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Subject: **ACTION**: Electromagnetic Interference

Date:

From: Manager, Engineering and Specification Division, AAS-200

Reply to  
Attn. of:

To: All Regions  
ATTN: Airports Division Managers

Some airports have experienced excessive levels of electromagnetic interference (EMI) in the airport environment. Although EMI is naturally present in the environment, excessive levels of EMI may degrade the performance of some air navigational systems, i.e. RVR's, glide slope's, localizer's, Air Traffic Control Tower's, etc. As a result, we are currently evaluating the acceptable levels of EMI specified in our advisory circulars.

The attached Airport Technical Advisory provides some suggested cautionary steps that may help reduce the possibility of interference which disturbs the function of existing airport systems. Until the appropriate advisory circulars are revised, please distribute this technical advisory as needed to alert the industry of the potential for disruptive interference.

Additionally, if you should learn of interference problems caused or aggravated by airport lighting equipment please advise our office. If you need to discuss this matter further please contact me at (202) 267-8745 or Pamela Whitley at (202) 267-3118.

John L. Rice

Attachment

cc: AAS-200/250  
File: ARP-11B  
WP: ELECTRO

AAS-250:PWHITLEY:pw:73118:12/19/97

## Airport Technical Advisory

**Subject:** Electromagnetic Interference (EMI) induced by L-828, Silicon Controlled Rectifier (SCR) Type, Constant Current Regulators (CCR's)

Some airports have experienced excessive levels of electromagnetic interference (EMI) which degrade the performance of some of the airport's air navigational systems, i.e. RVR's, glide slopes, localizers, ATCT's, etc. Silicon controlled rectifier (SCR) type, L-828, constant current regulators (CCR's), are likely sources of EMI due to their inherent operating characteristics. The following are some of the cautionary steps that may help decrease EMI and/or its adverse effects in the airport environment.

- 1) Cables for airfield lighting circuits should not be installed in the same conduit, cable duct, or duct bank as control and communication cables.
- 2) Cables for airfield lighting systems should not be installed such that they cross control and/or communication cables.
- 3) In some cases, harmonic filters may be installed at the regulator output to reduce the EMI emitted by the CCR. These filters are available from some CCR manufacturers.
- 4) Spare control and communications cables should be grounded.
- 5) Inform manufactures, designers, engineers, etc. about the existing navigational equipment and the potential for interference.
- 6) Electromagnetic compatibility between new equipment and existing equipment should be a requirement in project contracts. Operational acceptance test(s) may be required to verify compliance.

The Federal Aviation Administration is modifying Advisory Circular, 150-5345-10E, Specification for Constant Current Regulators and Regulator Monitors to decrease EMI in the airport environment.

**For more information contact John Rice at (202)267-8745 or Pamela Whitley at(202)267-3118.**