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Tech Note #6

RIGGING: "Flying"

Problem:

Ghost effects / haunted house / paranoia? An object needs to 'fly' from some perch (shelf, night stand) on stage to some other location on stage.

Suggested Solution:

Use a simple pendulum setup. This simple rigging system allows for highly reproducible flights for lightweight objects. It's only for relatively light weight things because the setup has no mechanical advantage so the operator has to handle all the weight.

How to:

The simple pendulum flying situation is an application of spotlining. The rope (usually a thin steel cable, to be as invisible as possible) runs from where it will be operated (some sort of pinrail), up through a head block, across to a loft block, and down to the stage area. The loft block will need to be located between the starting and ending positions of the flying object.

The cable should be firmly attached to the object by some method, depending on whether the object will be doing anything else (e.g. does someone carry it in earlier or remove it later? - then you'd need an easily detachable setup). While normal rigging is done using only on the order of a tenth of the breaking strength of the rope or cable, flying is often done with a much smaller safety margin in order to use thinner cable. This is ok because the rigging setup in this case is done for a specific rigging situation.

The flying effect is achieved by pulling on the rope to bring the object off its perch and let it swing across stage as the operator lowers it on its rope to the ground. The flight path can be

adjusted by how much the operator lifts the object during the flight, how fast he brings it up & down, and whether he makes it undulate. The object will always land along the path from the original perch through the loft block, so it must be placed properly each time. (Naturally the path on which the rope swings must be free of obstruction!) The landing place along that line depends on how the operator flies the object.

#### References:

Arnold, Richard L., *\_Scene Technology\_*, 2nd Ed. Prentice Hall, 1990.  
Specifically, Chapter 9: Scene Assembly, Rigging, and Shifting.