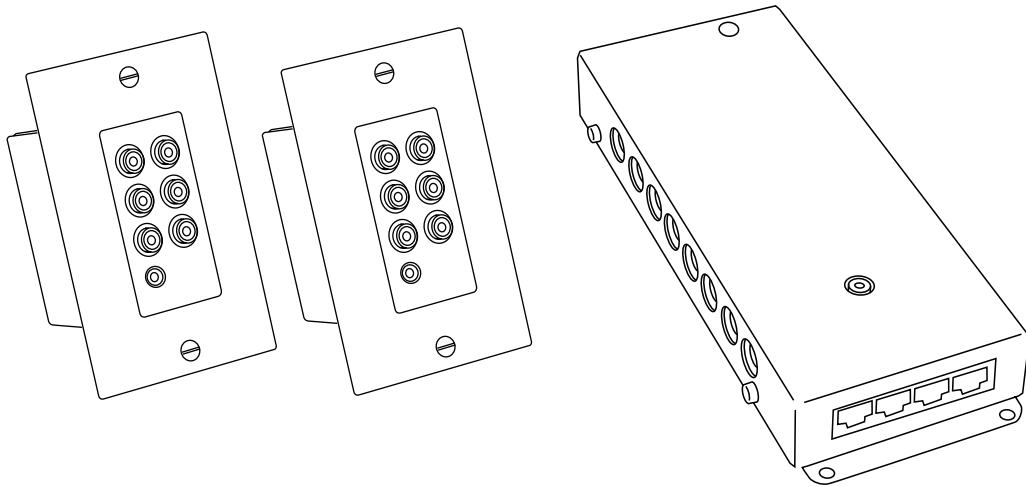


# *DuoDrive*<sup>TM</sup>

Model 9870D  
(9871, 9879)

## Residential Category 5 HDTV Distribution System



**Installation and User Manual**

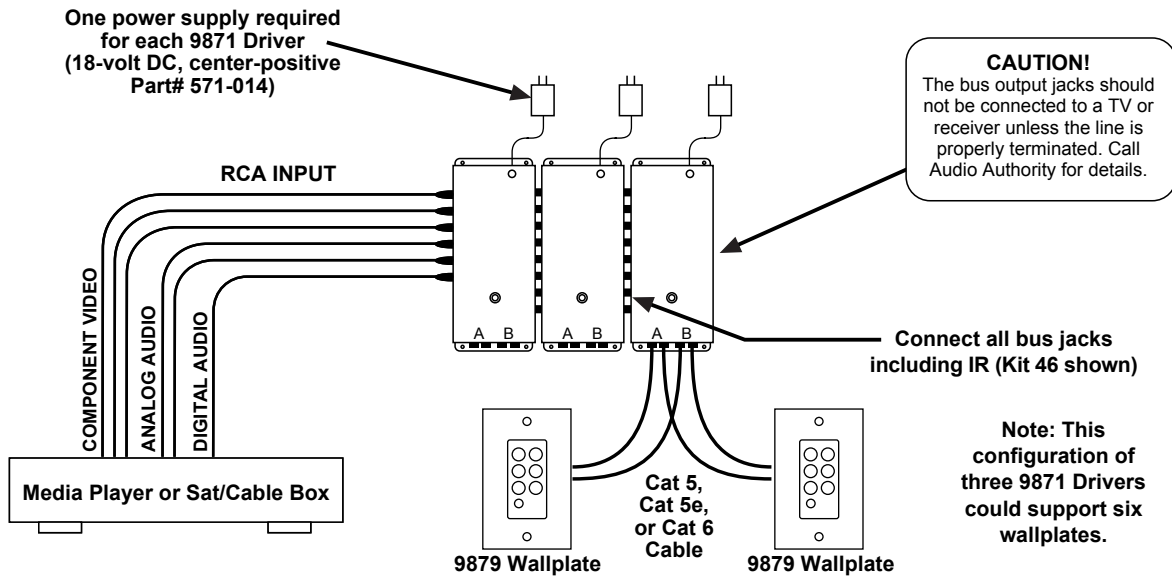
# DuoDrive™ Residential Category 5 HDTV Distribution System

## Overview

The DuoDrive (Model 9870D) allows HDTV signals to be distributed throughout the home from a single source. Component video (YPbPr), analog stereo audio, and digital audio (coaxial) signals are included in each two-cable Cat 5 pathway. By connecting IR remote control systems to the DuoDrive system, users can easily control the source equipment from other rooms in the house. IR receiver and emitter products are not included with the DuoDrive.

## System Design

The DuoDrive is comprised of one Model 9871 RCA-to-Category 5 Driver and two Model 9879 wallplate/receivers. (Two other Cat 5 receiver styles are also available, Models 9878 and 9880.) These products enable distribution of audio, video and IR control signals on Cat 5 cable runs of up to 1,000 feet. The buffered Cat 5 bus outputs on each 9871 drive one or two wallplate/receivers. To expand output capacity of the system, connect together an unlimited number of 9871 Drivers using Kit 46, included with each Driver. High quality RCA patch cables can also be used



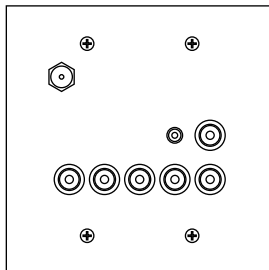
for expansion.

## Rough-In

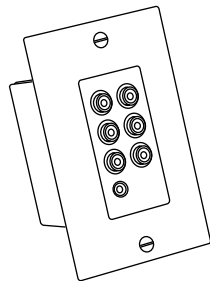
Wallplate/receivers are normally placed on the wall behind the television sets or entertainment centers removed off the main home entertainment system. Set a plaster ring at each wallplate location. Pull two runs of good quality Category 5, 5e or 6 UTP cable from the head-end location to each wallplate/receiver location. Be careful not to pinch, kink, or tightly staple the cable. Mark both ends of the cables in each set A and B, or use two different jacket colors of Cat 5 cable for A and B. It will be helpful to mark the cable length of each run at the wallplate/receiver end because you will have to adjust the cable length compensation when installing each wallplate/receiver.

## Cat 5 Wallplate/Receivers

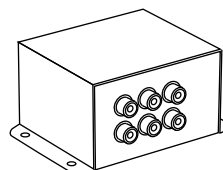
All three wallplate/receiver styles deliver component video, digital and analog audio, and IR signals. The 9879 offers a wallplate format to fit a standard single-gang electrical box, and features front and rear facing IR jacks.



Model 9878



Model 9879



Model 9880

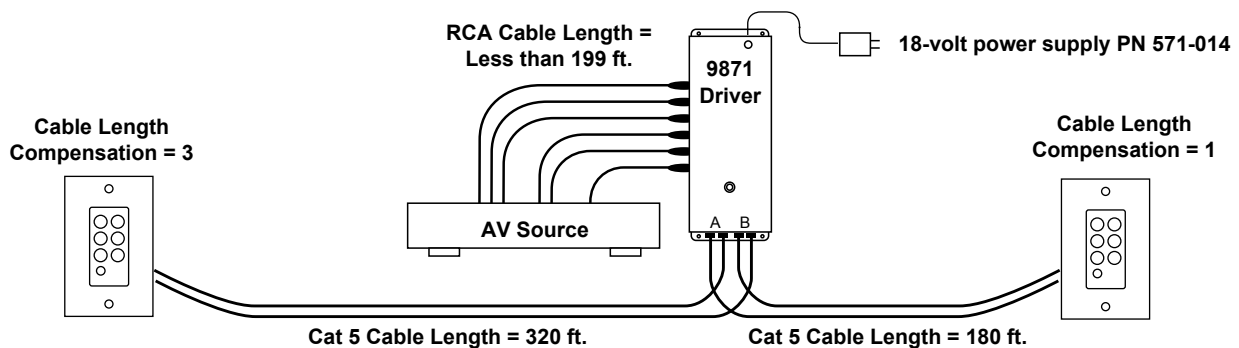
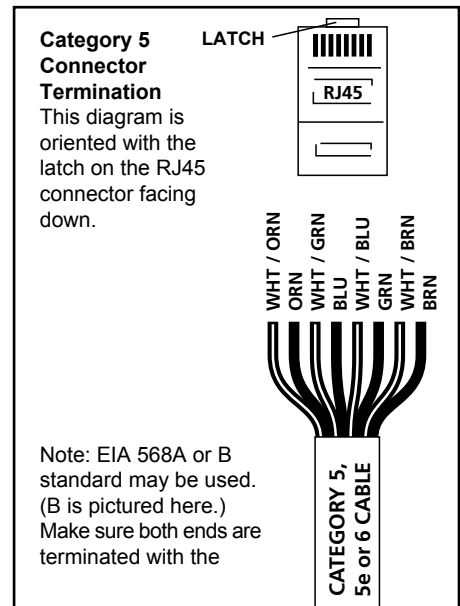
The 9878 is a dual-gang stainless steel wallplate with an antenna pass-through jack. The 9880 is an enclosed receiver ideal for locations where a wallplate style receiver is not practical. DC power for each receiver is supplied through the Cat 5 cable from the 9871's power supply.

## Installing the 9871 Driver

Mount the (first) 9871 Driver on any flat vertical or horizontal surface using the screws provided. You may wish to leave space to add 9871 Drivers to expand output capacity. Connect component video and all audio connections desired from the source equipment to the inputs of the 9871. Use high quality, matched sets of component video cables, and high quality RCA cables for audio. The IR bus jacks are only used to connect 9871 modules together.

If installing more than one 9871 Driver, connect all the bus outputs of the first Driver to the inputs of the next Driver using high quality patch cables or Kit 46 (sold separately), which provides convenient male to male connectors for a more compact installation. Connect bus jacks for all channels whether or not they will be used.

Pull two cables to each wallplate location, preferably using a different colored cable jacket for A and B cables. Install an RJ-45 termination on each end of every Cat 5 cable, using EIA-568B pairing (pins 1-2, 3-6, 4-5, 7-8). If possible, use EZ RJ-45 connectors. Check each cable with a network cable tester – CONTINUITY TESTING IS NOT ADEQUATE – the pairs must match the EIA-568B color code.

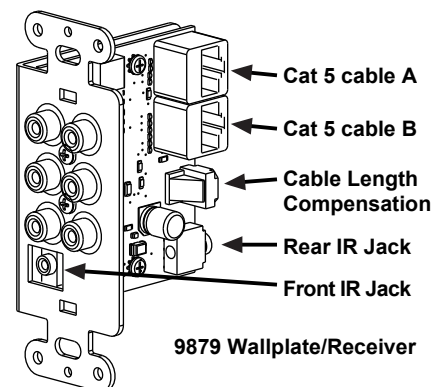


## Installing 9879 Wallplates

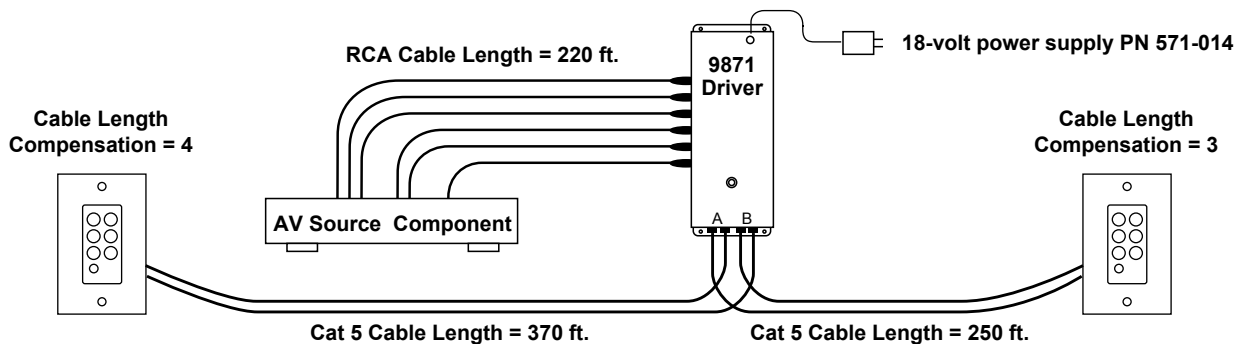
BE CERTAIN to connect the A cable to the A jack and the B cable to the B jack or damage to the wallplate/receiver may occur. Adjust the cable length compensation if the cable between the Driver and the wallplate/receiver is over 100 feet long. Set the compensation at 1 for cables 100-199 ft. long, and 2 for 200-299 ft. cables, etc. Do not permanently mount the wallplate/receivers until after system testing.

Carefully connect the A and B cables to the Driver(s), power the source components, TVs and AV receivers, and plug in 9871 power supplies to test the system. Connect a TV to each wallplate/receiver location to refine cable length compensation settings. Use the MINIMUM compensation setting that still provides the best picture.

Ideally, Drivers should be located near the audio/video sources, but if

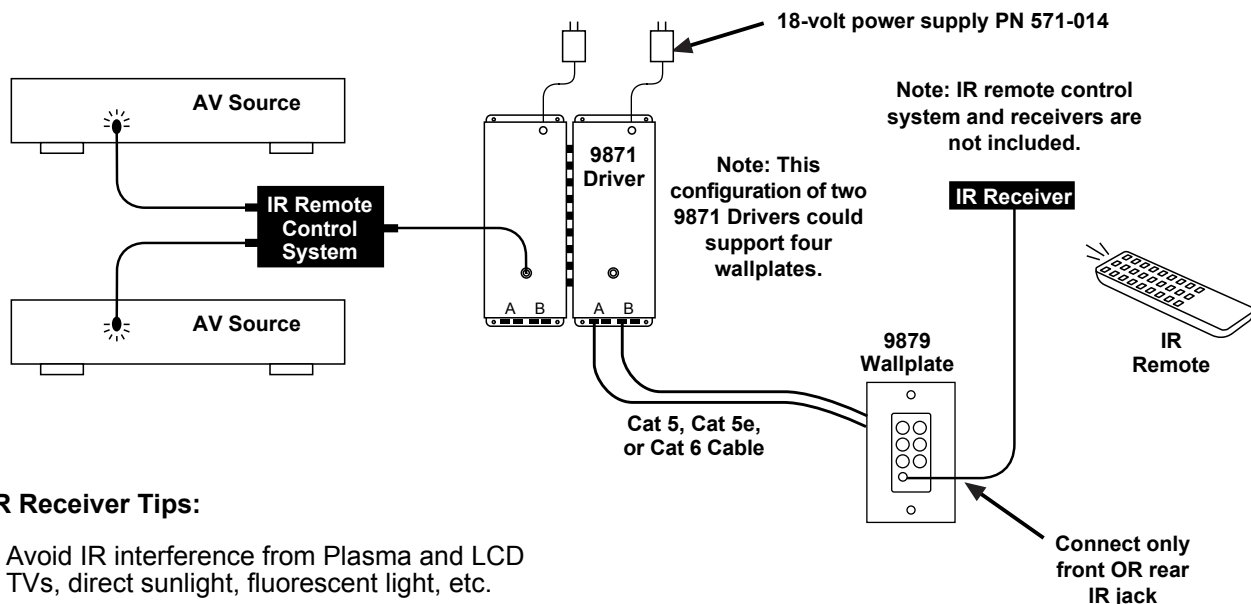


they must be placed far away, compensate for losses of the long coaxial cable by increasing the cable compensation setting by one click for each 200 feet of coaxial cable length (see diagram below). For example, if the coaxial cable length from source to 9871 Driver is 220 feet (1 click) and the Cat 5 cable length to a certain wallplate is 250 feet (2 clicks), the correct Cable Length Compensation for that wallplate is 1 + 2 = 3 clicks. Conditions vary, so it is best to verify settings using the video display that will be installed in each location.



### Connecting to an IR network

The DuoDrive does not have an IR remote control system; it provides a discrete three-strand Cat 5 pathway for a third party system. Connect an IR remote control system input to the Driver IR output stereo 3.5mm jack (see example diagram below). Connect an IR receiver to each wallplate/receiver and position them appropriately in the rooms. Do not connect any equipment to the vacant white RCA jacks marked "IR".



### IR Receiver Tips:

- Avoid IR interference from Plasma and LCD TVs, direct sunlight, fluorescent light, etc.
- Use Plasma-proof or LCD-proof receivers.



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### In Case of Difficulty

If any problems arise that are not covered in this manual, call Audio Authority Technical Support at 800-322-8346, or outside the US and Canada, call 859-233-4599.