

Evidence for the Earth and Fuse proposed characters

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[Document History](#)














This document provides some background on the use of the symbols for electrical earth and fuse proposed for encoding in the US comments on 10646:2003/Amd 1 (SC2/WG2 N2757R) and in L2/04-161.

A description of the concepts of electrical ground can be found at <http://www.ee.upenn.edu/rca/instruments/misctutorials/Ground/grd.html>. Roughly, the proposed EARTH GROUND symbol represents an electrical connection to the earth.

Both symbols are commonly used circuit diagrams, but more importantly for our purposes, they also appear in safety instructions:

- here is a fragment of a user manual for electrical equipment which lists symbols presumably found on the equipment itself (page 6 of http://www.lakeshore.com/temp/cus/102_Manual.pdf):

1.5 SAFETY SYMBOLS

	Direct current (power line).
	Alternating current (power line).
	Alternating or direct current (power line).
	Three-phase alternating current (power line).
	Earth (ground) terminal.
	Protective conductor terminal.
	Frame or chassis terminal.
	On (supply).
	Off (supply).
	Equipment protected throughout by double insulation or reinforced insulation (equivalent to Class II of IEC 536 - see Annex H).
	Caution: High voltages; danger of electric shock. Background color: Yellow; Symbol & outline: Black.
	Caution or Warning - See instrument documentation. Background color: Yellow; Symbol and outline: Black.
	Fuse.

- here is a fragment of a user manual for a television set with shows the EARTH GROUND inline with text (page 2 of http://www.jvc.co.uk/files/instruction_manual/lct1440-001a-u-en.pdf):

Important

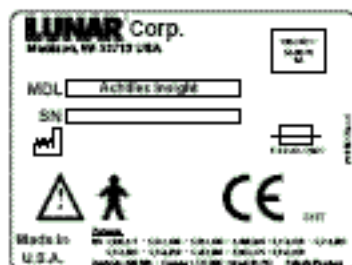
Do not make any connection to the larger terminal which is marked with the letter E or by the safety earth symbol \perp or coloured green or green-and-yellow.

- here is another similar fragment from another user manual (page 3 or http://www.tascam.de/fr/docs/CD-RW750_Manuel.pdf):

IMPORTANT : N'effectuer **AUCUNE** connexion sur la plus importante des broches, repérée par une lettre E, un symbole de terre \perp , la couleur verte ou jaune/vert.

- here is an example for the fuse symbol (French “fusible” = fuse), from yet another user manual (page 10 of http://apps.gemedicalsystems.com/LunarDistributors/files/insight/manual/insight_opmanc_french.pdf).

i.4.1 Symboles et étiquettes externes



Etiquette du système : Cette étiquette contient les informations concernant la puissance d'alimentation du système et sa conformité.



Informations relatives à la sécurité : L'utilisateur doit respecter les informations relatives à ce symbole pour un fonctionnement en toute sécurité de l'Achilles InSight. Consultez ce manuel pour les informations importantes relatives à la sécurité



Marque CE : elle indique la conformité avec la norme du Conseil européen 93/42/CEE sur les appareils médicaux, Annexe II.



Equipement de type B : signale que l'Achilles InSight possède une protection de type B contre les chocs électriques. Consultez IEC-601-1 pour de plus amples informations sur la qualification des équipements de type B.



Calibre du fusible : indique les informations concernant le calibre du fusible et la tension d'entrée de l'Achilles InSight.

i.4.2 Symboles et étiquettes internes



Prise de terre de sécurité : Branchements électriques mis à la terre afin d'assurer la sécurité de l'opérateur et du patient.

Document History

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Revision	Date	Comments
1	June 10, 2004	Initial version