

SeismicAirgun User Guide

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I. INTRODUCTION

SeismicAirgun computes airgun/bubble dynamics following a similar treatment to the seminal work of ?. A lumped parameter model is used where the internal properties of the airgun and bubbles are assumed to be spatially uniform. **SeismicAirgun** is written in MATLAB and runs efficiently on a standard desktop/laptop computer. For more details and examples of the application of **SeismicAirgun** see:

- Chelminski, S., Watson, L. M., and Ronen, S. (2019) Low-frequency pneumatic seismic sources, *Geophysical Prospecting*, <https://doi.org/10.1111/1365-2478.12774>.
- Watson, L. M., Dunham, E. M., and Ronen, S. (2016) Numerical modeling of seismic airguns and low-pressure sources, *SEG Technical Program Expanded Abstracts*, <https://doi.org/10.1190/segam2016-13846118.1>.

II. DIRECTORY

- **demo** - script files for demonstration
- **doc** - documentation including user guide and license file
- **source** - function files associated with numerical implementation

SeismicAirgun is freely available online at <https://github.com/leighton-watson/SeismicAirgun> and is distributed under the MIT license (see `license.txt` for details).