

JEITA Battery Run Time Measurement Method (Ver. 1.0)

This document explains the method of measuring battery run time with the JEITA Battery Run Time Measurement Method (Ver. 1.0). Current products have a variety of methods for setting power management, and screens may differ from this example. If this is the case, use the settings which most closely match the example.

Calculate the battery run time as follows; [(measurement method a) + (measurement method b)] / 2.

Round the result downward to one decimal point and display the result as x.y. It is acceptable to use the term "approximately" or "about."

Example: For measurement method a) 3 hours 15 minutes, measurement method b) 8 hours 7 minutes.

$$(195 \text{ minutes} + 487 \text{ minutes}) / 2 = 5.683 \text{ hours}$$

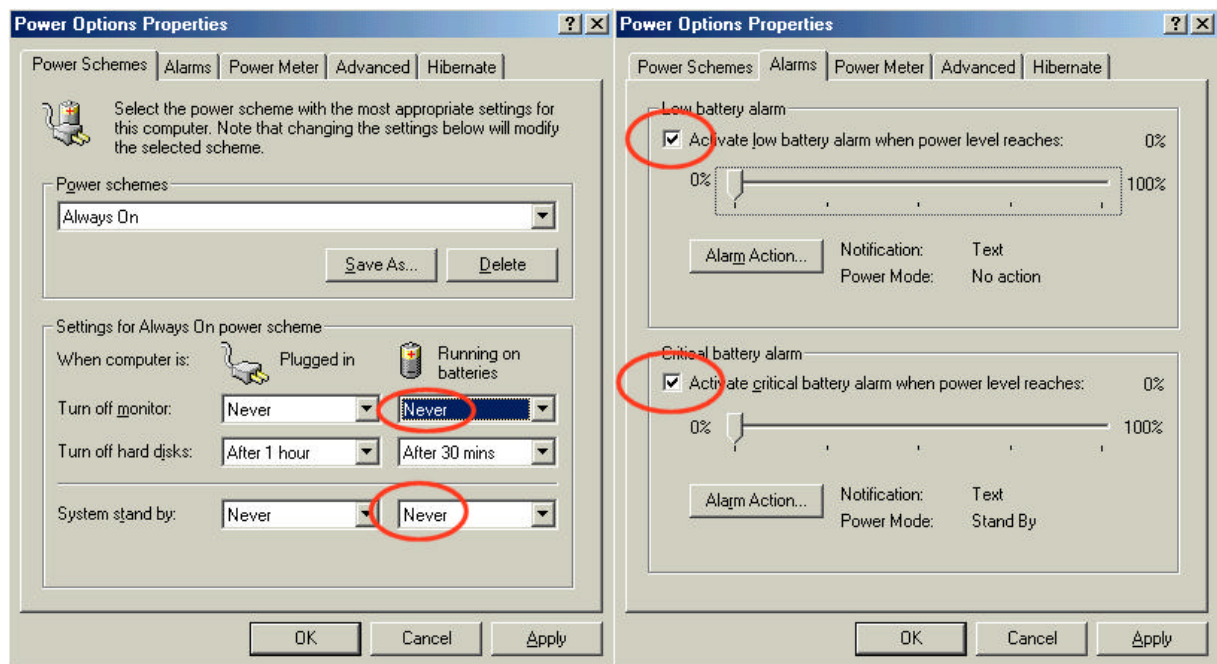
Thus, round down to 5.6 hours (or about 5.6 hours).

It is necessary to disclose all information on settings which are different from the factory shipping default.

(Examples of Disclosure: By Web, By information center, By Brochure.)

Margin on the measured value to the published value will not be defined.

Example: Figure 1

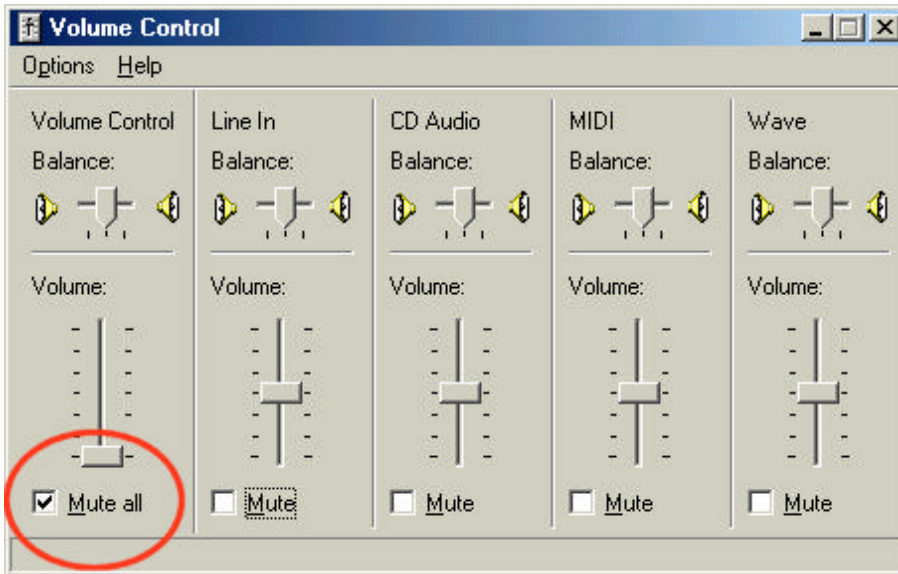


Measurement method a)

At a display luminous intensity of 20 cd, measure the continuous playback time of one MPEG moving image file read from a hard disk.

1) Sound should be set to the minimum (mute is acceptable).

Example: Figure 2



2) Minimum luminous intensity of 20 cd for LCD

While displaying white on the LCD, set the luminous intensity to a minimum of 20 cd. Any luminous intensity exceeding 20 cd (such as 25 cd) is acceptable. Do not reduce the luminous intensity of the white area to less than 20cd during measurement. The white will be defined as the R, G and B data of each pixel to their maximum values.

-> A fluctuating luminous intensity is acceptable during measurement as long as it does not fall below 20 cd.

-> How to set the values for the LCD to exceed the 20cd should be disclosed so that the luminous intensity for measurement can be set without the need for an intensity meter (Example: Two steps from the lower end of a five-step intensity range).

3) Software used for movie playback: Not Defined. Software which is bundled in the shipping unit is preferred. Software which is used must be disclosed. For example: Windows Media Player

The user should be able to obtain the same playback software used for the measurement by downloading or purchasing the same package separately.

4) Play back size of the movie.: One time (320 x 240)

5) Percentage setting of Battery remaining to define as end of the test: Not defined.

-> It is acceptable to disable the percentage checking and run the test all way down to actual battery empty

6) Margin between measured results and value published in product catalog: Not defined.

-> May follow the guideline of each PC manufacturer

7) Charging the Battery for testing: Charge the Battery in the notebook PC itself.

8) Condition of battery (degree of degradation, etc.): Not defined.

-> Can be determined by each PC manufacturer.

9) Setting the other power management: Not defined.

-> Power management should not cause any frame drops during playback of the movie.

10) Location of movie file:

Store the movie file on the hard disk, and always play back the file by reading it directly from the hard disk during playback. However, if there is no hard drive in the system (example PDA) the movie file may be stored in a secondary memory source such as a Flash Card.

Storing or caching the entire moving image file in a main memory during measurement is prohibited.

In case if the file cached, link the movie file multiple times so that the size for the file will exceed the main memory.

11) Foreground applications and background applications running during measurement: Not defined.

-> If the computer setup has changed from the factory shipping default, disclose the change.

Measurement method b)

Set the notebook PC so that the desktop screen is displayed at the lowest luminous intensity of the LCD. Power management settings are not defined in detail, but information on the settings should be disclosed.

Regulated items

1) Luminous intensity of LCD: Set to the lowest possible value.

-> Neither the backlight nor the screen should be set to OFF. However in the case of system which has reflective type LCD, it may be measured without backlight.

2) Margin between measured value and value published in product catalog: Not defined.

-> May follow the guideline of each PC manufacturer

3) Foreground applications and background applications running during measurement: Not defined.

-> If the computer setup has changed from the factory shipping default, disclose the change.

4) Percentage setting of Battery remaining to define as end of the test: Not defined.

-> It is acceptable to disable the percentage checking and run the test all way down to actual battery empty

5) Powering-off of hard disk drive: Not defined. Powering-off the hard disk drive during measurement is acceptable.

-> The power management value can be the lowest value that can be set.

6) Other power management: Not defined.

-> As long as the screen and backlight are on during the measurement, no other regulation applies.

However, the power management settings should be disclosed.

Sample settings:

