CW-4000
PROFESIONAL DIGITAL TELEVISION EQUIPMENT

CW-4881 TS GENERATOR & INSERTER

OPERATING INSTRUCTIONS

Dear User!

Digital television technology permits implementing numerous features, which could not or hardly could be achieved in analogue technology.

The CW-4881 Transport Stream Generator & Inserter has been designed for creative technicians, who want to realize their ideas also in television technique.

The device comprises two flash memories. One of them is always in operation state, and the other can be programmed from the user's PC.

1. MECHANICAL CONSTRUCTION

The CW-4881 Transport Stream Generator & Inserter is built in standard 19" × 1 HU instrument frame. It is delivered along with following accessories:

1. Power cord   1 ea.
2. Spare fuse T 1.25 A
   (placed in the fuse holder mounting)   1 ea.
3. Crossover cable with RJ45 connectors   1 ea.

The power consumption of the device is very low therefore no cooling or ventilation is needed, however do not use it covered, blocking the natural airflow.

2. ELECTRICAL CONSTRUCTION

A CW-4881 Transport Stream Generator & Inserter is a device of simple structure but very wide scope of application.

The device is equipped with an own switching mode power supply. The supply voltage of the interface circuitries is 3.3 V; the signal processing circuitries are supplied with a voltage as low as +1.2 V. The power consumption is low; the device is suitable for continuous service.
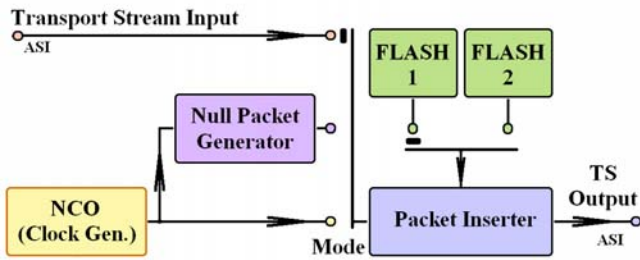
Programming of the device is made through CableWorld's CW-Net system; the steps of putting in operation the system is described in the Using_CW_Net.pdf file at www.cableworld.eu.

All items of CableWorld software are available for free download and use at www.cableworld.eu. The software user manuals are available in the Help menus and also on the web site, separately in pdf format. The CW-4881 Transport Stream Generator & Inserter can operate with all CableWorld software.

All CW-Net controlled CableWorld devices are shipped with the IP address set to 10.123.13.101. Prior to using them in network, the IP address must be changed to avoid conflict between the IP addresses.

For changing the IP address download, install and use the SW-4800 software. All knowledge necessary for this is included in the Help file of the software.

3. GENERAL INFORMATION

Structure of the CW-4881 TS Generator & Inserter

The device is equipped with two flash memories of 4 Mbyte each, which can be loaded with optional 188 bytes packets by the user.

The device can be operated in 3 modes:

1. Transport stream packet inserter

In this mode the device receives the input transport stream and inserts the packets stored in the memory in the place of the null packets. This mode can be used for inserting EPG, CAT, NIT etc. tables, set-top box upgrade software, advertisements etc. in an existing transport stream.

2. Continuous transport stream generator

In this mode the packet inserter inserts the packets stored in the memory in a null packet stream generated in the device. This mode has been designed for generating new streams e.g. measuring signals and special control signals, but it can also be used as a starting-point for generating any complex TS.

3. Transport stream burst generator

In this mode the packets stored in the memory will be put to the output as individual packets, according to the timing assigned to them. The Transport stream burst generator mode can advantageously be used for generating input signals for transport stream remultiplexers, e.g. set-top box software upgrade at multiple channels at the same time as well as generating data streams and measuring signals for IP networks and IP TV systems.

The device is suitable for continuous operation.

The switchover between both flash memories is synchronized.

Programming one of the memories does not influence the operation of the other one.

The content of the flash memory can be read back.

Technical data

ASI input and output

ASI signals	according to TM 1449 Rec.1
ASI input	loop-through type (2 × BNC socket)
Input voltage	200 … 880 mVpp
Input impedance	75 Ω
ASI output	double type (2 identical outputs)
Output voltage	min. 800 mVp-p
Output impedance	75 Ω (BNC)

Transmission parameters

Data format	burst or continuous
Packet format	188 or 204
Format recognition	automatic
Input data rate	tested between 0 and 56 Mbit/s
Generated data rate	800 bit/s ... 80 Mbit/s
Raster	8 bit/s
Accuracy	1×10^{-4}

General data

Service period	continuous
Power requirements	90 ~ 264 V, 47 ~ 440 Hz
Power consumption	max. 35 VA
Mass	approx. 3.8 kg
Physical dimensions:	19" × 1 HU
Width	483.0 mm
Height	43.6 mm
Depth	473.0 mm
Operational temperature range	+5 … +40ºC
Relative humidity	max. 80 %
Storage temperature range	-25 … +45ºC
Relative humidity	max. 95 %