

TELE 2

# Introduction

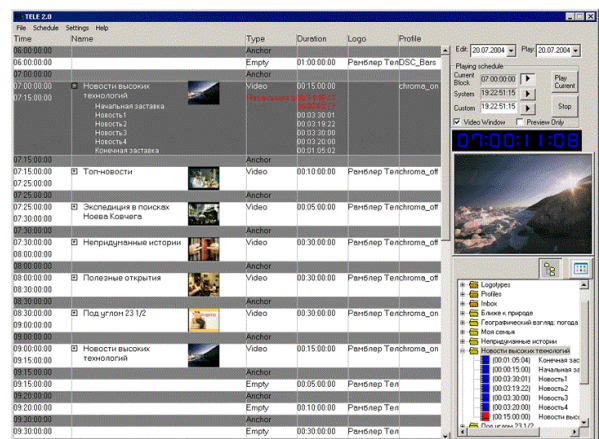
V1.0

The TELE 2.0 software for Stream ALPHA series cards allows to automate the broadcasting of a TV station, plan the output of the station's own programs, insert of regional advertisement to the national channels broadcasting grid, retransmission of other channels accompanied by output of titles information, superposition of captions and logos at required moments, generation of clock images, and many other features.

The extended version Alpha Pro 2.0 delivered complete with the TELE 2.0 software allows the user to take advantage of all additional opportunities of live transmissions and SDK design to develop custom-made application and to integrate the system with the existing studio systems.

## What is the Stream TELE 2.0?

- The simplest-installed and mounted solution for local advertisement insertion: a computer can be connected with a passing-through signal at any point.
- No decoding for the passing-through signal (10 MHz bandwidth). The Stream TELE system does not require any expensive additional equipment (synchronizers, mixers, transcoders, non-linear cutting modules, etc.). A single module does it all, which is important if the computer is to be installed inside a transmission center.
- Emergency bypass mode activated at video and audio systems power failures (additional option for Stream ALPHA Plus cards).
- Economy, convenience, reliability. You will appreciate, among others, the cost advantages of this solution if you have to retransmit 5 or 6 national channels.
- Multi-format capacity: the system supports all popular editing system formats (Matrox, Canopus, Pinnacle), as well as DPS Reality/Velocity. It also ensures a direct replay from legacy DVD and CD-ROM disks in the currently popular MPEG-4 format!
- Adjustment of images (brightness, contrast, color spectrum and saturation) and sound (volume) of video files is performed in real-time, without additional calculations.
- Creeping lines, logos, temperature readings, digital or analog clocks are all produced at the same computer with video clips, and managed with the same schedule.



## Main System Features

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- Insertion of advertisement clips in a passing-through video signal without video mixer, synchronizer, or a non-linear editing system. Automated commutation of audio and video signals in various types of computer modules.
- Scheduled replay of advertisement captions and AVI video files in DV and MJPEG formats.
- Scheduled replay of MPEG-2 video files: video and sound information can be stored in different files, e.g. for some of Matrox systems.
- Scheduled replay of uncompressed video files (4:2:2) of D1 quality level and above 4 GB of size.
- Replay of 32-bit animation 4:4:4 files to be used in animated logos and presentations.
- Scheduled replay of MPEG4, DIV-X, Intel Indeo codec files.
- Support of direct replay of MPEG-2 and MPEG-4 video clips directly from a CD-ROM drive, including a replay of 720×400 movies format DivX (MPEG-4) video films from CDs without size distortion.
- Titling information output with a superposition on an external video signal (all titling features of the system are kept).
- Rotation of text messages, creeping lines, logos, animation banners allows to specify for each message the number of demonstrations and the time interval where this message is to be replayed. The rotation is performed automatically. Purchase of the additional software module also enables a rotation of video files replayed by the system itself or in combination with a video signal in a scalable window, in addition to the rotation on the passing-through video signal.
- Superposition of animation logos on video files in a separate layer able to move across the screen in addition to the creeping line option.
- Superposition of full-screen analog clock on a video file (animated background) and a real-time display of the clock.
- Initialization of video module broadcasting on a scheduled time, on a timer predefined by the operator, or directly on operator's actions.
- Play lists can be edited on-line, in parallel to their replay.
- A schedule of regional advertisement insertion can easily be integrated with the central station-broadcasting schedule by replacement of replaceable programs.
- Convenient structure of disk arrays for storage of audio and video information.
- Advertisement clips can be transferred to the broadcasting computer via a local network (LAN) without use of legacy video information carriers.
- The Preview function allows to preview user-made schedules on a control monitor.
- Compatibility with popular non-linear editing system using DV, MPEG-2 and MJPEG formats (Pinnacle DV500, miroVIDEO DC30 and DC50, Matrox RT-2500, Matrox DigiSuite and many others).
- Control of the transcoder-synchronizer (switching up to 3 channels without

synchronization tearing) allows to insert advertisement modules into the broadcasting sequence using two video and audio signal sources, e.g. for consecutive switching between the local and central station signals.

- RS-422 video equipment control allows broadcasting video modules from a video tape recorder as well as from a computer disk.

- Automated output of current time and temperature sensor readings.
- Brightness, contrast, color saturation, and sound volume can be adjusted individually for each video file 'on-the-fly', as the file is registered with the event planner.
- MPEG-4 and DivX video files can be scaled 'on-the-fly', as they are replayed.

## Supported Video & Audio File Formats

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- DV type 2 (720×576), 4:2:0, compression 1:5, 32/44/48 KHz stereo audio – no 4 GB limit AVI file produced by most non-linear editing cards supporting the DV format.
- MJPEG (720×576), 4:2:2, compression up to 1:3, 32/44/48 KHz stereo audio – format produced by miroVideo DC30/DC50, Matrox DigiSuite/DigiSuite LE, Fast AVMaster cards.
- DivX, MPEG-4 (720×576), 4:2:0, bandwidth up to 10 Mbps, 32/44/48 KHz stereo audio – no 4 GB limit AVI file produced by the DivX codec or its analogues in compliance with the MPEG-4 specification.
- MPEG-2(720×576, 704×576, 512×576), 4:2:0, bandwidth up to 10 Mbps, 48 KHz stereo audio – MPEG-2 Main Profile file (compatible with DVB, DVD standards and most hardware coding devices in MPEG-2).
- MPEG 2 I-frame (720×576), 4:2:2, 32/44/48 KHz stereo audio (or in a separate WAV file) – no 4 GB limit AVI file produced by Matrox cards, series RT-xxxx.

- Uncompressed video files type 422 provide the highest D1 video quality (720 × 576 × 4:2:2) and the 48 KHz stereo sound format and have no 4-GB size limit of AVI files.
- Animation file type 444 does not include sound; 720×576×32 bits resolution; unlimited duration. Used for production of animation logos, presentations and advertisement banners; created by a converter of TGA 32-bit file sequences.
- Alpha Pro SC files – standard script files of the popular Alpha Pro AE v.2.0 character-generating software.
- WAV format audio files.

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The support of above formats is built-in the system by default. Replay of AVI files in arbitrary formats is also possible if the corresponding Video for Windows codec is available in the system. Resolution should be 720×576 and the frame rate 25 fps.

For instance, Indeo, Microsoft MP42, Canopus v.2.8 (for replay of Canopus DVStorm, DVRaptor RT files), and other formats can be used.

## Additional Software Modules

The TELE 2.0 delivery package can be completed with new modules offering additional functionalities unavailable in the standard configuration, if required by the customer.

### TELE 2.0 DVB Module

The DVB video server module provides recording, storage and retransmission (with or without a delay) of DVB-format video data received from a satellite. Data are recorded independently of and simultaneously with the transmission of the current schedule by the TELE 2.0 systems. Time intervals of each fragment recording and replay can overlap; in this case, a time delay is applied at the replay.

MPEG2 IBP 4:2:0 (DVB) is used as storage format, which, on the first hand, provides a very high storage capacity (100 hours per a 360 GB disk array), and on the other hand, ensures the full original quality preservation: the materials are broadcasted exactly as they were received from the satellite, without any additional coding or digitizing. In this case, a completely digital circuit is used: there is no need to decode a composite PAL signal produced by a traditional DVB receiver. The signal is formed out of original data directly in the required format. The improvement of the image quality can be seen 'by the naked eye'.

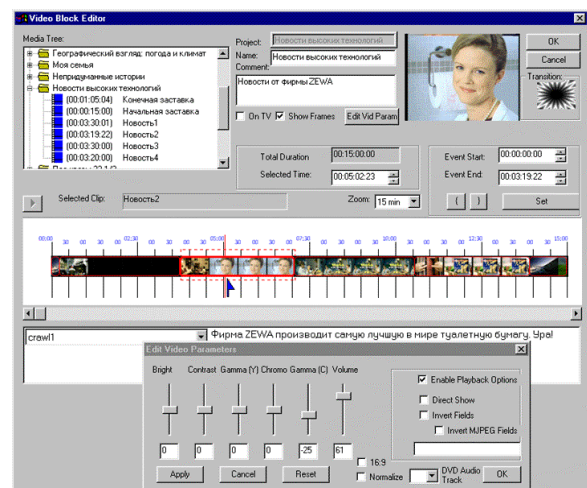
The video server module allows to reject useless fragments of the signal received from the satellite, postpone the transmission of network programs to later time or introduce in them regional inserts without blocking or interrupting the central channel broadcasting.

### TELE 2.0 Info Channel Module

Many modern TV channels – RBK-TV, Bloomberg, RAI-24, etc. – use rich graphical design characterized by, e.g., simultaneous display of several creeping lines, animation logos, constantly updated information fields, etc. The video signal is then scaled down to a window, and the rest of the space is occupied by graphics elements.

The TELE 2.0 Info channel module helps you use this design style for your programs filling the round-the-clock broadcasting with advertisement and information, and the rotation mechanism makes the play list edition as simple as possible, using a cyclic alternation of data displayed in the informative elements of the design.

This is a module, which allows to scale video data to be displayed in a 'window' surrounded by various graphical elements – logos, creeping lines (up to 16 at a time), readings of temperature, pressure, and humidity sensors, currency rates, etc. The creeping lines information is displayed 'on-the-fly', which makes it possible to use them to for visualize real-time data or, e.g., SMS-chat messages. Such creeping lines can 'creep' directly upon the video file display performed by the system.



## Delivery Package

- A TELE 2.0 broadcasting automation software package (the TELE 2.0 package includes Alpha Pro 2.0 extended version) (CD).
- A HASP USB dongle with the software individual number.
- A detailed User's Manual in English (electronic copy on a CD).

## Recommended PC Configuration

Pentium IV or Celeron (based on Pentium IV) CPU, i845 chipset motherboard (ASUS P4PE or P4PE-X), at least 512 MB RAM, two hard disks: 40 GB (system) and at least 80 GB (operative), Windows 2000/XP or DirectX (v. 8.1 and above) operating system.

Some of the proclaimed features require a special configuration of the system unit. Consult your equipment provider on system requirements for the efficient operation of the TELE 2.0 system.

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Stream Labs, JSC.