

amplified and strong ones are attenuated.

In the Macrovision method, some new signals are inserted in the non-visible portion of the picture. These signals can make the VCR think that a perfectly normal picture is suddenly way, way too bright. The AGC circuit therefore darkens it until it thinks the brightness is normal.

Of course, now the real picture is very dark. The picture is varied between bright and dark periodically in order to defeat simple eliminators that would just amplify the dark and murky signal back to almost normal.

Why isn't the TV affected? Well, most TV sets do not have any AGC-circuits at all, and the rest behave differently from VHS ones.

My friend has a VHS VCR that is not affected. How is this possible?

The proper behavior of the AGC-circuit is very important in order to achieve good protection. Apparently the specifications were somewhat "loose" in the pre-Macrovision days, so the old (how old?) machines are not affected.

JVC, the VHS license holder, has tightened the spec and the control, so it is difficult to get an "immune" VCR, but there are some machines that are conveniently "out of spec". No, I don't know which ones.

I have heard that 8mm video is not affected by it. Is this true? 8mm video is not affected by Macrovision, because it is totally separate from VHS. There is no need to have AGC circuits that bear any resemblance to JVC ones. Of course, 8mm recorders do not remove the protection, so any subsequent VHS dub will again be unwatchable.

Can Macrovision be defeated by copying via the aerial inputs/outputs?

No, it can't. There was some ancient method that could be eliminated like that, but it is now long dead. Macrovision is so integrated in the video signal that these simple tricks will not work.

There are many mail-order companies in the USA selling those boxes.

Can I buy one and use it in Europe? No, not really. You might get some improvement, but the protection timings are sufficiently different to keep it from working properly.

My TV does not get a stable picture, when I watch rental tapes.

Could this be a fault of the copy protection? Yes, very likely.

Macrovision signals resemble false synchronization pulses, and some sets mistake them for the real ones.

Can laserdiscs have Macrovision? Apparently no. First of all, it is technically difficult, because the region used by Macrovision is also used to hold control data for the laserdisc players. Secondly, as long as the laserdisc market stays as a niche market, the distributors will not pressure the manufacturers to change the specs.

5) A technical explanation

In this part, I represent the empirical data about "Macrovision in action" that I have gathered with my trusty 20+ year old oscilloscope.