

Centauri Application Note 5

Point to Multipoint for Centauri 300x, 350x

1 Conditionals

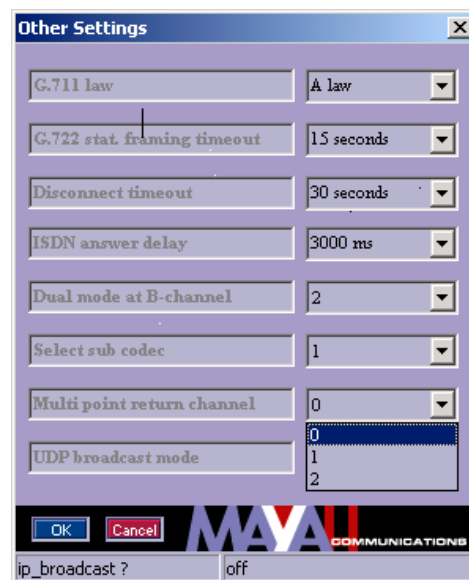
- Centauri with system software 1.1.0.44 or later
- PC with:
 - min. Pentium 166 MHz
 - RAM 32 MB
 - operational system Windows '95, '98, ME, NT or 2000
 - free serial port (remote control by RS232) or Ethernet card (remote control by IP)
- Null modem cable (included in Centauri) if RS232 control is used or all necessary LAN cabling between Centauri and PC
- Centauri remote control with version 1.1.0.31

Note:

You can download the current the Centauri system software and the latest remote software from Mayah homepage www.mayah.com at section download.

2 Point-to-Multipoint

The Point-to-Multipoint-mode enables the Centauri 300x and 3500 to receive/send data from/to several different remote Centauri-devices. Within processing the data-transfer one can choose which input is to be heard (for detailed description see *Centauri Communication Reference Manual, chapter 4.2.10*). For handling Point to Multipoint with the Centauri Remote Software, you have to choose `<Settings/Others/Multipoint return channel>` .



3 Centauri Remote Software

You can type in all the necessary commands with help of the Centauri remote control software. Just step to remote item `<Expert/Direct Command>`.

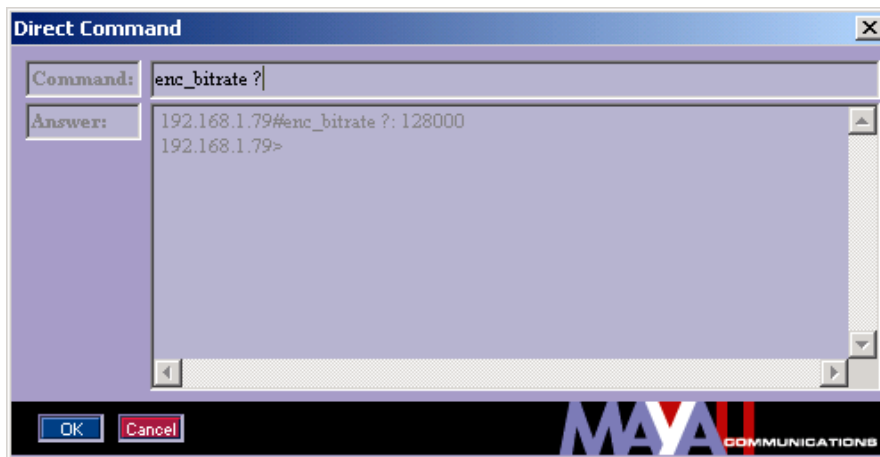
Maybe you get asked for a super user password. This super user password is determined by the first use of Centauri remote on your PC. If the super user gets lost you can recover it very easily.

It is saved in the registry at:

HKEY_CURRENT_USER\Software\Mayah Communications\Centauri Remote\SuperUserPassword.

How to use the direct command dialog:

Just type in the Centauri command in the command edit field and confirm by pressing the 'OK' button. You'll get the answer in the answer memo box.



4 Settings with Direct Command

For using the Point to Multipoint, special settings have to be established.

Example:

- 1) Set format to automatic
`enc_format auto` <Settings/Codec/Encoder/mux>
- 2) Choose the mode that is to be used:
`enc_mode mono` <Settings/Codec/Encoder Mode>
- 3) Choose the bitrate.
`enc_bitrate 128000` <Settings/Codec/Encoder Bit Rate>

Currently there are only two different bitrates available :

For 1-channel-connection you have to choose 64.000 bit/sec.

For 2-channel-connection you have to choose 128.000 bit/sec.

The remote devices must have the same settings as the multipoint-server. This settings can be made local on the multipoint-server or on the remote devices. In that case the server acts as a slave and synchronizes itself with the remote settings.

5 Start

The command `com_receive [0,1]` controls the activity of the multiplexer. The parameter [1] enables the Point-to-Multipoint-mode, whereas [0] disables it.

Example:

`com_receive 1` enables Point-to-Multipoint

`com_receive 0` disables Point-to-Multipoint

6 Addressing

If the Point-to-Multipoint-mode is enabled, the same command as above, but with a different parameter, is responsible for addressing the B-channels that are to be used for data-transfer: `com_receive [1..n]`, where n is the max multiplexer-index. This multiplexer-index can be derived from following formula :

$$n = \text{max ISDN B-channels} * 64000 / \text{Encoderbitrate}$$

This means, for 1-channel-connections n is the number of B-channels that are available, whereas for 2-channel-connections n is the half of it .

For 2-channel-connections the channels of the multipoint-server can only be chosen in neighbouring pairs : (1,2), (3,4), (5,6), (7,8)

Example:

`com_receive 2` For the settings made above (bit rate 128000) this would mean B-channels 3 and 4 are selected for hearing.

Generally the addressing of the B-channels works only in one direction. This means, the multiplexer can only receive data with all his channels or send data with all his channels. The possibility to receive on one channel while sending on another is in mind, but at this time not available.