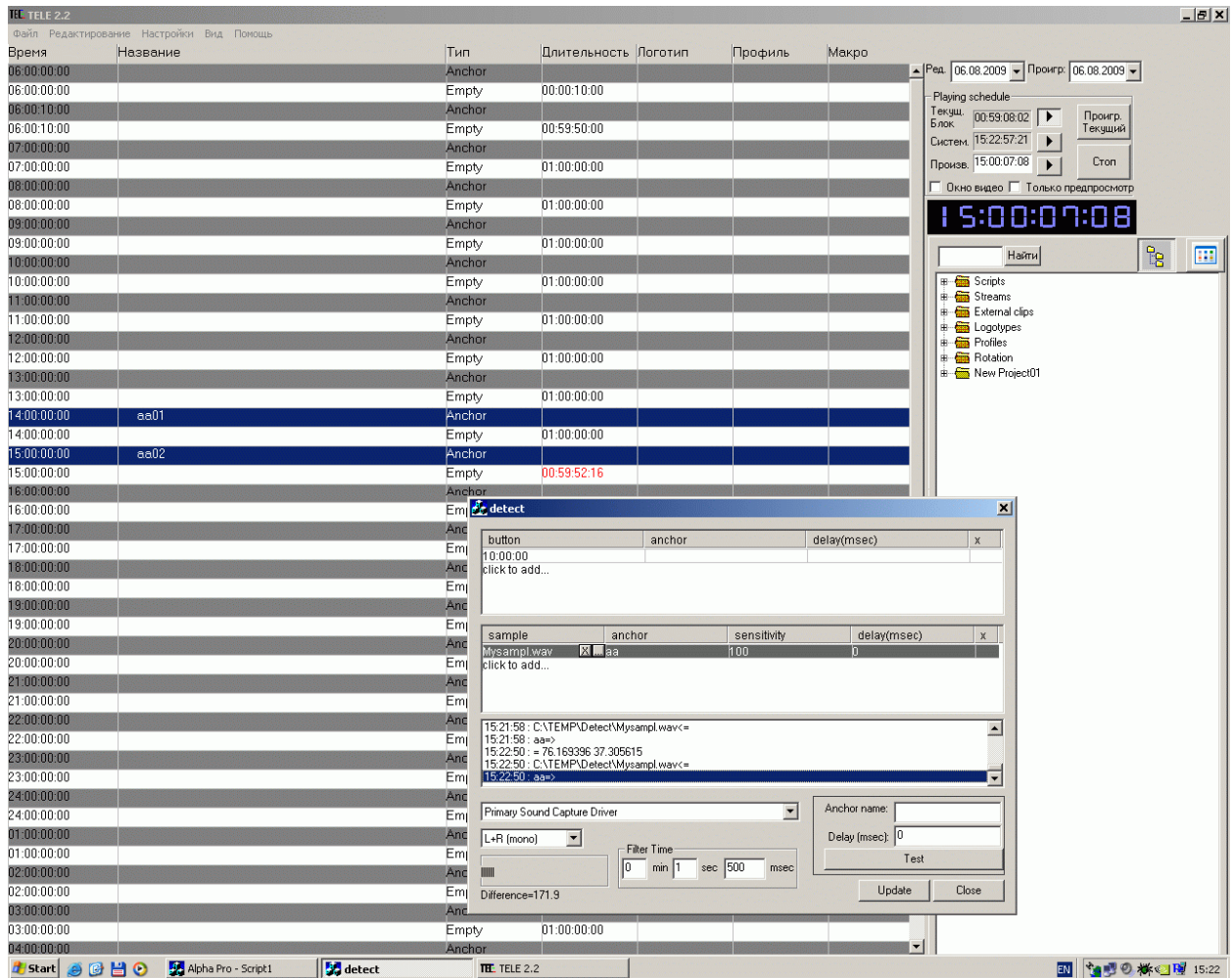


DETECT – software for control of broadcast in automated system TELE

DETECT is a part of TELE installation package and functions in conjunction with TELE. Control over broadcast is being facilitated by moving schedule to tagged/ named anchor. The cause for this movement may be one of follows:

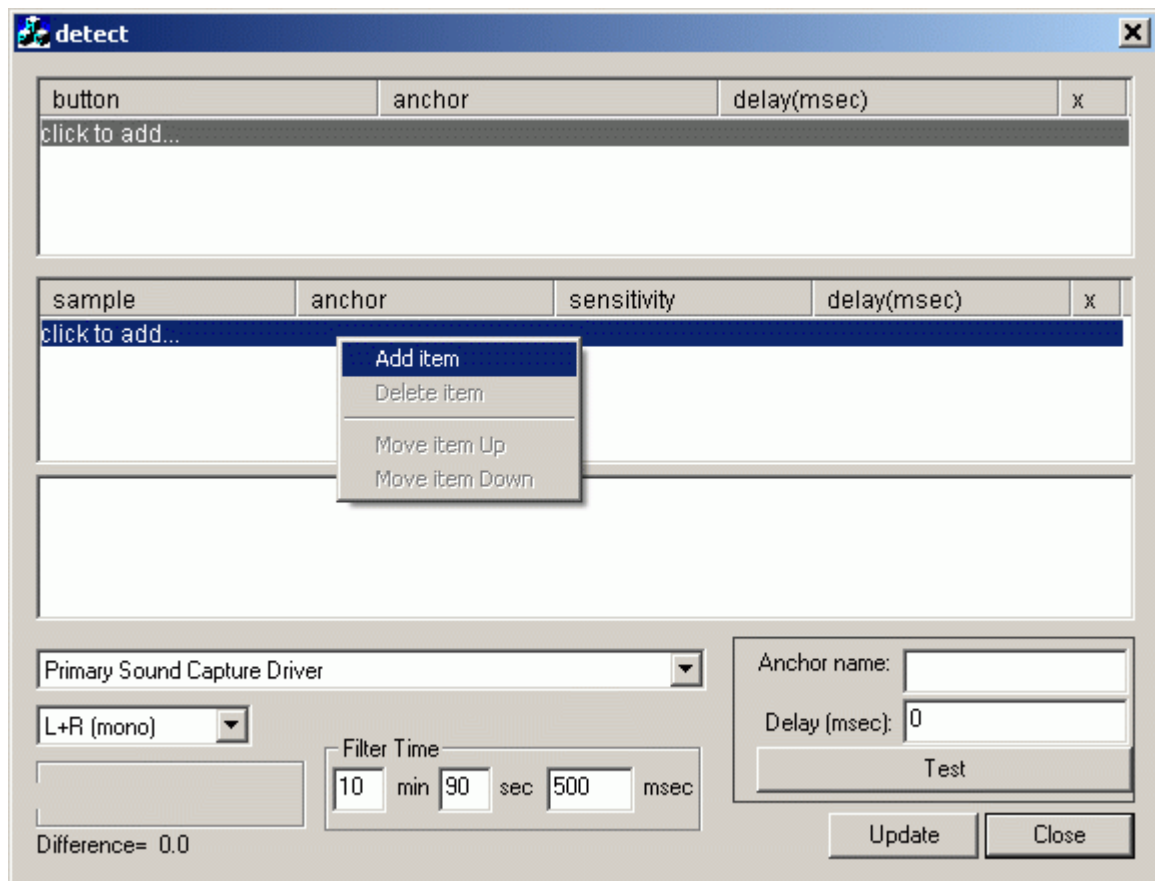
1. Preset system time.
2. Press and release of buttons on a joystick connected to a PC through standard GAME-port (thereby it could be controlled through GPI-signals);
3. Recognition of DTMF mark or jingle in incoming audio stream.



After moving to designated anchor with certain delay measured in msec, the scheduler starts playback from this point on, as if you pressed “Play from current” in TELE.

DTMF mark or jingle could be received via right or left audio channels of consumer’s recording device.

After start up of DETECT under Windows OS, it’s ready for use right away. For your convenience you may include DETECT in Auto Start Up Menu under condition that TELE is in this Menu as well.



After launch of DETECT you will see an interface (above) in which you can define course of action triggered by certain events.

In a top table you should specify transfer of playback downwards in scheduler initiated by approaching of preset system time or by pressing/releasing of joystick buttons (what is identical to GPI signals).

In a middle table you place a list with audio samples which are expected to be detected by program in incoming audio stream. In this table, compare to a top one, you can additionally define sensitivity between sample and incoming streams during identification process.

In a bottom panel you should see a log of recognized events and actions fulfilled by a program. There are also fields for settings at the bottom of interface.

Once you click on line with «click to add...» or «Add item» from right-click context menu, it will add anticipated event. You can delete line from table if you mark with “x” a check box or using «Delete item» command from context menu.

Repositioning of lines up or down (command «Move item Up» and «Move item Down» from context menu, correspondingly) usually is not required for resolving of specific tasks.

delay (msec) – delay in msec from the moment of recognition of event from column 1 till beginning of execution of playback starting at designated anchor in TELE scheduler.

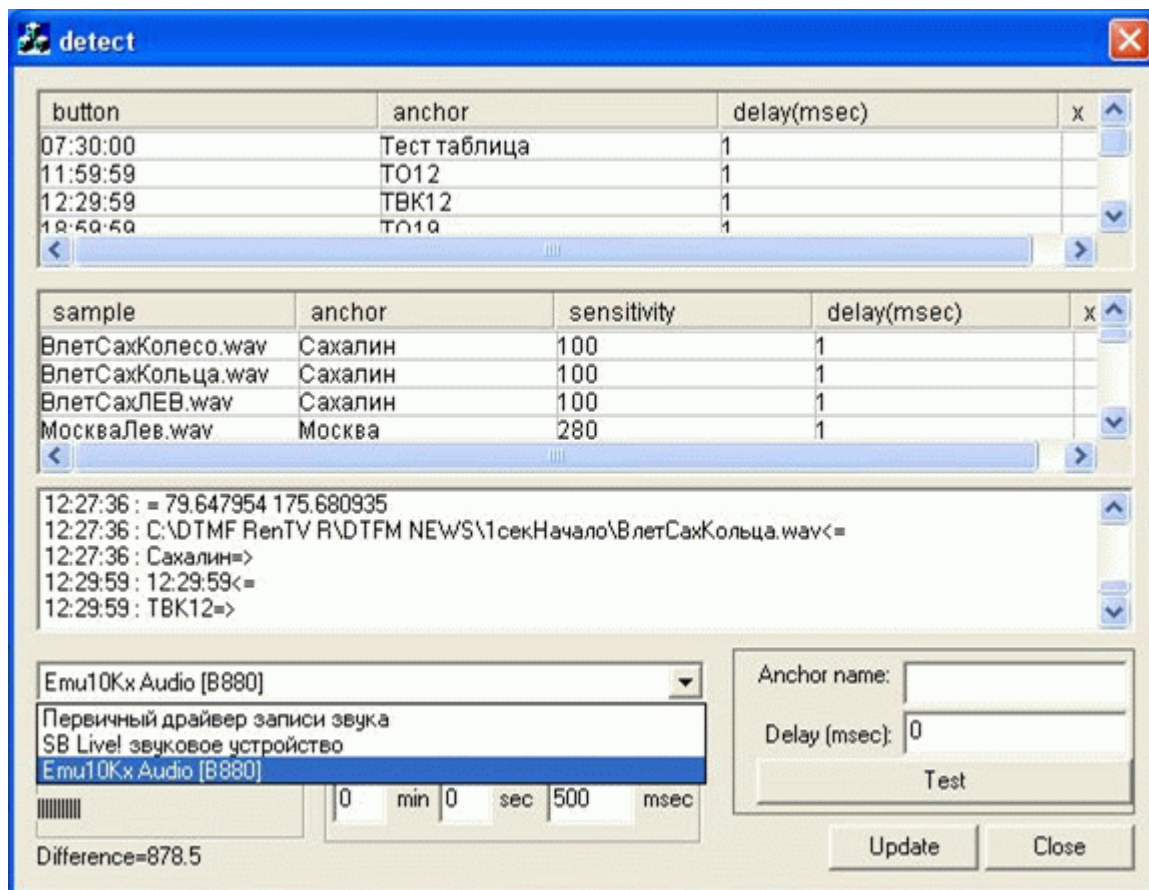
anchor – initials of names of anchors in TELE scheduler where playback starts after detection of events in column 1. Those anchors constitute a series like a01, a02, a03, etc. It is sufficient to refer to “a” in anchor field and playback will start from the next available anchor from this series. Name “**stop**” is reserved for stop of playback which occurs after detection of event from column 1.

button – in this column you can select event associated with press/release of one of 4 buttons of joystick (GPI-signals) or approaching of preset system time. After insertion of new line this event could be

selected from drop-down list with left-click. For selection of specific option you would use UP and DOWN buttons/arrows.

Options buttonN on and buttonN off mean press/release of N-button on a joystick correspondingly. When you press button voltage at the GAME-port switches from 0 to 5 volt and vice versa after release.

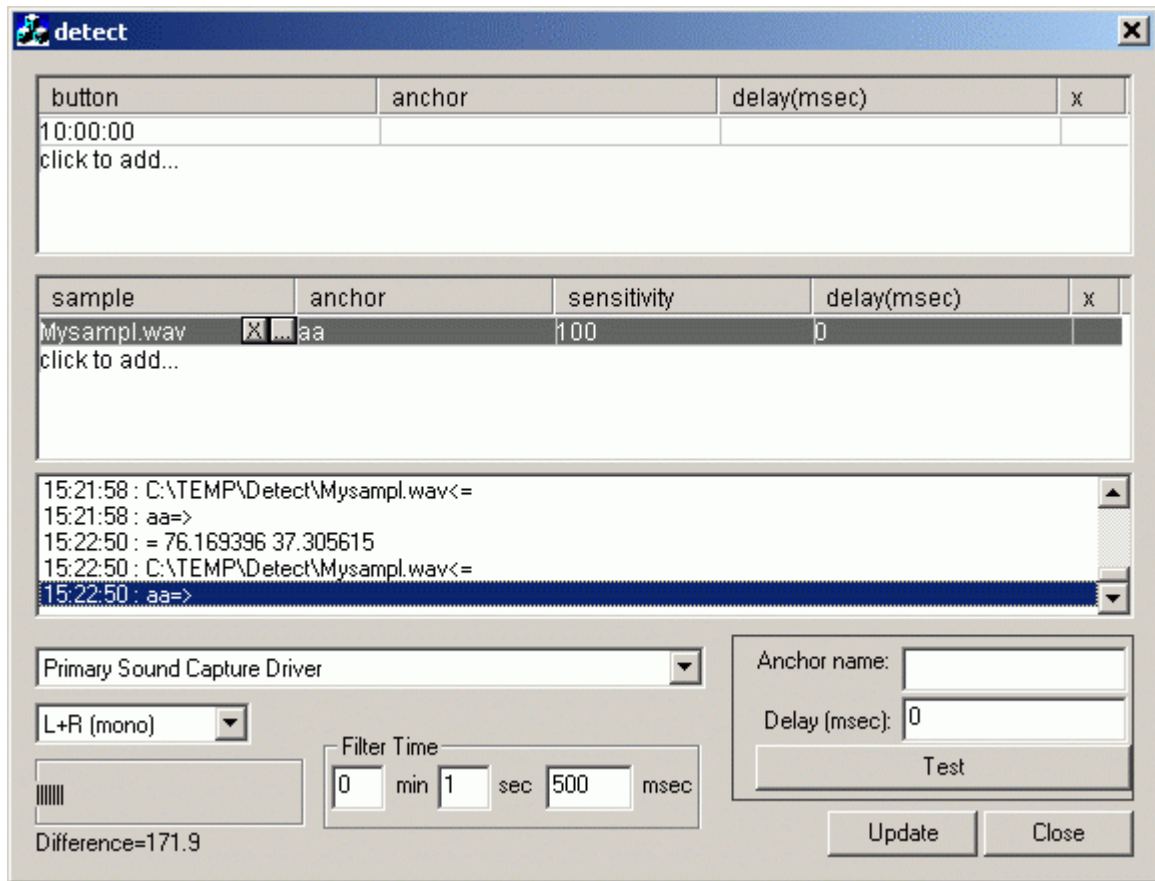
System time could be set in hh:mm:ss format. For more precise setting of start time of fulfillment of predefined action you should use field delay.



sample – in this column you can set name of audio wav-file which is being traced in incoming converted to digital audio stream. This file must be pre-recorded in Windows OS using the same audio device and same setting for digital conversion, amplification and balance contained in incoming stream and used for detection. Duration of file should be approximately 1 sec or equal duration DTMF mark. Press «...» in corresponding field in order to enter file name.

sensitivity – in this column you can set the degree of sensitivity to the difference between sample and actual stream during identification. The value is experimental and could be set, for instance, in increments of 100. During setup pay attention to value of Difference, displayed in a bottom panel upon arrival of signal in incoming stream (value of sensitivity should be greater). Ideally, once you set up value of sensitivity, the program should neither skip incoming audio samples or DTMF signals nor initiate false starts.

Down below, you may select an audio device from drop down list, which is going to be used for digital conversion of incoming audio stream. It could be either default Windows device - «Primary audio driver» or any specific audio card installed on PC.



You can select processing mode for audio channels:

- **L+R (mono)** – left and right channels add-up to each other resulting in mono sound.
- **L, R (stereo)** – left and right channels are being processed independently. Predefined audio signal is considered recognized if it's being contained in any channel.
- **L-R, L+R (radio dtmf)** – left and right channels are being subtracted and add-up. Further recognition is similar to previous scenario. This method applies to DTMF signals transmitted via radio channels.

Filter Time – you can pause process of recognition right after last fulfilled event using those 3 fields - **min, sec, msec**. You need this parameter in cases when opening and closing jingle coincide.

Difference – it's a real time value of difference between incoming stream and **sample**. Based on this value you set correct value for **sensitivity** which should be slightly greater than **Difference**.

Just a little bit above indicated **Difference** horizontal indicator of audio level if located.

Processing log is being displayed in a panel under the table with audio samples. Timestamp (hh:mm:ss) for occurred event is a first field following information about event – if it's a button or time (all this is being contained in a top table). In cases when **Difference** has become less than **sensitivity** from the table with audio samples, additional line with path to sample file appears with «<=>» symbol at the end. In any case the following line states name of anchor where TELE schedule had moved to.

Fields **Anchor name**, **Delay** and button **Test** in a right hand lower corner serve for testing of connection between DETECT and TELE. You can enter name of anchor in a schedule for current day and press Test. TELE is expected to move down to closest appropriate anchor and start playback from this point on.

Update – after pressing of this button program DETECT applies all changes, if any.

Close – stops functioning of program DETECT and closes interface.

NOTES

1. Changes in settings take an effect only after you CLOSE and then OPEN program DETECT.
2. In some cases it is necessary to have 2 installed sound cards for normal functioning of DETECT (see map with connections on Fig. below). In this case first card takes input of both channels of central TV broadcast and second card takes output of right channel only from the first card as an input. DTMF marks and jingles are being converted to digital on a second card. Two cards are needed in order to prevent DETECT from operating during its own lengthy programming when central TV broadcast may carry the same DTMF marks or advertisement in the same timeframe. During playback of its own programming first card is outputting sound which doesn't contain advertisement jingles which might have triggered DETECT.

Connection map for 2 sound cards operating with program DETECT

