March 1, 2000

Mr. George Tannahill
Federal Communications Commission
Equipment Authorization Division
7435 Oakland Mills Road
Columbia, MD 21046

Ref: FCC ID: CN2M840-90HP, EA96178
Cattron Incorporated
Correspondence Reference # 12311

In response to the referenced inquiry:

A. Modulating frequency is 2 kHz, producing a data rate of 4000 baud. Since binary information is transmitted (only one level of bit of information per unit or symbol) bits per second and baud rate in this device are identical.

B. Description of the modulating signal: The message signal begins with a mark idle (quiet time) signal of –2.5 kHz deviation from center frequency for a period of 6 ms followed by 9 sets of 1 and 0 toggle bits. This is followed by a 750 mS period of RZ data (referred to as QSYNC). The rest of the message is NRZ data containing address, data, and error checking bits and is variable in length depending on the amount of functions active in the controller.

C. Applicant has removed the "unlicensed" reference in section 1 of the manual. Updated manual has been uploaded through add attachments. All of the other manual sections make no reference to unlicensed systems and are unchanged.

D. Emission Designator:

(2D + 2F)

2 x 2.5 + 2 x 2 = 9k0F1D

D = measured system deviation in kHz using Boonton 8220 modulation meter.

F = modulating data rate of 2 kHz

E. Photos show both the "paddle" control and "toggle" control configurations. Identical electronics are used in both versions.

F. Regarding your Item 7: Refer to page 3, Para. C, the HP 478 sensor and Narda 765-20 attenuator are coaxial 50-ohm devices. Refer to page 5, Para. E, note use of words "spurious emissions at the antenna terminal" and refer to page 6 heading of Table 1 "Transmitter Conducted Spurious". One can correctly infer that a coaxial "antenna terminal" is provided.

Sincerely,
Hyak Laboratories, Inc.

Rowland S. Johnson