

闖紅燈自動照相系統對駕駛行為影響之研究

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摘要

台灣目前於道路上所架設之自動照相系統主要分為二類，測速自動照相系統、闖紅燈自動照相系統。本研究主要探討闖紅燈自動照相系統對駕駛人行為之影響，闖紅燈自動照相系統藉著駕駛人在闖紅燈時自動照相來幫助執法，闖紅燈自動照相系統與號誌連接，且設置感應器於穿越道或停止線。闖紅燈自動照相系統 24 小時持續運作，當紅燈時感應在預設最低速度以上的車輛穿越感應器即照相，照相會記錄日期、時間、紅燈開始過後多久以及車輛速度。本研究選擇新竹市區裝設闖紅燈自動照相系統之路口為研究路口，分別於平常日上下午尖峰與離峰以及假日時段，就闖紅燈自動照相系統啟動前後等不同運作狀態，利用攝影機架設在天橋上收集紅燈時汽、機車闖紅燈數量等資料做為闖紅燈自動照相系統之績效衡量指標。結果顯示裝設闖紅燈自動照相系統確實能有效降低駕駛人的違規傾向，但系統在相機啟動二個月後對降低駕駛人的違規傾向並不再顯著地作用。

關鍵詞：闖紅燈自動照相系統；闖紅燈；駕駛行為；執法

Effects of Red Light Cameras on Drivers' Behaviors

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ABSTRACT

There are two types of traffic enforcement cameras in Taiwan: Speed Cameras and Red Light Cameras. This study focuses on the drivers' behaviors affected by Red Light Cameras. Red light cameras can help communities enforce traffic laws by automatically photographing vehicles whose drivers run red lights. A red light camera system is connected to the traffic signal and to sensors buried in the pavement at the crosswalk or stop line. The system continuously monitors the traffic signal, and the camera itself is triggered by any vehicle passing over the sensors above a pre-set minimum speed and a specified time after the signal has turned red. The camera records the date, time of day, and time elapsed since the beginning of the red signal and the speed of the vehicle. Intersections in Hsinchu city were chosen to collect data. A digital video camera on an overpass was used to observe numbers of drivers running through stop line at red lights at AM and PM peak hours, AM and PM non-peak hours and holiday, while the Red Light Cameras were turned on and off. The results indicate that it's effective in reducing violation of drivers' behaviors by installing Red Light Cameras. However, after two months of installation, the Red Light Cameras could not further reduce the violation rates.

Keywords : Red Light Cameras, Red Light Running, Driver Behavior, Enforcement

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