



Maintenance Support Kit for HC-4221

In order to concentrate on your daily business, namely the exchange of information, you need to be confident that you can communicate securely whenever you need to. This turns the long-term, high availability of your secure communications system into a primary security objective. If you prefer to use your own personnel to maintain the system, for example to increase your autonomy or reduce costs, this kit provides them with the optimum tools to achieve success.

The main elements which influence system availability are high quality, professional maintenance and efficient logistics. The design of this kit focuses on these three aspects.

A complete set of spare modules and consumable items ensures that the repair work is not impaired by logistics delays.

The tools, test equipment and technical documentation increase the efficiency of the analysis, repair and testing procedures and so ensure that the repair work is successful.

High quality is not only a feature of the ciphering equipment itself, but of the maintenance tools and equipment needed to support it. Housing the kit in a high-quality, robust case ensures that the contents are easily accessible and well protected in transit to a field repair.

The result is a practical support tool for all maintenance and repair activities designed to increase the availability of your secure communications system.

Whether you perform these activities in the field, office or workshop, the return on investment in this kit and the individually customised maintenance training is extremely positive.

Key Features

- You have a practical, portable workshop at your disposal for both field and workshop applications
- You increase your autonomy in the maintenance and repair processes
- You minimise external costs by performing more repairs for yourself
- You are confident that you have everything needed for a field repair in one convenient box
- You improve your reaction time and avoid delays due to external repairs
- You reduce the mean time to repair and so increase system availability

Introduction

The maintenance support kit is a complete portable workshop containing tools, documentation, basic test equipment and a complete set of spare modules.

The main goal of the kit is to increase system availability by providing everything needed for a repair in one box. This helps to reduce the mean logistics delay time (MLDT), since no time is lost in assembling or ordering parts before the repair work can begin. The mean active repair time (MART) is also reduced, since all of the tools and information needed for the repair are readily at hand, and there are no transportation or customs delays if the unit is repaired locally. As a result, with this kit and the appropriate maintenance training, a mean time to repair (MTTR) of less than 2 hours can be expected.

In addition to reducing delays, the kit also enables trained personnel to localise a problem confidently to a specific functional block of the unit. Fully documented repair procedures describe the most efficient methods for this.

Typical Applications

The kit is portable to support repairs in the field as well as in the workshop.

Diagnostics and repair in the field:

The contents of the kit are packaged into layers of foam. This is not just to protect the items in transit to the repair site. Since everything has its own place, a quick visual check is all that is needed to verify that the kit is complete.

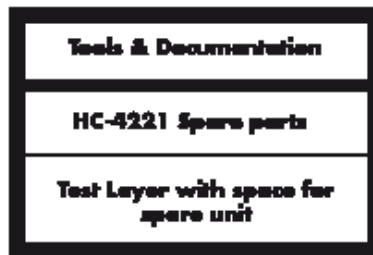
Diagnostics and repair in a central workshop:

In a workshop application, the kit provides a convenient source of parts and tools, allowing the work to begin immediately. Expended parts used from the kit can then be replaced later when time is not so critical.

Contents of the kit

- Test and measurement equipment for troubleshooting, including: Digital Multimeter, Mini Telephone Switchboard and Line Finder.
 - Set of all necessary assembly tools, including Antistatic set and miniature soldering tool.
 - One piece each of all the internal modules from the HC-4221, plus consumable items.
 - Handbook describing the most efficient diagnostics, repair and test procedures.
 - Portable, robust, shock-absorbent case.
- Replacement modules may be ordered separately as and when needed.
 - A minimum level of stock can be held locally. (Crypto AG can recommend stock levels, based on the size and configuration of the individual system if required.)
 - Our Fast Repair service can be used to quickly repair parts taken from stock or the kit.

Layout of Kit



Related products and services

(Please note: the options listed below, are not included with the maintenance support kit, and must be ordered separately)

Logistics delays and inefficiency in the repair process can be influenced by several factors.

To ensure optimum performance from the maintenance support kit, the following maintenance issues should also be considered.

Training

To ensure that repairs can be performed efficiently and independently, correct training in the use of the maintenance support kit is essential. This training is available separately.

Reference Units (HC-4221)

A second HC-4221 unit is useful to verify the operation of a repaired unit. Space is available within the kit for your own complete spare unit, but the kit is not supplied with this included. Reference units must be ordered separately if required. (Note: Having a spare unit in the kit also provides additional advantages since this may be exchanged with a defective unit should a field repair prove to be unsuccessful.)

Replacement Modules

If a module is taken from the kit to repair a unit, the kit must be replenished with a good module as quickly as possible to maintain its service readiness. Various logistics options may be considered to support this process:

Service Level Agreement

For a small system, a Maintenance Support Kit combined with one of the above services may be all that is needed to bring about a substantial increase in the availability of the communications function. For other systems, a more substantial support package is needed.

A complete maintenance package can be designed to precisely match the individual needs of any organisation. This may include spare parts, test equipment, fast logistics options, long term guarantees, refresher training, on-site support and various other options designed to interface with your existing processes. A concept designed to meet your own, unique, high-availability requirements will be provided upon request.