 | JL | Journal Entries-  Amy | | 17 | - | 26 |
| 6 | V 0004 | 2020/01/04 | 1005 | JL | Journal Entries- Lionel | | 29 | - | 55 |

| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 1 | #2 | | | #1 | #3 | | #4 | #5 |
| 2 | Cheque No | Customer | Code | Effective Date | Description | | Debit Amt. | Credit Amt. | Closing Balance |
| 3 | 1001 | Company 1 | A1 | 2020/01/01 | Receipiant - Sam | | | 43 | (43) |
| 4 | 1003 | Company 1 | A2 | 2020/01/03 | Receipiant - Leonardo | | 25 | | (18) |
| 5 | 1010 | Company 1 | A3 | 2020/01/04 | Receipiant -  Amy | | | 17 | (35) |
| 6 | 1005 | Company 1 | A4 | 2020/01/04 | Receipiant -  Emily | | 8 | | (27) |

We determined that date column should be the first column by using #1, Check number as second column by using #2.

Now click "Consolidating" button then select the row included # sing in first statement and click OK afterward again select the rows included # sign in second statement and click OK after that, program will create consolidate sheet.

| | A | B | C | D | E |
|---|---|---|---|---|---|
| 1 | Effective Date | Cheque No | Description | Debit Amt. | Credit Amt. |
| 2 | 2020/01/01 | 1001 | Journal Entries- Anjelina | 34 | 0 |
| 3 | 2020/01/03 | 1003 | Journal Entries- Leonardo | 0 | 25 |
| 4 | 2020/01/04 | 1010 | Journal Entries-  Amy | 17 | 0 |
| 5 | 2020/01/04 | 1005 | Journal Entries- Lionel | 29 | 0 |
| 6 | Effective Date | Cheque No | Description | Debit Amt. | Credit Amt. |
| 7 | 2020/01/01 | 1001 | Receipiant - Sam | 0 | 43 |
| 8 | 2020/01/03 | 1003 | Receipiant - Leonardo | 25 | 0 |
| 9 | 2020/01/04 | 1010 | Receipiant -  Amy | 0 | 17 |
| 10 | 2020/01/04 | 1005 | Receipiant -  Emily | 8 | |

Now add matching and movement column then start matching progress.

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | Effective Date | Cheque No | Description | Debit Amt. | Credit Amt. | Mathcing | Movement |
| 2 | 2020/01/01 | 1001 | Journal Entries- Anjelina | 34 | 0 | | 34 |
| 3 | 2020/01/03 | 1003 | Journal Entries- Leonardo | 0 | 25 | | -25 |
| 4 | 2020/01/04 | 1010 | Journal Entries-  Amy | 17 | 0 | | 17 |
| 5 | 2020/01/04 | 1005 | Journal Entries- Lionel | 29 | 0 | | 29 |
| 6 | Effective Date | Cheque No | Description | Debit Amt. | Credit Amt. | | |
| 7 | 2020/01/01 | 1001 | Receipiant - Sam | 0 | 43 | | -43 |
| 8 | 2020/01/03 | 1003 | Receipiant - Leonardo | 25 | 0 | | 25 |
| 9 | 2020/01/04 | 1010 | Receipiant -  Amy | 0 | 17 | | -17 |
| 10 | 2020/01/04 | 1005 | Receipiant -  Emily | 8 | | | 8 |

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# Matching control sheet

This sheet is created at first run of Armarecon or you can create it by clicking "Match CNT" button.

This sheet includes some information to assist you to control matching process.

| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 1 | 1 | - | | | Sum Matched Difference | 56 |
| 2 | 2 | - | | | Max Match Number | 6 |
| 3 | 3 | - | | | | |
| 4 | 4 | - | | | | |
| 5 | 5 | 69 | | | | |
| 6 | 6 - | 13 | | | | |
| 7 | 7 | - | | | Number of figures | 31 |
| 8 | 8 | - | | | Number of matched figures | 10 |
| 9 | 9 | - | | | Number of unmatched figures | 21 |

Row A shows list of matching references.

Row B shows balance of matching references. This balances normally should be zero otherwise must be investigated the reason. In this picture balance of match references 5 and 6 are not zero so user must go to detail and find the reason.

"Sum Matched Difference" shows total balance of all references. This should be zero otherwise; user must go to detail and find the reason. It is 56 in above picture comprises 69 and -13.

"Max Match Number" shows the highest matching reference number, which is used by user.

"Number of figures" shows the number of figures which user selected in order to do matching process.

"Number of matched figures" shows the number of matched figures which user has matched within the process.

"Number of unmatched figures" shows the number of unmatched figures which are not matched yet.

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# Removing Errors

You can change cells with error value to zero or blank cells by clicking [☑ Err Zero] button. Check box switches the functionality of button between Zero and blank. Select cells then click the button to remove the errors.

Facilitate tools
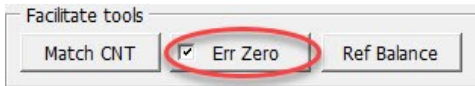
| Match CNT | ☑ Err Zero | Ref Balance |

| Movement | Movement | Movement |
|---|---|---|
| 34 | 34 | 34 |
| -25 | -25 | -25 |
| 17 | 17 | 17 |
| 29 | 29 | 29 |
| #VALUE! | | 0 |
| -43 | -43 | -43 |
| 25 | 25 | 25 |
| -17 | -17 | -17 |
| 8 | 8 | 8 |

# [Ref Balance] button

A column contains balance of matching references will be added by double clicking [Ref Balance] button. User can create a pivot table to do more analysis for matching balances.

| | B | C | D | E | F | G | H | I | J | K | L |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Effective D | Cheque No | Ty | Description | | Debit Ar | Credit Ar | Closing Bala | | Moveme | |
| 2 | 2020/01/01 | 1001 JL | | Journal Entries- Anjelina | | 34 | - | 34 | 3 | 34 | - |
| 3 | 2020/01/03 | 1003 JL | | Journal Entries- Leonardo | | - | 95 | (61) | 11 | (95) | (116) |
| 4 | 2020/01/04 | 1010 JL | | Journal Entries- Amy | | 17 | - | (44) | | 17 | |
| 5 | 2020/01/04 | 1005 JL | | Journal Entries- Lionel | | 29 | - | (15) | 2 | 29 | - |
| 6 | 2020/01/01 | 1001 JL | | Journal Entries- Anlelina | | - | 34 | (49) | 3 | (34) | - |
| 7 | 2020/01/05 | 1005 JL | | Journal Entries- Lionel | | - | 29 | (78) | 2 | (29) | - |
| 8 | 2020/01/01 | 1011 JL | | Journal Entries- Brad | | 69 | - | (9) | | 69 | |
| 9 | 2020/01/08 | 1009 JL | | Journal Entries- James | | 21 | - | 12 | 1 | 21 | - |
| 10 | 2020/01/03 | 1008 JL | | Journal Entries- Emma | | - | 97 | (85) | 9 | (97) | - |
| 11 | 2020/01/08 | 1009 JL | | Journal Entries- James | | - | 21 | (106) | 1 | (21) | - |
| 12 | 2020/01/14 | 1004 JL | | Journal Entries- Natalie | | 81 | - | (25) | 7 | 81 | - |
| 13 | 2020/01/10 | 1004 JL | | Journal Entries- Natalie | | - | 81 | (106) | 7 | (81) | - |
| 14 | 2020/01/03 | 1006 JL | | Journal Entries- David | | 58 | - | (48) | 5 | 58 | - |
| 15 | 2020/01/12 | 1002 JL | | Journal Entries- Jim | | 77 | - | 29 | 6 | 77 | - |
| 16 | 2020/01/01 | 1007 JL | | Journal Entries- Cristiano | | 19 | - | 48 | 8 | 19 | - |
| 17 | 2020/01/01 | 1008 JL | | Journal Entries- Emma | | 55 | - | 103 | 9 | 55 | - |
| 18 | 2020/01/12 | 1002 JL | | Journal Entries- Jim | | - | 77 | 26 | 6 | (77) | - |
| 19 | 2020/01/14 | 1006 JL | | Journal Entries- David | | - | 58 | (32) | 5 | (58) | - |
| 20 | 2020/01/15 | 1008 JL | | Journal Entries- Emma | | 42 | - | 10 | 9 | 42 | - |
| 21 | 2020/01/17 | 1007 JL | | Journal Entries- Cristiano | | 25 | - | 35 | 8 | 25 | - |
| 22 | 2020/01/18 | 1012 JL | | Journal Entries- Charlize | | 45 | - | 80 | 12 | 45 | 45 |
| 23 | 2020/01/15 | 1007 JL | | Journal Entries- Cristiano | | - | 44 | 36 | 8 | (44) | - |
| 24 | 2020/01/19 | 1013 JL | | Journal Entries- Zinedine | | | 13 | 23 | 10 | (13) | - |

Balance of matching references 11 and 12 are not zero in above picture.

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# Effective reconciliation:

There are some tips, which help you to perform effective matching. This part will be updated based on feedback of users in future.

- Save your file with new version within matching process in order to not miss data in case of hanging
- As first step, use "Check match" button in case of existing check column in bank reconciliation or common identical data such as supplier code, customer code, etc.
- Use quick sort in next step to match one by one combinations to reduce unmatched figures as much as possible. Less unmatched figures means faster engine output in next steps.
- If you feel some of figures will not be matched with other figures at all, you can use predetermined match reference such as "Temp" in order to remove that figures from matching process temporarily. You will remove "Temp" reference at the end of matching process to report them as unmatched figures.
- In next step, run engine to find (1-X) one by two, one bye three and others separately (do not use accumulated in huge data). Do the same for 2-X and 3-X.
- Run engine daily with 1 day and match figures then increase number of days based on system power and your experience. The aim is to divide figures to groups with less number of figures in order to reduce number of possible combination.
- Find optimized maximum figures in each scan and update related box in setup page
- Find optimized engine max time process then update related box in setup page in order to avoid missing data and time in case of hanging