MEASUREMENT/TECHNICAL REPORT

Duro-Test Corporation - Model: 1197LN
FCC ID: M64-DT3
March 1998

This report concerns (check one:) Original Grant__X__ Class II Change_____

Equipment Type: Fluorescent Ballast (example: computer, printer, modem, etc.)

Deferred grant requested per 47 CFR 0.457(d)(1)(ii)? Yes___ No_X__

If yes, defer until: _____
date

Company Name agrees to notify the Commission by: _____
date

of the intended date of announcement of the product so that the grant can be issued on that date.

Transition Rules Request per 15.37? Yes___ No_X__

If no, assumed Part 15, Subpart B for unintentional radiator - the new 47 CFR [10-1-95 Edition] provision.

Report prepared by:

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EXHIBIT 1

GENERAL DESCRIPTION

1.0 General Description

1.1 Product Description

The ballast consists of two sub-systems. The first is a double voltage rectification circuit responsible for the rectification of a 120 volt 50/60 Hz line input to a stable DC voltage. The later system is an an oscillating circuit that is used to drive the fluorescent arc tube at a high frequency voltage. All timing is derived from 30kHz to 38kHz in the oscillating circuit.

1.2 Related Submittal(s) Grants

This is a single Application for Certification. No simultaneous filings under Part 18.

1.3 Test Methodology

Both AC mains line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.4 (1992). All measurements were performed in Open Area Test Sites. Preliminary scans were performed in the Open Area Test Sites only to determine worst case modes. For each scan, the procedure for maximizing emissions in Appendices D and E were followed. All Radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "**Justification Section**" of this Application.

1.4 Test Facility

The open area test site and conducted measurement facility used to collect the radiated data is located at 593 Massachusetts Avenue, Boxborough, Massachusetts. The North site was used. This test facility has been fully described in a report dated November 20, 1996 submitted to your office. Please reference the site filing number: 31040/SIT 1300F2, dated January 16, 1997. Each test site is accredited by the NVLAP program.

EXHIBIT 2

SYSTEM TEST CONFIGURATION

2.0 System Test Configuration

2.1 Justification

The system was configured for testing in a typical fashion (as a customer would normally use it). During testing, all cables were manipulated to produce worst case emissions.

Radiated emissions test was not performed as the unit operates below 1.705 MHz.

2.2 EUT Exercising Software

There was no special software to exercise the device.

2.3 Special Accessories

There are no special accessories necessary for compliance of this product.

Confirmed by:

Andrew J. Bellezza
EMI Engineering Supervisor
Intertek Testing Services NA Inc.
Agent for Duro-Test Corporation

Andrew T. Bellezza Signature

3-27-98 Date

2.4 Equipment Modification

Any modifications installed previous to testing by Duro-Test Corporation will be incorporated in each production model sold/leased in the United States.

No modifications were installed by Intertek Testing Services NA Inc.

Confirmed by:

Andrew J. Bellezza
EMI Engineering Supervisor
Intertek Testing Services NA Inc.
Agent for Duro-Test Corporation

Andrew T. Bellezza
Signature

3-27-98
Date

2.5 Support Equipment List and Description

The FCC ID's for all equipment, plus descriptions of all cables used in the tested system (included inserted cards, which have grants) are:

Cables:

(1) AC Line Cord (1.8m, unshielded)

EXHIBIT 3

EMISSION RESULTS

3.0 Emission Results

Data is included of the worst case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs, data tables and graphical representations of the emissions are included.

3.1 Field Strength Calculation

The field strength is calculated by adding the reading on the Spectrum Analyzer to the factors associated with preamplifiers (if any), antennas, cables, pulse desensitization and average factors (when specified limit is in average and measurements are made with peak detectors). A sample calculation is included below.

FS = RA + AF + CF - AG + PD - AV

where FS = Field Strength in dBμV/m
RA = Receiver Amplitude (including preamplifier) in dBμV
CF = Cable Attenuation Factor in dB
AF = Antenna Factor in dB
AG = Amplifier Gain in dB
PD = Pulse Desensitization in dB
AV = Average Factor in dB

In the radiated emission table which follows, the reading shown on the data table may reflect the preamplifier gain. An example of the calculations, where the reading does not reflect the preamplifier gain, follows:

FS = RA + AF + CF - AG + PD + AV

Assume a receiver reading of 62.0 dBμV is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted. The pulse desensitization factor of the spectrum analyzer was 0 dB, and the resultant average factor was -10 dB. The net field strength for comparison to the appropriate emission limit is 32 dBμV/m. This value in dBμV/m was converted to its corresponding level in μV/m.

RA = 52.0 dBμV/m
AF = 7.4 dB
CF = 1.6 dB
AG = 29.0 dB
PD = 0 dB
AV = -10 dB
FS = 52 + 7.4 + 1.6 - 29 + 0 - 10 = 32 dBμV/m
Level in μV/m = Common Antilogarithm [(32 dBμV/m)/20] = 39.8 μV/m