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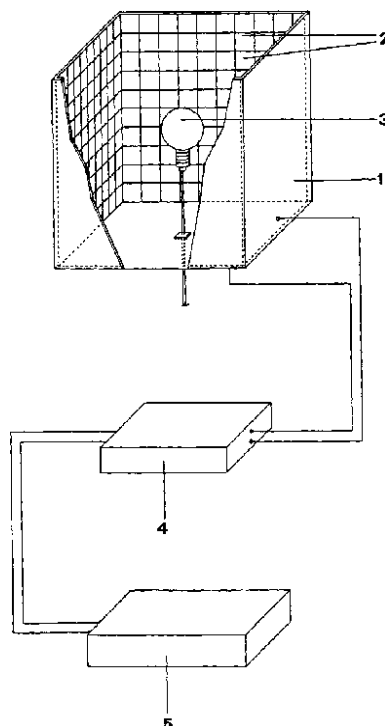
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(54) 【発明の名称】 電子装置のための人工光源と共に作動する太陽電池付きパワー供給装置

(57) 【要約】

一個以上の太陽電池(2)でカバーされた構造(1)からなる電子設備用の、人工光源で作動する、太陽電池を備えた供給装置であって、該装置は電流で供給されるLEDダイオードランプを備えた光源(3)からなり、できれば比較的安定化システム及び自然太陽光でいつまでも作動可能な用途に適する。



【特許請求の範囲】

【請求項 1】

ユーザーデバイス(5)に対置して、比較的安定化された供給装置を備えており、自然光がないときランプ及び/又は電気システムによって供給されるLEDからなる光源(3)よりなる、内部が太陽電池でカバーされた巻き方構造(1)を特徴とする、電子設備の作動用装置。

【発明の詳細な説明】

【技術分野】

【0001】

本発明は電子装置のための、人工光源と共に作動する太陽電池付き供給装置に関する。

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【背景技術】

【0002】

小さな振幅のシグナルの増幅のため提供するこれらの電子装置の主な問題の一つが、増幅されるべき最小のシグナルを限定する背景ノイズからなることは知られている。

【0003】

ノイズは正確な計画の立案によって、特にエネルギー源、即ち供給に大きな注意を拂うことによって減少される。

【0004】

通常、電気エネルギーの配電ネットによって得られる全ての供給は、ノイズと電波障害を発生し、これらは電子増幅装置の解像力を制限する。

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【0005】

その現象は、供給ノイズを減少させてこの現象を回避させるため、過度に改良されすぎた供給回路が使用されるオーディオ装置に見られる。

【0006】

かかるノイズを減少させるための別の解決は、バッテリー供給あるいは蓄電池を用いることであるが、これらは良い結果をもたらしても明らかな不利益を有する。事実、電気ネットから来る全ての電波障害は除去される；整流回路がないので、ノイズと共に整流ダイオードのバンドスイッチングノイズが除去される。

【0007】

かかる供給の使用について実施されたテストから、電気化学反応時間に又は使用された材料にリンクする現象が現われ、そして該現象は音響分野にて明らかに聞き取れる：

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- 高周波ハーモニーを形成する小さいシグナルは、正位相が再現されないか、又はカットすらされる；

- 傾聴にかんして環境が失われる；

- その現象は記録相において勿論のこと、再製においても聞きとれる、そして環境は音の再生において最も重要なパラメーターの一つである。

【0008】

従って、ネットにつながらないし、また電気化学的自然のものでもないエネルギー源を得るための直流発電機又は交流発電機のような発生機に戻ることは可能である、これによって該発生機は動く部分からなり、ノイズでうるさいので、これらの作業の一定の制御が要求される。

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【発明の開示】

【発明が解決しようとする課題】

【0009】

動かないで、かつ何らの制御を要求しない、かなり耐久性のある電流源を活用する改新的方法により上記の問題を解決することが本件の目的である。

【課題を解決するための手段】

【0010】

上記の目的は、所望の電圧と電流が得られる迄、直列又は並列の一個以上の太陽電池で実現される構造からなり、かつ電流システム又は他の電源により供給されるダイオードラン

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ブを備えた光源からなり、またできれば相対的安定システムであって、使用のため送ることができ、そしてまたいつも可能であれば、自然の太陽光で作動できる、本発明の装置によって達成される。

【発明の効果】

【0011】

この供給タイプをもつ電子装置で得られた効果は、従来の供給システムのタイプよりも高いことが実証された。

【0012】

より一層小さいシグナルは、いかなるタイプの位相転換もなく、かつ正常振幅で格別高い解決法でもって再生されうる。

【0013】

音響再生装置を用いて、本発明は例外的で、絶対的に環境の再生を意味し、かくして従前の既知の装置では決して得ることができない結果を簡単な方法で達成する。

【0014】

音記録システムによってテストが実施され、他のシステムによって供給された同じ装置を用いたテストに比べて、本発明による供給手段で一層改良された結果が得られた。

【発明を実施するための最良の形態】

【0015】

本発明は実施態様を示された添付図面に関して以下詳細に説明される。

【0016】

図1は太陽電池2で内部がカバーされた巻き方構造1からなる、電子設備用の、人工光源で作動する、太陽電池を備えた供給装置を示し、更に該供給装置は自然光がないとき電気システムによって供給されるランプ及び/又はLEDからなる光源3を有しユーザーデバイス5に対置された比較的安定化された供給装置4を備えている。

【0017】

本発明に従って、電子装置用の人工光源で作動する、太陽電池を備えた供給装置は、音とビデオの記録/再生装置において、並びに電子メディカル装置、測定装置、無線シグナルを受信する装置、電子テレスコープ及び顕微鏡の如き高性能の解像度を要求する増幅器が用いられるこれら全てのデバイスにおいて使用される。

【図面の簡単な説明】

【0018】

【図1】本発明の電子装置のための、太陽電池付き供給装置の概略説明図である。

【符号の説明】

【0019】

- 1：太陽電池で内部がカバーされた巻き方構造体
- 2：太陽電池
- 3：光源
- 4：安定化された供給装置
- 5：ユーザーデバイス

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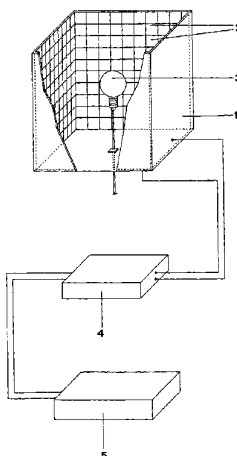
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(71) Applicant and (72) Inventor: AGOSTINELLI, Paolo [IT/IT]; Santa Croce, 2257/A, I-30135 Venezia (IT). For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A FEEDING DEVICE WITH SOLAR CELLS, WORKING WITH ARTIFICIAL LIGHT SOURCES, FOR ELECTRONIC EQUIPMENTS



WO 02/087064 A1



(57) Abstract: The feeding device with solar cells, working with artificial light sources, for electronic equipments consists of a structure (1) covered with one or more solar cells (2), comprising a light source (3) with led diodes lamps fed by the electric current, with the possible relative stabilization system and sending for use, and/or -if ever possible- susceptible of working with the natural sunlight.

WO 02/087064

PCT/IT01/00493

1

**A FEEDING DEVICE WITH SOLAR CELLS, WORKING
WITH ARTIFICIAL LIGHT SOURCES, FOR ELECTRONIC
EQUIPMENTS**

5 The present invention concerns a feeding device with solar cells, working with artificial light sources, for electronic equipments.

10 It is known that one of the main problems of those electronic equipments that shall provide for the amplification of signals of small amplitude consists of the background noise that limits the minimum signal to be amplified.

15 The noise may be reduced by means of an accurate planning and, even more, by deserving a great attention to the energy source, i.e. to the feeding.

20 Usually, all feeding obtained by the distribution net of electric energy generates noise and statics, which limit the resolution of the electronic amplification equipments.

The phenomenon can be immediately heard in those audio equipments in which over-refined feeding circuits are used for reducing the feeding noise, for avoiding said phenomenon.

WO 02/087064

PCT/IT01/00493

2

Another solution for reducing said noise consists of the use of battery feeding or accumulator, with good results but with evident inconveniences. In fact, all statics coming from the electric net are eliminated; as there are no rectification circuits, together with the noise also the band switching noise of the rectification diodes is eliminated.

From the tests performed on the use of such feeding a phenomenon appears that might be linked to the electrochemical reaction time or to the used materials, and said phenomenon is clearly audible in the sound field:

- small signals forming the high frequency harmonics, are not reproduced with the correct phase or are even cut;
- in terms of listening, the ambience gets lost,
- the phenomenon is audible in the reproduction as well as in the recording phase, and the ambience is one of the most important parameters in the sound reproduction.

Therefore, it is possible to turn to generators like dynamo or alternators for obtaining an energy source that is not connected to a net nor of electrochemical nature, whereby said generators comprise moving parts, are noisy and require a constant control of their working.

WO 02/087064

PCT/IT01/00493

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It is the aim of solving above mentioned problems by means of an innovating solution that exploits a current source of a considerable duration, that does not move and that does not require any control.

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The aim set forth is reached by means of the device according to the present invention, consisting of a structure realized with one or more solar cells, in series or parallel, until the required tension and current are obtained, and comprising a light source
10 with led diodes lamps fed by the electric current system or by other electric sources, with the possible relative stabilization system and sending for use, and/or - if ever possible - obviously susceptible of working with the natural sunlight.

15 The results obtained in the electronic equipments with this kind of feeding have proved to be higher than any kind of conventional feeding system.

The smaller signals may be reproduced without any kind of
20 phase-displacement and in the correct amplitude, with a decidedly higher solution.

With sound reproducing equipments, all this implies an exceptional, absolutely likely ambience reproduction, thus

WO 02/087064

PCT/IT01/00493

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obtaining in a simple way results never obtained before by any known equipment.

5 Tests have been performed with sound recording systems and a considerable improvement has been obtained by means of the feeding according to the present invention, when compared with the same equipments fed with other systems.

10 The present invention will be explained more in detail hereinbelow relating to the enclosed drawing in which an embodiment is shown.

Figure 1 shows a feeding device with solar cells, working with artificial light sources, for electronic equipments, consisting of a structure 1 preferably winding, internally covered with solar cells 2, comprising a light source 3 consisting of lamps and/or led fed by the electric system also when there is no natural light, with a relative stabilized feeder towards user devices 5.

20 The feeding device with solar cells, working with artificial light sources, for electronic equipments, according to the present invention may be used in recording and reproducing equipments for sound and video and in all those devices where amplifiers are used requiring a high solution, like

WO 02/087064

PCT/IT01/00493

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electromedical equipments, measuring equipments,
equipments for receiving radio signals, electronic telescopes
and microscopes.

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WO 02/087064

PCT/IT01/00493

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CLAIM

1. A device for the working of electronic equipments,
characterized in a structure (1) preferably winding, internally
5 covered with solar cells (2), comprising a light source (3)
consisting of lamps and/or led fed by the electric system also
when there is no natural light, with a relative stabilized
feeder (4) towards user devices (5).

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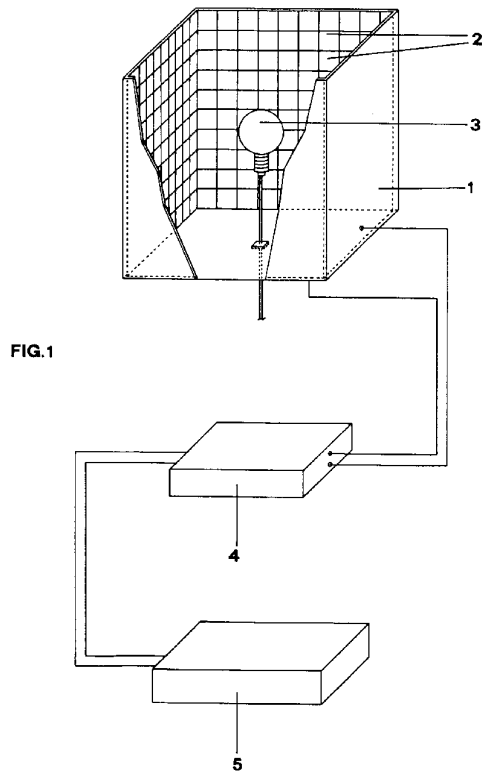
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WO 02/087064

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【 国際調査報告 】

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B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 H02N				
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched				
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data				
C. DOCUMENTS CONSIDERED TO BE RELEVANT				
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<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex.				
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Date of the actual completion of the international search 14 February 2002	Date of mailing of the international search report 22/02/2002			
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-3340, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Visentin, A			

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