

Message protocol, timing and duty cycle calculation.

The data output is phase encoded Manchester which has inherent 50% duty cycle and consists of 64 bits per word.

A supervision transmission is five identical words separated by (start to start) by nominal 125mSec (100mSec min, 150mSec max). Each message has a nominal data rate of 3.7 kB/s (3.2kB/s min to 4.2kB/s max). Therefore the duty cycle calculation is as follows:

The word format consists of 64 bits,

The duration of each bit is 312.5 uSec max.

The duty cycle over a 100mSec measuring period is calculated as follows:

Duty Cycle = Actual RF transmission ON time / 100mSec (interval)

Actual transmission ON time = 64 bits X 50% X 312.5uSec =
= 10mSec

Therefore Duty cycle = 10 / 100 mSec = .10 = 10%, and peak to average field strength is 20dB.

Total on-air time for a supervision transmission is
64 X 312.5 X 4 X 150 = 0.62 seconds

In the case of an alarm transmission, the group of five transmissions is repeated twice, with the second group delayed from the first by 1 second.

The worst case on-air time is 2 X (supervision time) + 1

= 2.24 seconds

Summary :- Duty cycle = 10%
On air time = 2.24 seconds max.

EXHIBIT 5

CFS8DL58450W

Report of Measurements.

Measurements were made in accordance with the procedures and reporting requirements of ANSI C63.4-1992.

The Test Set-Up (C63.4 section 10.1.3) is shown in the attached drawing. The attached photographs shows the attached power supply and telephony connections during the emissions measurements.

The sequence of testing (C63.4 section 10.1.7) for radiated emissions is as follows: A preliminary scan was conducted with the receiver antenna close to the EUT in order to identify the emission characteristics of the EUT (C63.4 section 8.3.1.1). The antenna and EUT were then placed at the proper separation with the EUT positioned on a non-conducting turntable. The EUT was rotated on the turntable to maximize the received signal strength, then the receiver antenna height was varied to further maximize the received reading. Thereafter, the device was again rotated to a peak output position and the antenna height was re-adjusted for maximum received signal. This procedure was re-iterated until there was no further increase in signal level. This procedure was performed with the EUT rotating in three orthogonal planes (C63.4 section 13.1.4.1) to generate a final maximum reading which is recorded on the radiated emissions result sheet.

See Exhibit 6 for list of test equipment (C63.4 section 10.1.4).

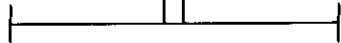
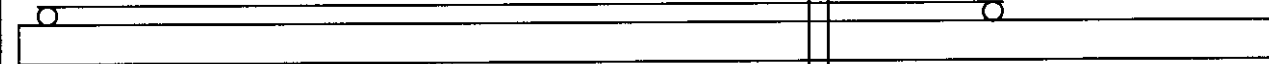
Note, Spectrum Analyzer resolution bandwidths set as follows;
(Video Bandwidth set greater than RBW)

- For occupied bandwidth measurements, RBW = 100kHz,
(This is in accordance with the minimum RBW allowed by C63.4, which requires RBW greater than 5% of the FCC required occupied bandwidth spec of 0.25% of center frequency).
- For radiated emissions below 1 GHz, the RBW = 100kHz.
Detector function set to peak.
- For radiated emissions above 1 GHz, the RBW = 1MHz.
Detector function set to peak.

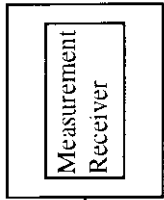
OCCUPIED BANDWIDTH is shown on attached plot.

RADIATED EMISSIONS are recorded on attached sheet.

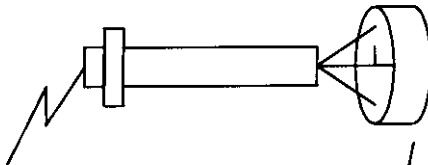
Antenna Height Position



Antenna



EUT on 1m high
non conducting
platform.



Turntable

Ground Plane

Note: EUT rotated in three
orthogonal planes.

RADIATED EMISSIONS DATA SHEET

DATE: 7/2/98 TESTED BY: Tom M. Martin APPROVED BY: _____

TEST SAMPLE (model): ADEMCO Transmitter

TEST METHOD: ANSI C63.4 - 1992

TEST SPECIFICATION: FCC Part 15, Subpart C

NOTES: 1) $F_c = 345$ MHz, 2) Detector = Peak, 3) Frequency range scanned to
4 GHz. Emissions not reported were more than 20 dB below the specified limit.

4) Conv. reading = $10^{\frac{(\text{Meter reading} + \text{Cable/Amp factor} + \text{Antenna factor})}{20}}$

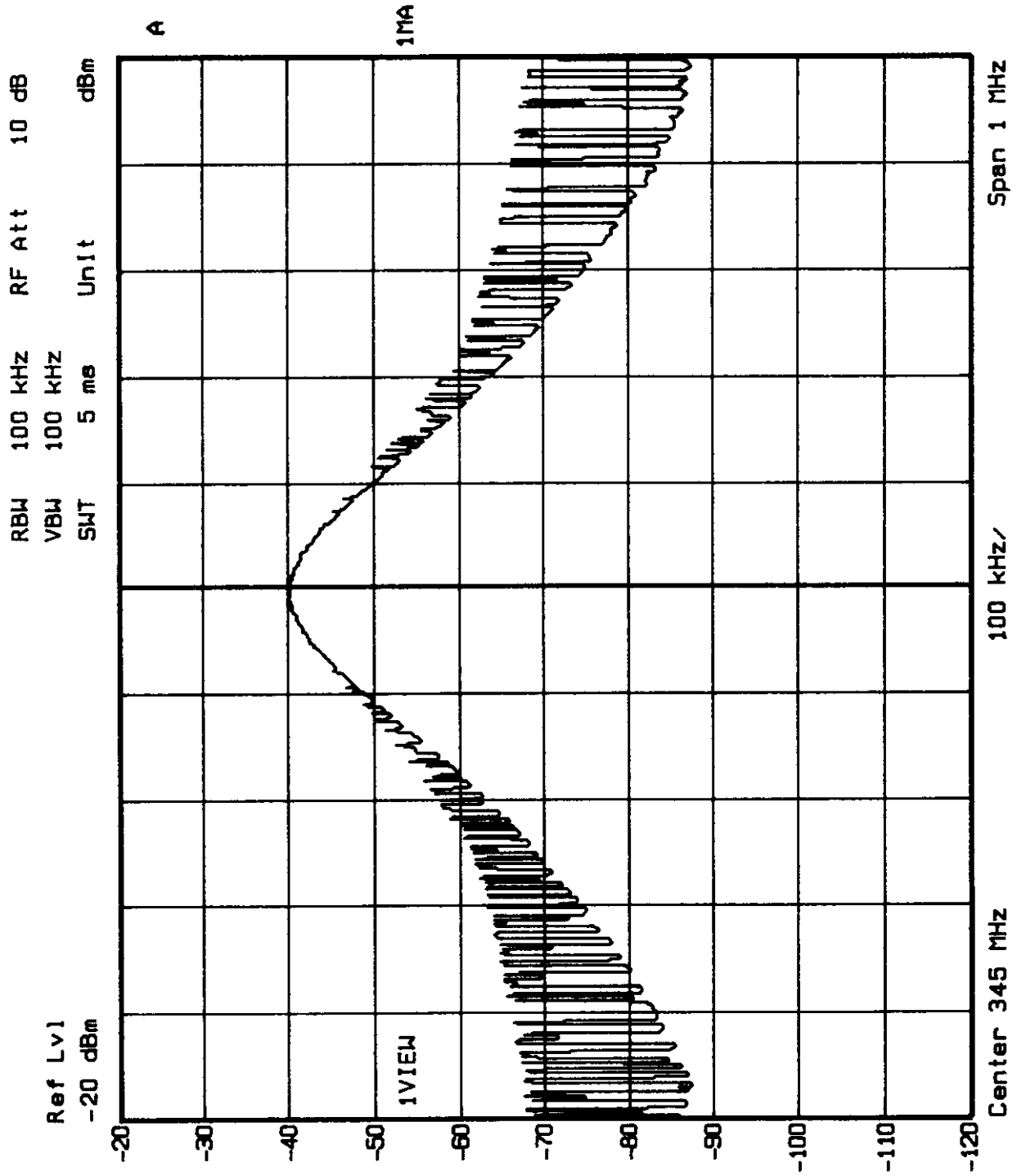
5) Corr. reading = Conv. reading X Duty cycle.

FREQUENCY (MHz)	POLARITY (V / H)	METER READING (dB uV)	CABLE/AMP FACTOR (dB)	ANTENNA FACTOR (dB/M)	CONV. READING (uV/M)	DUTY CYCLE (%)	CORR. READING (uV/M)	LIMIT @ 3M (uV/M)
30								729
345	H	70	1.3	19.8	35892	10%	3589	7292
690	H	32	1.8	24.5	822	10%	82	729
1035	H	31	2.0	23.9	700	10%	70	500
1380	H	38	2.6	24.2	1738	10%	174	500
1725	H	39	3.0	26.1	2541	10%	254	729
4000								

®ADEMCO

Alarm Device Manufacturing Company
A Division of Pittway Corporation
165 Eileen way
Syosset, NY 11791

Occupied Bandwidth



Date: 26.JUN.98 13:59:53

EXHIBIT 6

CFS8DL58450W

Test Equipment List.

Model	Description	Calibrated	s/n
2383	Marconi Spectrum Analyzer	9/25/97	152048/006
2380	Marconi display	9/25/97	152046/056
Antenna	Roberts dipole 30 - 65 MHz	7/29/97	110
Antenna	Roberts dipole 65 - 180 MHz	7/29/97	110
Antenna	Roberts dipole 180 - 400 MHz	7/29/97	110
Antenna	Roberts dipole 400 - 1000 MHz	7/29/97	110
Antenna	Electrometrics Horn 1 - 18 GHz	7/24/97	6127
Cable	RG58U		-
2784	Tektronix spectrum analyzer	7/14/97	B010165