



(43 %) ACQUA Batch (ACOPT 31)

File Settings Run Help

3QUEST

Files to process (7 File Set(s))

No.	Processed File	Unprocessed File	Clean Speech File
1	example_proc_01.dat	example_unproc_01.dat	example_clean_01.dat
2	example_proc_02.dat	example_unproc_02.dat	
3	example_proc_03.dat	example_unproc_03.dat	
4	example_proc_04.dat	example_unproc_04	
5	example_proc_05.dat	example_unproc	
6	example_proc_06.dat	example_unproc	
7	example_proc_07.dat	example_unproc	

Channels

Processed File: 1 Unprocessed File: 1 Clean Speech File: 1

Batch File

Filename: D:\ACQUA\_Batch\Batch\_file.txt

Progress

Current: 

Overall: 

Status: ...Processed vs. Clean Speech

Progress: 4 / 7

Start! Stop

Code 6987/6858

# ACQUA Batch

Automated Batch Processing of Speech and Audio Recordings

# OVERVIEW

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## ACQUA Batch

**Code 6987/6858**

Automated Batch Processing of Speech and Audio Recordings

ACQUA Batch enables automated batch processing of speech signal files with various calculation methods. Further, ACQUA Batch provides the calculation of recorded music files according to the MDAQS algorithm. Applying a calculation method in ACQUA Batch requires the acquisition of the respective ACQUA Option (ACOPT). ACQUA Batch is available as standalone version (Code 6987) or as ACQUA Option for usage alongside ACQUA (Code 6858).

## KEY FEATURES

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Convenient batch processing of recorded speech signal files by means of various calculation methods

Convenient batch processing of recorded music files with MDAQS

Automation of batch process by simple command file structure (\*.txt or \*.ini)

Support of various file types  
(\*.dat, \*.hdf, \*.wav, \*.pcm, \*.raw)

Extendable with further calculation methods at any time by acquiring the respective ACQUA Option

## APPLICATIONS

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Quality evaluation of audio signals by means of:

3QUEST (ETSI EG 202 396-3 and ETSI TS 103 106)

3QUEST SWB/FB (ETSI TS 103 281, Model A)

ABLE (ETSI TS 103 558)

EQUEST (ETSI TS 103 802 or Classic calculation)

LEAP

MDAQS

PESQ (ITU-T P.862)

POLQA (ITU-T P.863)

SNRI and TNLR (ITU-T G.160, App. II, Amd. 2)

Automated and speech-based Double Talk (ITU-T P.501/P.502 and 3GPP TS 26.132)

TOSQA

# DETAILS

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The evaluation of speech quality or audio quality as perceived by the user with instrumental methods is an important tool to quantify and compare the performance of terminal devices and single transmission paths up to whole networks. Manually running calculations of many files is time-consuming and inconvenient. ACQUA Batch provides quick and automated processing of audio signal files with various calculation methods.

## DESCRIPTION

ACQUA Batch is available in two variants: There is a standalone version or an ACQUA Option requiring an existing ACQUA full license. They are suited for analysis of speech signal files by means of the linked calculation method. Both versions support various calculation methods. The availability of calculation methods depends on acquired ACQUA Options.

ACQUA Batch supports the following calculation methods:

- › 3QUEST (3-fold Quality Evaluation of Speech in Telecommunication), calculations according to ETSI EG 202 396-3 or ETSI TS 103 106
- › 3QUEST super-wideband/fullband, calculations according to ETSI TS 103 281 (Model A)
- › ABLE (Assessment of Binaural Listening Effort), calculations according to ETSI TS 103 558
- › MDAQS (Multi-Dimensional Audio Quality Score), calculating audio quality of arbitrary playback systems or playback devices
- › MDAQS – Headphone (included in MDAQS), calculating audio quality of headsets or headphones
- › EQUEST (Echo Quality Evaluation of Speech in Telecommunication), calculations according to ETSI TS 103 802 and Classic algorithm
- › LEAP (Listening Effort Prediction from Acoustic Parameters)
- › PESQ (Perceptual Evaluation of Speech Quality), calculations according to Recommendation ITU-T P.862
- › POLQA (Perceptual Objective Listening Quality Analysis), calculations according to Recommendation ITU-T P.863
- › Signal-to-noise ratio improvement (SNRI) and Total noise level reduction (TNLR), calculations according to Recommendation ITU-T G.160 (Appendix II, Amendment 2, 08/2011)
- › Automated Double Talk and Speech-based Double Talk, calculations according to Recommendation ITU-T P.502 or 3GPP TS 26.132
- › TOSQA (Telecommunications Objective Speech Quality Assessment), calculations according to TOSQA or TOSQA2001

Automating tasks in ACQUA Batch requires writing an TXT file or INI file. It specifies file names, directories, and their chronological order for processing. Once created, an TXT/INI file may be reused as template with minor changes for processing other projects. ACQUA Batch also provides the possibility for adding files manually via drag and drop to the user interface for processing. In the user interface, files can be sorted arbitrarily. For audio files with multiple channels, the channel for processing is selectable. Multi-channel files can be added repeatedly to process different channels. Furthermore, the time range to be analyzed is customizable as well.

ACQUA Batch supports various file types:

- › Data files (\*.dat)
- › HEAD acoustics HDF files (\*.hdf)
- › Wave files (\*.wav)
- › Raw files (\*.pcm or \*.raw)

For Wave files and Raw files, the conversion parameters are adjustable before importing the files.

After processing, calculation results can be exported as text file. More detailed results can be exported to Excel files or SQLite files.

## OPTIONS

ACOPT 10 (Code 6820)

- › Option TOSQA

ACOPT 16 (Code 6836)

- › Option PESQ according to ITU-T P.862

ACOPT 21 (Code 6844)

- › Option 3QUEST – 3fold Quality Evaluation of Speech in Telecommunication (narrowband/wideband)

ACOPT 28 (Code 6855)

- › Option SNRI and TNL R Calculation

ACOPT 29 (Code 6856)

- › Option EQUEST – Echo Quality Evaluation of Speech in Telecommunication

ACOPT 30 (Code 6857)

- › Option POLQA – Perceptual Objective Listening Quality Analysis

ACOPT 32 (Code 6859)

- › Option speech-based Double Talk analysis

ACOPT 35 (Code 6866)

- › Option 3QUEST super-wideband/fullband according to ETSI TS 103 281, Model A

ACOPT 36 (Code 6867)

- › Option MDAQS – Multi-Dimensional Audio Quality Score

ACOPT 37 (Code 6869)

- › Option ABLE - Assessment of Binaural Listening Effort according to ETSI TS 103 558

ACOPT 38 (Code 6871)

- › Option LEAP – Listening Effort from Acoustic Parameters

ACOPT 40 (Code 6873)

- › Option MDAQS Headphone

## GENERAL REQUIREMENTS

### Software

One of the following software applications:

ACQUA Batch (Code 6987)

- › ACQUA Batch
- ACOPT 31 (Code 6858)
  - › Option ACQUA Batch Processing
  - › Requires an existing and valid ACQUA full license
  - › Works with ACQUA dongle

### System Requirements

Computer

- › Multi-core processor
- › 8 GB RAM (recommended: 16 GB RAM)
- › NTFS
- › Free disk space 300 MB

Operating system (one of the listed)

- › Windows 11 x64
  - » Pro, Enterprise, Education; version 21H2 or newer; languages: US, Western European
- › Windows 10 x64
  - » Pro, Enterprise, Education; version 1809 or newer; languages: US, Western European

## SCOPE OF DELIVERY

ACQUA Batch

- › Setup DVD or download

Dongle or upgrade file for existing ACQUA dongle

- › License file

Only for POLQA/PESQ

- › OPTICOM license dongle

1 year software maintenance agreement (SMA) and update contract

- › Optionally renewable on a yearly basis

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