

It is often time-consuming to make one's way through the Literature in search for the information about the weight systems used in a city. There are numerous cross references (... the weight is equal to the weight in ..); the mass is not specified in grams or grains; the type of the weight you are looking for is missing; you do not know, in which period the weight specification was valid; etc.

This program informs the user selectively and comprehensively by:

- giving an overview of all weight systems in the selected city
- showing the cities, which had the same weight system
- displaying weight standards and show all cities which used the standard
- scanning the database by criteria, which range is chosen by the user

The program was developed under Firefox. If you use the Internet Explorer, the data is displayed suboptimally, especially when calling the function "Details".

The dialog input fields and the fields, the user may click on, are marked green in the program description.

Program Start : visit the website www.hjmittelbach.de and select the [English Version](#). Click on [Program Start](#) or on the picture to the left.

The dialog begins with the display of the **Selection-Page** which shows all stored countries/regions/cities (c/r/c) sorted according to c/r/c.

Each display contains on the top the dark grey shaded navigation bar, from where you may switch directly to the **Selection- / Standards- / Criteria-Page**.

The identification of the actual page is shown in the tab-window of the browser, together with further information about c/r/c where necessary. The **Details-Page** only shows c/r/c.

The **Selection**-Page is shown after “Program Start” or after clicking on “**Selection**” in the navigation bar. All stored countries/regions/cities (c/r/c) are displayed sorted according to c/r/c.

Input:

The fields **Country**, **Region**, **City** are generic, case insensitive input fields, with which you may reposition by clicking on “reposition“. The output data is sorted according to the fields, the user has filled in. Examples:

1. **Country** = “it” **Region** = **City** = “g” : all c/r/c are displayed, beginning with the following entry : **Country** >= “it” and **Region** >= blank and **City** >= “g”. Currently this entry is the city of Genoa in Italy. Sort sequence: country/city in ascending order.
2. **Country** = **Region** = **City** = “aaa” : all c/r/c are displayed, beginning with the following entry: **Country** >= blank and **Region** >= blank and **City** >= “aaa”. Currently this entry is the city of Aach in Germany. Sort sequence: city in ascending order. In this way, a list of all recorded cities, sorted according to the name of the city, is displayed.

Output:

The first three columns contain c/r/c. If Country is underlined, the user may click on this field and the weight information of the city is displayed on the **Detail**-Page.

If “Country” is not underlined then the following 3 columns “as Country/ as Region/ as City” (aC/aR/aC) are filled in. “as Country” and the “X” in column “Equalities” are underlined and may be clicked on. This is the case when c/r/c has no weight system of its own but is equal to the weight system of aC/aR/aC. So, the weight system of c/r/c is retrievable via aC/aR/aC by clicking on “as Country”.

By clicking on an underlined “X” the user displays on the **Equal-Weights**-Page all c/r/c, which have the weight system of aC/aR/aC.

The columns “equal from / equal to” contain the year, from respectively to which the weight system of c/r/c is identical to the weight system of aC/aR/aC. If one of the fields or both are blank, then the equality existed from respectively to this year respectively always.

The **Equal-Weights**-Page may be called from the **Selection-, Standards-, Criteria** Page. It displays those countries/regions/cities (c/r/c) which weight systems is equal the weight system of the country/region/city of the calling page (c*/r*/c*). A new tab in the browser is opened and c*/r*/c* is displayed in the tab window.

By clicking "**Bibliography**" the user calls the **Literature**-Page.

All the other fields are output fields.

"equal from" indicates the year from which the weight system of c*/r*/c* was valid in c/r/c. If the field is empty, the year is not known or the weight system has always been valid.

"equal to" indicates the year until which the weight system of c*/r*/c* was valid in c/r/c. If the field is empty, the year is not known or the weight system has always been valid since the starting year.

"reference" contains the citation :

xx-yyy :	xx is the number of the book in the bibliography yyy is the page number in the book
MG-xx-yyy:	journal Maß&Gewicht, xx is the number, yyy the page number
EEZ:	European Verification Marks by Gregor Linkenheil
BEms-xx-yyy:	Bad Emser journals, xx is the number, yyy the page number
NDB :	North German Confederation

The **Details**-Page may be called from the **Selection-, Standards-, Criteria** Page. It displays the weight information of a country/region/city (c/r/c). A new tab in the browser is opened and c/r/c is displayed in the tab window.

The output fields “Country“, “Region“, “City” are filled with the data of the calling page. The fields may be underlined and by clicking on one of the underlined fields, the user calls the **Info**-Page where further information is displayed.

The field “Unit” is a dropdown field. If the user selects an unit and clicks on “refresh”, the weights are displayed in the selected unit.

By clicking “Bibliography” the user calls the **Literature**-Page.

The screen display below contains the information of the different weight in form of one or several identically assembled boxes. Each box contains 4 or more rows and each row contains one or more columns.

Description of a box:

- row 1: may contain the weight name or details on the city or the name of the city, if no further information is stored.
- row 2: column 1 indicates the year from which the weight had been introduced
 column 2 = “-”
 column 3 indicates the year until which the weight had been valid.
 column 4 = „J“ , if the weight is a standard (see the description **Standards** below)
column 5 is an internal key. If it is underlined and the user clicks on the field, then the **Info**-Page is displayed where links to further information about the weight described in the box are displayed.
- row 3: column 1 contains the weight type. Currently 21 different types are stored.
 column 2 contains the citation:
 xx-yyy : xx is die number of the book in the bibliography
 yyy is the page number in the book
 MG-xx-yyy: journal Maß&Gewicht, xx is the number, yyy the page number
 EEZ: European Verification Marks by Gregor Linkenheil
 BEms-xx-yyy:Bad Emser journals, xx is the number, yyy the page number
 NDB : North German Confederation

The rows below contain the weights and their division. Normally the denotation is carried out in the language of the country.

The boxes are sorted according to the type of the weight in row 3 and the year in column 1 of row 2.

The **Info-Page** is called from the **Details-Page** if at least one of the fields “Country“, “Region“, “City” or the key field in row 2 of a box is underlined and the user clicks on the underlined field.

Output fields :

“key“ is the number in the key field in row 2. The field is empty, if the key field has not been clicked on. The corresponding file in column “Link” contains further information about the specific weight described in the box.

The values for “Country“, “Region“, “City” are taken from the **Details-Page**.

“Link“ is the name of the file which contains further information. If the user clicks on the field, the download of the file is started.

The **Literature**-Page may be called by the user from the **Details**-Page or the **Equal-Weights** Page. It contains a list of the books, which are encoded in the citation.

“Number“ is the key “xx“ in the citation from type “xx-yyy“ (see **Details** respectively **Equal-Weights**).

“Title“ is the title of the reference.

The **Standards**-Page is called from the navigation bar. It contains all weights, which are defined as a standard, sorted according to country / region (city) / type.

In the weight information system a weight is defined as a standard, if it was used in several cities. The Prussian Pound with the mass = 467,711g for example is a standard weight. The information where it had been introduced may be displayed by calling the **Standard-Selection-Page**.

The generic, case insensitive input field “Country” enables the user to reposition the output data. The positioning is only reasonable if the first sort criterion = country (see below).

Example: “Land” = “I” and click on “reposition/refresh” : the output starts with that country which name begins with “I”.

“Sort” : the user can change the sort sequence of the output with this field in order to find the standard he is searching for more easily. After clicking on “reposition/refresh” the data is displayed in the chosen sort sequence.

“+- Gramm” : by filling in a numeric value $x > 0$ also the weights of those cities are displayed on the **Standard-Selection-Page** which mass differ from the standard about +- x gram (the type of these weights must equal the type of the standard). The precious metal types (coin weight, fineness of gold/silver, ...) are combined to the generic term coin/gold/silver.

Background is the following: the mass of the standard weight Mark of Cologne = 233.8123 gram. The Mark of Cologne was used in many cities – however seldom with exact the mass above but with a slight difference. The “+- Gramm” input provides the display of those cities. Another example: The mass of the standard weight Prussian Pound = 467.7110 gram. A value > 0 in the “+- Gramm” field would be pointless for this standard, because the Prussian pound was legally fixed to the value above and the weight was introduced in a region/city only with exactly this mass.

Please consider the following : on the **Standard-Selection-Page** all weights are displayed, which mass differ +- gram from the standard and which generic term weight type equals the weight type of the standard. That is why also weights are shown which have no relation to the standard, but simply are of the same type and are in the limits of the chosen interval. This will primarily happen when the +-x value is too high.

The +- gram output is activated by filling in a value and clicking on “reposition/refresh”. The actual screen does not change. It changes not until the user selects a standard (see below) and the **Standard-Selection-Page** is displayed.

“Country” : clicking on this field, the user calls the **Standard-Selection-Page** in order to display all countries/regions/cities where the standard was introduced.

“Type” : weight type of the standard. Type = “all“, if the weight was used for all types (for example the Kilogramm or the Russian pound).

The **Standard-Selection-Page** is called from the **Standards-Page**. All countries/regions/cities (c/r/c) are displayed, which had introduced the standard. The browser tab shows the name of the chosen standard.

If $\pm \text{ gram} = 0$ (on the **Standards-Page**), then only those c/r/c are displayed, which had introduced the standard with exactly the same mass. If $\pm \text{ gram} > 0$, then all c/r/c follow below, which had introduced the standard with the chosen tolerance. As already explained on the **Standards-Page**, a c/r/c in the latter list may have no relation to the standard. This cannot be absorbed by the program but must be construed by the user.

“Country“ : clicking on this field, the user calls the **Details-Page** in order to display all details of the type of the weight in the c/r/c. If the weight type of the standard is the generic term coin/gold/silver, all weight are displayed which belong to this group of types.

“as Country“ : if c/r/c had no weight system of its own but is equal to the weight system of as country/as region/ as city (aC/aR/aC), then the weight system of c/r/c is retrievable via aC/aR/aC by clicking on “as Country” (see the description of the **Selection-Page**).

The **Criteria**-Page is called from the navigation bar. On this page the user may specify different criteria the weights of the cities must meet for being displayed.

“**Type**“ : with this dropdown field the user can limit the output to one or several weight types. If no type or the blank line is selected, then all weight types are considered. The precious metal types (coin weight, fineness of gold/silver, ...) are combined to the generic term coin/gold/silver.

“**Country**“ : with this dropdown field the user can limit the output to one or several countries. If no country or the blank line is selected, then all countries are considered.

“**Number**“ : only those weights are displayed which Number-times mass is in the interval [weight from, weight to]. Number must be numeric and > 0 .

“**Mass from**“ : only those weights are displayed which Number-times mass \geq the value in “Mass from“. “Mass from“ must be numeric; the unit is gram. Fractional values are valid, too (for example 467.1).

“**Mass to**“ : only those weights are displayed which Number-times mass \leq the value in “Mass to“. “Mass to“ must be numeric; the unit is gram. Fractional values are valid, too (for example 467.1).

“**Unit**“ : with this dropdown field the user can limit the output to one weight unit.

“**Generic Unit**“ : with this dropdown field the user can limit the output to a generic weight unit. A generic weight unit is a classification of several weight units to a generic term. As the weight units are stored and displayed in their national language, the generic weight unit allows for a country-independent search and weight comparison.

Example: all the weight units “As”, “Funt”, “Libbra”, “Libra”, “Livre”, “Pfund”, “Pond”, “Pound”, “Pund” are subsumed under the generic unit “Pound”.

Only one of the two fields „Unit“ and „Generic Unit“ may be selected. If both fields are empty, “Mass to“ must not exceed double the value of “Mass from“.

“**Sort**“ : The output may be sorted according to city or mass.

“show“ : by clicking on “show“ the record, which meet the inputted criteria are displayed.

“display units / generic units“ : by clicking on this field, the Display units / generic units-Page is displayed in a new browser tab. This page gives an overview of the correlation of the units to the generic-units and vice-versa.

“Country“ : clicking on this field, the user calls the **Details**-Page in a new browser tab where the weights of the county/region/city (c/r/c) are displayed, limited to the weight type shown in the output column “Unit“. C/r/c is displayed in the browser tab field of the **Details**-Page.

“Equalities“ : this column may contain underlined “X“. By clicking on this field, the **Equal-Weights**-Page is called in a new browser tab, where all c/r/c are listed which have the same weights as the c/r/c in the selected X-row. The c/r/c in the selected X-row is displayed in the browser tab field.

The number of output rows is limited to 300. The user should choose more restricting input fields if more than 300 rows meet the criteria.

The **Display Units / Generic Units**-Page is called from the **Criteria**-Page.

A generic weight unit is a classification of several weight units to a generic term.

In the first and second column the stored weight units and the corresponding generic weight units are listed, sorted according to weight unit. The weight units not beginning with a letter (these are decimal fractions like $\frac{1}{2}$, $\frac{1}{32}$...) are not displayed, because they are not assigned to a generic weight unit.

In the following two columns the generic weight units and the correlated weight units are listed.