

Case study #	1.10
Title	RF welder interference
Type of trouble	Acoustic noise/Degradation.
Source of trouble	RF welders and coupling of the RF into the telephone with resultant demodulation at semiconductor junctions into "white" noise.
System affected	Customer's equipment, office equipment.
Location	Customer premises.
Keywords	High-frequency welder, common mode chokes, filtering.
Version date	2004-01-01

System configuration

Normal PSTN circuit adjacent to a factory that uses an RF welder. Noise, sounding like loud "white noise", is only present during welding operations. Customer has normal telephones and wiring.

Measurement/Searching techniques/Experiment

Detection of the noise is by inference to the location. It is unlikely to be due to a far-away electric source. Coupling of the noise into the affected telephones/wiring tends to be over a short distance, so it does not normally affect many customers.

Mitigation method/Results/Conclusion

There is not always an easy solution to the problem. Internal wiring may need to be well screened to minimize RF pickup and/or the use of ferrite rings on telephone cords.

References

Rec. ITU-T K.37; Annexes A and B.