

Case study #	1.1
Title	Acoustic noise troubles caused by an amateur radio base station
Type of trouble	Acoustic noise.
Source of trouble	Amateur radio base station.
System affected	Customer's equipment.
Location	Customer premises.
Keywords	Immunity, amateur radio.
Version date	2004-01-01

System configurations

Acoustic noise trouble occurred at a customer premises. The customer complained that a strange sound could be heard through the handset of the telephone. The telecom line pair was changed as a usual mitigation measure; however, the problem continued.

The system configuration of this issue is shown in Figure 1.1-1. The telephone set was connected to the host equipment. The customer premises were located 20 to 30 m away from an amateur radio base station. The frequency of the radio base station was 7 MHz and its radiation power was estimated at more than 100 W. After the investigations, the electric field strength was found to be greater than 110 dB μ V/m around and in the customer premises. The noise was caused by the electromagnetic waves of the amateur radio base station.

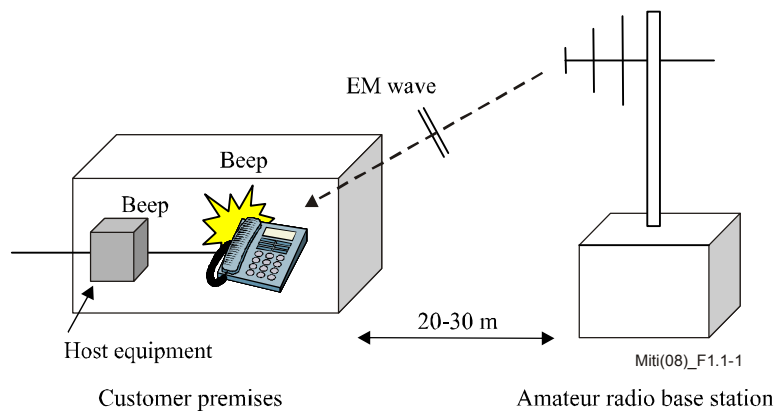


Figure 1.1-1 – System configuration