

A Technical Description of The Magic Whiteboard Eraser

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Comm 400
10/20/06

Definition

The **Magic Whiteboard Eraser** is a device used to erase a whiteboard at the press of a button. It uses a 12 volt dc motor and a pulley system to horizontally pull an eraser across a whiteboard. The motor has a pulley with a rubber belt attached to it, and the rubber belt is stretched up to a second pulley located at the top left corner of the board. The upper pulley is connected to a threaded rod that is mounted to span across the top of the board. The eraser has a threaded hole at the top of its side, and the rod goes through this hole. A circular red button that's 5" in diameter is mounted at the bottom left corner of the board. Four lights are located above the button to indicate when the eraser is in use.

Specifications	Parts
Rod	
Length.....15'	
Diameter.....1/2"	
Eraser	
Width.....5"	
Height.....5'	
Depth.....3"	
Motor	
Length.....4"	
Diameter.....2"	
Pulleys	
Length.....1/2"	
Diameter.....4"	
Rubber Belt	
Length.....10' 6"	
Diameter.....1/4"	
Button	
Height.....1"	
Diameter.....5"	

Function

The **Magic Whiteboard Eraser** has very few parts and can be attached to any 15' by 5' whiteboard.

Operating Principle

To operate the magic white board, a user should press the big red button labeled easy. The motor will then turn the lower pulley causing the belt to move, and then the upper pulley will turn. Finally the threaded rod will rotate caused the eraser to move across the board.