GENTEX
CORPORATION
A Smarter Vision®
600 N. Centennial Street, Zeeland, MI 49464

To whom it may concern,

HomeLink® is a wireless transceiver capable of learning the frequency and code for a number of wireless command and control systems, notably garage door openers. When the HomeLink device enters train mode, it begins scanning frequencies from approximately 286 – 440 MHz. When the HomeLink device finds energy above a predetermined threshold, it stops and analyzes it. If it determines that the energy is a valid signal, and that the signal is at a frequency not banned by the FCC, it decodes the signal and stored characteristics of the signal in non-volatile memory for later retransmission.

When the user presses a trained HomeLink button, the HomeLink device is powered up, and it reads from non-volatile memory the information it needs to re-create the trained signal. The duty factor of the signal to be transmitted is used to adjust the output power. This is true for duty factors from 10% to 90%. For signals below 10% duty factor, 10% is used in the calculations, and for signals above 90% duty factor, no duty cycle adjustment factor is applied. These conditions are rarely if ever encountered, as virtually all systems the HomeLink device is compatible with have a duty factor between 30% and 50%.

The HomeLink firmware is code-protected so that it may not be read or modified. In addition, there are no hardware means by which the HomeLink device can be modified to transmit at anything other than the intended frequency.

Todd Witkowski
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