



US005565871A

United States Patent [19]

Aker et al.

[11] Patent Number: **5,565,871**

[45] Date of Patent: **Oct. 15, 1996**

[54] POLICE TRAFFIC RADAR FOR ALLOWING MANUAL REJECTION OF INCORRECT PATROL SPEED DISPLAY

4,740,045	4/1988	Goodson et al.	342/112
4,743,908	5/1988	Brassfield et al.	342/113
4,988,994	1/1991	Loeven	340/936
5,371,718	12/1994	Ikeda et al.	367/91

[75] Inventors: **John L. Aker**, Kansas City, Mo.;
Robert S. Gammenthaler, Princeton;
Alan B. Mead, Plano, both of Tex.

OTHER PUBLICATIONS

Craig Paterson, Speed Enforcement Technology, An explanation of the latest features and capabilities of speed detection equipment, Law and Order, vol. 41, No. 9, Sep. 1993, pp. 32-41.

[73] Assignee: **Applied Concepts Inc.**, Plano, Tex.

Primary Examiner—J. Woodrow Eldred
Attorney, Agent, or Firm—Ron Fish; Falk, Vestal & Fish

[21] Appl. No.: **386,374**

[22] Filed: **Feb. 10, 1995**

[51] Int. Cl.⁶ **G01S 15/60**

[52] U.S. Cl. **342/176; 342/175; 342/104; 340/936**

[58] Field of Search **342/175, 176, 342/104; 340/936**

[57] ABSTRACT

A police radar utilizing digital data transmission from the antenna unit to a separately housed counting and display unit. The antenna has a double balanced mixer to suppress even order harmonics. The counting and display unit has a computer programmed to perform digital signal processing on the digital data received from the antenna to improve the quality and accuracy of calculated speeds for patrol speed, strongest target speed and fastest target speed. Fastest target speed can be displayed simultaneously with strongest target speed. Signal processing techniques are used to suppress false signals caused by double and triple bounce, harmonics, intermodulation products, video display terminal interference, etc.

[56] References Cited

U.S. PATENT DOCUMENTS

Re. 29,401	9/1977	Aker et al.	343/8
3,438,831	4/1969	Fathauer	
3,689,921	9/1972	Berry	343/8
3,936,824	2/1976	Aker et al.	343/8
4,214,243	7/1980	Patterson	343/8
4,236,140	11/1980	Aker et al.	343/8
4,293,859	10/1981	Sergent	343/702
4,335,382	6/1982	Brown et al.	343/8
4,335,383	6/1982	Berry	343/8

7 Claims, 46 Drawing Sheets

