

Transmit 24/32 files into 24/32 timeslots simultaneously

Receive 24/32 files from 24/32 timeslots simultaneously

Drop and Insert Time slots capability

DOS-based utility

Executes commands contained in an ASCII file

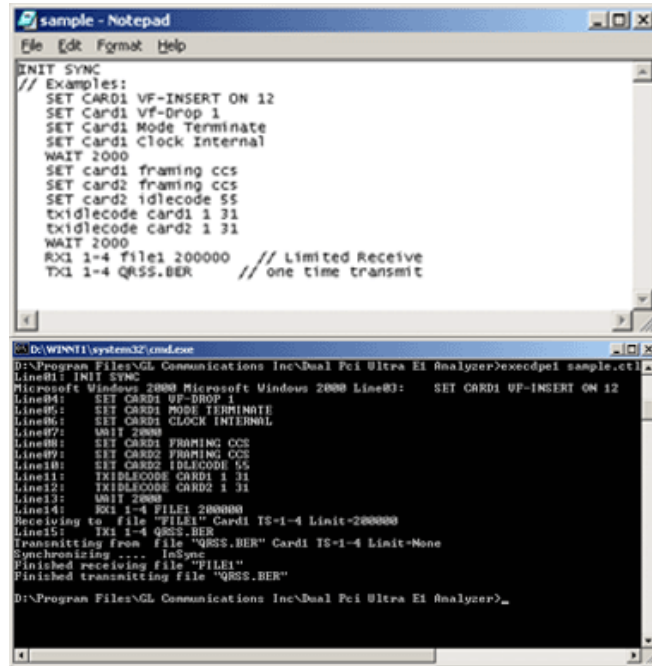
Active time slots setting for the Dual Laptops

Supports Wait Feature

Transmit and Receive operations on 4 boards simultaneously

Synchronizes Transmit Multiframe outputs of different T1/E1 ports

Transmit-Receive File Utility



Sample ctl file and its execution from DOS prompt

Tx-Rx File Utility Application

The Transmit/Receive File Utility allows transmission and reception of files to/from T1 or E1 lines with greater flexibility than the Record/Playback Software. The optional Record/Playback software runs as a feature under the T1/E1 GUI application software. The transmit/receive file utility program, however, runs as a "console" program and is intended for use by other WIN 98/NT/2000/XP applications as a "callable" function. The program can also be run as a standalone program. Examples of its use include, use with MATLAB programs or other programs that can call external programs.

Tx-Rx File Utility Main Features:

- Transmit 24 (32 for E1) different files into 24 (32 for E1) different timeslots simultaneously.
- Simultaneous to any transmit file operation, receive 24 (32) different files from 24 (32) different timeslots
- Perform the above operations on four different boards simultaneously
- Perform any subset of operations (from above)
- Send or receive a limited or unlimited number of bytes
- Program runs from a Windows DOS prompt simultaneously with other WIN programs (but not WIN T1/E1 programs)
- Option of initialization or no initialization of T1 or E1 boards
- Option of synchronization up to four boards i.e. simultaneous transmission of files into multiple boards or simultaneous reception of files from more than one board
- The execution of the utility is controlled from an ASCII file which defines boards, filenames, timeslots, initialization options, and synchronization options
- Supports Wait feature
- Option to select Active time slots for Dual Laptop Analyzers
- Drop and Insert Time slots capability



818 West Diamond Avenue - Third Floor Gaithersburg, MD 20878 • (V) 301-670-4784 (F) 301-670-9187
Web Page Address: <http://www.gl.com/> • E-Mail Address: gl-info@gl.com

Summary of the commands

The list to the right is a summary of commands available in the Tx-Rx Utility application. The execution of some of these commands from a Windows DOS prompt is shown in the screenshot below:

```
D:\Program Files\GL Communications Inc\Dual Pci Ultra E1 Analyzer>execdpe1 samp
Line01: INIT SYNC
Microsoft Windows 2000 Microsoft Windows 2000 Line04: SET CARD1 UF-INSERT ON 12
Line05: SET CARD1 UF-DROP 1
Line06: SET CARD1 MODE TERMINATE
Line07: WAIT 2000
Line08: SET CARD1 FRAMING CCS
Line09: SET CARD2 FRAMING CCS
Line10: SET CARD1 GAIN-RX 12
Line11: SET CARD1 GAIN-TX 12
Line12: SET CARD1 SPEAKER ON
Line13: SET CARD1 LOOPBACK OFF
Line14: WAIT 2000
Line15: SET CARD1 CLOCK INTERNAL
Line16: SET CARD1 RX-EQUALIZER-GAIN 12DB
Line17: RX1 1-4 FILE1 200000
Receiving to file "FILE1" Card1 TS=1-4 Limit=200000
Line18: TX1 1-4 QRSS.BER
Transmitting from file "QRSS.BER" Card1 TS=1-4 Limit=None
Synchronizing ... InSync
Finished receiving file "FILE1"
Finished transmitting file "QRSS.BER"
```

```
SET Card1 Framing 193S|193E|CCS|CAS|CCS+CRC|CAS+CRC (193S,193E T1-only, others E1-only)
SET Card1 Mode Terminate|Monitor|Bridge
SET Card1 Clock Internal|External|Recovered
SET Card1 LoopBack Inward-Framer|Inward-Driver|Outward-Driver|Off
SET Card1 Vf-Insert { ON timeslot | OFF }
SET Card1 Vf-Drop { ON timeslot | OFF }
SET Card1 Gain-Rx gain // gain range is 0 to 100
SET Card1 Gain-Tx gain // gain range is 0 to 100
SET Card1 Speaker On/Off
SET Card1 Rx-Equalizer-Gain 12dB|26dB|36dB
xXn TimeSlots FileName [ LimitBytes | Cont ], where,
xXn - R or T followed by X followed by card number RX1 - receive on card1, TX2 transmit on card 2
TimeSlots- specified as StartTS-EndTS, e.g. 0-4 or Single TimeSlot Number, e.g. 3
LimitBytes- specified to stop receive/transmit after LimitBytes e.g. 200000
CONT - continuous play
SET Card1 ACTIVE TX_TS|RX_TS {StartTS End TS|ALL} (Applicable for the Dual Laptops)
SET CARDn IDLECODE xx
TXIDLECODE CARDn StartTs [EndTs]
//Setting Priority and Synchronized Transmit of Multiframes
Set Priority IDLE | NORMAL | HIGH | REALTIME | CRITICAL. (REALTIME==CRITICAL)
SyncTxMf [ cardN-cardM [cardN-CardM] ...]
```

SyncTxMf

Tx-Rx utility provides a methods to approximately "synchronize" the transmit multiframe outputs of different T1 (E1) ports. By "synchronize", it is meant that the multiframe marker (beginning of multiframe) occurs at exactly the same instant for the different transmit outputs. For example if Card 1 and 2 are so "synchronized", than their respective transmit multiframe markers occur at the same time. This feature is useful when there is a requirement for simultaneously transmitting signals over multiple T1 (E1) ports. For example, the command "SyncTxMF 1-2 4 5-7" will initiate the synchronization starting with CARD 1, then 2, 4, 5, 6, and finally 7.

```
File Edit Format Help
\\Example for SyncTxmf command
INIT SYNC
SET Card1 Loopback Off
SET Card2 Loopback Off
SET Card1 Framing ccs
SET Card2 Framing ccs
SET Card1 Mode Terminate
SET Card2 Mode Terminate
SET Card1 Clock Internal
SET Card2 Clock Internal

//Synchronize the output of card1 and card2//
sync txmf 1-2
Tx1 1-1 copy1--pip_at_2s.ala cont
TX2 1-1 copy2--pip_at_2s.ala cont
```

TCP/IP Client and Server

The RemExec is a script client allowing executing commands controlling GL Communications T1/E1 cards installed on a remote computer called "server". The client can be running on the same machine where cards are installed or on a computer that can be connected to the "server" machine via TCP/IP.

Multiple client machines can control server cards simultaneously. Each client machine can access multiple server machines one at a time. Clients can send commands interactively from the console (DOS) window accepting user input via keyboard or can redirect the input from a file or other device.

RemExec Invocation:

Before client RemExec is started the server must be launched. To start the Server run RemServ command from the directory where RemServ.EXE is installed. The general syntax for this command is "RemExec". User should type the name and hit enter in the console (DOS) window. Then one can proceed with other commands starting with the connect command. The first command should always be "connect" and the last one should always be "quit".

```
D:\Program Files\GL Communications Inc\Dual Pci Ultra E1 Analyzer>execdpe1 sync txmf r1
Line01: INIT SYNC
Microsoft Windows 2000 Microsoft Windows 2000 Line02: SET CARD1 LOOPBACK
Line03: SET CARD2 LOOPBACK OFF
Line04: SET CARD1 FRAMING CCS
Line05: SET CARD2 FRAMING CCS
Line06: SET CARD1 MODE TERMINATE
Line07: SET CARD2 MODE TERMINATE
Line08: SET CARD1 CLOCK INTERNAL
Line09: SET CARD2 CLOCK INTERNAL
Line12: SYNC TXMF 1-2
SyncTxMF 1 2
Line13: TX1 1-1 COPV1--PIP_AT_2S.ALA CONT
Transmitting from file "COPV1--PIP_AT_2S.ALA" Card1 TS=1-1 Limit=None c
Line14: TX2 1-1 COPV2--PIP_AT_2S.ALA CONT
Transmitting from file "COPV2--PIP_AT_2S.ALA" Card2 TS=1-1 Limit=None c
Synchronizing ... InSync
```

Buyers Guide

XX019 [Transmit/Receive File Utility Software](#)

Related Software

[XX020](#) Record/Playback File Software

[XX030](#) Call Capture and Analysis

[XX070](#) MFC-R2 Capture and Analysis

[SA026](#) Adobe Audition

[SA048](#) – Goldwave Software

[SA021](#) File Edit Software (Ultraedit32 SW)

[STE40](#) Mux-Demux Software

* Specifications and features subject to change without notice.