

GAMS/LINGO

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1 Introduction

GAMS/LINGO allows users to solve GAMS models using solvers within the LINDO modeling system. The GAMS/LINGO link comes free with any GAMS system. Users must have a licensed LINGO system installed and have the LINGO executable in their path.

To run GAMS/LINGO, just specify the solver as lingo. For example, if we wish to solve the *transport.gms* model, we would run

```
>> gams transport.gms lp=lingo
```

As for other GAMS solvers, options can be passed on via solver option files. GAMS/LINGO specific options are described in the section “GAMS/LINGO Options”.

By default, GAMS/LINGO returns a model status of 14 (no solution) and a solver return status of 1 (normal completion), provided the link is executed normally. This includes the case where the LINGO executable is not found.

2 LINGO Path

GAMS searches for a LINGO executable using the following hierarchy:

- Via the options `LingoPath` and `RunLingo` within a GAMS/LINGO solver option file.
- An `lingopath.txt` file located in the GAMS system directory specifying the path of the LINGO executable.
- The system path.

For example, GAMS will first search for the LINGO executable within the `lingo.opt` file, if specified. If not found, it will search within the GAMS system directory for a file called `lingopath.txt` specifying the LINGO directory. Finally if `lingopath.txt` is not found, the GAMS will try the system path.

If no LINGO executable is found, the user will see a message similar to

```
LINGO Link 0. Jan 26, 2005 LNX.00.NA 21.6 002.000.000.LXI P3PC
```

```
--- No LingoPath option or "lingopath.txt" file found  
--- System PATH will be used
```

```
sh: line 1: runlingo: command not found
```

The last line is platform dependent but indicates that LINGO was not found, either because it is not installed or because it is not found in the system path.

3 GAMS/LINGO Options

GAMS/LINGO solver options are passed on through solver option files. If you specify “<modelname>.optfile = 1;” before the SOLVE statement in your GAMS model, GAMS/LINGO will then look for and read an option file with the name *lingo.opt* (see “Using Solver Specific Options” for general use of solver option files).

Option	Description	Default
DotLng	Lingo input file name	lingo.lng
Help	Display GAMS/LINGO options	
LingoPath	Path to LINGO system files	
OptCR	Relative termination for MIPs and Global nonlinear optimization problems	
IterLim	Minor iteration limit.	
ResLim	Resource limit.	