

Overview

WinPP101 is a test program for the telecontrol protocol IEC 870-5-101. It receives, tests, filters, stores, prints and transmits IEC 870-5-101 messages. Additionally, it can listen and logically output ABB RP570 and RP571 telegrams. For test purposes it can also be used as a byte receiver, here the parity, number of data bit and stop bit are to be parameterized.

System Requirements: Windows 95, 98, Me, XP, 2000 or NT 4.0, 32 MB RAM, 5 MB Disc, at least 1 COM, LPT or USB for dongle, VGA or better.

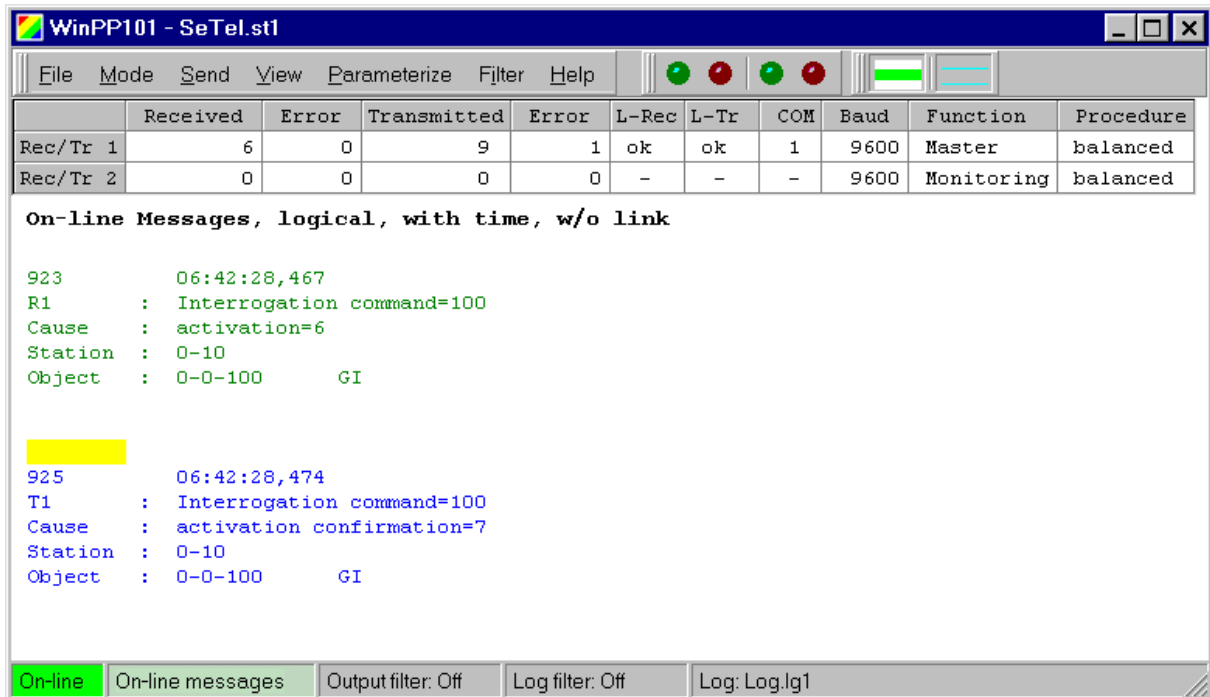


Fig. 1 WinPP101, Online message display

Interfacing to the telecontrol equipment is done via the serial interface COM. The program supports two COM interfaces. It is possible to run the program several times simultaneously and thus support several COM interfaces.

Functionality

You can monitor an existing Link or simulate a Master or Substation. If you wish to monitor the command and monitoring directions simultaneously then you need two free COM interfaces. For simulation you need one free COM interface.

You can configure the following parameters for example:

- Ø Plain text of the objects (CSV-file)
- Ø Length of link address
- Ø Length of cause of transmission
- Ø Structure of common and object address
- Ø Program function (monitoring, master, station, byte receiver)
- Ø Transmission mode (balanced/unbalanced)
- Ø Use of the single control character E5
- Ø COM Port, Baud rate

The program reads the plaintexts of the individual objects from a CSV file, format: "Object address; Color code; Plaintext;"; see also file "ExText8.csv" in the program directory. Select a CSV file in the menu "File | Object Texts Load". The currently used file is indicated in the status bar.

The program checks the received messages for transmission errors, link faults and ASDU faults. Faulty messages are marked as such. Every transmitted and received message is allocated a time stamp and is stored in a Log file. The size of the Log file can be parameterized (Standard: 2 MB = ca. 45,000 messages). The messages in the Log file can be output to a printer or stored in a text file.

The Log file is organized as a circular buffer. When the file is full then the newest message overwrites the oldest message.

When storing or displaying messages you can filter them with respect to:

- ∅ Time
- ∅ Link Address
- ∅ Type, Cause, Common address
- ∅ Object address (and others)

With the time filter you can specify, for example those only messages from 02:00 till 08:00 should be stored.

The transmitted messages are parameterized logically, see Fig. 2.

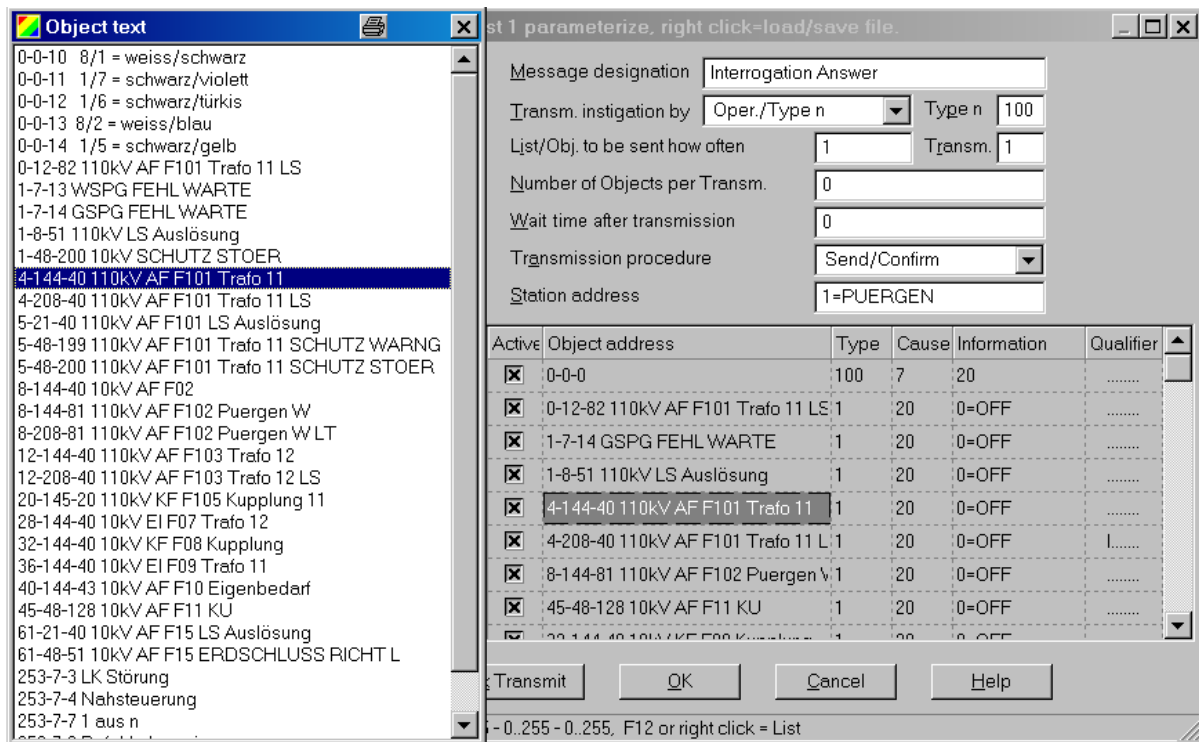


Fig. 2 Parameterizing a message list

There are 12 single messages and 12 message lists available. In a list you can parameterize up to 3000 objects. For the simulation of command responses 1000 objects are available. The transmission instigation for the messages and lists takes place via operation or via an event. An event can be: reception of a particular type of message or successful establishment of a link. You can then send an interrogation command, answer an interrogation command automatically, send commands, simulate responses, transmit cyclic measured values or simulate an avalanche of messages. The parameterized messages and lists can be saved and loaded. For test purposes you can send illogical link and data messages. For examples: send NACK instead of ACK, do not toggle the FCB bit, use private ASDU, send the check character incorrectly, etc.