Rates Engine Tutorials

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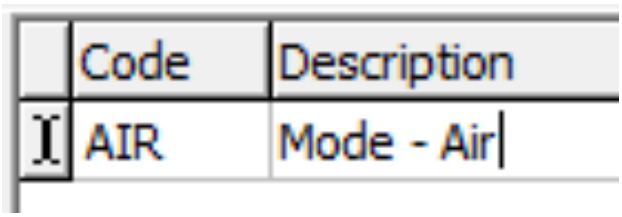
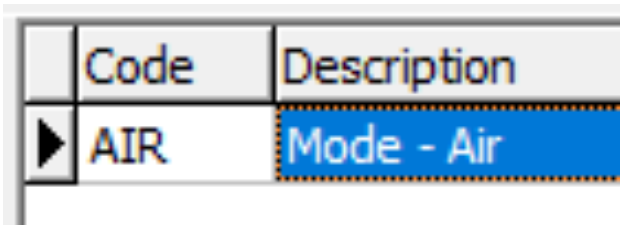
SAVE AND EDIT RATES

Each time you create or edit an existing rate you will need to save the changes. To do this, simply click on the down arrow on your keyboard to move out of the record.



Editing



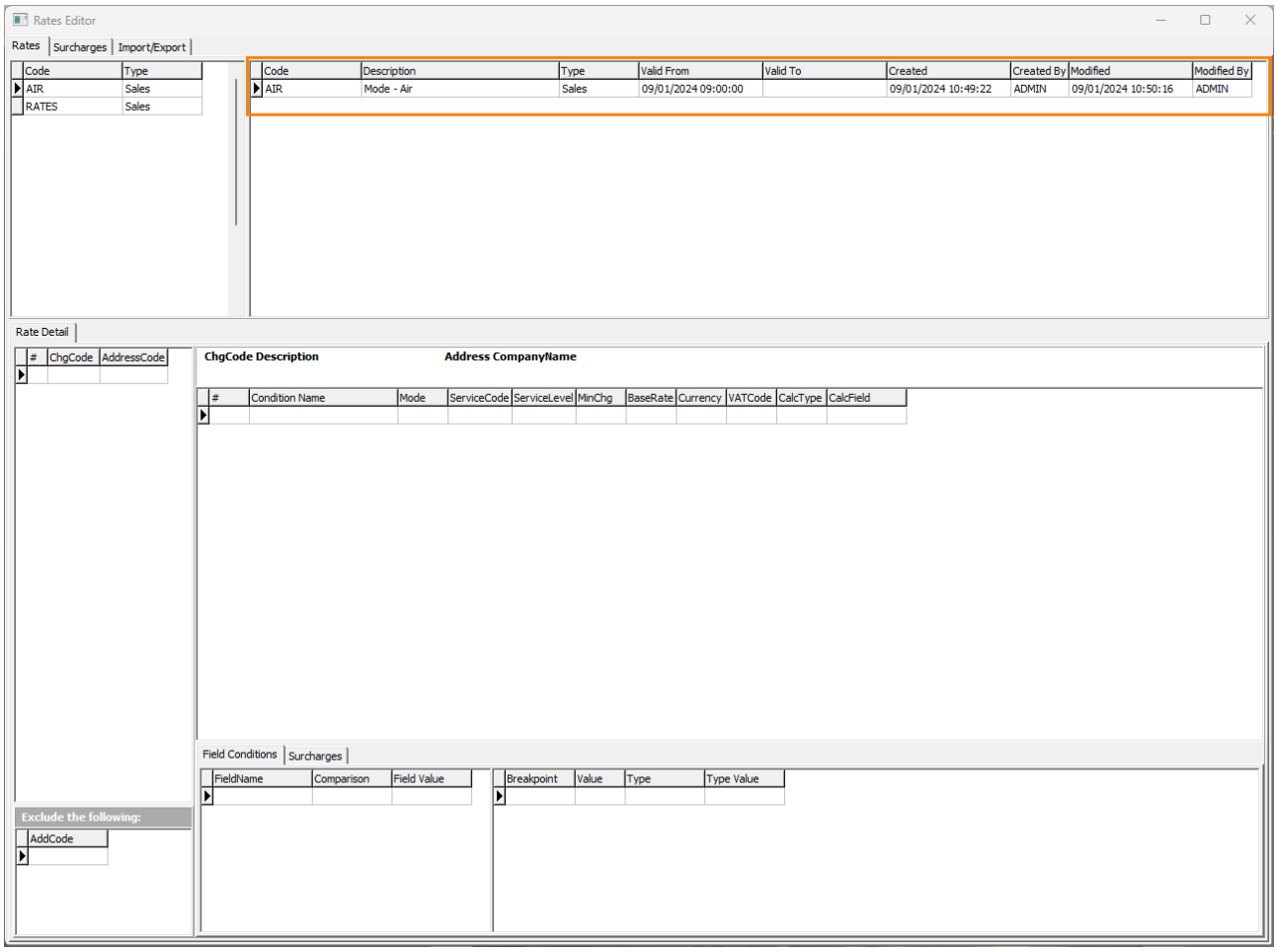
After Pressing Down & Up Arrow

When the record is saved the icon at the beginning of the row will change from a cursor icon to a triangle.

Tutorial 1 - Minimum Charge & Base Rate

1.
Create a new group of sales rates called 'AIR'.
Within this group, we will set up rates for charge codes that apply to only air mode charges (AFREIGHT, AHANDLING & APTTRFR)
Note: You will need to use your own defined ChargeCodes instead of the examples used in this document. i.e. AFREIGHT might be code 100 in your system.

a. Click on the Rates Listing tab and enter the following details; as per the image below
b. Code = 'AIR', Description = 'Mode - Air', Type = 'Sales'
c. Save the new record by clicking on the down arrow on your keyboard.

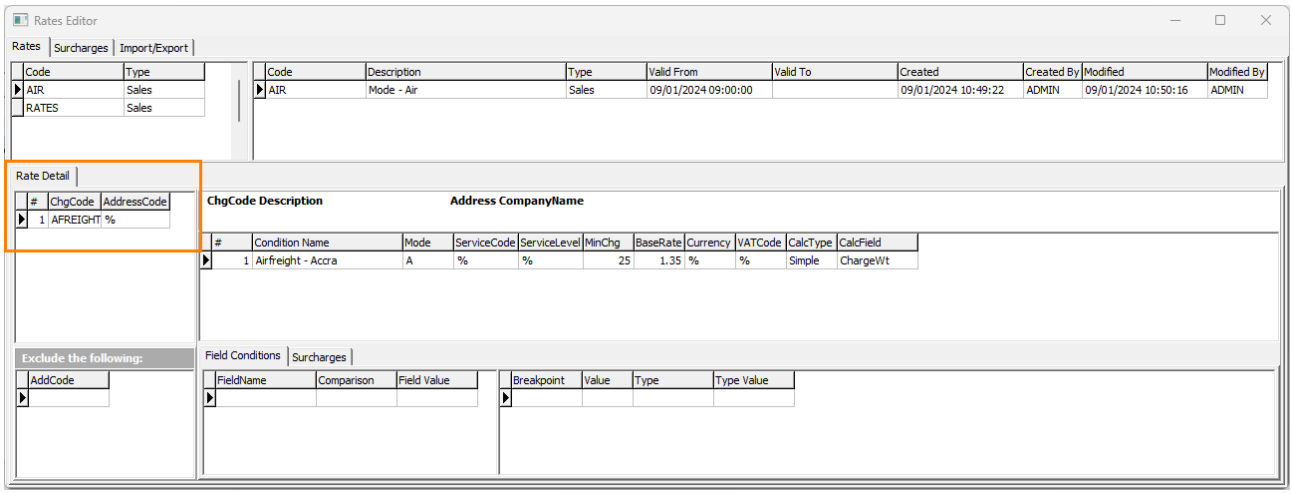


Add The Line To This Box, Type In The New Code And It Will Automatically Create The Left Side Group Entries.

2.

Now click on the Rate Detail tab and enter the following details into the left-hand pane.

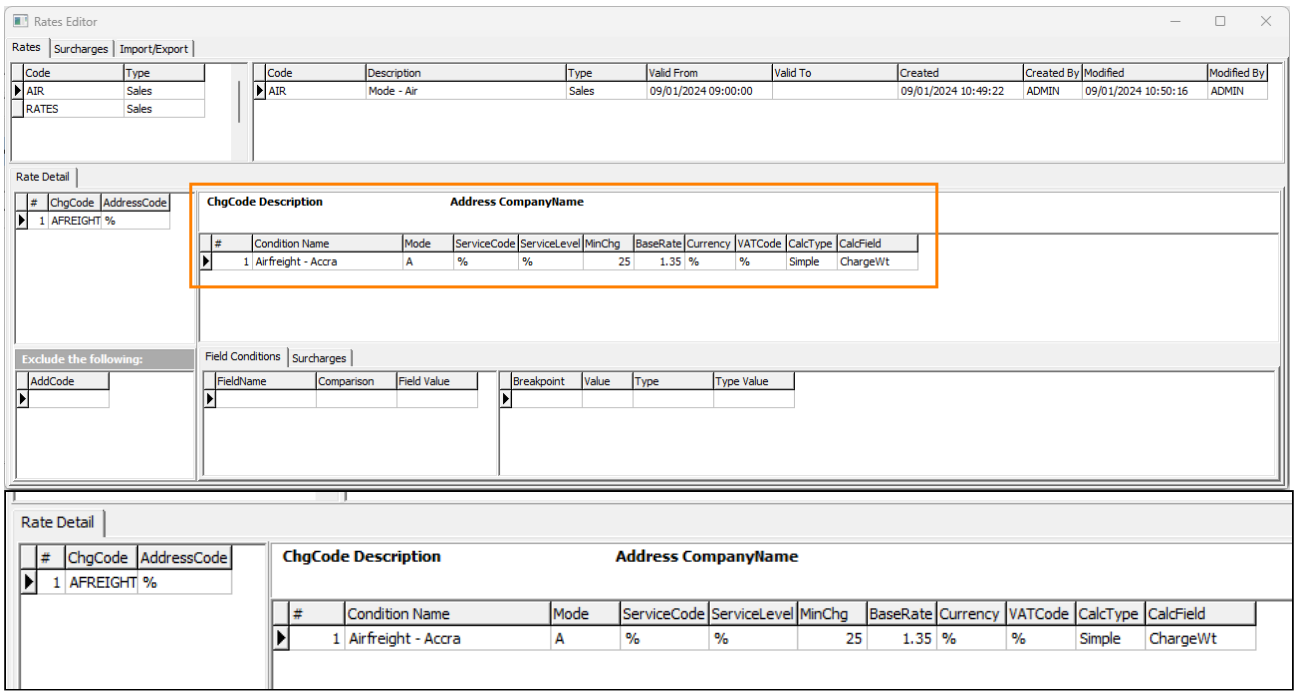
a. In the ChgCode field enter ‘AFREIGHT’.
b. In the AddressCode enter ‘%’. The percentage symbol is a wildcard for ALL and therefore this rate will apply to all address codes.
c. The ChgCode and AddressCode are the two pieces of information that are used when entering charges onto a job.



3.

Now set up the rate conditions.

a. Enter the Condition Name, ‘Airfreight – Accra’
b. Enter ‘A’ for the Mode
c. Enter the MinChg of ‘25’ and a BaseRate of ‘1.35’
d. The CalcType should default to ‘Simple’
e. Enter ‘ChargeWt’ for the CalcField

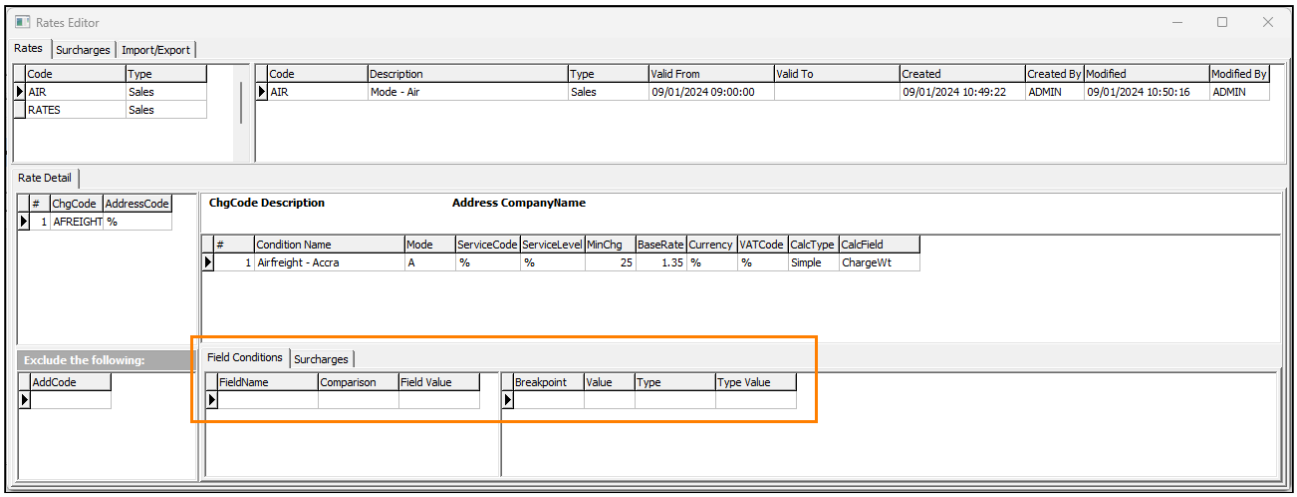


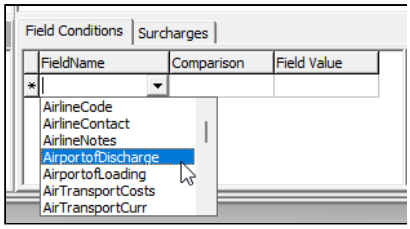
4.

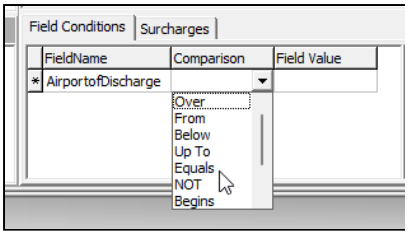
Set up the extra conditions in the bottom section of the Rate Detail pane

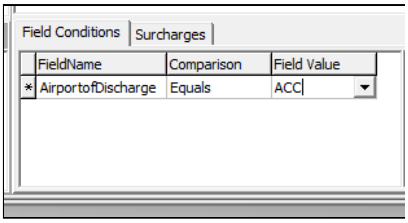
a. Enter ‘AirportOfDischarge’ for the FieldName
b. Enter ‘Equals’ for the Comparison Enter ‘ACC’ for the Field Value

c. You have now completed the setup of the AFREIGHT rate so let's create a job and enter some charges to test it.









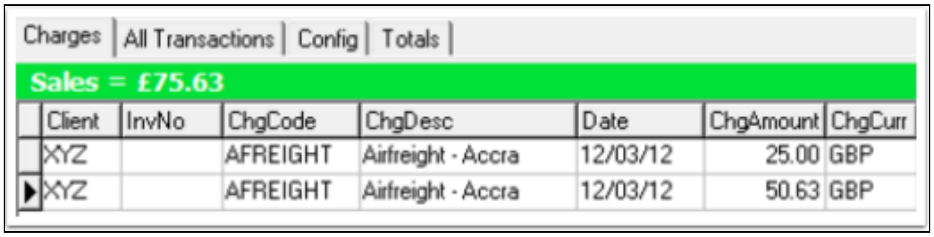
5.

Close the Rates Editor window and create a new Air Export job

a. On the Header tab enter an Exporter code of your choice
b. On the Details tab set the Destination to ACC
c. On the Goods Descripton tab enter in the dimmension for 1 package of 75 x 50 x 20 with a gross weight of 8 kilos.
d. Save the line and then CLOSE. The Chargeable Weight will be calculated and update automatically to the value of 12.50
e. SAVE the job
f. Click 'Enter Charges' on the Dashboard
g. Enter your chosen Client code and then enter the ChgCode of AFREIGHT. When you tab to the next cell the ChgDesc will update to read 'Airfreight – Accra' with a ChgAmount of £25. The minimum charge has been applied here due to the calculated cost of £16.88 being lower than the set minimum.
h. Now go back to the Goods Description tab and change the packages to 3 with the same dimensions. The Chargeable weight is now 37.50.
i. SAVE the job
j. Click on Enter charges and enter another line for AFREIGHT
k. The ChgAmount is now £50.63 using the calculated rate of 37.50*1.35 = 50.625

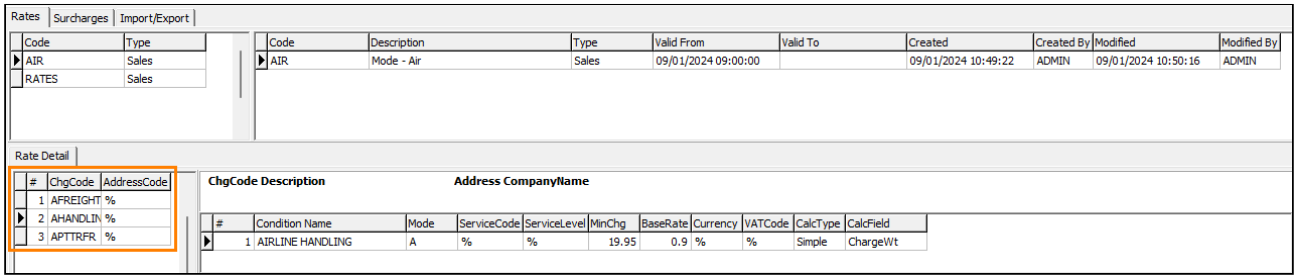
Note: that the ChgAmount in the first cost line didn't update to reflect the changes you made on the job. If you have cost lines that are required to be updated then you will need to overtype the ChgCode

in lowercase and then tab out of the field. This will force the rate to be recalculated. The same applies if you were to make an amendment to the actual rate itself. Just because a rate may increase or decrease it wont automatically update the costings of existing jobs.

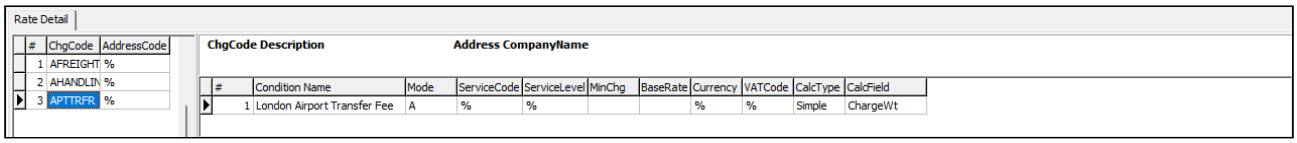


6.

For extra practice create Charge Codes for AHANDLIN and APTTRFR within the same Air Group. See the image below.



AHANDLIN



APTTRFR

Tutorial 2 - Multiple Field Conditions

Using the ChgCode 'AFREIGHT' (created in the first tutorial). Create a new field condition. For 'Airfreight - Cairo BA'.

Tutorial 3 - demonstrates rate calculations for;

1.

Set up the rate conditions using the following steps and the image below.

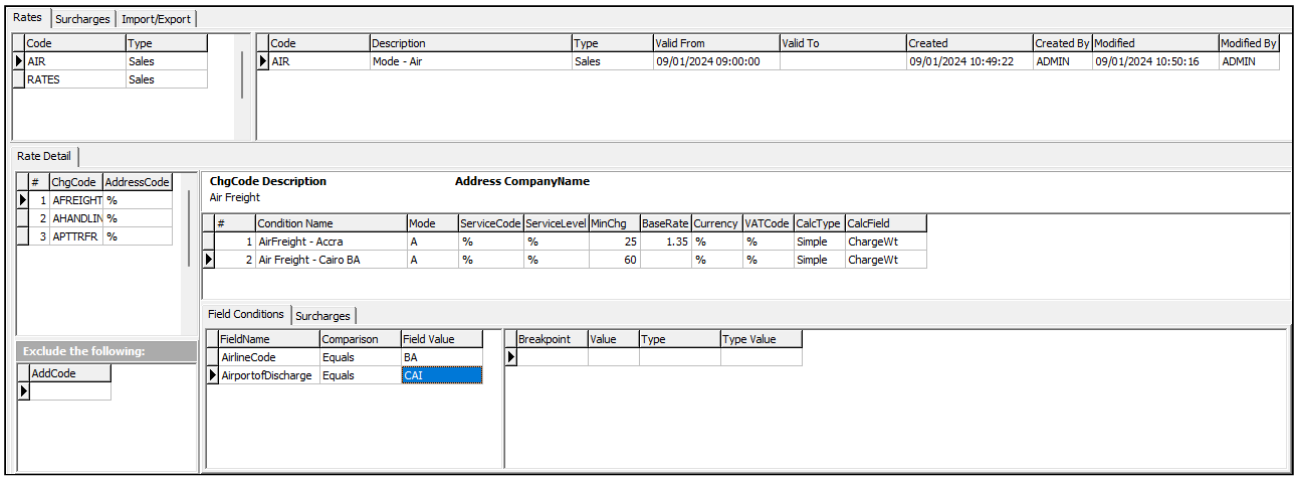
a. Enter the Condition Name, 'Airfreight - Cairo BA'
b. Enter 'A' for the Mode
c. Enter the MinChg of '60'
d. The CalcType should default to 'Simple'
e. Enter 'ChargeWt' for the CalcField

2.

Set up the extra conditions in to the bottom section of the Rate Detail pane

a. Enter ‘AirlineCode’ for the FieldName
b. Enter ‘Equals’ for the Comparison
c. Enter ‘BA’ for the FieldName
Create the second condition on a new line as follows;
d. Enter ‘AirportOfDischarge’ for the FieldName
e. Enter ‘Equals’ for the Comparison
f. Enter 'CAI’ for the Field Value

You have now added a new set of conditions to the Charge Code of AFREIGHT rate so you can now test this by amending the Air Export job you created earlier.



3.
Close the Rates Editor window and open your Air Export job

a. On the Details tab amend the Destination to CAI
b. Set the Airline to ‘BA’
c. SAVE the job
d. Click ‘Enter Charges’ on the Dashboard
e. On a new costing line enter the ChgCode of AFREIGHT.

Both conditions for Airline and Airport of Discharge are met and therefore the £60 minmum charge has been applied.

Tutorial 3 - Breakpoints

Still using the ChgCode ‘AFREIGHT’ (created in tutorial 1). Create a new field condition. For ‘Airfreight - Baghdad’. This time we will not only set a minimum charge but also Breakpoints for ChargeWt.

1.
Set up the rate conditions using the following steps and the image below.

a. Condition Name, ‘Airfreight - Baghdad’
b. Mode, ‘A’
c. MinChg, ‘90’

d. CalcType should default to ‘Simple’
e. CalcField, ‘ChargeWt’

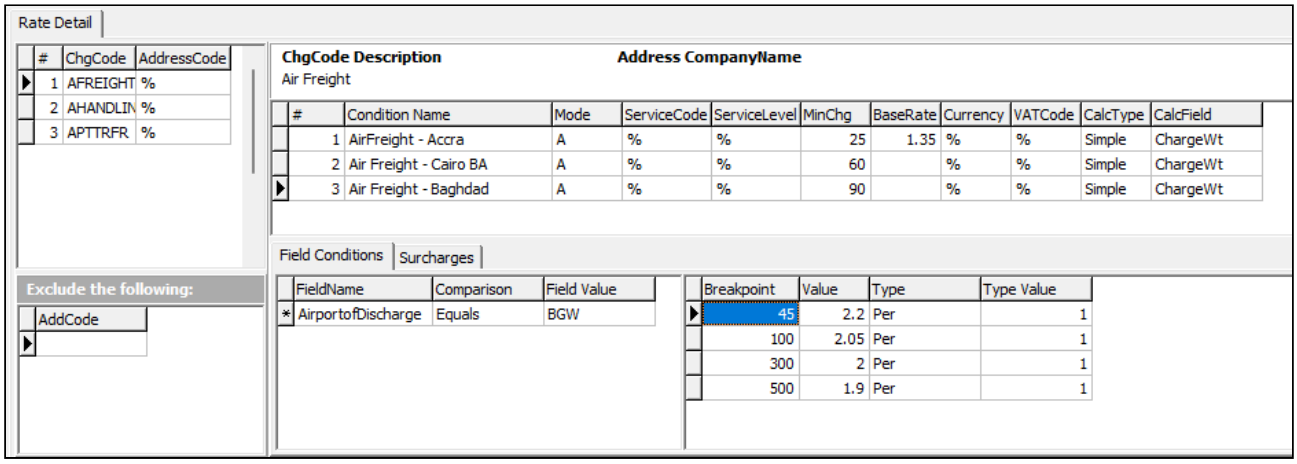
2.
Set up the extra conditions in to the bottom section of the Rate Detail pane

a. FieldName, ‘AirportOfDischarge’ for the FieldName
b. Comparison, ‘Equals’ for the Comparison
c. FieldName, ‘BGW’ for the FieldName

3.
Set up the Breakpoints as follows;

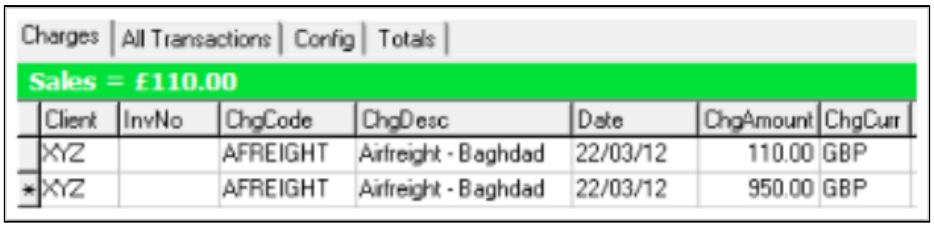
a. Breakpoint of 45, Value 2.20, Type ‘Per’ and Type Value set to 1
b. Breakpoint of 100, Value 2.05, Type ‘Per’ and Type Value set to 1
c. Breakpoint of 300, Value 2.00, Type ‘Per’ and Type Value set to 1
d. Breakpoint of 500, Value 1.90, Type ‘Per’ and Type Value set to 1

For each breakpoint, a different value is used to calculate the rate of the (CalcField) Charge weight per kilo. For example, for a job with a charge weight of 45 kilos (the first breakpoint), the rate per kilo is calculated at £2.20, whereas a job with a charge weight of 300 kilos or over is calculated at £1.90 per kilo. Any job with a chargeable weight below the first breakpoint will be charged at the minimum rate of £90.



4.
Test the rate by changing the Destination of your Air Export job to BGW

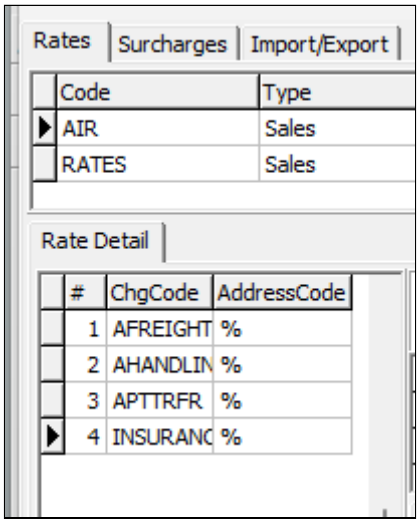
a. Increase the packages from 3 to 4 thus making a chargeable weight of 50.
b. Enter a new costing with the charge code ‘AFREIGHT’.
c. The Charge amount will be calculated at £110 (50 x 2.20=110)
d. Now amend the packages to 40 so that the chargeable weight updates to 500
e. Enter another new costing line for AFREIGHT. You will now see that the amount is calculated at £950. (£1.90 per kilo, 500 x 1.90)



Tutorial 4 - Breakpoint Percentages

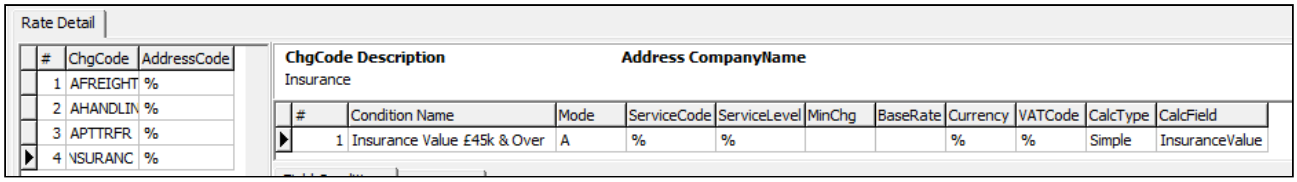
The Percentage Breakpoints can be used to calculate different percentages based on defined breakpoints. The example used in this tutorial sets up rates for the Insurance value of goods above and below £45,000 applying a different percentage rate to each (0.5% and 0.65% respectively)

1.
Click on the Rate Details tab and set up a new ChargeCode INSURANC.

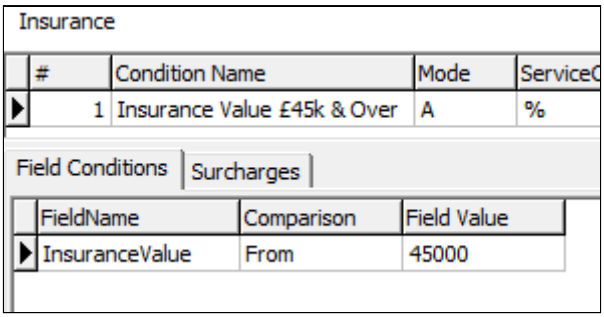


2.
Set up the first Condition in the top pane as follows;

a. Description 'Insurance Value £45k & Over'
b. Mode 'A'
c. CalcType 'Simple'
d. CalcField 'InsuredValue'



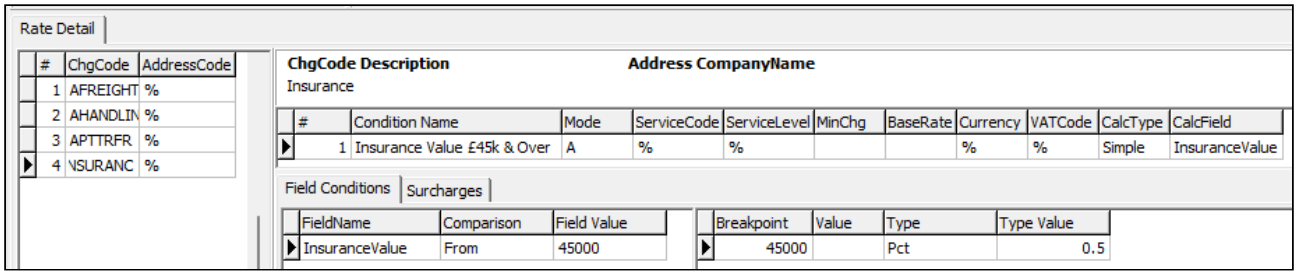
3.
Set up the extra conditions in to the bottom section of the Rate Detail pane and enter the details as follows; FieldName 'InsuredValue' Comparison 'From' FieldValue '45000'



4.

Set up the Breakpoints as follows;

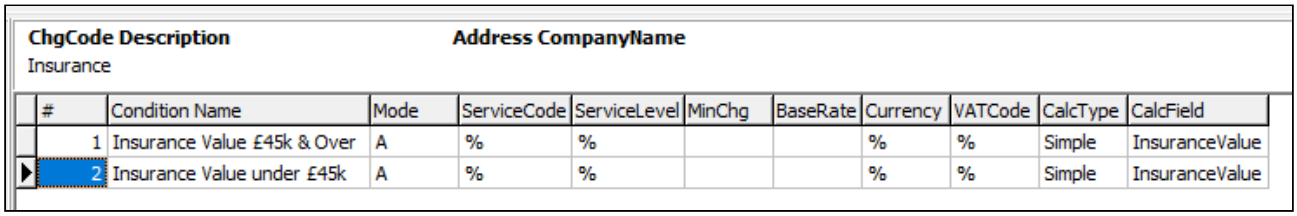
a. Breakpoint '45000'
b. Type 'Pct'
c. Type Value '0.5'



5.

Now set up the second Condition in the top pane as follows;

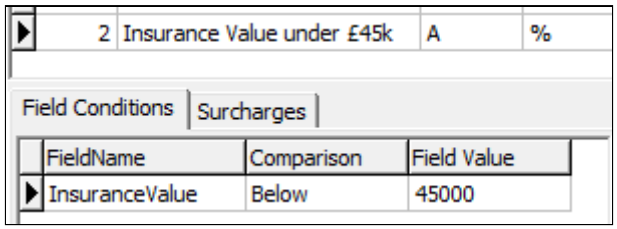
a. Description 'Insurance Value under £45k'
b. Mode 'A'
C. CalcType 'Simple'
d. Enter 'InsuredValue' for the 'CalcField'



6.

Set up the extra conditions in to the bottom section of the Rate Detail pane

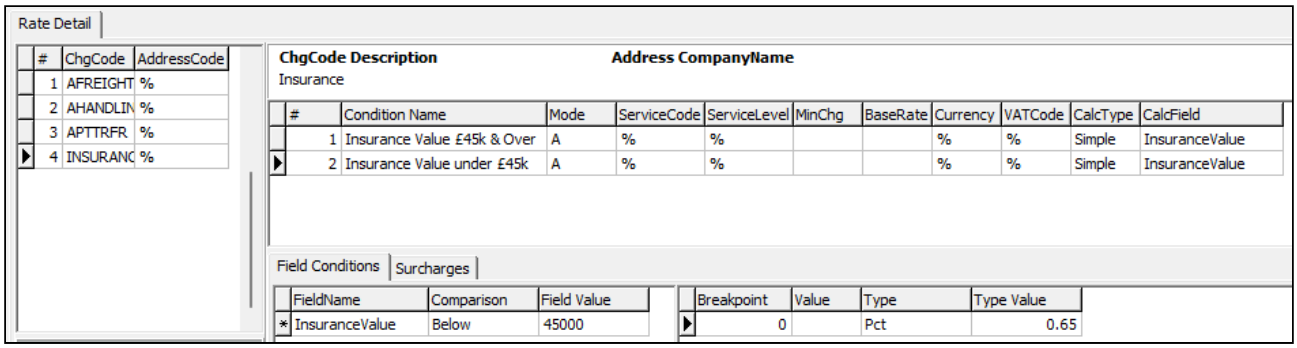
a. FieldName 'InsuredValue'
b. Comparison 'Below'
c. FieldName '45000'



7.

Set up the Breakpoints as follows;

d. Breakpoint '0'
e. Type 'Pct'
f. Type Value '0.65'

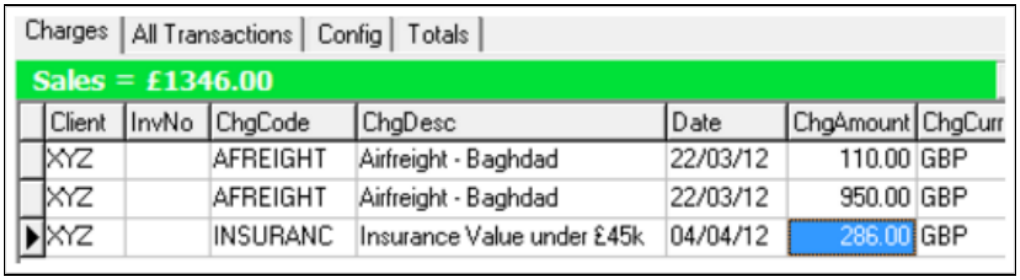


8.

Using your Air Export job to test the Insurance rate

a. On the Goods Description Tab enter the Insurance value of 44000
b. Save the Job
c. Enter a new costing line for 'INSURANC'
d. The charge amount will be calculated at £286

Given that the Insurance Value is below £45,000 a 0.65% charge is calculated and applied to the costing line. 0.65% of 44,000 = 286

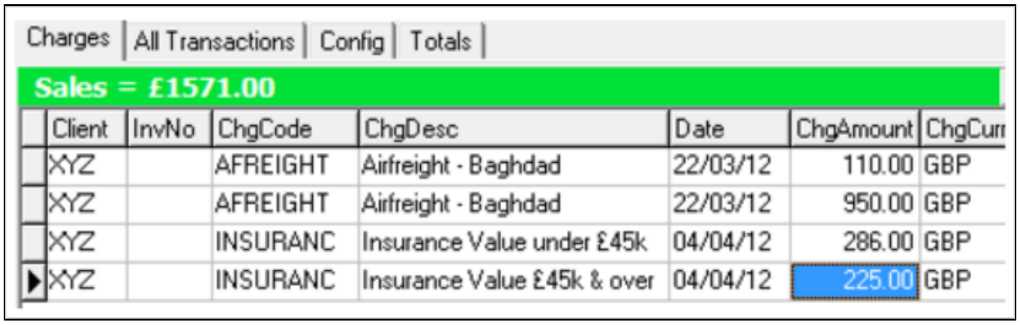


9.

To test the other condition for Insurance value £45,000 and over.

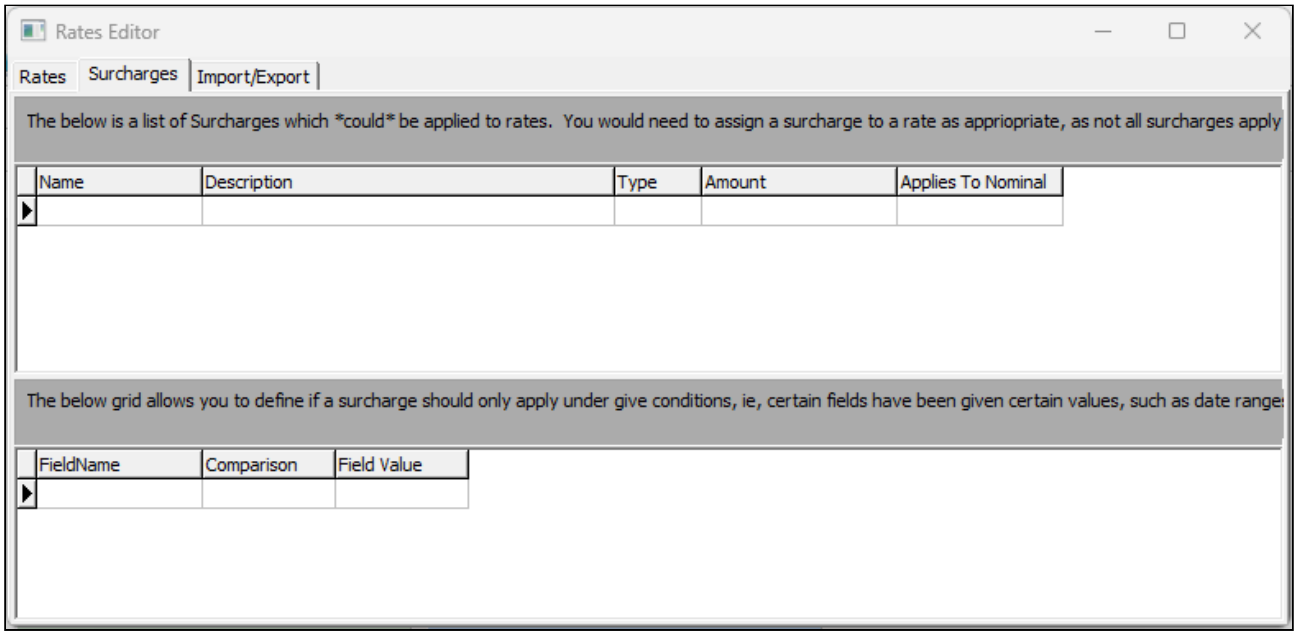
e. On the Goods Description Tab enter the Insurance value of 45000
f. Save the Job
g. Enter another new costing line for 'INSURANC'
h. The charge amount will now be calculated at £225

Given that the Insurance Value is now £45,000 the second condition is met and therefore a rate of 0.5% is now calculated and applied to the costing line. 0.5% of 45,000 = 225



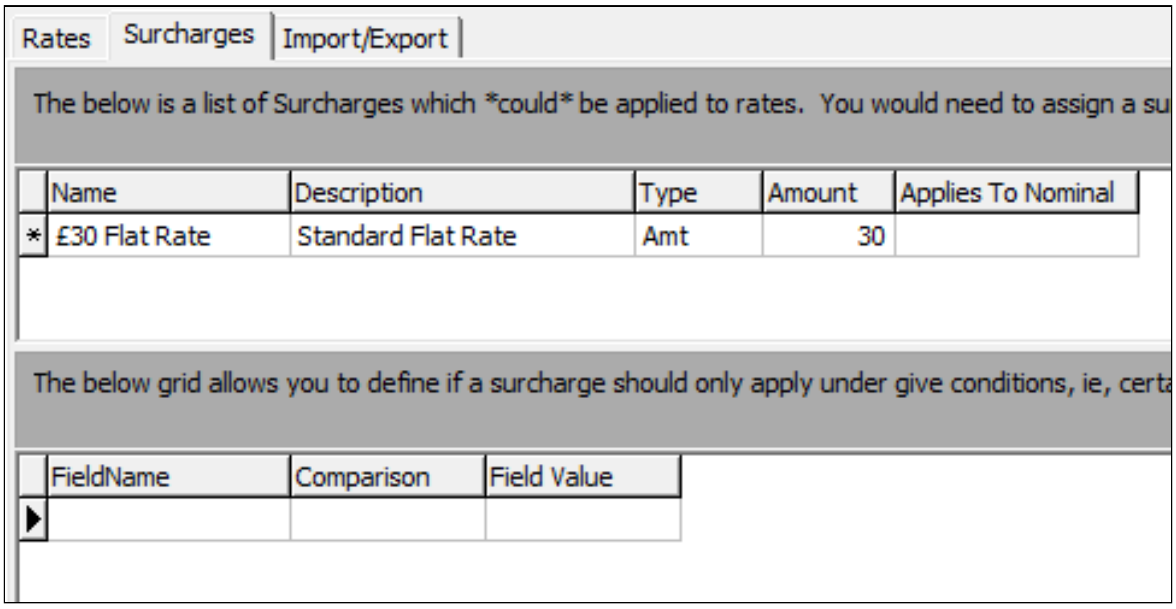
Tutorial 5 - Surcharges - Percentage & Flat Rates

Click on the Surcharges tab at the top of the Rates Editor window. There are two parts to the Surcharges window. The top section contains the description and charge amounts for each defined surcharge and then the bottom section contains the field conditions.



1.
Set up a Flat Rate Surcharge as follows;

a. Name ‘£30 Flat Rate’
b. Description ‘Standard Flat Rate’
c. Type ‘Amt’
d. Amount ‘30’
e. Leave the field conditions blank as they are not required given that the charge will be applied regardless of the job details.



2.

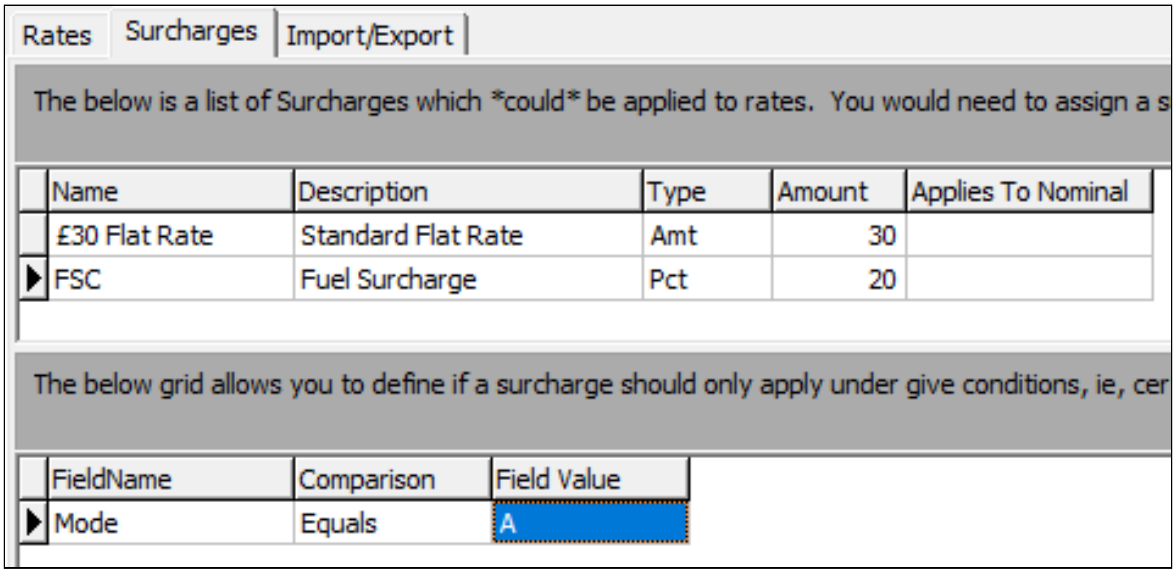
Set up a Percentage Rate Surcharge on a separate line as follows;

a. Name 'FSC'
b. Description 'Fuel Surcharge'
c. Type 'Pct'
d. Amount '20'

3.

Set the field conditions in the bottom section as follows;

a. FieldName 'Mode'
b. Comparison 'Equals'
c. Field Value 'A'



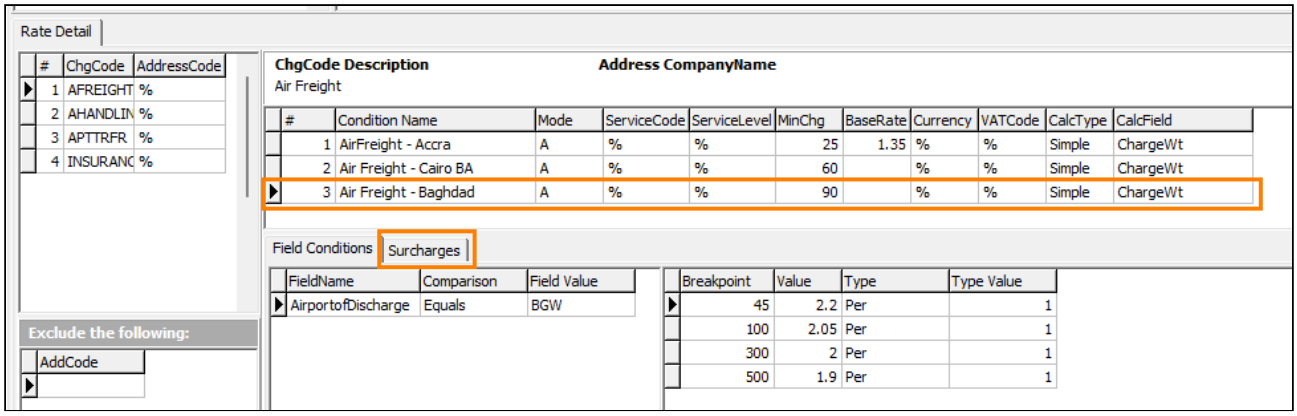
4.

A Surcharge will not apply until you assign it to an existing rate.

a. Switch back to the Rate Details tab

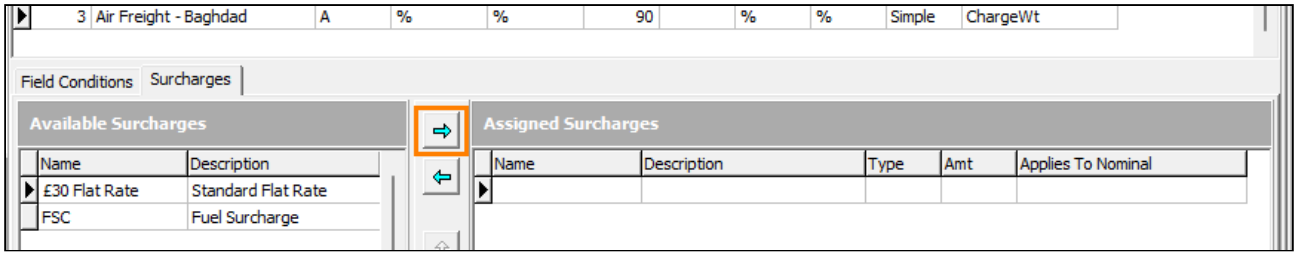
b. Select the condition for Airfreight – Baghdad

c. Now click on the 'Surcharges' tab from the bottom section of the Rate Details window.

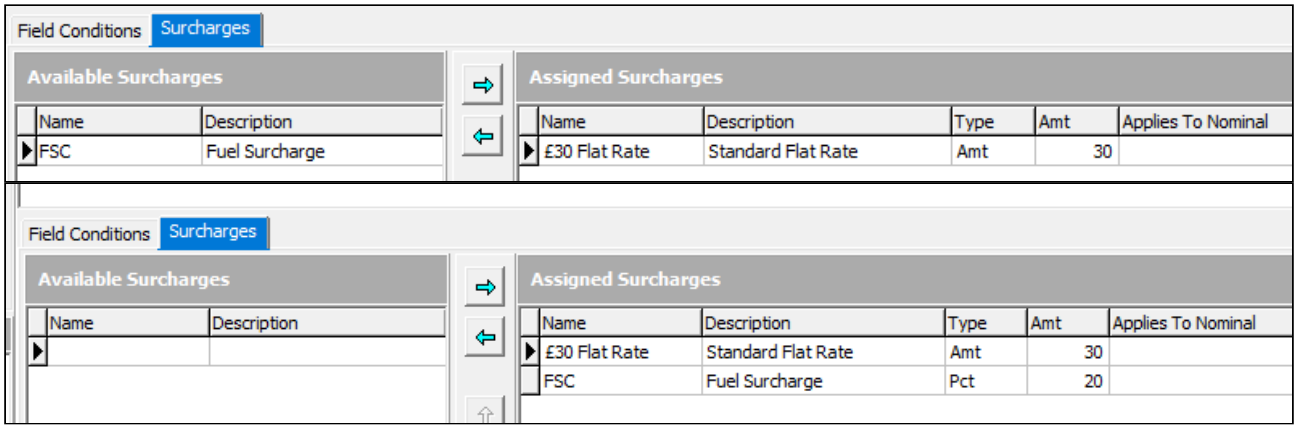


5.

From the list of 'Available Surcharges' select the '£30 Flat Rate' and then click on top arrow to move it into the 'Assigned Surcharges'



a. Notice that the Surcharges tab now changes colour from Grey to Blue. This acts as a visible indicator to the user and denotes that a surcharge has been applied.



6.

Now move the surcharge for 'RFSC' from the 'Available Surcharges' section into the 'Assigned Surcharges' section by clicking on the top arrow.

The sequence of the surcharges must be applied in the correct order.
(see overview section 'Surcharge Sequence Order')

7.
Using your Air Export job to test the surcharge

a. Amend the packages back to 4 so that the chargeable weight is 50
b. Save the Job
c. Enter a new costing line for AFREIGHT
d. The charge amount will be calculated at £168
e. Given the Chargeable weight of 50Kg the following calculation applies.

The condition entry has a Breakpoint of £2.20 per kilo, so the calculated amount would be £168 (50 * 2.20) + £30) + 20% calculated as follows;

*40 * 2.20 = 110*
110 + 30 = 140
20% of 140 = 28
140 + 28 = 168

Charges | All Transactions | Config | Totals

Sales = £1228.00

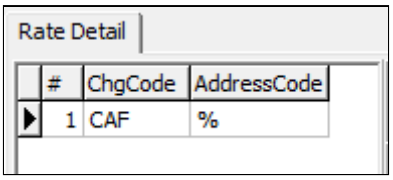
Client	InvNo	ChgCode	ChgDesc	Date	ChgAmount	ChgCurr
XYZ		AFREIGHT	Airfreight - Baghdad	22/03/12	110.00	GBP
XYZ		AFREIGHT	Airfreight - Baghdad	22/03/12	950.00	GBP
XYZ		AFREIGHT	Airfreight - Baghdad	28/03/12	168.00	GBP

Tutorial 6 - Rate on Rate Calculations - Percentage of ChargeCode Costing Line

In some cases, there may be a requirement to set up a Charge Code to calculate a percentage charge of another ChargeCode and show it as a separate costing line.
The example used in this tutorial creates a CAF rate which applies 10% of the SFREIGHT costing by setting the CalType to 'ChgPct' and the CalcField to SFREIGHT.
The SFREIGHT charge would need to be entered as a costing line (Type set to Invoice) before entering the CAF charge. It would then look something like the image below.

SFREIGHT	Seafreight to Alexandria	14/05/12	212.93	GBP	Invoice
CAF	Currency Adjustment Factor	14/05/12	21.29	GBP	Invoice

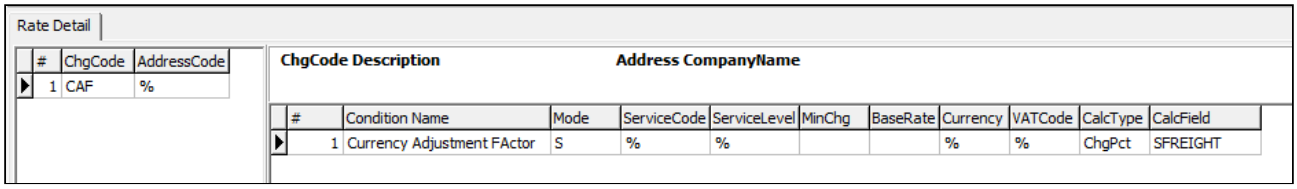
1.
Click on the Rate Details tab and set up a new ChargeCode CAF



2.

Set up the Condition in the top pane as follows;

a. Description ‘Currency Adjustment Factor’
b. Mode ‘S’
c. CalcType ‘ChgPct’
d. CalcField ’ SFREIGHT



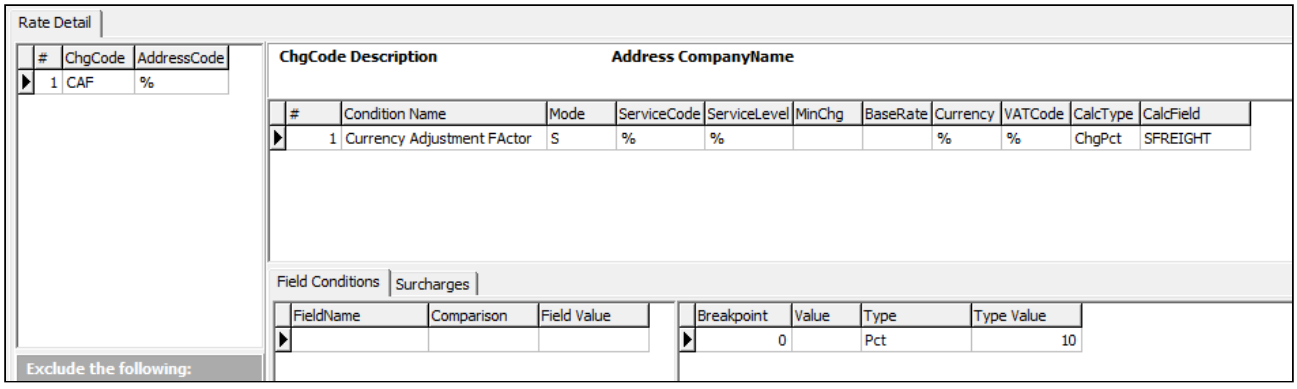
3.

You can optionally set up extra conditions should they be required for specific ports etc otherwise leave this area blank.

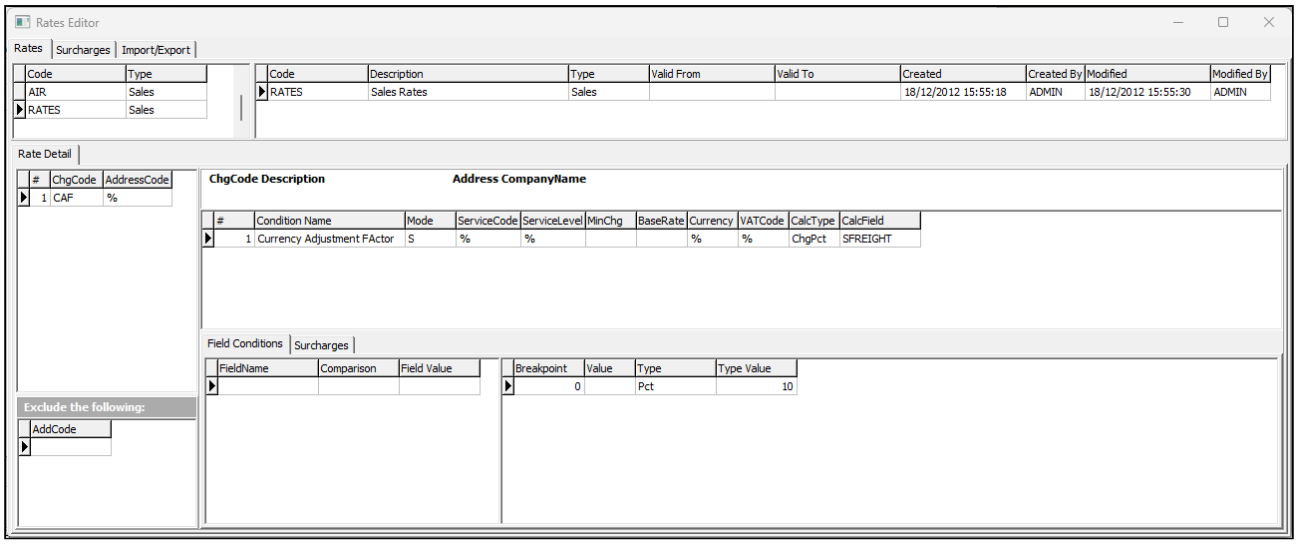
4.

Set up the Breakpoints as follows;

g. Breakpoint ‘0’
h. Leave the Value field empty
i. Type ‘Pct’
j. Type Value ‘10’



The final result:



5.

Test the rate using any job that matches your field condition; in this case any Sea Freight job as the only condition we have set up is the Mode 'S'

a. Ensure that the job already has a costing line SFREIGHT
b. Enter a new costing line for CAF
c. The charge amount will be calculated at 10% of the SFREIGHT amount.

SFREIGHT	Seafreight to Alexandria	14/05/12	212.93	GBP	Invoice
CAF	Currency Adjustment Factor	14/05/12	21.29	GBP	Invoice

Tutorial 7 - Advanced Field Conditions - Job Field Formulas

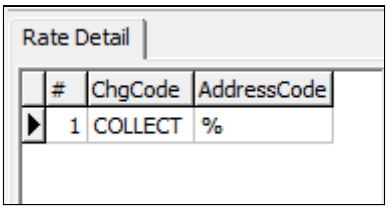
The extra field conditions can also be used to perform advanced calculations against a field such as Cube or Gross before the CalcField is used to look up the breakpoint value. The CalcField can also be used to perform calculations and a combination of the two can be used together to perform complex rate conditions.

The example used in this tutorial shows you how to create a rate called COLLECT which has two separate condition lines. These are used to determine whether to use Gross or Cube depending on which is the greater before looking up the breakpoint value. The extra conditions divide the Cube by 2 and then check to see if the result is Greater Than or Less Than the Gross. The CalcField is then used to perform another calculation and uses the result to look up the breakpoint value.

Set up the two parts of the conditions for the COLLECT rate as follows;

1.

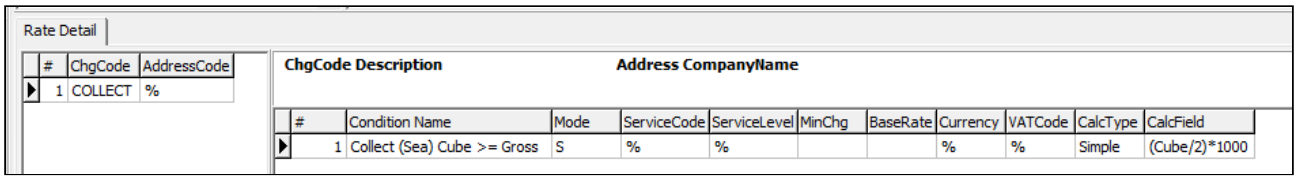
Click on the Rate Details tab and create up a new ChargeCode COLLECT with an an address code of '%'.



2.

Set up the first Condition in the top pane as follows;

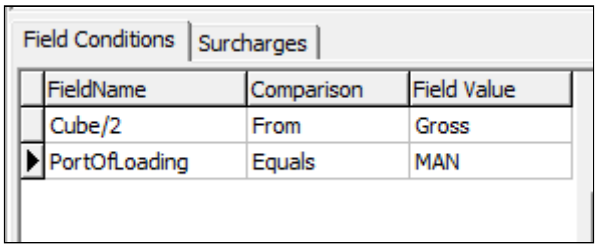
a. Description 'Collect (Sea) Cube >= Gross' ('Cube >= Gross' in the description is only for the purpose of testing the rate functionality so that you can see which condition is being met when entering the charge code on the costing line)
b. Mode 'S'
c. CalcType 'Simple
d. CalcField '(Cube/2) *1000'



3.

Set up the extra conditions in to the bottom section of the Rate Detail pane

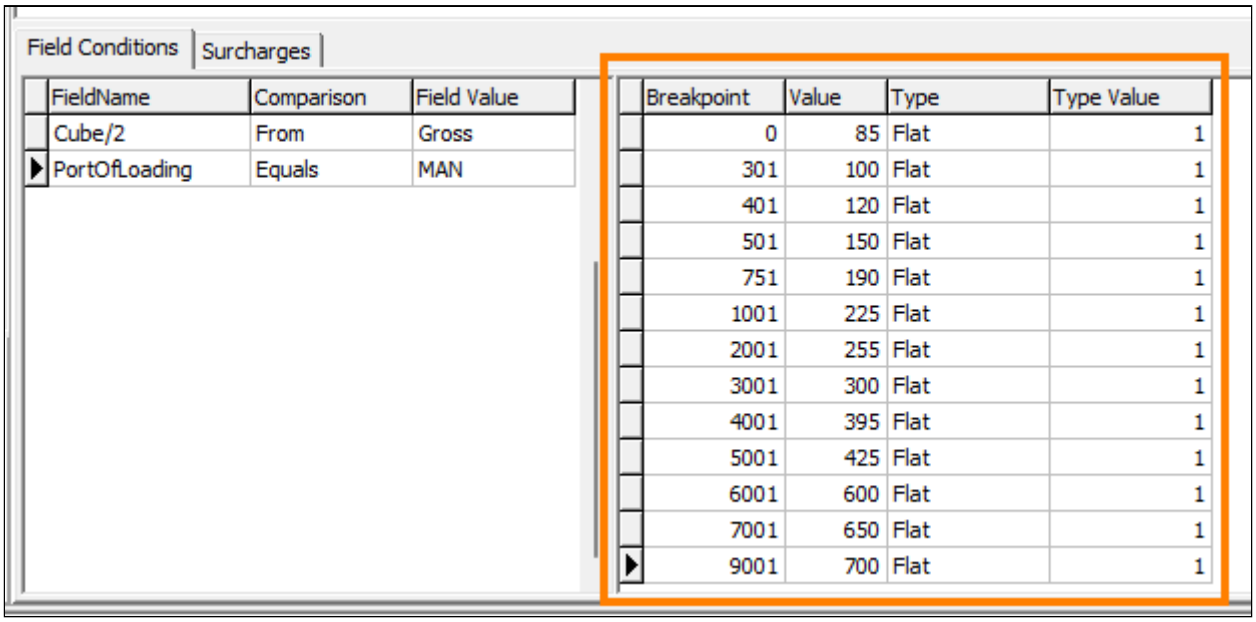
a. FieldName 'Cube/2'
b. Comparison 'From'
c. FieldValue 'Gross' Set up another Extra condition as follows;
d. FieldName 'PortOfLoading'
e. Comparison 'Equals'
f. FieldValue 'MAN'



4.

Set up the Breakpoints as follows;

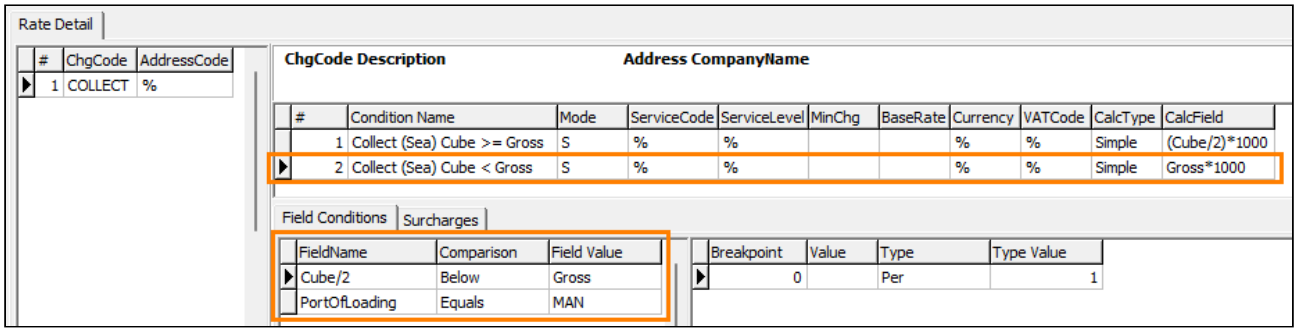
a. Breakpoint '0'
b. Value '85'
c. Type 'Flat'
d. Type Value '1'
e. Set up all of the Breakpoints from 0 to 9001 as per the screenshot below.



5.

Now set up the second condition in the top pane in the same way as the first one using steps 2 to 4 but with the following changes;

Step 2a set the Description as 'Collect (Sea) Cube < Gross'
Step 2d CalcField 'Gross *1000'
Step 3e Comparision 'Below'



6.

Ensure you set up the same breakpoints as in Step 4

Field Conditions | Surcharges

FieldName	Comparison	Field Value
Cube/2	Below	Gross
PortOfLoading	Equals	MAN

Breakpoint	Value	Type	Type Value
0	85	Flat	1
301	100	Flat	1
401	120	Flat	1
501	150	Flat	1
751	190	Flat	1
1001	225	Flat	1
2001	255	Flat	1
3001	300	Flat	1
4001	395	Flat	1
5001	425	Flat	1
6001	600	Flat	1
7001	650	Flat	1
9001	700	Flat	1

7.

You should now have the COLLECT rate set up with the two conditions as per the two images below.

Rates Editor

Rates | Surcharges | Import/Export

Code	Type
AIR	Sales
RATES	Sales

Code	Description	Type	Valid From	Valid To	Created
RATES	Sales Rates	Sales			18/12/2

Rate Detail

#	ChgCode	AddressCode
1	COLLECT	%

ChgCode Description **Address CompanyName**

#	Condition Name	Mode	ServiceCode	ServiceLevel	MinChg	BaseRate	Currency	VATCode	CalcType	CalcField
1	Collect (Sea) Cube >= Gross	S	%	%			%	%	Simple	(Cube/2)*1000
2	Collect (Sea) Cube < Gross	S	%	%			%	%	Simple	Gross*1000

Field Conditions | Surcharges

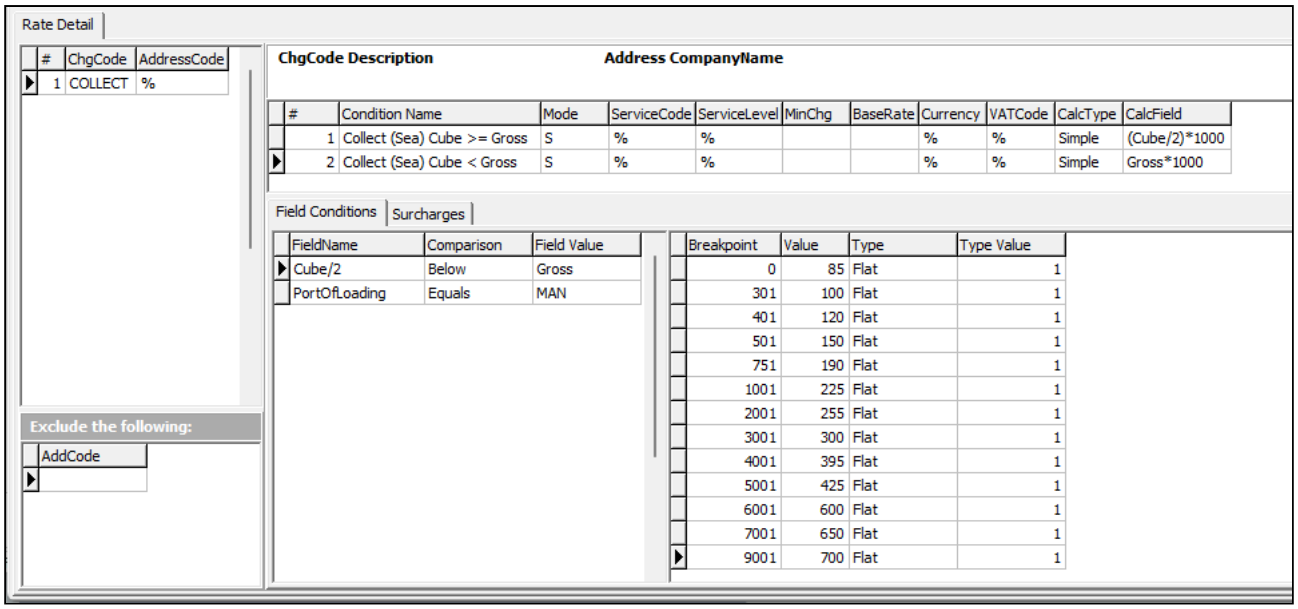
FieldName	Comparison	Field Value
Cube/2	From	Gross
PortOfLoading	Equals	MAN

Breakpoint	Value	Type	Type Value
0	85	Flat	1
301	100	Flat	1
401	120	Flat	1
501	150	Flat	1
751	190	Flat	1
1001	225	Flat	1
2001	255	Flat	1
3001	300	Flat	1
4001	395	Flat	1
5001	425	Flat	1
6001	600	Flat	1
7001	650	Flat	1
9001	700	Flat	1

Exclude the following:

AddCode

Condition 1: Cube >= Gross

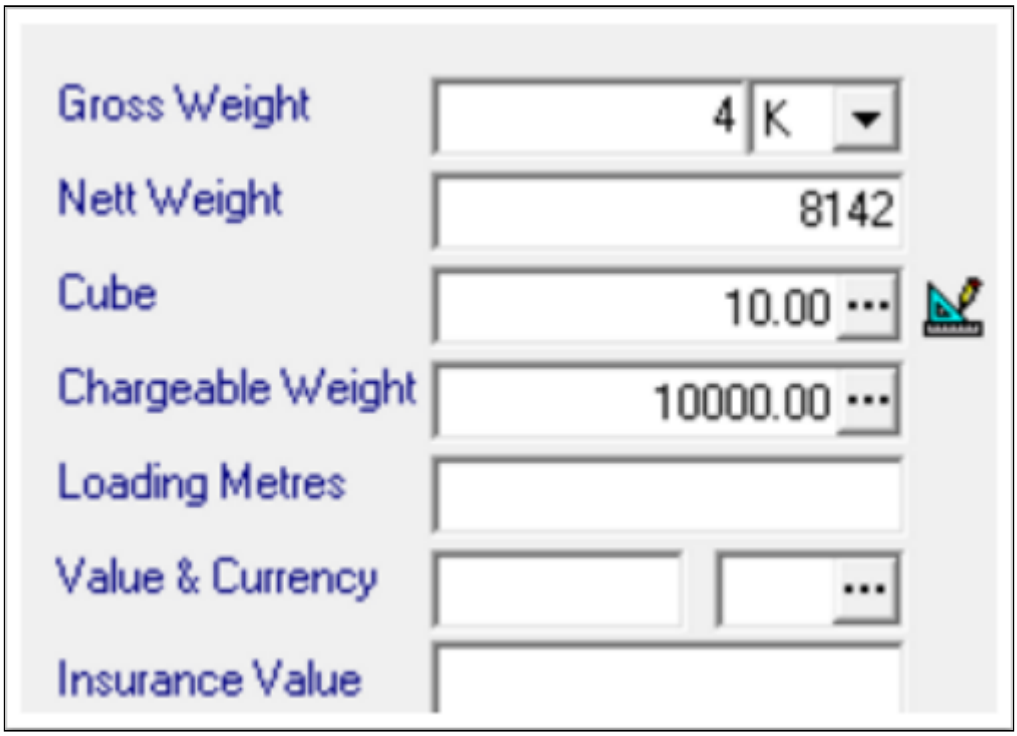


Condition 2: Cube < Gross

8.

Test the rate by amending the Cube and the Gross on the Goods Description tab of any Sea Freight Job

a. Enter a value in the Cube which is greater than the Gross value (for example enter 10 as the Cube and 4 for the Gross Weight).
b. Save the Job



9.

Enter the COLLECT charge code on a costing line.

a. All conditions for the 'Collect (Sea) Cube >= Gross' rate will be met and this description will appear on the Costing line with a charge amount of £395.
Cube = 10 and Gross = 4, the Cube divided by 2 = 5 which is greater than the Gross value of 4. Then the Cube/2 *1000 = 5000 giving a breakpoint value of £395

10.
Now that the 2nd condition by amending the Cube to 2 so that it is less than the Gross of 4

a. Save the Job
b. Enter another COLLECT charge code on the costing line.
c. The conditions for the 'Collect (Sea) Cube < Gross' rate will be entered as the description with a breakpoint amount of £300.
Cube = 2 and Gross = 4, the Cube divided by 2 = 1 which is less than the Gross value of 4. Then Gross*1000 = 4000 giving a breakpoint value of £300

COLLECT	Collect (Sea) Cube >= Gross	18/05/12	395.00	GBP
COLLECT	Collect (Sea) Cube < Gross	18/05/12	300.00	GBP

11.
Once you are happy that the rate conditions have been set up and working correctly, you can if you wish amend the two Description names to be the same, such as 'Collect (Sea)'. The system will apply the correct rate in the background depending on the defined conditions.