CW-Net Principal v 1.03
Network Controller and Supervisor Software

The main changes in the 1.03 version:
- Extension of the IP address range.
- Displaying the name, software version etc. of the device.
- Extended instruction set, more user-friendly user interface.

Instruction manual

1. Task of the software

Digital television technology requires a very fast environment for controlling the devices and accessing the data streams. For this purpose, CableWorld Ltd. developed a 100 MBit/s control system referred to as CW-Net. Structure, detailed description and instruction set of the CW-Net are included in the CW-Net.pdf file free accessible at www.cableworld.hu.

The SW-4800 CW-Net Principal software is an easy-to-use handling software for the CW-Net network, which permits checking-up the readiness of the devices connected to the network and querying their type numbers and serial numbers. All control processes in the CW-Net network are made using the Internet Protocol therefore the devices must have different IP addresses. Using the CW-Net Principal, the IP addresses beyond being queried can also be changed.

The software was designed for under the Windows system, and runs under Win 98SE or later versions. However, from 2005 on we will test the new pieces of software in Windows XP Professional environment only and we suggest our customer to use this version.

The CW-Net Principal is a good starting point also for them going to design their own control software for the CableWorld devices. Connecting an analyser to the 100 MBit/s network, the structure of commands and responses can be studied, and the description included in the CW-Net.pdf file becomes lucid.

2. Establishing the CW-Net

The CW-Net can be built of the components of the widely used 100 MBit/s Ethernet networks. The simplest system can be established by connecting the computer's Ethernet socket with that of one of the CableWorld devices' through a category 5 cross-wired cable.

Connecting more than one device can be made through a switch or some other component of similar function, but in this case all devices must have different IP addresses. CableWorld Ltd. delivers its products with the 10.123.13.101 IP address, which must be changed to different addresses each at putting them in operation. For doing this, first connect the computer with a straight (not cross-wired) cable to the switch, and then connect the first device with a straight cable. Set the IP address of the device, and then continue this procedure with all devices.

In the CW-Net network the computer has to be set to a fix IP address (e.g.: 10.123.13.201) and to 100 MBit/s full duplex operation mode. In Windows XP environment, for setting the computer's IP address, select following options: My Computer – Control Panel – Network Connections – Local Area Connection – (mouse right click) Properties – Internet Protocol (TCP/IP). The offered (255.0.0.0) Subnet mask should be accepted. Here, on the upper side of the General page also the setting of the network handling device is offered (Configure > Advanced). After clicking the "Settings" button, click the "Link Speed/Duplex Mode" line in the "Special" page and then in the roll down menu select the "100Mbps/Full Duplex" mode. In most cases auto mode is applicable, too.

When selecting the switch type, consider that for transmitting simple instructions e.g. setting IP addresses any switch type may work, but the fast transport stream can only transmitted by industrial versions.

3. Installing the software

The SW-4800 software is free available for our customers, anyone can download it from our web site. Installing is made in the usual way, with running setup.exe. After installing, the software is started with clicking the icon on the desktop. The IP addresses and the attached remarks are stored in the IPdata.dat and Comment.dat files. For those operating more than one system, it is advisable to operate the software from separate folders.

4. Setting up the CW-Net and the IP addresses

On running the software, the CW-Net Principal user interface panel (GUI) appears on the screen. On clicking the Query button, the software queries the parameters of the device with the preset IP address. The answer of the device is displayed in the message box of the Communication Platform. In lack of received response "Device not found!" is displayed.

CableWorld Ltd. delivers its products set to the 10.123.13.101 IP address. The first step of establishing the CW-Net is setting the IP addresses of the connected devices. The CW-Net Principal permits the fourth part of the IP address to be programmed. Within the 1 ... 254 range the IP addresses can be set arbitrarily. The address 101 is not advisable to be left as finalized, because at enlarging the system the new device enters the network always with this address, which then would cause address conflict.

For changing the IP address, set the old and the new IP address, and send out the instruction for change by clicking the Replace IP Address button. In case of a device with unknown IP address (e.g. IP address forgotten), the desired IP address can be set by sending out the instruction for change to the 255.255.255.255 IP address. However this instruction should be sent out with care, because all devices, which receive it, will execute it.

From the software version 1.03 on, both the device and the software can be used also outside the 10.123.13.x range, used by the CW-Net. If the Use CW-Net checkbox is not checked, the "Use:" textbox gets light and the instructions will be sent out in the IP address range written here. The first 3 bytes of the range have to be typed (in decimal format along with the closing decimal point) and the following fourth byte is set with the stepping buttons.

For setting a new IP address, all four bytes of the IP address have to be typed in the New IP Address textbox and entered with the Enter button.

When going to use an individual IP address range, the steps to be made are following:
- Reprogramming the IP addresses of the devices one by one to the new values.
- Reprogramming the IP address of the computer to the new value.
- Setting the new range in the software to be used.

5. Editing the address list

A list of the devices connected to the network can be created in the IP Address List box using the "Add IP Address to List" and the "Remove IP Address from List" buttons.
In the list, to each IP address a remark can be attached from the textbox above the IP Address List box. Clicking an item in the IP Address List acts the same as that of the Query button.

6. Querying the whole CW-Net

When forgetting the IP addresses or in case of a CW-Net network with unknown devices, click the "Auto Search" button. On this, the software queries all IP addresses and will display the responses in the message text field of the Communication Platform. The query is always made in the range of the fourth byte of the IP address.

7. Comments, further information

We are pleased to receive (at cableworld@cableworld.hu) comments and remarks pertaining to our products and software and we take the included suggestions and ideas into consideration at further developments. At the same address are we ready to provide further information about the application of the products.