

# XS<sup>®</sup> Sequencer



Test your automotive networks  
Generate your sequences



# Powerful and reasonably priced: The Portable CAN Tool to control your sequence

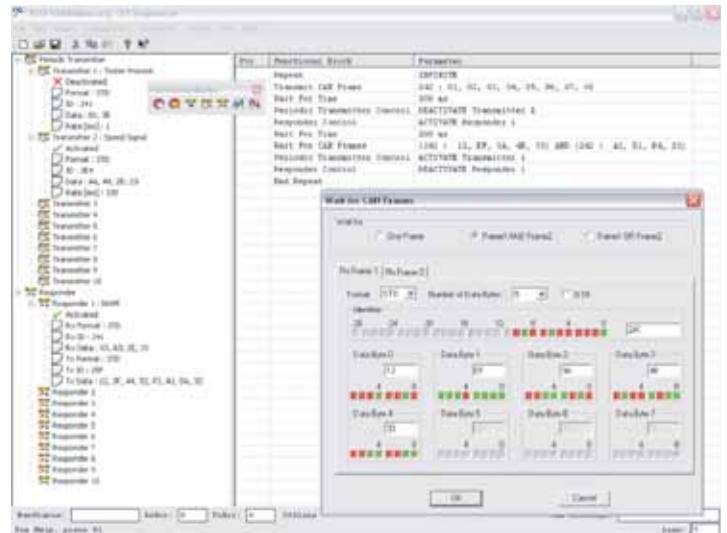
## Get the overview of your sequence

XS® Sequencer is a powerful CAN Tool to observe, analyze, simulate and supplement data traffic on your CAN bus.

You can find on the market different CAN Tool analyzers but XS® Sequencer is the only one to enable you so much means to set up your sequence at such a reasonable price !

Running on PC's operating systems as Windows 98SE, ME, NT4, 2000 and XP, XS® Sequencer enables you among others to emulate CAN nodes or to keep other CAN nodes in a certain state by transmitting CAN messages.

Beyond that, the XS® Sequencer offers periodic transmitters and responders which are running asynchronously to the sequence itself. This enables you to set up a simulation of parts of a CAN network.



## How does XS® Sequencer function ?

The main functionality of XS® Sequencer is the execution of a defined sequence. A sequence can be understood as a set of so called functional blocks which can be defined and executed.

The definition of a sequence is very simple:  
The functional blocks can be inserted using the corresponding menu or the tool box.

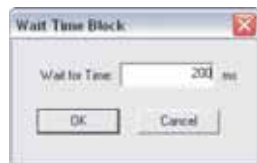
After inserting them, you just have to define the blocks.

For it, each type of block has its own dialog box which can be accessed with a simple left double click of your mouse button or with the enter key. The consistence of the sequence is ensured by doing it in offline mode.

## Functional Blocks Overview

XS® Sequencer offers all necessary functional blocks to set up your sequence.

The "Wait for time" functional block enables you to stop the sequence for a certain time defined in milliseconds.



The "Transmit CAN frames" functional block makes it possible to transmit a defined CAN frame by defining the CAN identifier and the data bytes. You can even use 11 bit or 29 bit CAN identifier! Furthermore, the transmission of RTR frames (this is a frame a transmitter is waiting for) are possible as well as the transmission of so called high voltage frame (if single wire CAN is being used). The CAN identifier and the data bytes can be input hexadecimal or on a bit level.

The "Responder control" functional block enables you to activate or deactivate a Responder.

The "Wait for CAN frames" functional block stops the sequence until the defined CAN frames are received. Up to three definitions are possible:

- Wait for ONE frame
- Wait for frame ONE AND TWO
- Wait for frame ONE OR TWO

Again within the dialog box, you can define the frames to wait for.

A very important advantage is that the definition of "don't cares" is possible. This enables you to set up ranges of frames which enormously increases the functionality of this block. These "don't cares" can be defined for both : CAN identifier and data bytes.

Furthermore, as with the "Transmit CAN frames" functional block, it is possible to use 11 bit or 29 bit CAN identifiers.

The "Repeat" and "Repeat End" functional blocks can be used if parts of the sequence or the whole sequence shall be executed several times.

The "Periodic transmitter control" functional block enables you to activate or deactivate a periodic transmitter.



### More control by defining yourself the periodic transmitter and responder

In many cases it is required to have the possibility to send CAN frames periodically. This shall be done asynchronously to the sequence which is in progress. The Periodic Transmitter supports this feature.

Independent from the sequence up to ten Periodic Transmitters can be defined. This can be done in each mode of XS® Sequencer. If the sequence is being executed a change of the definitions will be directly processed, that means it is possible to change e.g. the CAN Identifier or the data bytes online.

### Definition of Periodic Transmitter

A Periodic Transmitter can be changed in each mode of the XS® Sequencer, even in online mode it is possible to adapt the settings.

The transmission starts when the XS® Sequencer is in online or running mode and it stops when the XS® Sequencer is in offline mode.

It is possible to use 11 bit or 29 bit CAN Identifier and the data bytes can be defined.



The reaction of asynchronous events can be done with the Responders. A Responder waits for the reception of a predefined CAN frame. If the CAN frame has been received another predefined CAN frame will be sent out.

This mechanism allows you to react on incoming CAN frames independent from the defined sequence.

### Definition of Responder

The settings of the chosen Responder can be changed with this function.

A Responder can be changed in each mode of the XS® Sequencer, even in online mode it is possible to adapt the settings. In order to activate a Responder the 'Activated' check box has to be marked. The Responder is really active when the XS® Sequencer is in online or running mode and it stops when the XS® Sequencer is in offline mode.

The Responder requires the definition of a Rx frame (This is the frame which the responder is waiting for) and of a Tx frame (This is the frame the responder will send if the Rx frame has been received.).

If the XS® Sequencer is in online or running mode an 'Apply' button is available. Each time the Apply button has been pressed the changes will be used immediately.



### High integration possibility for the owners of CAT & XS® Monitor...

### Replay Overview

The menu item File | Import CAT Trace File allows you to replay CAN frames which have been recorded and stored with the CAT (CAT Analyzer Tool) or XS® Monitor.

The CAT and XS® Monitor automatically store the CAN frames into a so called trace file. This file is located within the session directory of a CAT or XS® Monitor.

When you have selected such a file, a dialog box will appear. Here you can determine which kind of frames shall be replayed.

Furthermore the number of frames to be replayed can be defined by defining the first and the last frame.

You can replay up to 35.000 frames.

XS® Sequencer creates an executable sequence out of the CAT and XS® Monitor trace file.

# XS - The new generation of vehicle communication interfaces

## Highlights

- carries out complex sequences of CAN frames
- up to ten independent Transmitter and Responder are available for automated tests
- a Stand Alone Mode is supported
- a flash memory version is available for "Start on power up"
- with the replay funktion CAT-traces are repeatable
- developed for our XS family and our CAT product
- online Help available

## Order Information

IME3901303

**XS Sequencer**  
**Download Online**  
incl. Application,  
Product Key,  
Application Help

## System Requirements

### Hardware requirements:

200 Mhz IBM compatible-PC  
32 MB RAM for Windows 98 is recommended  
64 MB RAM for Windows NT (Serv. Pack 5) / Windows ME is recommended  
128 MB RAM for Windows 2000/XP is recommended  
Hard disk memory: 10 MB free memory space is recommended

### Operating systems:

Windows 98 SE- Windows ME - Windows NT 4 (from service pack 5 onwards) - Windows 2000 - Windows XP

## ! Discover the XS Family



The XS family is a product range dedicated to automotive engineering.

All these interfaces can be used as vehicle communication interfaces and have been already successfully implemented by major car manufacturers in different application fields such as development, workshop service and production.

It includes hardware and software for the use and development of communication interfaces based on protocols as CAN, K- LINE, KWP2000, GMLAN... ?  
The highlight of these product range is the high flexibility of connection through interfaces such as Bluetooth, USB, RS232, GMLAN...

These interfaces can be used under different operating systems (please consult technical productsheet on our website or contact us). Special requirements can be integrated.

## ! More Software from the XS Family...



### XS Monitor Software

Bus configuration and activity can be visually monitored by this software.  
CAN Messages may also be transmitted within the tool.  
Further to the rudimentary observation functions, are a multiple of filtering and triggering options, imperative for more experienced CAN engineers.  
Developers will be more than satisfied with the extended data base functions used by this tool.

Further information and software trial versions available on  
[www.ime-actia.com](http://www.ime-actia.com)

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