



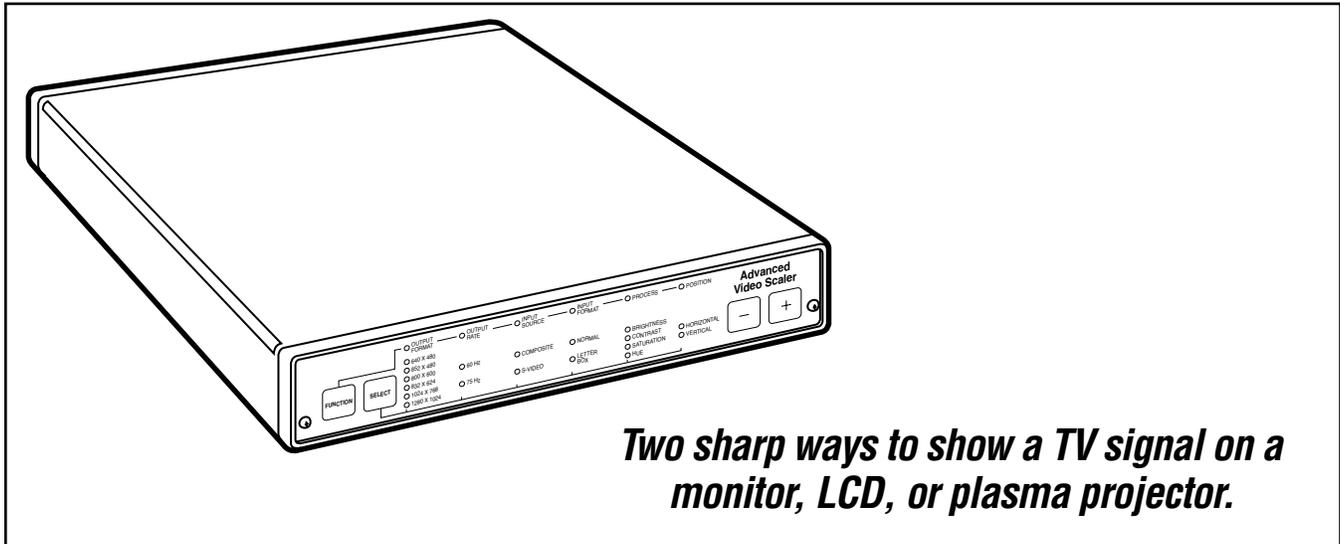
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Black Box Corporation.

# BLACK BOX<sup>®</sup>

## NETWORK SERVICES

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## VIDEO SCALERS



*Two sharp ways to show a TV signal on a monitor, LCD, or plasma projector.*

### Key Features

- ▶ **Both models provide scaling to multiple output resolutions.**
- ▶ **Selectable output vertical refresh rates enable the brightest, flicker-free images.**
- ▶ **Advanced motion compensation when de-interlacing input video.**
- ▶ **Support wide-screen and letterbox images.**
- ▶ **Switchable composite and S-Video inputs. The AC217A also supports component video input and RS-232 remote control.**

Our Video Scalers convert standard TV video to non-interlaced, high-resolution images that exactly match the native resolution of any HDTV, DTV, or plasma projector.

#### What is interlacing?

A TV video signal is interlaced, meaning each full screen of information is actually made up of two separate fields—the odd field and the even field. First, the odd lines are painted on the screen. Then, before the odd lines fade, the even lines are painted in between the odd lines. This all happens faster than the human eye can perceive.

In contrast, the computer signal is non-interlaced—the horizontal lines are painted progressively, left to right, top to bottom, in a single pass. So the flickering problem you get in interlaced TV does not exist in computer video.

Line doublers and quadruplers were developed to convert interlaced TV signals to non-interlaced computer signals. However, when compared to line doublers or quadruplers, both video scalars offer several clear advantages:

- When using a video scaler, a projector or display device is not forced to crop, distort, or further process the image in order to display it.
- The video scalars can provide outputs at multiple refresh rates. For example, a video scaler can display converted PAL video on projectors that don't support 50-Hz refresh rates. Or converted video can be displayed at 75 Hz, eliminating flicker.
- The video scalars are not limited to a 4:3 aspect ratio—they can display

letterbox-formatted video, too (16:9 aspect ratio).

- With a video scaler, projectors and displays no longer have to reprocess the output of a doubler or quadrupler to match their own native resolution, so the final displayed image is sharper.

#### Video scaling the intelligent way.

The Intelligent Video Scaler represents the next generation in our video scaler solutions. It incorporates support for component video input and output, lockout function of front-panel controls, and RS-232 remote control of all functions.

Like the Advanced Video Scaler, the Intelligent Video Scaler eliminates on-screen artifacts (such as black lines) associated with line doubler conversion. It also features selectable output resolutions and aspect control ratio.

# Why Buy From Black Box? Exceptional Value. Exceptional Tech Support. Period.

## Recognize any of these situations?

- You wait more than 30 minutes to get through to a vendor's tech support.
- The so-called "tech" can't help you or gives you the wrong answer.
- You don't have a purchase order number and the tech refuses to help you.

- It's 9 p.m. and you need help, but your vendor's tech support line is closed.

According to a survey by Data Communications magazine, 90% of network managers surveyed say that getting the technical support they need is extremely important when choosing a vendor. But even though network

managers pay anywhere from 10 to 20% of their overall purchase price for a basic service and support contract, the technical support and service they receive falls short of their expectations—and certainly isn't worth what they paid.

At Black Box, we guarantee the best value and the best

support. You can even consult our Technical Support Experts before you buy if you need help selecting just the right component for your application.

Don't waste time and money—call Black Box today.

## Specifications

### Controls:

AC215A: Contrast, brightness, color, saturation, hue, horizontal and vertical positioning;

AC217A: Input selection, output resolution, input to output aspect ratio conversion

### Input Decoding:

AC215A: 8-bit Y, 8-bit C, and 16-bit YUV with comb-filter processing;

AC217A: 16-bit YUV with adaptive 4H comb-filter processing

### Input Formats:

Normal (4:3), Letterbox (16:9)

### Input Types:

AC215A: Composite and S-Video (Y/C), both terminating into 75 ohms;

AC217A: Composite, S-Video, (Y/C), both terminating into 75 ohms, component

### Input Video Standards:

AC215A: NTSC, NTSC-Japan, PAL (B, D, G, H, I, M, N, N-3.58), SECAM;

AC217A: NTSC, PAL (B, G, H, I)

### Output Resolutions:

AC215A: 640 x 480, 800 x 600, 832 x 624, 852 x 480, 1024 x 768, 1280 x 1024 (60 Hz only);

AC217A: 480p, 720p, 1080p, 1280 x 1024, 1366 x 768

### Aspect Ratio Conversion:

AC217A: 4:3 to full screen, 4:3 to 4:3 in 16:9 screen, 16:9 to 16:9

### Switch:

AC217A: Selects output format for RGBHV, RGBS, or YC<sub>B</sub>R

### Connectors:

AC215A: Input: (1) Composite: BNC F; S-Video: (1) 4-pin mini-DIN

F; Output: (1) HD15 F with standard VGA pinout, (5) BNC connectors configurable as RGBHV, RGBS, or RGBS (RGB Sync on Green);

### AC217A:

Input: (1) Composite: RCA F; S-Video: (1) 4-pin mini-DIN

F; Component: (3) RCA F; Output: (1) HD15 F standard

VGA pinout; RS-232 remote: (1) 3-pin screw terminal

**Power:** AC215A: 95 to 250 VAC, 47 to 63 Hz, autosensing, external; AC217A: 85 to 265 VAC, 47 to 63 Hz, autosensing, internal

**Size:** 1.5"H x 7.3"W x 8"D (3.8 x 18.5 x 20.3 cm)

**Weight:** AC215A: 3 lb. (1.4 kg); AC217A: 2 lb. (0.9 kg)

## Technically Speaking

The Advanced Video Scaler and Intelligent Video Scaler convert images from a TV screen onto a computer monitor, LCD, or plasma screen. Here's more about how they work.

### Types of signals.

TV video is defined by either the NTSC, PAL, or SECAM standard, which dictates the number of lines in the picture, how the color information is defined, and the speed with which the lines are painted on the screen (refresh rate). But within NTSC, PAL, and SECAM, there are several formats that meet these standards. Composite video is most commonly used, with video information for red, green, and blue (RGB) and sync combined into a single signal.

S-Video, which separates the chrominance (color) from the luminance and sync information, provides a superior picture.

AC217A also supports component video, which carries the color and brightness portions of the video signal as separate signals. This provides superb color clarity and reduced color bleeding.

### How they work.

The Video Scalers will accept any video source, de-interlace it with proprietary, advanced motion compensation, and then intelligently scale it to the desired resolution with virtually no artifacts. All you need to do is set the output resolution to match the native resolution of the connected LCD, DLP, or plasma projector or display.

## Typical Application

Convert images from your TV screen to clear, crisp images on your computer screen for superior presentations.

## Ordering Information

ITEM	CODE
Advanced Video Scaler.....	AC215A
Intelligent Video Scaler .....	AC217A
<i>For optimum performance and a 20% savings, order...</i>	
VGA Video Extension Cable (Specify length, PVC or plenum construction, and gender when ordering).....	EVNPS05