

**LAP TIMER FOR MINI 4WD RACING CIRCUIT**

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## ABSTRACT

A mini 4WD is any miniature model within the mini scale of between 1/20 (1:20) to 1/48 (1:48) scale. Currently, in 2014, the term is popularized predominately by a 1/32 (1:32) scaled, AA battery powered plastic model race car without remote control. All four (4) wheels are direct-drive, thus "4WD" for 4-wheel drive, as opposed to "AWD" or All-wheel drive. Horizontal side rollers guide the vehicle against the vertical walls of the un-banked track for steering, providing very fast speeds up to 65 km/H (40 mph) on the track. In Japan, Mini 4WD is also known as mini yonku in Japanese.

The Mini 4WD lap timer is used to measure the time taken to finish a lap. It is mainly use by Mini 4WD hobbyists to measure the time taken by their mini 4wd to complete each lap in racing competition. The lap timer can also be used to measure the speed of Mini 4WD car in KM/H unit. Lap timer is one of the essentials during tournaments and fun race. This is because the winner were determined by the time taken. The top 16 (usually) in a tournaments are then be taken through a tandem race in which the format change into a knockout round. 3 types of racing categories for Mini 4WD are Technical, Speed-Technical and Drag Racing. The most common racing categories in Malaysia is semi-speed and speed race. There are many communities of Mini 4WD racers in Asia since this hobby is quite popular and ready to make a huge comeback.