

  
**GRETAG**

# **GRETACODER<sup>®</sup> 103**



## G R E T A C O D E R 103

### Secure Voice System for Telephone communication

The GRETACODER 103 is a civil secure voice system designed to protect standard telephone lines against interceptors.

Voice control facilitates crypto conversations in "quasi duplex" on duplex channels - similar to intercontinental telephone communications via satellite but with the possibility of reverse signalling and "break-in". A simplex (push-to-talk) mode is available for simplex channels.

A power supply for 110/220 V AC operation and a telephone interface for galvanically isolated interconnection with various telephone systems is included. A special telephone with remote control is available and is recommended for easy interconnection with the telephone line.

The GRETACODER 103/104 uses digital signal processing, very long crypto programs and microprocessor control to provide the highest level of "pseudo digital" security. Keys are introduced with the appropriate front panel controls. 9 keys can be stored and subsequently selected. Stored keys are not recallable and remain in an electronic memory for several months without external power. The first digit of a key used also determines the security mode: two dimensional coding or time division only.

Changeover from clear to crypto or vice versa is fully automatic and remote controlled by either station. The automatic gain control compensates for variations in loudness on different channels.

The GRETACODER 103 includes BITE (built-in-test-equipment) to check the principal circuits without the need of external test equipment.

## **GRETACODER 103 Specification**

### **Technique**

- 8 fragment time and frequency division algorithm
- fast non-linear pseudorandom crypto program generator
- supervisor for suppression of non suitable fragment combinations
- digital speech processing at 64 kbit/sec by CVSD delta modulators
- microprocessor master control with 8 kbyte program
- total delay in crypto: 1 sec

### **Keys**

- $10^8$  external keys, entry via front panel selectors
- $10^7$  internal software controlled customer keys (more optional)
- 9 preselected external keys stored in tamper proof memory, externally selected or remote controlled (optional)
- message key (optional)

### **Clear Crypto**

- automatic, initiated by either station
- remote control possibility

### **Sync**

- fully automatic
- no resync or crypto program restart during crypto operation

### **Channel Requirements**

- standard voice grade channels
- radio, including: HF, VHF, UHF and SSB
- duplex or simplex

### **Operation**

#### **DPX for duplex channels:**

- duplex in clear
- "quasi duplex" in crypto with voice control (VOX), reverse signalling and/or break-in possibility

#### **SPX for simplex channels:**

- push-to-talk control

### **Security Modes**

- 2 dimensional (time and frequency division)
- time division only

### **Telephone Interconnection**

- electrically inserted between handset and telephone base (4 or 3 wire connection).
- direct telephone line interconnection with special Remote Control telephone.

### **Power**

- voltage: 110/220 V AC, 6 VA
- built-in rechargeable battery for key memory

### **Dimensions and Weight**

- 24,5 cm wide, 8,5 cm high without support, 31 cm deep
- 5 kg

### **Environmental**

- storage: -20<sup>0</sup> to +70<sup>0</sup> C
- operation: -10<sup>0</sup> to +50<sup>0</sup> C
- humidity: up to 92 % rel. h. max.

Specification subject to change