



SOCIETÀ PER L'ELETTRONICA s.r.l.

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Exhibit 9: OpeAdditional Information in response to 47 CFR Ch.1 Sec. 2.1033

**External Radio Frequency
Linear Amplifier
Model Expert 1.5K-FA**



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Section c.1.

The Expert 1.5K-FA Linear Amplifier will be assembled and production testing performed in Italy (Rome) by S:P:E: (SOCIETÀ PER L'ELETTRONICA) s.r.l. The Company is located in via di Monteverde 33 – 00152 Rome Italy. The President and principal owner of S:P:E: is Dr. Eng. Scasciafratti Gianfranco.

The Company has designed and manufactured the EXPERT 1K-FA HF + 50 MHz linear amplifier accepted as FCC ID: UW31K-FA, the EXPERT 2K-FA HF + 50 MHz linear amplifier accepted as FCC ID: Y9C2K-FA and the EXPERT 1.3K-FA HF + 50 MHz linear amplifier accepted as FCC ID: 2ADK5GC324809 all are in volume production and are being presently marketed in the United States.

IMPORTANT INFORMATION: The Expert 1.5K-FA, object of this request, is practically equal to the EXPERT 1.3K-FA FCC ID: 2ADK5GC324809, the only difference is the use of an improved version of the final power MOSFET (MRF1K50HR5 or MRF1K80HR5 instead of MRF1K25HR5), same Producer, same family and same size.

Applicant for certification is S:P:E: s.r.l. Rome Italy.

Applicant is responsible for all aspects of quality assurance, marketing and service, as well as for the compliance with FCC rules.

Applicant has conducted or observed all design-proof testing and will re-test samples of production equipment on an ongoing basis to ensure conformance to Applicant's quality standards, including all FCC regulatory requirements.

Section c.2.

This product designed "SPE EXPERT 1.5K-FA" hereafter "EXPERT 1.5K-FA" is an external radio frequency power amplifier that covers all amateur bands from 1.8 MHz through 29.7 MHz and from 50 MHz to 54 MHz the legal and provides output power in all bands with a gain of not more than 15 dB.

The EXPERT 1.5K-FA will be marketed in the United States for use for the Amateur Radio Service. The FCC identifier for the EXPERT 1.5K-FA will be 2ADK5GC324810.

Section c.3.

A copy of the Installation and Operating Instruction for the EXPERT 1.5K-FA is included as Exhibit 6.

Section c.4.

The equipment is suitable for all types of emission authorized for amateur use in 97.305 of FCC rules.



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Section c.5.

The equipment is designed to meet all specification and FCC performance standards on all amateur band from 1.8 MHz to 29.7 MHz and from 50 to 54 MHz. When derived to any buyer within FCC's jurisdiction, the equipment is not operable in CB band, the amplifier possesses none of the prohibited characteristics listed in section. FCC 97.317(b).

Section c.6.

The equipment can be operated at the maximum power “MAX” state automatically using the ALC link. To reduce the amplifier output, if required, it is necessary only to set the amplifier to “MID” or “LOW” power state rather than changing the transceiver drive power. It is also possible to regulate continuously the amplifier output power by changing the level of drive power from the transceiver.

Section c.7.

The equipment is rated for maximum RF power output of 1500 W PEP in I.C.A.S. conditions.

Section c.8.

Normal currents and voltages are:

“MAX” (1500 W), PA voltage 48 Vdc, 43 Adc.

“MID” (900 W), PA voltage 36 Vdc, 34 Adc.

“LOW” (500 W), PA voltage 32 Vdc, 22 Adc.

Section c.9.

The amplifier has an automatic tuner that handles load mismatches up to 3:1 VSWR (2.5:1 for 50 MHz). The amplifier contains a look-up table with the amateur bands only (continuous coverage is inhibited, including CB band).

For the tuner management, antenna data and other working data are stored.

Every band has a sub-band set, and for each of those, data related to the antenna and auto-ATU tuning is stored.

The procedure description is included in Exhibit 11, as well as in the User's Manual – Exhibit 6.

Section c.10.

Several features of the EXPERT 1.5K-FA design are specifically intended to reduce spurious radiation to a minimum.



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The input circuit having a 8 dB attenuator ensures that VSWR of 1.3:1 or less is presented to the exciter at the RF input terminal over the entire frequency range. The output circuit uses a well designed low pass filter unit which suppresses the harmonic emissions.

Results of EXPERT 1.5K-FA RF performance and spurious emissions are included as Exhibit 5.

Section c.11.

A photograph showing the design of the FCC identification label for the EXPERT 1.5K-FA is included as Exhibit 1.

Section c.12.

Photographs showing the construction and layout of the EXPERT 1.5K-FA are included as Exhibit 2 and Exhibit 7.

Section c.13.

Not applicable to external RF power amplifier.

Section c.14.

Not applicable, as provided in Section c.15.

Section c.15.

Measurement data indicating compliance with requirements of Part 97.307 and Part 97.317 is included as Exhibit 5 and Exhibit 10.

Section c.16.

Not applicable to external RF power amplifier.

Section c.17.

Not applicable to external RF power amplifier. The subject application is not part of a composite system.