

Philips Historical Tube Data

1. Introduction.

This CD contains the data of over 200 Philips tube types, mainly from the years 1927 through 1930. One set covers 1930's upto and including 1938. Based on their application:

- * 33 Rectifier tubes and 20 current regulator tubes for use in battery chargers.
- * 71 Receiving and amplifying tubes from the series A415, C443, F410, etc.
- * 84 Transmitting tubes, including modulator tubes (9 types) and power rectifiers (29 types).

The data are compiled from 6 sources, all being original Philips publications.

On this CD, they have been placed in 4 folders:

Folder 1 contains 3 files, each file offering the complete contents of a booklet, so 3 booklets in total.

Folder 2 contains 58 files of receiving and amplifying tubes.

Folder 3 contains 36 files of transmitting tubes and rectifiers.

Folder 4 contains 60 files of transmitting tubes and rectifiers. The originals are packed up in a cardboard box.

Each file on this CD is a separate .pdf.

For reading, use Adobe's Acrobat Reader 5.0 or higher.

In the unlikely event that this reader is not available, go to Adobe's website for a free download.

The file 'Index.pdf' contains all tube types from which data are available on this CD.

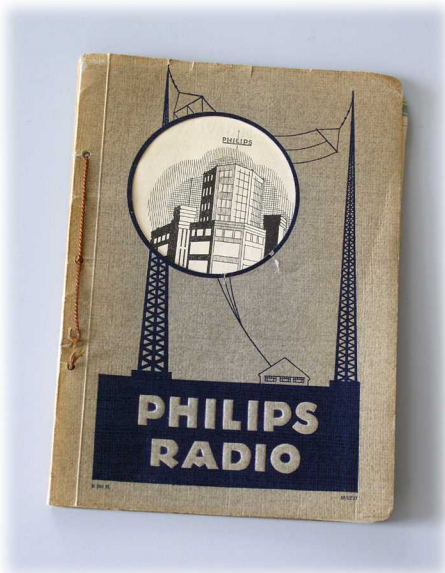
In the table, each folder has its own column. Available files (tube types) are indicated by an 'X'.

The file-name of a tube breaks down in 3 parts: 1) The tube type, 2) a 4-digit code, offering the date of the particular data sheet (YYMM), 3) a lettercode for the language being used.

If no date is known, the 4-digit code is omitted.

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2. Description of the sources used.



Folder 1 nr.1.

Booklet "Philips Radio", issued December 1927, 66 pages, dimensions 140 x 205 mm, language: Dutch.

The first pages are dedicated to the Philips radio industry. After that, the functions to be performed by the several tubes of a radio set are being described.

A brief description is provided for 17 tube types has been provided for, including the static data (set-point) and a graph (Ia-Vg characteristic). Also, the static data of another 11 tube types have been included in a table.

The book concludes with the description of some Philips products like battery chargers, power supplies, loudspeakers and safety devices (fuses, overvoltage protectors). Note also the paragraph "De stem van de Reus" ("The Giants voice").



Folder 3. "Illustrated sheets Transmitting".

These separate data sheets are dated 1928 through 1930, dimensions 160 x 240 mm, semi gloss paper, both sides printed.

The language differs per tube type, most are in German and French, some are in Dutch or English.

At the frontside a nice photograph is presented, together with a short description and main properties of the tube.

The backside offers a graph and a data table.



Folder 4. "Box A-4 sheets Transmitting".

A box containing 60 separate sheets DIN A-4 format, semi gloss paper, both sides printed.

The language differs per tube type, most German and French, some are in Dutch.

The release date is missing on most of the data sheets. The year of release, 1937 or 1938 is shown on just a few pages.

Based on this, it is assumed that this box was issued around 1939.

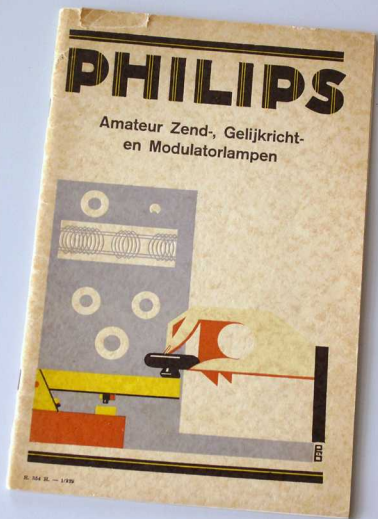
Each data sheet offers a photograph and a description of the tube concerned at the frontside. A graph and a table with the most important data is offered at the back.

Only a slight overlap of tube types exists with tubes in folder 3, quite understandable, because their release date was some 8 years earlier than this box.

Enjoy this CD, a window on the radio engineering of the 1930's.

Reeuwijk, October 2010

Adri de Keijzer



Folder 1 nr.2.

Booklet "Philips Amateur Zend-, Gelijkricht- en Modulator-lampen", issued February 1929, 32 pages, dimensions 160 x 240 mm, language: Dutch.

A brief introduction is followed by a chapter: 'Hints for the (proper) use of Philips Amateur transmitting tubes'. After that, the data of twelve Transmitting tubes and rectifiers are presented, each containing a photograph, a brief description, static data (set point) and graphs (Ia-Vg, or Ia-Va in case of rectifiers). A data set covers 2 pages for each transmitting tube and 1 page for a rectifier tube. A large sheet is going with this book, showing the graphs of eighteen Philips tubes, such as power tubes F410, F704 and rectifiers 1561, 1562, 1805, 1823, etc.

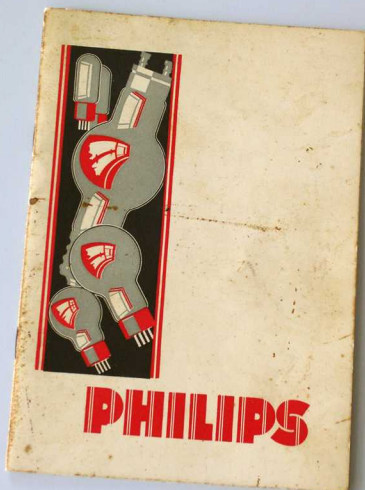
Folder 1 nr.3.

Booklet "Les Tubes Redresseurs", issued October 1929, 32 pages, dimensions 140 x 206 mm, language: French.

Descriptions of rectifier circuits and instructions for use of gas filled rectifiers.

The charging process of lead-acid batteries is discussed as well.

Data are presented in tables only, both for 33 types of rectifier tubes as well as for 20 current regulator tubes used in charging equipment. Some photographs (sometimes neat glass art!) are offered also.



Folder 2. "Instruction sheets Receiving".

The phrase 'Instruction sheet' reflects the kind or character of the description, found in each of the files presented.

These separate data sheets were released from 1929 through 1930, dimension 90 x 210 mm, both sides printed. Some are double size (180 x 210); In the .pdf files this means 4 instead of 2 pages.

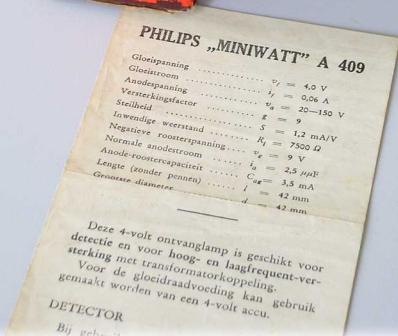
Most of the files are in the German or French language, a few are in Dutch, Italian or Spanish.



The first page starts with the static data and dimensions of the tube.

This listing is followed by the description mentioned earlier. In many cases the text is continued on page 2. The data set, is completed with an Ia-Vg characteristic of the tube concerned.

Pages 3 and 4, if available, offer advertisement for Philips low-frequency transformers and a listing of other Philips products used in radio's, amplifiers and transmitters.



It is quite certain, that the data sheets presented here, were packed up with tubes for retail. Anyway, the box on the photograph contains such a data sheet.

This assumption is supported also by the character of the description. The user of the tube gets step by step instructions, about the proper layout of the filament circuit, how to connect the plus- and minus pole of the neg. grid voltage battery and anode battery, etc.