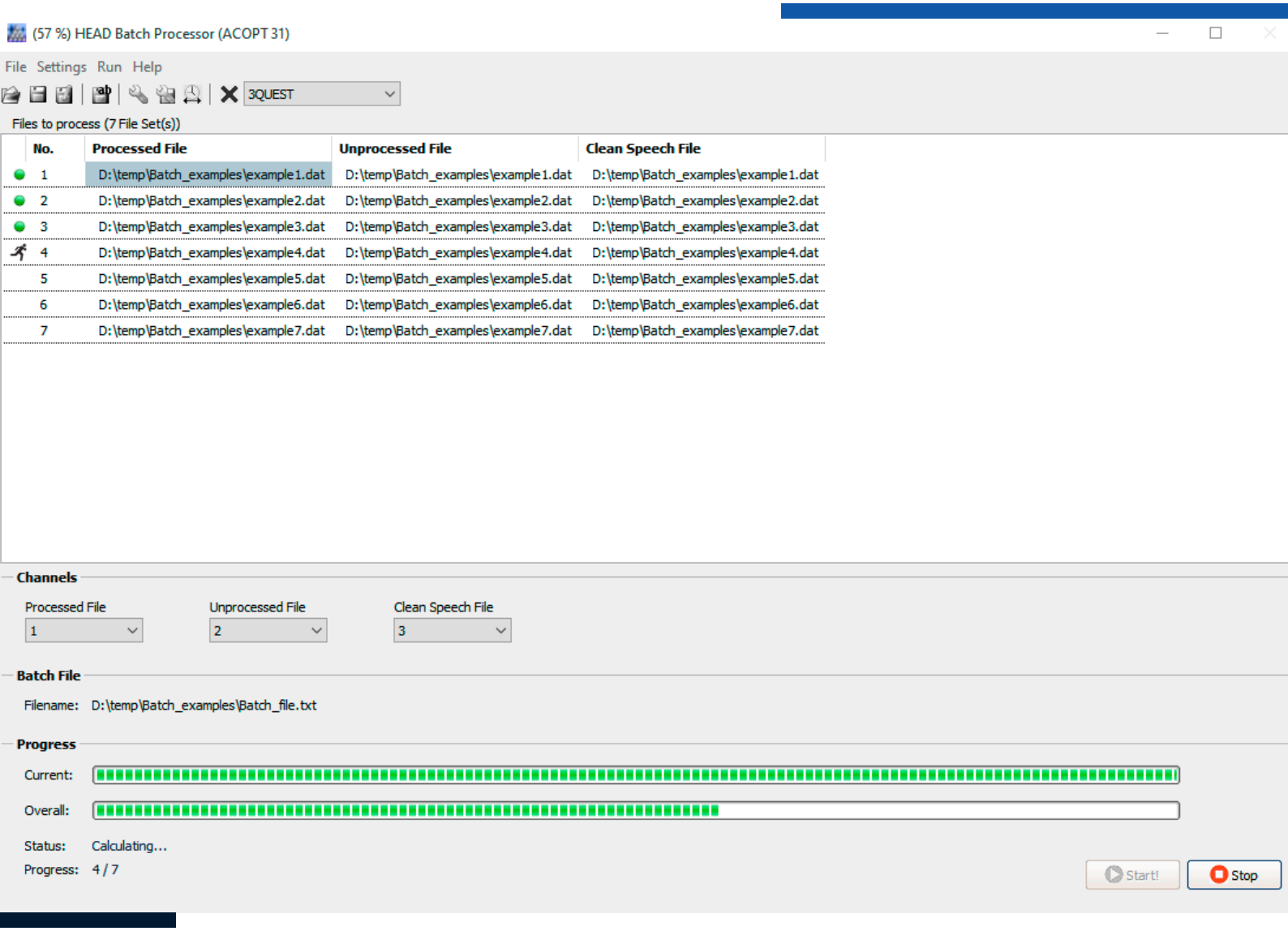
HEAD acoustics

DATA SHEET



Code 6977/6981/6982/6858

Batch Processor

Automated batch processing of speech signal files

OVERVIEW

Batch Processor

Code 6977/6981/6982/6858

Automated batch processing of speech signal files

Batch Processor enables automated batch processing of speech signal files with various calculation methods.

Batch Processor is available in three standalone versions (with 3QUEST/PESQ/POLQA) or as ACQUA option (ACOPT) for usage alongside ACQUA.

KEY FEATURES

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

Extendable with further calculation methods at any time

Automation of batch process by simple command file structure (TXT or INI)

Support of various file types
(DAT, HDF, WAV, PCM, RAW)

APPLICATIONS

Quality evaluation of telecommunication terminals, single transmission paths, and whole networks by means of:

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

3QUEST SWB/FB (ETSI TS 103 281)

ABLE (ETSI TS 103 558)

EQUEST

PESQ (ITU-T P.862)

POLQA (ITU-T P.863)

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

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

TOSQA

DETAILS

In telecommunication, evaluating speech 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 processing large amounts of speech signal files quickly becomes time-consuming. Batch Processor fills this gap by providing automated processing of speech signal files with various calculation methods.

DESCRIPTION

Batch Processor is available in two variants: Standalone versions linked to specific calculation methods or as ACQUA option requiring an existing ACQUA license. The standalone versions are available for three calculation methods, either 3QUEST, PESQ, or POLQA. They are suited for analysis of speech signal files by means of the linked calculation method.

Batch Processor provides individual settings for each calculation method. Batch Processor supports the following calculation methods:

- 3QUEST (3fold 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
- EQUEST (Echo Quality Evaluation of Speech in Telecommunication)
- 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)
- 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 Batch Processor requires writing a simply-structured INI or TXT file. It specifies file names, file directories, and their chronological order for processing. Once created, an INI/TXT file may be reused as template with minor changes for new processing projects. Batch Processor also provides the possibility for adding files via drag and drop to the list for processing. In the list, 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.

Batch Processor supports various file types:

- HEAD acoustics data files (*.dat)
- HEAD acoustics HDF files (*.hdf)
- Wave files (*.wav)
- RAW files (*.pcm or *.raw)

For Wave and RAW files, the file parameters are adjustable before importing the files.

After processing, calculation results can be saved to a text file, more detailed results can be exported to Excel files or SQLite files.

ACQUA options for additional calculation methods are available for upgrading every version of Batch Processor.

Batch Processor versions upgrade possibilities

O Included
◊ Optional upgrade

Calculation method	ACOPT	Standalone (3QUEST)	Standalone (PESQ)	Standalone (POLQA)	ACOPT 31
3QUEST	21	O	◊	◊	◊
3QUEST SWB/FB	35	◊	◊	◊	◊
ABLE	37	◊	◊	◊	◊
EQUEST	29	◊	◊	◊	◊
PESQ	16	◊	O	◊	◊
POLQA	30	◊	◊	O	◊
SNRI and TNLR	28	◊	◊	◊	◊
Speech-based Double Talk	32	◊	◊	◊	◊
TOSQA	10	◊	◊	◊	◊

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 TNLR 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 37 (Code 6869)
› Option ABLE - Assessment of Binaural Listening Effort according to ETSI TS 103 558

SCOPE OF DELIVERY

Batch Processor
- 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
- For ACOPT 31 (Code 6858), SMA is included in SMA for ACQUA

GENERAL REQUIREMENTS

Software

One of the following software applications:

3QUEST-Batch (Code 6977)
- 3QUEST Batch Processor

PESQ-Batch (Code 6981)
- PESQ Batch Processor

POLQA-Batch (Code 6982)
- POLQA Batch Processor

ACOPT 31 (Code 6858)
- Option ACQUA Batch Processing
- Requires an existing and valid ACQUA license

One of the following Microsoft Windows versions:

Microsoft Windows 10 Pro
- (English or German version)

Microsoft Windows 11 Pro
- (English or German version)

Hardware

PC
- Multi-core processor, 1.6 GHz or faster, 4 GB RAM, 300 MB free disk space

HEAD acoustics

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