

SUPPLEMENTARY INFORMATION

FORM 442 - EXHIBIT 1

In accordance with Item 10 the following is submitted to support our need for a construction permit.

- (1) This work is part of a total integrated effort of this Department's programs to provide the highest technical expertise in its Research and Development efforts. The General Electric Company, A.E.S.D. has proven an outstanding performance as a major contributor to the growth of Electronics.
- (2) The Department is fully qualified with proper technical personnel and financial funding to complete the program specified in this application.
- (3) (4) (5)

This project is to provide an adaptive array system suitable for use as a test bed and as a demonstration system. Both radar and communication system adaptive array experiments are to be performed after system design and construction are completed. To facilitate complementary computer simulation work, the recording of digitized antenna element signals is also planned as a function of this system. The design approach and experiment planning for the Adaptive Phased Array Demonstration Model are motivated by a need to verify the utility and practicality of adaptive detection system concepts. Practical applications and systems performance will be effected by partial implementation, signal environment, compatibility of adaptive array with other signal processing functions, avoidance of excessive system costs of array and sophisticated processing methods. Questions of signal environment analysis and simulation must include multipath propagation, reflections and polarization of received signals. Due to the relatively complex relations between the adaptive processor and other system parameters, a test bed array system can provide significant system performance information not attainable by other means. Moreover, factors of system performance can be isolated by the complementary use of experimental and computer simulation techniques. For example, recorded digitized array receiver signals employed as inputs to a computer simulation will isolate certain factors of performance. Further use of this off-line processing method is to evaluate other adaptive processor configurations.

- (6) This Department will operate transmissions in full compliance of the applicable FCC rules and clauses.

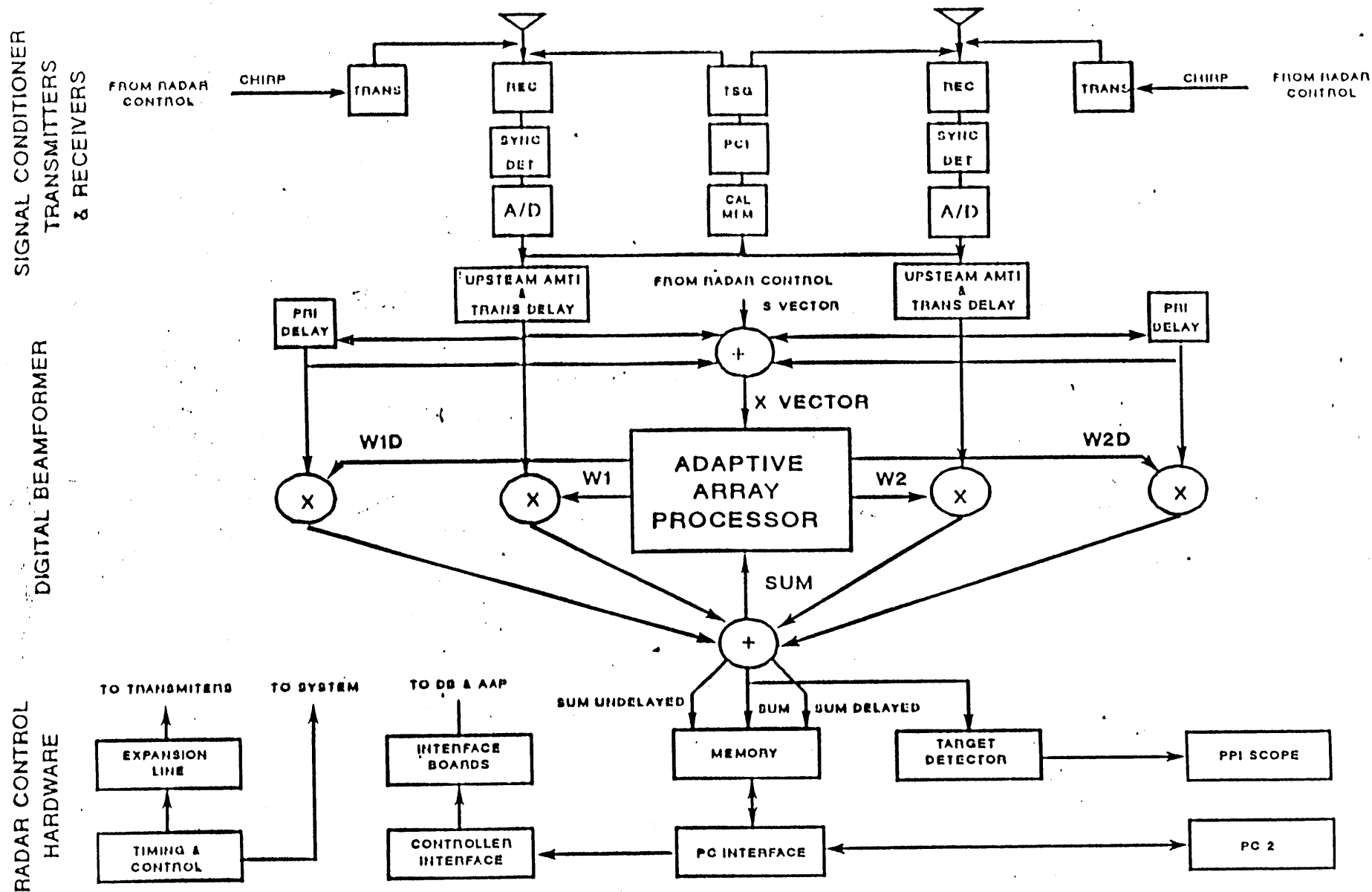
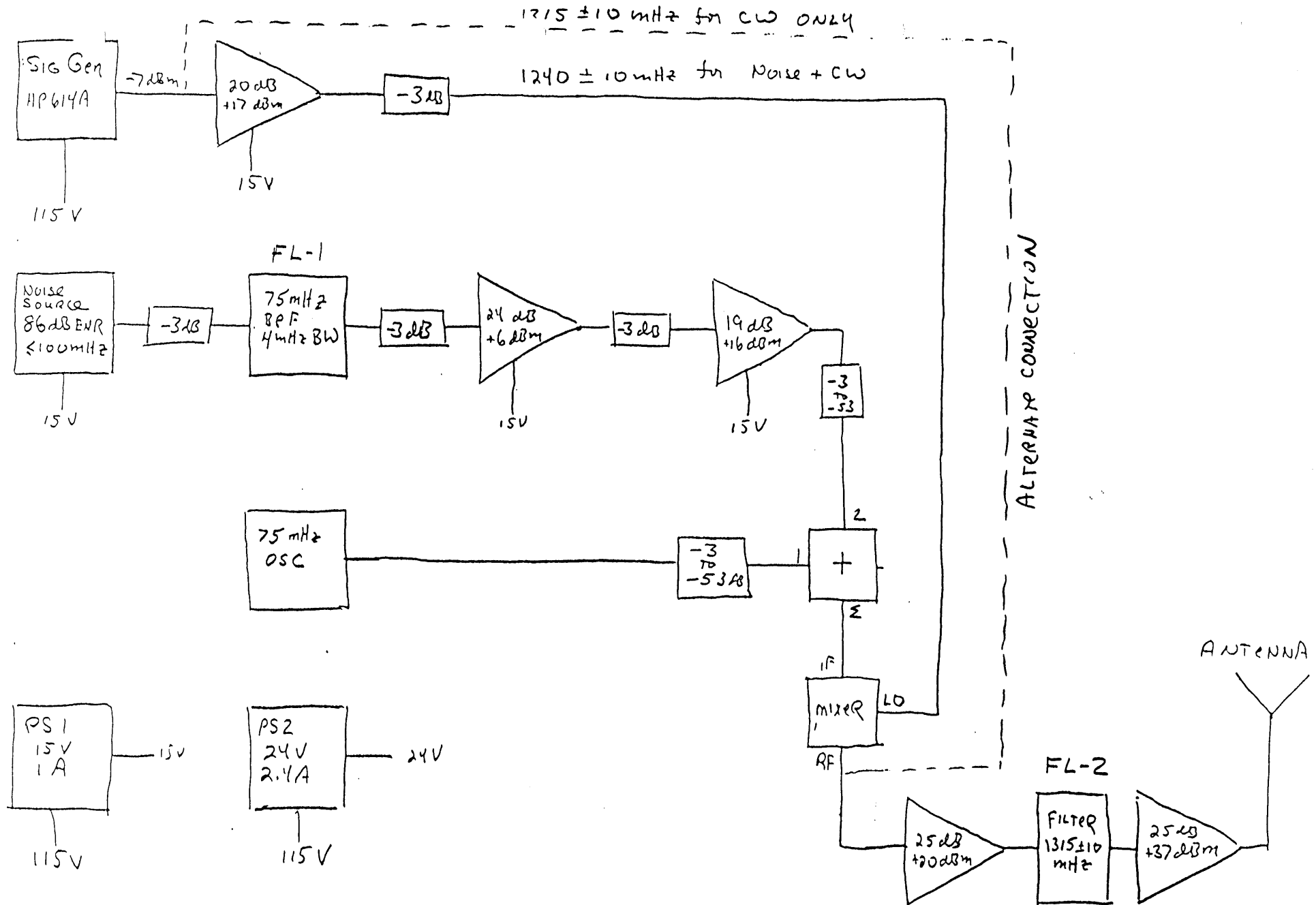


FIGURE 1 AES'S ADAPTIVE ARRAY DETECTION SYSTEM
(TWO CHANNELS SHOWN)



ADAPTIVE ARRAY DETECTION SYSTEM
JAMMER SOURCE MOBILE

E-X111B173

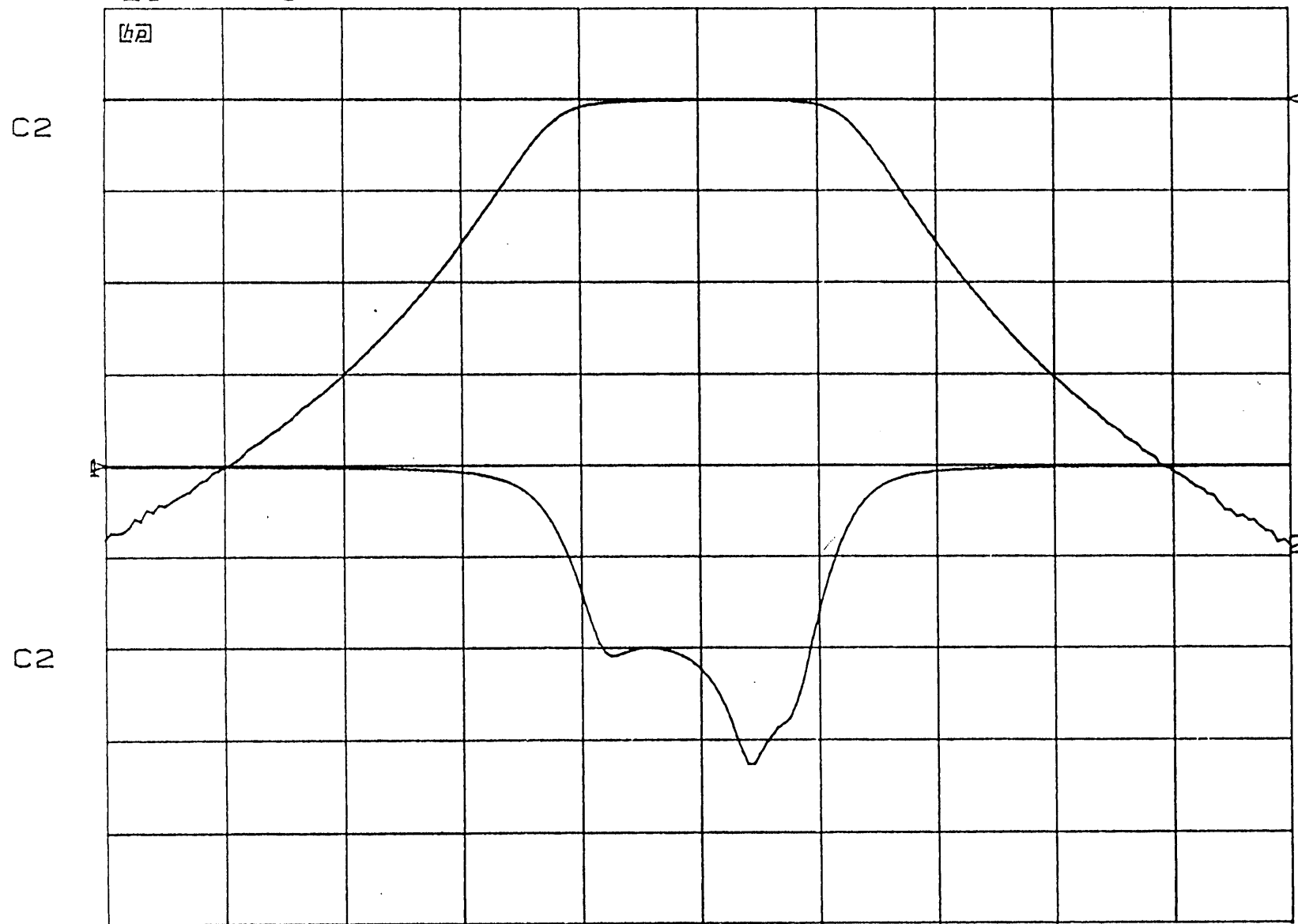
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L-BAND Filter

CH1 S₁₁ log MAG 10 dB/ REF 0 dB
 CH2 S₂₁ log MAG 10 dB/ REF -1.222 dB

FL-2



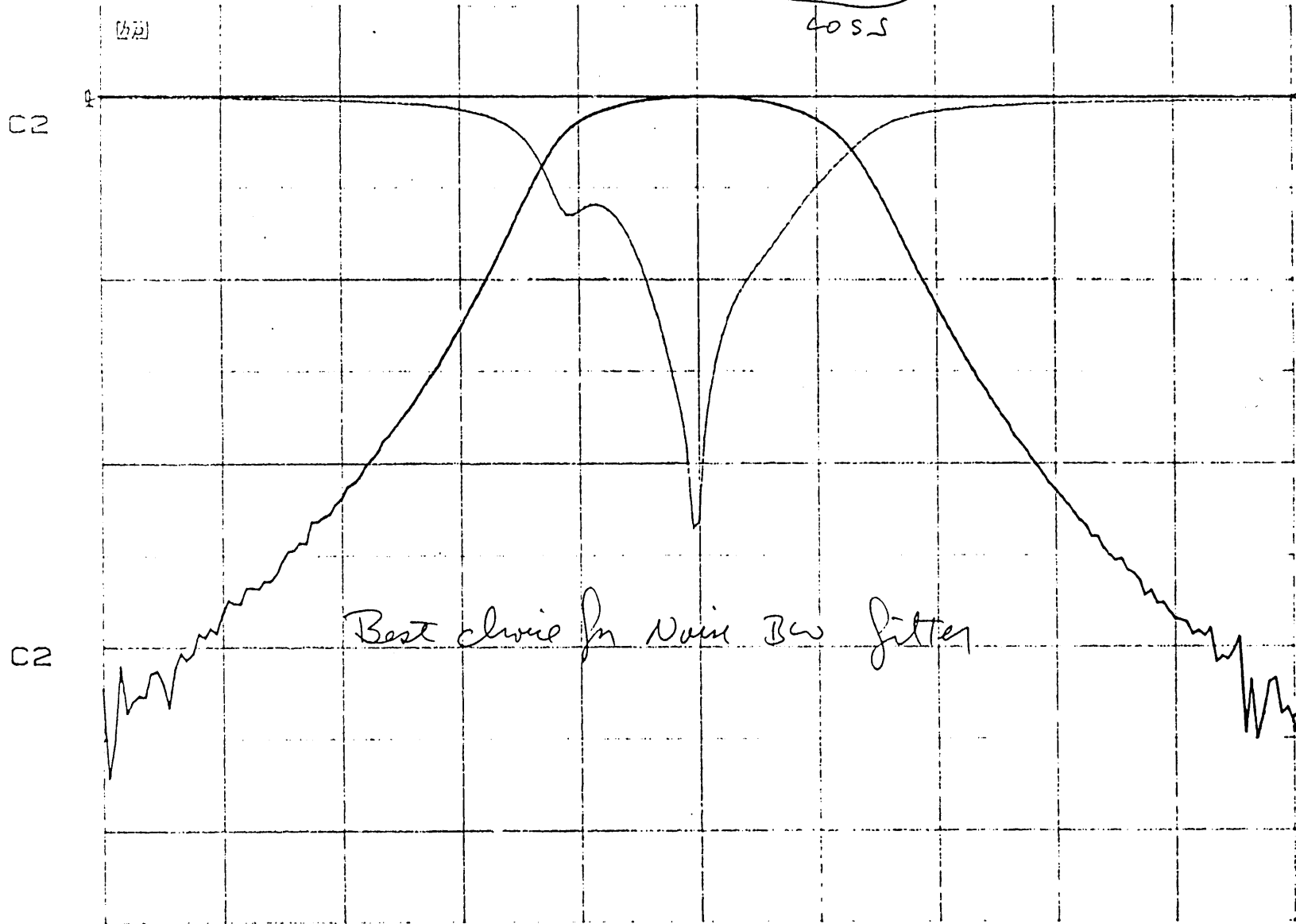
CENTER 1 315.000 000 MHz

SPAN 100.000 000 MHz

EXHIBIT 4

CH1 S₁₁ log MAG 10 dB/ REF 0 dB
 CH2 S₂₁ log MAG 10 dB/ REF -5.951 dB

FL-1



START 65.000 000 MHz STOP 85.000 000 MHz