[0086] If the lamp current is found at block **40** to be less than or equal to the upper value of the allowable current range and the duty cycle of the high frequency PWM signal is not at its maximum preset value, then the duty cycle of the high frequency power signal is incrementally increased and control then returns to block **28** of **FIG. 4***a*.

[0087] Finally, if the lamp current is found at block **40** to be less than or equal to the upper value of the allowable current range and the duty cycle of the high frequency PWM signal is at its maximum preset value, then control returns to block **28** of **FIG. 4***a* to wait for a further interrupt.

[0088] The present invention, at least in its preferred form provides a number of advantages over the prior art. The reduction of the number and length of wiring reduces the amount of power loss through EMI and capacitive coupling and therefore allows the power rating of the power supply to be reduced or additional lamps to be added to the backlighting system. The positioning of the circuit board substrate in the present invention also beneficially minimises the footprint of the backlight system. The control algorithm of the controller in accordance with the present invention ensures that the power supplied to the various lamps within the backlighting system are balanced so that a consistent brightness of the display screen may be obtained across its entire surface area. The control algorithm also extends the operating life of the lamps by maintaining their operating temperature and current within allowable parameters.

[0089] **FIGS. 5***a* and **5***b* demonstrate the types and waveforms of electrical signals at various positions throughout the electrical circuit in the preferred embodiment of the present invention. In **FIG. 5***a* an additional circuit element of a DC input filter **2***a* has been illustrated (although this could form part of the inverter **2**,**3**) which effectively smoothes or filters the superposed low **52** and high **53** frequency PWM power signals.

[0090] **FIG. 5***b* illustrates the way in which the low **52** and high **53** frequency PWM signals are combined and filtered. The duty cycle of the example signals **52** and **53** shown in **FIG. 5***b* is approximately 50% (that is, $t_{ON} \approx t_{OFF}$). Preferably, the low and high frequency signals are effectively logically ANDed together so that signal **50** is high only if both signals **52** and **53** are high at the same time. The output of switch **15** is therefore a pulsed 12V DC signal consisting of high frequency pulses in a low frequency envelope having substantially the same shaped waveform as signal **50**.

[0091] Ripples **54** appear in waveform **51** as a result of the filtering or smoothing of the high frequency component of the combined signal **50**. Royer **2** converts waveform **51** to an AC signal **55**, preferably without altering its magnitude significantly. Transformer **3** then steps up the AC signal to a higher voltage AC signal **56** for supply to the light source **5** or sources of the display apparatus.

[0092] It should be noted that the present invention could incorporate light sources other than CCFT lamps which require Energisation via an AC current. For example, light sources in which the output brightness is dependent upon the magnitude of an AC or DC voltage could be utilised in which case it may not be necessary to provide inverters **2**,**3**.

[0093] Aspects of the present invention have been described by way of example only and it should be appreciated that modifications and additions may be made thereto without departing from the scope thereof.

1-11. (canceled)

12. A power distribution system for at least one light source within a display apparatus wherein a control means controls the distribution of power to the at least one light source by carrying out the steps of,

i) detecting the electrical power consumed by the at least one light source,

ii) determining whether the electrical power consumed by the at least one light source is within predetermined limits,

iii) regulating the electrical power supplied to the at least one light source based upon the detected power consumption to maintain or return the power consumed by the at least one light source between said predetermined limits and

iv) repeating steps (i) to (iv).

13. A power distribution system as claimed in claim 12, wherein the step of regulating the electrical power supplied to the at least one light source comprises providing the tight source with a first light source brightness controlling power signal and a second light source current controlling power signal.

14. A power distribution system as claimed in claim 12, wherein said display apparatus includes a plurality of control means, each of which are connected to an associated inverter to control the power distributed to more than one fluorescent light source, wherein a capacitor associated with each fluorescent light source and its associated inverter.

15. A power distribution system as claimed in claim 12, wherein the power consumed by the at least one light source is determined by sensing the current through the at least one light source.

16. A power distribution system as claimed in claim 12, wherein said display apparatus also includes a temperature sensor which provides said control means with an indication of the temperature in the vicinity of the at least one light source and the control means also carries out the steps of:

iia) determining whether the temperature of the at least one light source is within predetermined limits, and

iiia) adjusting the power supplied to the at least one light source based upon the temperature indication to maintain or return the temperature of the at least one light source between said predetermined limits.

17. A power distribution system as claimed in claim 14, wherein, the display apparatus also includes cooling means adapted to provide variable cooling to the at least one light source, wherein the control means also carries out the step of:

iiib) controlling the electrical power supplied to the cooling means based upon the temperature indication to maintain or return the temperature of the at least one fight source between said predetermined limits.

18. A power distribution system as claimed in claim 17, wherein the respective steps of regulating and adjusting the electrical power supplied to the at least one light source and the step of controlling the power supplied to the cooling