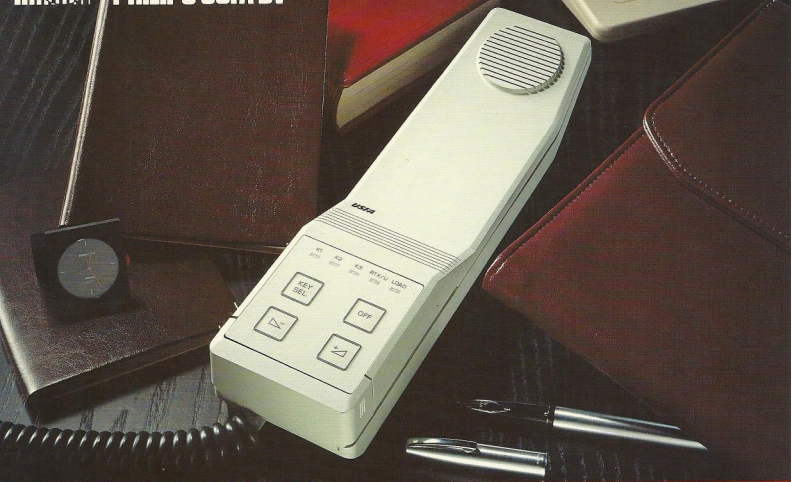




PHILIPS USFA BV



ORTHROS MOBILE SECURE VOICE RADIO SYSTEM

Voice encryption and decryption
system complete in handset
Lightweight
Easy to use
Directly connectable to VHF radios
Latest microcircuit technology
Military standard design.



PHILIPS

ORTHROS mobile secure radio voice system.

Orthros is the first member of the new family of cryptographic equipment for commercial, governmental or paramilitary use from USFA.

It is the mobile radio version of the range of cryptographic telephones planned for the family and incorporates a complete advanced encryption and decryption system in one lightweight handset.

In the design of Orthros, USFA has drawn upon the extensive knowhow and experience which it has built up over the years in the supply of electronic equipment to the world's armed services. Thus, it embodies the

basic concepts of ruggedness and reliability essential for such equipment, as well as utilising the latest technology.

Orthros works with a number of well known makes of mobile FM/VHF radio transceivers. It can operate from normal radio power or from four internal penlight batteries and is specially resistant to adverse environments.

With Orthros your most exacting requirements for complete security in mobile radio links can be met at a most reasonable cost.

Extra protection is provided by the facility for changing the encryption code, as often as may be desired, by a simple adjustment.

Technical data

Communication security : High grade crypto-logic.
Crypto alarm system, blocking data path when activated.
Fail safe: if a fault occurs which could result in undesired information leaving the handset, the connection is broken and the alarm mode initiated.

Synchronization by : Redundant preambles.
Synchronization check bits in the crypto stream.

Power supply : External power supply (6 to 16V).
Internal power supply by standard batteries.

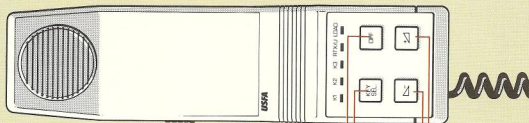
Connection : Interface to radio by cable.

Weight : 600 g.
Dimensions : 75 x 100 x 300 mm (W x D x H)
Rugged construction, meeting the most exacting EC standards for mechanical, climatological and radiation conditions.

Environment : Ambient temperatures: from -25 to +55°C; relative humidity of max. 95%; direct solar radiation.

Reliability : MTBF 10,000 h.
Zeroise circuits : Two fitted

- a. a circuit which, when activated, destroys all keys.
- b. a selective zeroise circuit, which allows specified keys to be erased.



Note:
To zeroise the keys, press PTT, KEYSSEL and + simultaneously.

Press to talk (PTT)

OFF

Key selector (cycle): automatic after switching on the key compartment.

ON (decrease volume during reception)
ON (increase volume during reception)
(either button will switch on the equipment)

Access protection : All keys are destroyed if the unit is opened.
Speech processing : Digitally controlled delta modulation (DCDN)

Speed : From 9.6 k bit/sec to 64 k bit/sec.

ORTHROS - the guardian

Orthros was, in Greek mythology, a two-headed guard dog, brother of the three-headed Cerberus, both of

whom, along with Hydra, were the issue of the union of Echidna and Typhon. Echidna was a monster, part beautiful woman and part snake who mated with

Typhon, said to be the mightiest monster of all. Orthros was charged by the giant Eurauton with guarding his purple herd.

Company profile

Philips Usfa BV. has more than 35 years experience in the development and manufacture of electronic and electro-optical military equipment, including high grade cryptographic equipment. USFA has direct access to the high level expertise and advanced technology of the entire Philips organisation, especially the facilities of the Philips Research laboratories.

Recent technological development from USFA include advanced digital signal processing systems such as LPC (Linear Predictive Coding) vocoders.

Comprehensive facilities, together with experience and craftsmanship, provide an ideal environment for modern project-oriented development, manufacture, repair and maintenance operations. Current projects include large military equipment programmes.

Philips Usfa BV. meets NATO AQAP-1 quality control-system requirements for industry, as laid down in STANAG-4108, which is generally recognised as one of today's most stringent quality-assurance programmes for military equipment.

Printed in The Netherlands

Document number 9922/154/13041

Philips Usfa BV. 1987.
Data subject to change without notice.
All rights reserved.
Further information available from:

Philips Usfa BV.
Meerenakkerweg 1,
P.O. Box 218,
5600 MD EINDHOVEN,
The Netherlands.
Tel.: +31 (0)40-722600
Telex: 51732 USFAE NL
Fax: +31 (0)40-723658



PHILIPS