



TARIFF FILES – AN EXPLANATION

INTRODUCTION

All tariff files are plain text files and can be edited in any package, such as Notepad or Wordpad. If they are edited in a spreadsheet (such as Excel) you must ensure that the leading zeros, at the beginning of the area codes, are not dropped – the file must then be saved as a .csv.

All tariffs can be split into two main sections:

1 – BANDS

Each Band contains the Rate or cost that the Band is charged at. A Band can contain multiple Rates, for example, Day, Evening, Weekend.

2 – AREA CODES

Each area code is linked to a specific Band which lets us know what Rate to cost a call at. This emulates the way that providers cost the calls.

USEFUL INFORMATION

- Throughout the file, the first element of each line always defines the contents of the line – **N** (Name of Tariff), **B** (Band), **V2R** (Rate), **L** (Label – shows the beginning of an area codes section) or **D** (Detail of the Area Codes).
- Each element must have a unique name to identify it and all names are limited to a maximum of 15 characters.
- Each element also has a description that is limited to 31 characters; descriptions do not need to be unique.
- All fields marked with a < > are compulsory,
- All fields within [] are optional.
- If a field should contain the comma character, it must be surrounded by " ", for example "France, Paris".

THE DEFINITION LINE

A tariff file must start with a line that defines the tariff name, discounts schemes and currency.

The format of the line is:

N, <name>, <description>, <decimal places>, <discount1>, <discount2>, <discount3>, <discount4>, <discount5>, <discount6>, <discount7>, <discount8>, <discount9>, <discount10>, <currency>

The decimal places column is no longer used. All tariffs we create are stored to 3 decimal places and we recommend this column contains the text "3".

Each tariff has 10 simple discount schemes which allow the creator to apply a percentage discount to each band. The tariff definition line simply gives a name to each of these schemes. Most tariffs, however, no longer use discount schemes.

The final currency field is used to identify the currency of the tariff. It is recommended to use the standard international abbreviations.

A tariff should only contain one definition line and it must be at the start of the file.

The following example is the defining line of the BT Standard tariff created in January 2011, all discount schemes with the tariff are called "Standard" and the currency is defined as GBP.

N, BT, BT Jan 11, 3, Standard, GBP



If you wish to overwrite an existing tariff, the <name> must match the existing tariffs name. The description can be anything although we recommend you insert the date or an identifier into the description to help identify when the tariff was created.

BANDS

Following the tariff definition the charge bands are defined. Each band has a definition line followed by one or more charge rate definition lines.

The format for a Band definition line is:

B, <name>, <description>, <band classification>, <discount1>, <discount2>, <discount3>, <discount4>, <discount5>, <discount6>, <discount7>, <discount8>, <discount9>, <discount10>

The band line must have a unique name and description at the start. All Band names in the tariff file must be unique otherwise the area code prefixes will be unable to determine which band is being assigned.

The band classification should be one of the following values.

Local, National, International, Premium, Mobile, Freephone or NO CLASSIFICATION.

This identifies the classification of the band, except for “NO CLASSIFICATION” which allows the call logger to identify numbers that are not covered by a tariff.

There should only be one band with “NO CLASSIFICATION” and we recommend this band has a name of “NC”.

The next 10 entries identify the percentage discount for the discount schemes names in the tariff definition line. These are likely be 0% as most tariffs no longer use these schemes.

The following example is the band line for dq1 which is classified as Premium and has no discounts.

B, dq1, dq1, PREMIUM, 0.00%, 0.00%, 0.00%, 0.00%, 0.00%, 0.00%, 0.00%, 0.00%, 0.00%

Following the band line there will be one or more rate lines. There should be sufficient lines to cover every time for every day. The length of these lines can vary depending on the options used.

The format for a Rate definition is:

V2R, <name>, <description>, <time covered>, <days covered>, <connection delay>, <cost by duration>, <minimum cost>, <setup cost>, <ceiling cost>, <rate options>, <cost rate 1>, <duration of cost rate 1>[, <cost rate 2>, <duration of cost rate 2>][, <cost rate 3>]

Each rate line is assigned to the band line immediately above it and has a unique **name** and **description** at the start. The rate names need only be unique within the band, so you could have a rate called “peak” for each band.

The **time covered** indicates the start time and end time of a rate, this should be in the format <start time>-<end time> with each time being in 24 hour clock format.

The **days covered** indicate the days of the week that the rate covers. This will be one of the predefined day spans of M-F for Monday to Friday, W-E for weekend (Saturday and Sunday) or All for all days of the week. If the days of the week covered needs to be something else, it will be a numerical value. The value is created by adding the score value for each day together. The values are Sunday=1, Monday=2, Tuesday=4, Wednesday=8, Thursday=16, Friday=32 and Saturday=64. To have the rate cover Monday, Tuesday and Friday would be the numerical value 38 (2+4+32).

The **connection delay** allows each rate to have a typical dialling time included; this would be removed from the duration before calculating the call cost. This is no longer required with modern PBXs and digital lines. Typically this value is 9 seconds and is disabled by default within the call logger when defining the cost style.

The **cost by duration** allows the rate to define how the duration is split into units for costing. This is typically “sec” to indicate that the call is costed to the nearest second. However you may need to define this as



“30sec” or “60sec”, if the call is costed to the nearest 30 seconds or minute. The call units are always rounded up.

The **minimum cost** allows you to define the minimum amount of cost that a single call is charged at. If the cost of the duration units is below this cost, this cost will be applied. Most tariffs have a minimum cost that needs applying.

The **setup cost** allows you to define a cost that is applied as soon as the call is connected. This cost is in addition to the duration units.

The **ceiling cost** allows you to set an upper limit to call cost. If the cost of the call would have worked out higher than this, the ceiling cost will be used instead. The ceiling cost is only applied for the duration of cost rate 1.

The **rate options** allow you to control elements about the costs, this will typically be blank. The only option currently is “CEILING=ALL”, this indicated that the ceiling cost should be applied to all the cost rates, not just the duration of cost rate 1.

The **cost rate 1** allows the user to define how the call will be charged. This is in the format of <cost>/<duration>, such as 3.4/min or 2.5/30sec. This allows the user to set a charge rate while the cost by duration will determine how the call duration is split for the costing.

The **duration of cost rate 1** allows you to define how long the rate is valid. This will typically be either “forever” or some user defined duration, such as 60mins. If this column contains “forever”, all following columns are ignored. If this column has a user defined time in it, the cost rate 2 and duration of cost rate 2 columns must exist. After the call has been charged at rate 1 for this period of time, it will be charged at rate 2 and the ceiling cost will stop applying (unless CEILING=ALL used in the options)

The **cost rate 2** and **duration of cost rate 2** are defined in the same way as cost rate 1 and duration of cost rate 1. If duration of cost rate 2 is not “forever”, cost rate 3 must exist.

The **cost rate 3** is the final costing rate that can be applied; this rate is assumed to run “forever”.

With these definitions it is possible to have a call charge at three different rates depending on how long the call lasts. Each section of the call could be charged at different rates.

The following is an example of the single rate line for band dq1 which is active at all times on all days and has a setup charge of 9p. In addition to the setup charge the call is charged at 21.2p per minute, calculated to the nearest second.

V2R, dq1, dq1, 00:00-23:59, All, 9sec, sec, 0.000 min, 0.090 setup, 0.000 ceiling, , 0.212/min, Forever

The following is an example of another band:

The band is called “d” is a national band with no discount schemes. It contains three rates to cover the week and is charge a 14.2p per minute between 8AM and 6PM, Monday to Friday and at 8.3p per minute at all other times. The setup charge of 9p is applied at all times.

B, d, d, NATIONAL, 0.00%, 0.00%, 0.00%, 0.00%, 0.00%, 0.00%, 0.00%, 0.00%, 0.00%, 0.00%

V2R, d Day, d Day, 08:00-17:59, M-F, 9sec, sec, 0.000 min, 0.090 setup, 0.000 ceiling, , 0.142/min, Forever

V2R, d Eve, d Eve, 18:00-07:59, M-F, 9sec, sec, 0.000 min, 0.090 setup, 0.000 ceiling, , 0.083/min, Forever

V2R, d W/E, d W/E, 00:00-23:59, W-E, 9sec, sec, 0.000 min, 0.090 setup, 0.000 ceiling, , 0.083/min, Forever



AREA CODES

Once all necessary bands have been defined, each area code prefix needs to be assigned to the relevant band.

This is done by a single line that indicates we are finished defining bands, followed by multiple lines that contain the area code prefixes.

The format for these lines is:

L,Main Tariff

D,<charge band name>,<area code prefix>,<area code description>,<area code country>

The line that indicated we have completed defining bands is static and always **L,Main Tariff**. This line should not be altered in any way.

This line is followed by a list of the area code prefixes.

Each area code prefix line should start by stating which **change band** will be used for the area code. This charge band must be a band name that was previously defined.

The **area code prefix** indicates the start of dialling string and should be unique within the tariff. A good source for the UK area codes can be found on the Ofcom website at <http://www.ofcom.org.uk/static/numbering> .

The **area code description** allows a place name to be associated to the area code prefix.

The final column contains the **country** the area code points to.

For example

L, Main Tariff

D, d, 07000, Vodafone Ltd, UK

D, dq1, 118004, Telecom2 Ltd, UK

This example assumes that we have completed all the bands and that the following area codes are defined.

07000 is a “**Vodafone Ltd**” number in the “**UK**” that is charged at band “**d**”.

118004 is a “**Telecom2 Ltd**” number in the “**UK**” that is charged at band “**dq1**”

SUMMARY

A typical tariff file is extremely large and complex to read. For example the BT Standard tariff has in excess of 32000 area code prefixes and 750+ charge bands.

Focom Limited offer a tariff creation and maintenance service, please email support@focom.com if you would like us to provide a quotation for your specific tariff needs.