

Technical superiority



The new 95 and 85 series IR kits from Xantech feature five significant advances in IR control to achieve their remarkable sensitivity, performance and reliability in a wide variety of installation environments. Xantech is the only manufacturer building an IR product line around this level of advanced circuit design. IR is a crucial control “backbone” in nearly every A/V system installation, and Xantech is committed to IR that works perfectly every time which demands such a no-compromise approach. If it is an IR problem and Xantech can't solve it, nobody can.

Native Carrier Frequency Transmission circuitry:

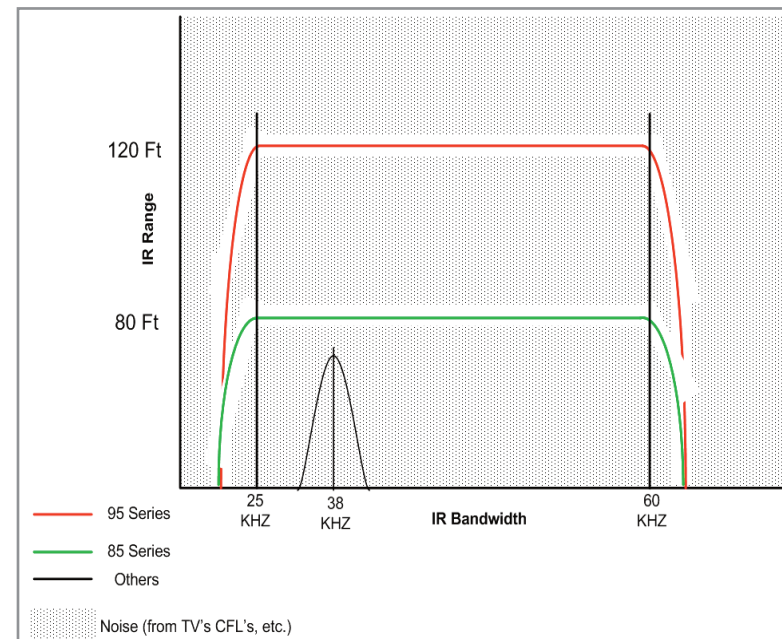
Nearly every IR system relies on a carrier frequency to “carry” the commands to their destination. Some consumer electronic devices, especially digital cable and satellite TV boxes, are very picky regarding carrier frequency accuracy: they may not accept remote commands unless precisely the right carrier frequency is present.

Unfortunately, many IR repeater systems take a technical short-cut and simply strip away the carrier frequency upon reception— instead of intelligently identifying and removing the unwanted noise and interference from it— and then attempt to regenerate or replicate the carrier frequency. This can result in incomplete or incorrect IR signals and a lot of frustration and expense for a system designer.

Xantech takes no shortcuts here. Rather than trying to make a copy of the carrier frequency to compensate for inadequate parts and circuit design, Xantech uses better-quality components and circuitry that can accurately process the original carrier frequency. By doing so, a Xantech IR kit eliminates the noise and interference instead of the carrier itself, and transmits the original IR signal in its correct form to the rest of the system. The result is a dead-on accurate signal transmission— minus all the noise and distortion.

Overall build quality:

Essential in getting the most out of Xantech's technology advantages is an unusually high level of component quality and manufacturing precision not found in competitive IR products. Every link in the system chain, from power supply to IR emitters, is made from ultra-high quality electronic parts and materials and selected for performance, electronic and/or optical integrity, and long-term reliability. This attention to both component quality and advanced technology is ultimately what makes a superior IR product— and what makes it a “Xantech.”



Error Correction circuitry:

Xantech IR receivers actively monitor and confirm an infrared signal's validity by comparing it to typical remote control signal patterns. By doing this, unwelcome spurious or very high-frequency interference can be easily ignored, while validated but distorted IR signals can be quickly repaired and purged of undesirable noise. The result is the most faithful reproduction of the original IR signal that present technology allows.

Automatic Gain Control (AGC) circuitry:

A Xantech IR receiver also constantly studies the ambient light level in the environment, and automatically (and rapidly) re-calibrates its own sensitivity so it can more accurately discriminate between the wanted remote signals and unwanted noise from sources such as TV's, lighting and even the sun.

Sophisticated Adaptive Filtering circuitry:

Xantech has extensively analyzed the IR characteristics of the vast majority of consumer electronics product types, which shows that nearly all of them operate using a carrier frequency between the 25 kHz and 60 kHz range. Frequencies above 60 kHz consist mostly of random noise generated by CFL lighting as well as LCD and plasma displays. Through this exhaustive and on-going research, Xantech is able to build-in an intelligent, accurate, and effective filtering mechanism into each of its IR receiver technologies which enables a Xantech receiver to more electively “look” at an IR source while rejecting those frequencies without any useful information.

Almost all A/V IR remote controls operate over a bandwidth of 25kHz-60kHz, where they generate carrier frequencies to communicate with their corresponding A/V components.

Xantech's advanced circuitry in its 85 & 95-series IR receivers ensures that all carrier frequencies are faithfully transmitted and that the sensitive IR signal is not lost in the interference generated by plasma TV's, LCD/LED TV's, and compact fluorescent lighting (CFL's). That means *all* components will work properly under a wider range of conditions and over greater ranges.



GUIDE TO IR PRODUCTS

Updated IR components & kits 2010



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Xantech's new IR series

Based on years of market leadership in a category Xantech created, the brand is again re-inventing infra-red (IR) control for audio/video and other systems with the introduction of its new 25, 85 and 95 series

Background

The prior revolution in IR control from Xantech was driven by the evolution of the television display. Xantech's innovation of the Dinky Link in 1990 was remarkably prescient as it anticipated that televisions would be migrating from entertainment centers (where there was space for table-top IR receivers) to the wall, where a small form-factor that could stick-on a flat-screen TV frame would be more practical.

With the rise of plasma and LCD TV displays for on-wall use came the problem of opto-electronic interference from these new video display designs. Add to that the drive for energy efficiency and the rapid growth of interference-generating compact fluorescent lighting (CFLs) in residences, and IR systems faced a challenging new environment in which to function.

Xantech responded with a three-level, color-coded product line, making it simple for installers to choose the right IR system for any application: red (high interference) for plasma TV's and CFL lighting, green (medium interference) for LCD TV's and CFL lighting, and blue (low interference) for CRT and DLP TV's, and incandescent lighting.

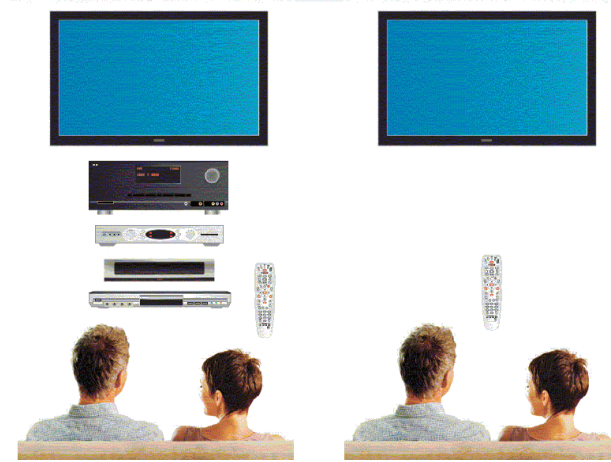
The level of interference-rejection technology and overall build quality of these dedicated products surpassed all competitive types. Xantech's baseline blue-series product, for example, is capable of outperforming many "premium" products made by competitors under low interference operating conditions. This level of "overkill" built into every Xantech product assures installers that in applications where "IR makes or breaks the system, Xantech makes the IR that works."

What's new?

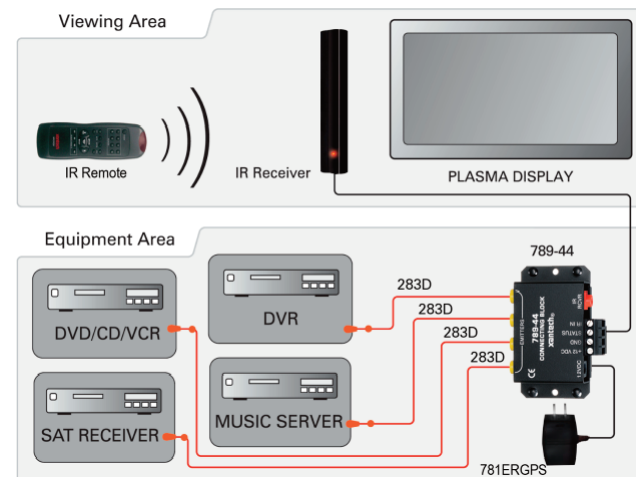
LCD and plasma TV's are now ubiquitous in today's homes. Compact fluorescent lighting (CFL) is increasingly common as well— many homes now have more CFL bulbs than incandescent ones. Furthermore, many popular entertainment source units, such as cable and satellite boxes, feature dramatically evolved IR reception circuitries to better cope with the increased sources of interference.

As a result, the accuracy of an IR signal is much more critical today than ever before, especially when it comes to an IR signal being correctly recognized and executed by a source unit. This is why Xantech took the lead role and once again reinvented IR technology to address these evolutionary changes— and offer new benefits to installers and end-users based on market and application needs.

The good news is that through a series of advanced technical improvements, Xantech's red (95 series) and green (85 series) lines of IR kits now both handle LCD and plasma TV's (as well as the new LED TV displays), and are also immune to interference from compact fluorescent (CFL) lighting. With Xantech's new line, it's easier than ever to select the right level of technology for an IR application.



IR repeater technology lets you see the show-- instead of the clutter



Basic IR repeater system connection diagram



IR repeater kit: Clockwise from top, IR receiver, IR emitter, power supply, connecting block

New IR kits



All three Xantech IR series kits feature advanced circuitry which passes the native IR carrier and data signals faithfully and reliably to ensure proper control of all A/V components. This is superior to the scheme used in many competitive products. They try to "strip" and regenerate the carrier signal, resulting in incomplete and erroneous IR commands which a source unit often cannot execute competently.

Red/95 series

Premium kit for high-end and custom installations requiring the ultimate in IR control. 95-series works with remotes up to 120 feet away*. Compatible with all types of TV's including plasma, LCD and LED, and all satellite and cable TV boxes. Works with CFL lighting.

Green/85 series

Versatile IR solution that works with remotes up to 80 feet away*. 85-series is also compatible with all types of TV's (plasma, LCD and LED) as well as all satellite and cable TV boxes. Works with CFL lighting.

Blue/25 series

Also works with remotes up to 80 feet away*. A great value in IR control, 25-series is designed for CRT and DLP TV's and is compatible with all satellite and cable TV boxes. Works with traditional lighting.

IR receiver styles



HL/Hidden-Link for equipment rack



Decora-style/J-box for in-wall retrofit and other applications



DL/DinkyLink surface-mount for TV frame. Includes white and silver color sleeves.



ML/MicroLink peephole style for in-wall or ceiling installation

Improved IR technology in four receiver styles to fit any control application:

HL/ Hidden Link™ Designer-style table top

Perfect for placing on shelves near or even under A/V components, or elsewhere in an entertainment center. Also available in black, white or silver to match A/V systems.

Decora® style/ J-box

Used in low-voltage mounting bracket or J-Box installations next to keypads, volume controls, etc., when a two-gang on-wall installation is desired.

DL/ Dinky Link™ surface mount

The industry's best-selling design for easy, unobtrusive mounting on any TV set frame or other component. Now the DL-series receivers come with color-change sleeves to match black, white or silver components— ensuring a very hidden installation.

ML/ Micro Link™ bullet or peephole

Intended for in-wall or in-ceiling installations, and in speakers with a suitable IR knockout feature. ML style comes with brass, white and black bezels for easy concealment.

Decora is a registered trademark of the Leviton Manufacturing Company

*Actual IR kit range depends on remote control output and ambient lighting conditions

