



WATTS ANTENNA COMPANY  
270 Sunset Park Drive  
Herndon, VA 20170-5219

## **TECHNICAL SUMMARY: WA-TS 01.001**

**SUBJECT: “Instrument Landing—Does it Exist?”**

April 19, 2001

### **ABSTRACT:**

The question posed in the title is considered in the context of current terminologies. One may conclude that landing on instruments (blind) probably does occur, rarely, in the United States, in a small number of situations, but would be normally prohibited by regulation. Suggestions are presented to increase the number of instrument landings by means of changes in procedure and some improvements in ground and airborne equipments. Instrument approach occurs routinely, usually followed by landing.

### **DEFINITIONS:**

(1) Instrument = pilot's (or autopilot's) cross pointer, presumably with associated basic instruments for stable flight: (2) Landing = touching terrain with landing gear, at least temporarily, some will say, without damage, personal or property: (3) thus, Instrument Landing = bringing an airplane successfully onto the ground, with reference to instruments and (by implication) without requiring to look out the window for visual reference (“blind”).

### **CONSIDERATIONS:**

- (1) It seems that there cannot be a landing without first having a successful approach and that the approach maneuver might be accomplished by use of a suitably different set of instruments, thus leaving the landing instruments free to be optimized for the specific purpose of landing.
- (2) Further considerations would exceed space limitations here.

### **CONCLUSIONS:**

- (1) Instrument landings rare: (2) Instrument approach, routine.

**SUGGESTIONS** – In future developments, it would be helpful always to keep in mind the essential differences between approach (navigation) and landing (pilotage) when proposing landing system changes. These might include such things as sharper beams, different signal formats, procedural requirements, and others.

**WATTS ANTENNA COMPANY**  
**TECHNICAL SUMMARY: WA-TS 01.001**

**ACKNOWLEDGEMENT:**

The writer must give credit to the people of BLEU for first recognizing and stating forcefully that “to approach” is not necessarily “to land.”

**REFERENCES:**

>1. “The Development of the Civil Authority Aeronautics Authority Instrument Landing System”, Jackson, Alford, Byrne and Fischer, Monograph B-1280, Bell Telephone System, 1939, New York.

>2. “Standard Beam Approach --and controlled approach through cloud,” Army Air Forces, Air Service Command, Patterson Field, Fairfield, Ohio, March, 1943.

>3. “Blind Landing – A Review”, BLEU, RAF Station, Defford, 1944.

>4. “Handbook of General Information; The Army Air Forces Instrument Approach System (IAS) (formerly called the SCS-51 System),” August 1944.

>5. FAA 8200.1A CHG 2, Section 217 (ILS) Par. 217.241, 8/19/98 “source of definitions ILS cats. 1, 2, 3.a,b,c.” particularly POINTS A, B, C, D, and E.

Chester B. Watts, Jr.  
WATTS ANTENNA COMPANY  
April 2001