

SPECTICAST

Set Top Box Installation Manual



V1.0

www.specticast.com

1-866-996-2842

Table of Contents

1. General Information	4
2. Installation	10
3. Set Top Box Specification.....	16

1. General Information

Thank you for choosing the SpectiCast service

To activate your service, you must install the AmiNet130 Set Top Box (STB) provided by SpectiCast. To ensure you receive quality services and do not jeopardize the product warranty, you must keep your STB in good working condition. Please follow the instructions below to quickly and safely install the AmiNet130 STB. Please keep this installation guide close to your AmiNet130 for future reference.

Product safety

Warnings, Cautions and Notes

Throughout this manual, please pay special attention to the indications below of potentially hazardous situations:



Warning!

Indicates a hazardous situation, which, if not avoided, could result in serious injury.



Caution!

Indicates a situation, which, if not avoided, could damage the product or other devices.



Note!

Indicates additional information to the user to make the user aware of possible problems and to help the user understand, use and maintain the product.

Warnings, Cautions and Notes are included in the product literature to ensure your safety and the correct operation of the product – please adhere to them.

Attachments

Use only the supplied accessories and attachments with your AmiNet130. Use of accessories or attachments that are not supplied or approved by SpectiCast may be unsafe, may be detrimental to the life or performance of the AmiNet130, and will immediately invalidate any product warranty.

Water and moisture

To reduce the risk of fire or electric shock, this product, its accessories and attachments must not be exposed to any liquids, rain or moisture. The product must not be exposed to dripping, splashing or high humidity. Do not use this product in any location where it may come in contact with any liquid or vapor.

Product care

Servicing

This product contains no user-serviceable parts. The product must not be dismantled. Attempts to dismantle the product may be unsafe, may be detrimental to the life or performance of the product and will immediately invalidate any product warranty. Servicing must only be attempted by qualified service personnel. The AmiNet130 has tamper-evident seals. Breaking or modifying these seals in any manner will immediately invalidate the product warranty.

Cleaning

The product, accessories and attachments should only require occasional wipe with a soft dry cloth. Unplug the main plug from the wall outlet before cleaning the product. The silver aluminum case of the AmiNet130 may be cleaned with a slightly damp cloth to remove stubborn marks. Do not spray any substance or use any polishes, thinners, and abrasive cleaning products, liquids or aerosol products to clean the product, its accessories or attachments.

Unpacking and installing the product

Once removed from the transit packaging, the AmiNet130 must be handled with care and must not be dropped, shaken or exposed to any physical shock. The AmiNet130 is designed to be mounted either horizontally or vertically on a hard flat surface.

Do not place the AmiNet130 where it may be subject to physical shock or vibration or where the product may drop, topple, slide or shake as this may cause personal injury or irreparable damage to the product, which will not be covered by the manufacturer's warranty.

Do not operate the AmiNet130 on a soft surface such as carpet, rug, bed etc as these surfaces will obstruct airflow, may cause the product to overheat and will invalidate the warranty.

Do not install the AmiNet130 into any built-in installation such as bookcase or rack without ensuring that a minimum of 4" of clear space is available at the front, rear, top and sides of the product.

Do not install the AmiNet130 where it may be exposed to direct sunlight or radiant, convected or conducted heat from an open fire or radiator. The AmiNet130 should not be placed on any surface that may become warm in use (such as on top of a VCR or A/V amplifier) and nothing should be placed on top of the AmiNet130.

Do not cover the AmiNet130. Objects containing liquids, such as vases, flowerpots etc must not be placed on top of the product.

Do not pick the product up or move the AmiNet130 while in operation. If the product must be moved, please pull the main power cord out of the wall socket and wait 30 seconds before moving the product.

The leads and power-supply cord must be routed where they cannot be walked on, chafed, tripped over or pinched by items being placed on or against them. Power-supply cords must not be routed underneath carpets or rugs where any damage cannot be seen.

Power sources

The AmiNet130 must ONLY be used with the power supply supplied by the manufacturer. The power supply is fitted with a plug that is designed for use with the power source of the country of installation. If it is necessary to operate the product in another country or geographical area with a different power source, an approved adapter for that country or location must be obtained from the manufacturer.

Operation

The AmiNet130 and power supply will get warm to the touch when in use. If the AmiNet130, power supply or attachments become hot to the touch, immediately unplug the AmiNet130 from the main electricity supply and call your service provider to arrange replacement.

Lightning protection and periods of inactivity

If lightning is expected, or the product is not going to be used for a long period of time, please unplug the main cord from the wall outlet. This will help protect the product from damage due to lightning and power surges. If you have subscribed to SpectiCast packages, it is advisable to keep the AmiNet130 powered on (SpectiCast advises to use a surge protector for constant power supply to the AmiNet130) and connected to the Internet.

Use with Plasma displays

When used with certain display types, such as Plasma displays, it is important that the picture is not paused for a long time as the image displayed may then be 'burned' permanently into the screen of the display device. This effect is not a defect of the AmiNet130 but a limitation/characteristic of plasma display devices. SpectiCast will not be liable for damage thus caused.

Intent of use

The AmiNet130 is intended for the reception of SpectiCast presented picture and sound signals. Any other application is expressly prohibited. It is intended by SpectiCast that this AmiNet130 be used in full compliance of all copyright laws of the United States. It is the user's responsibility to comply with such laws. Unauthorized recording of copyrighted material or providing copies of such programs to others may, in certain circumstances, violate copyright law and prior permission from the copyright owners may be required for certain public performances and certain commercial uses.

Software updates

This product may benefit from periodic software updates. SpectiCast reserves the right to automatically update the software in the product in order to improve the product functionality.

During software updates, the AmiNet130 cannot be used and must not be switched off until the software update is complete. The first time it is powered, it is possible that the AmiNet130 will immediately start updating itself with the latest operating software. While the software is updating it is important that the AmiNet130 is not switched off. The software update will be complete in a few minutes and you will then be ready to enjoy the full benefits of SpectiCast service.

Software license

Software License Agreement

IMPORTANT – READ CAREFULLY: By using the software in your AmiNet130, you agree to be bound by the terms of this Software License Agreement. If you do not agree to be bound by the terms of this agreement, you must immediately cease all use of the product and return the product and all accessories, in the original packaging to SpectiCast.

License Grant; Restrictions

Subject to the terms of this agreement, SpectiCast grants you a non-exclusive, non-transferable license, without the right to sub-license, to use all software included with the product or subsequently provided to you, and all documentation solely for your noncommercial use and solely in connection with receiving SpectiCast services. You acknowledge and agree that SpectiCast may periodically update, modify or enhance the product software. You agree that; a) you will not attempt to modify, enhance, disassemble, decompile, reverse engineer or otherwise attempt to gain access to the source code to the software; and b) you will not attempt to remove or unbundle the software from the product. Any resale or transfer of the product by you will be subject to the terms and conditions of this agreement.

Ownership

SpectiCast retains ownership of the hardware. SpectiCast and its licensors own and retain all proprietary rights, including all patent, copyright, trade secret, trademark and other intellectual property rights in and to the software and to any enhancements or modifications to the software. You acknowledge that the license granted under this agreement does not provide you with title or ownership to the hardware or software but only to a right of limited use under the terms and conditions of this agreement.

Software warranties

To the maximum extent permitted by applicable law, the SpectiCast makes no representations and disclaims any and all warranties, express or implied with respect to the software, including, without limitation, any implied warranty of merchantability, fitness for purpose, non-infringement of third part rights and those arising from a course of dealing or usage of trade. No representation is made or warranty is given that use of the software will be defect free or error free or uninterrupted, that any defects or errors will be corrected or that the functionality of the software will meet your requirements. Because some US states do not allow all disclaimers of warranty, these limitations may not apply to you.

Limitation of Liability

To the maximum extent permitted by applicable law, SpectiCast, its suppliers and licensors will not be liable for loss of profits, business interruption, loss of information or data or other pecuniary loss or for any consequential, indirect, incidental, special, punitive or other damages whatsoever arising out of this agreement or the use or inability to use the software, even if SpectiCast or its suppliers or licensors have been advised of the possibility of such damages. Because some US states do not allow such exclusion or limitation of liability, these limitations may not apply to you.

Termination

This agreement and the licenses granted hereunder shall immediately terminate if you fail to comply with the license limitations described in this agreement. No notice will be required from SpectiCast to effect such termination. On termination of this agreement you must return all hardware, software and product documentation and accessories to the SpectiCast.

Export Controls

You acknowledge and agree that none of the software or underlying information or technology may be downloaded or otherwise exported or re-exported: a) into (or to a national or resident of) Angola, Cuba, Iran, Iraq, Libya, North Korea, Sudan, Syria, or any other country to which the US has embargoed goods; or any one on the US Treasury Department's list of Specially Designated Nationals or the US Commerce Department's Table of Denial Orders. By using the software, you represent and warrant that you are not a resident or national of any such country or on any such list. This software is a commercial product and is provided with restricted rights. Use, reproduction, release, modification or disclosure of the software or any part thereof including technical data is restricted in accordance with Federal Acquisition Regulation (FAR) 21.212 for civilian agencies and Defense Federal Acquisition (DFARS) 227.7202 for military agencies.

Miscellaneous

This agreement shall, in all respects, be governed by the laws of the Commonwealth of Pennsylvania without reference to its principles or conflicts of laws. You hereby agree that all disputes arising out of this agreement shall be subject to the exclusive jurisdiction and of and venue in the federal and state courts within Philadelphia, Pennsylvania, and you hereby consent to the personal and exclusive jurisdiction and venue of these courts. If any of the provisions of this agreement are held to be invalid under any applicable statute or rule of law, they are, to that extent, deemed omitted. The waiver of any breach or default, or any delay in exercising any rights shall not constitute a waiver of any subsequent breach or default. This agreement constitutes the complete and exclusive agreement between you and SpectiCast with respect to the subject matter hereof and supersedes all prior oral or written understandings, communications or agreements. This agreement may not be modified except in writing by a duly authorized representative of SpectiCast.

Disclaimer

SpectiCast shall not be liable for any errors contained herein nor for any damages arising out of or related to this document or the information contained within it, even if the Company has been advised of the possibility of such damages. This document is intended for informational and instructional purposes only. The Company reserves the right to make changes to the specifications and other information contained in this document without prior notification.

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Approvals

FCC Registration and Requirements

The following paragraphs describe requirements and information based on FCC rules:

FCC Rules, Part 15

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio-frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio of television, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected

- Consult the dealer or an experienced radio/TV technician for help. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation Company Name: Amino Communications Ltd

Address: Buckingway Business Park, Anderson Road, Swavesey, Cambridge, Cambridgeshire, CB4 5UQ, United Kingdom.

Safety

The following paragraphs describe requirements and conformity:

Conformity

IEC 60065:2001

CAN/CSA-C22.2 No. 60065-03

UL 6500

The Modem complies to the following standards:

TIA-968-A, CS03, TCB, and ES 203 021.

Rating

5V dc, 1.5A Class III

European Approvals

This product is manufactured to comply with the E.E.C Directives 72/23/EEC (Low voltage directive) and 89/336/EEC (EMC directive)

WEEE Directive (2002/96/EC)

The AmiNET130 is in compliance with the WEEE Directive.

2. Installation

a. Unpacking the SpectiCast Set Top Box

The AmiNet130 and its accessories are packed in a recyclable board and plastic package. Please keep all packaging in case you need to transport the unit at a later date. The AmiNet130 is supplied with the following accessories:



Figure 1: AmiNet130



Figure 2: Power Supply for AmiNet130



Figure 3: Power Cable



Figure 4: Stand



Figure 5: Video Leads

If any of these accessories are missing please contact SpectiCast at 1-866-996-2842.

The front window of the AmiNET130 is protected with a clear plastic film, and this should be removed and disposed of before using the product.

b. Connecting the Set Top Box

General Information:

Back panel connections

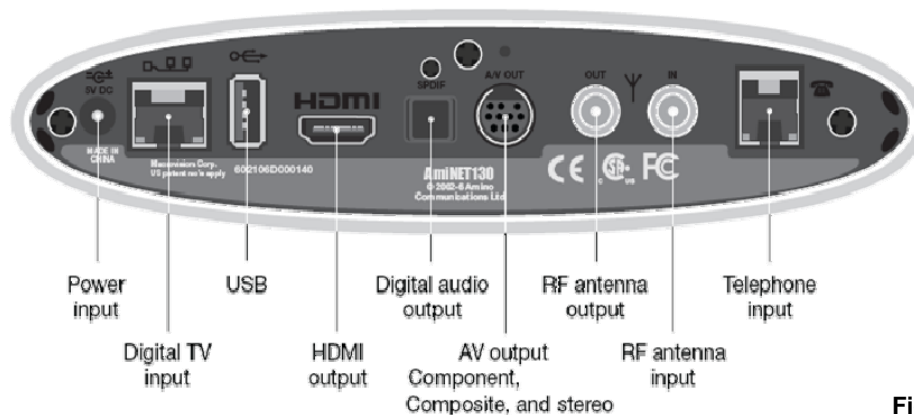


Figure 6: AmiNet130 Back

The above picture shows you the back panel connection for the STB. The technical specifications are included towards the end of the manual.



Warning!
Before connecting or disconnecting any cables, switch off all system devices (TV, VCR, AV Amplifier, etc) and disconnect from the main electrical supply.

Options for Connecting the AmiNet130

You have two options to connect your STB to begin receiving SpectiCast service. In order to maximize your enjoyment and receive service to the maximum number of television and other displays, you may connect your STB to your facilities' Closed Circuit Television (CCTV) network (see instructions for installing to a CCTV network). Alternatively, you can connect your STB to only one display (see instructions for installing to a Single Display below).

Option 1: Connecting STB to a Closed Circuit Television (CCTV) network

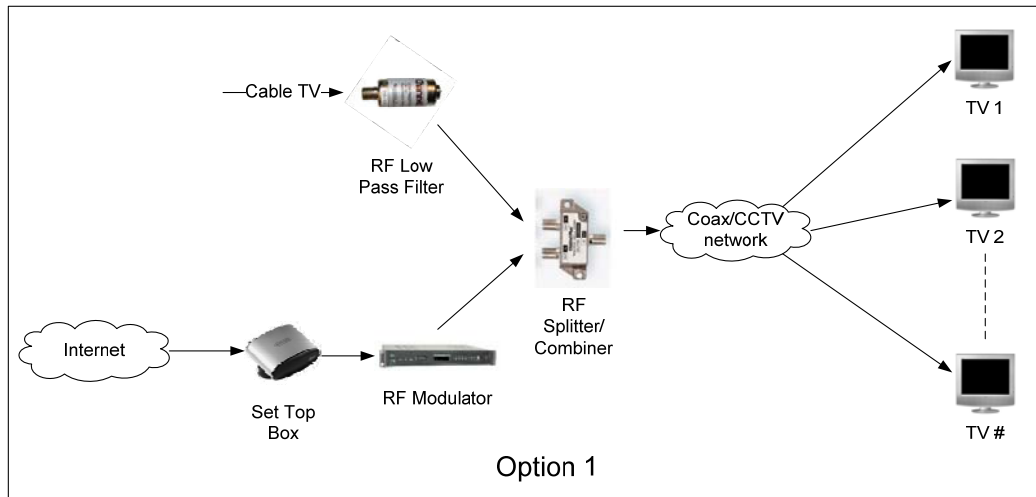


Figure 7: Connecting the STB to a CCTV

Description: If you have an existing Closed Circuit Television network in your facility and you would like to add SpectiCast service to one of your CCTV channels, see the following steps, else go to Option 2.

Connecting video

The AmiNet130 provides the following video outputs:

- Component Video (Y, Pr, Pb), which gives the best picture quality.
- Composite Video (CVBS), which gives standard picture quality.
- RF, which gives the same quality as broadcast TV.

In this manual, we explain the installation procedure using ChannelPlus RF equipment. The installation will utilize the following components that would already exist on your CCTV network

1. Multi-channel Low Pass Filter (to filter a group of channels from your cable feed)
2. RF Modulator (to modulate the A/V signal to one of the channels)



Note!
Depending on the type of RF modulator you use the video output leads used from the STB will vary.

3. RF Splitter/Combiner (to combine multiple RF modulated A/V signals to the CCTV network)

Step 1: Connecting Multi-channel Low Pass Filter

Ensure that you are using a multi-channel low pass filter. This low pass filter uses an RF lead from your cable company and filters a group of channels from the cable feed. These filtered channels are used to include CCTV feed and other services. An unused filter channel must be available for the SpectiCast services.



Figure 8: Sample multi-channel low pass filter



Note!
We advise our customers to note the channel numbers to be used for SpectiCast service in the space below:

Step 2: Connecting RF Modulator

Make sure that the RF modulator works at the same frequency selected above for SpectiCast service. The idea is to modulate the SpectiCast A/V signal at the selected frequencies and combine it with *filtered* cable company signal before feeding the signal to the Coax/CCTV network.



Figure 9: Sample RF modulator

Use the highest quality connection available on your other equipment.

- If the RF Modulator has a Composite Video input, a Composite Video lead is supplied by SpectiCast (Part No. 002-594). Use this to connect to the appropriate input on the modulator, taking care to match the color of each plug to its corresponding socket. The RF output (Coax) is then fed to the RF combiner.
- If your RF Modulator provides RF inputs use a Coax cable to connect the RF output from the AmiNet130 to the RF input of the modulator. The RF output (Coax) is then fed to the RF combiner.

Step 3: Connecting RF Splitter/Combiner

Depending on the number of inputs/feeds being added to the CCTV, you may need a 2-way or 4-way RF splitter/combiner.



Figure 11: Sample 2-way RF Splitter/



Figure 10: Sample 4-way RF splitter/combiner

Connect the RF leads from the low pass filter and the RF modulator to the RF splitter/combiner. The output will then be used to feed the CCTV network at the facility.

Connecting power

The AmiNet130 is provided with a low voltage power supply.

- Connect the power lead from the power supply to the power input of the AmiNet130.
- Power on the AmiNet130, and the RF modulator.



Note!

Please wait for 1-2 minutes once you power up the Set Top Box for the video to show up on your display. DO NOT disconnect power supply during this time.



Caution!

After unpacking the AmiNet130 please wait until it has reached room temperature before applying power as condensation may damage the product.

Option 2: Connecting to an A/V display

There are two choices available in this:

Option 2A: Connecting to a large screen display or TV

Option 2B: Connecting the STB through a VCR, DVD or Blu-Ray Player to a display

Option 2C: Connecting to a projector to light up a screen

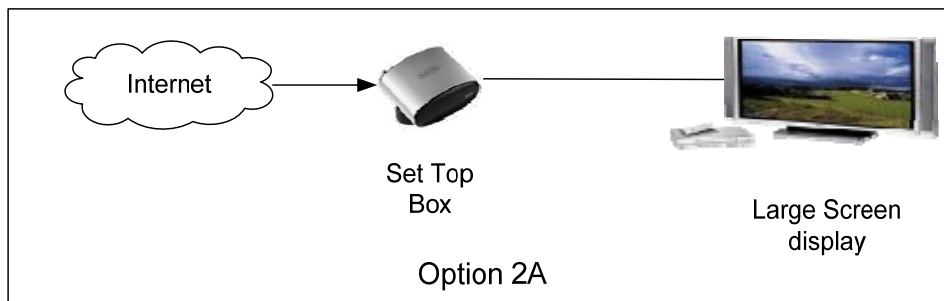


Figure 12: Connecting the STB to a large screen LCD display

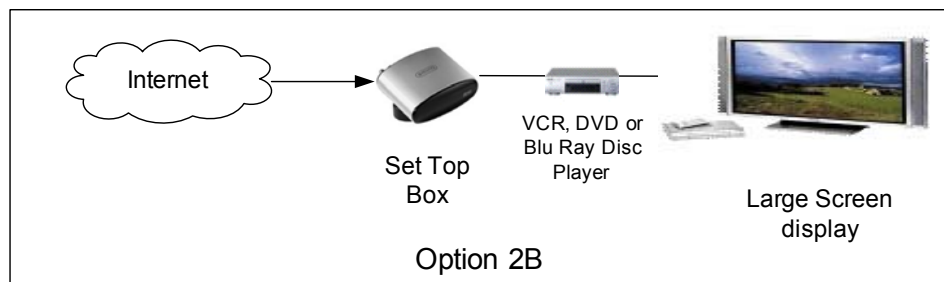


Figure 13: Connecting the STB through a VCR, DVD or Blu Ray Player to a display

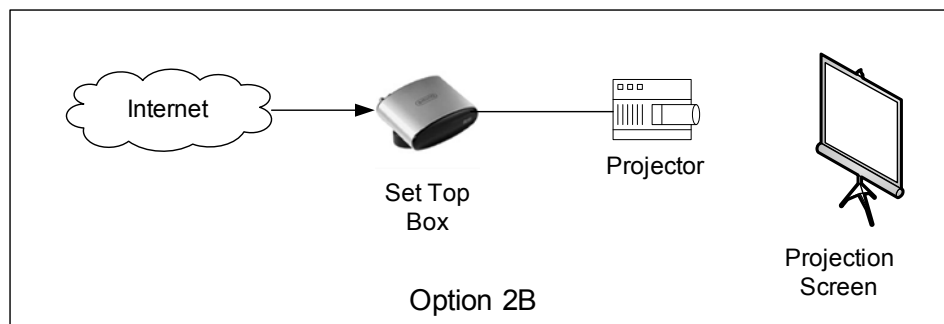


Figure 14: Connecting the STB to a projector

The above three options would require the same settings as described below:

Connecting video

The AmiNet130 provides the following video outputs:

- Component Video (Y, Pr, Pb), which gives the best picture quality.
- Composite Video (CVBS), which gives standard picture quality.
- RF, which gives the same quality as broadcast TV

Use the highest quality connection available on your audio/video equipment.

- If the Audio/Video equipment provides Component Video inputs use the Component Video lead supplied with the AmiNet130 to connect the Component Video outputs from the AmiNet130 to the Component Video inputs of the TV, taking care to match the color of each plug to its corresponding socket.
- If your Audio/Video equipment has an Composite Video input, a Composite Video lead is supplied by SpectiCast (Part No. 002-594). Use this to connect to the appropriate input on your TV, taking care to match the color of each plug to its corresponding socket.



Note!

If you are connecting the Set Top Box through a VCR, DVD, or a Blu Ray disc player, kindly select the appropriate output channel for the video to display on the screen.

Connecting audio

The AmiNet130 provides the following audio connections:

- Left and right audio for stereo sound (on the AV output).
- S/P DIF digital output for high quality surround sound, when used with an external decoder and amplifier (not supplied).

If you are using the Component Video or Composite Video outputs you should connect the audio left and right connectors included in the lead to the television or AV amplifier to provide sound.

If you have a separate AV surround sound amplifier with electrical S/P DIF input:

- Connect the digital audio output from the AmiNet130 to a suitable digital audio input on the AV amplifier using a standard S/P DIF lead (not supplied) to allow you to listen to Dolby 5.1 surround sound, or Windows Media Audio Pro when available.

Connecting power

The AmiNet130 is provided with a low voltage power supply.

- Connect the power lead from the power supply to the power input of the AmiNet130.
- Power on the AmiNet130 and the A/V display.

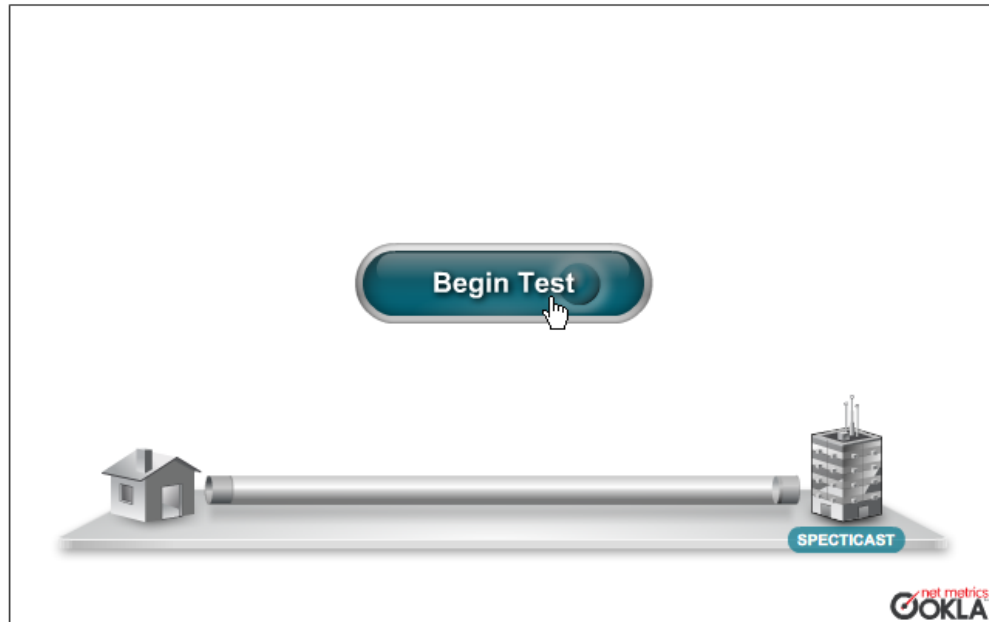


Caution!

After unpacking the AmiNet130 please wait until it has reached room temperature before applying power as condensation may damage the product.

c. Quick Test

1. Please do a quick speed test for sanity check with your Internet speed. We recommend our customers to use the 'Test Your Connection' link on our website (<http://www.specticast.com>) or go directly to SpectiCast speedtest server (<http://www.specticast.com/speedtest/index.jsp>) and conduct the test.



For superior results, the Internet speed should provide you a downlink speed of at least 3Mbps for Enhanced-definition feed, and 7Mbps for High-definition feed.

2. Ensure that there is a solid red light on the SpectiCast Set Top Box. Connect the Set Top Box to your Internet router with an Ethernet cable (not included); allow 1-2 minutes for the set top box to get an IP address and connect to the Internet.

You should see a SpectiCast welcome page, followed by music and video clips. If there is any problem, please schedule an appointment on SpectiCast website or call 1-866-996-2842.

3. Set Top Box Specification

AmiNet130

Physical specifications

Weight
480g (9.9oz)

Dimensions (including rear connectors but excluding base - approximate)
108mm (4.25") long,
180mm (7.09") wide,
40mm (1.57") high

Operating Temperature
0°C (32°F) to 40°C (104°F)

Storage Humidity
5% ~ 95% RH (non-condensing)

RF Modulator

RF Input connector
75Ω F Connector

Output Channel
VHF channel 3 or 4 (US)
UHF channel 21 to 68 (EU)
UHF channel 1 or 2 (Japan)

TV standard
PAL/NTSC standard definition

RF output connector
75Ω F Connector

Ethernet Interface

Ethernet connector
RJ-45 shielded connector

Cabling
UTP and STP Cat 5

Speed
Auto sensing 10/100Mbps

Indicators
Green LED - Link,
Yellow LED - Activity USB

USB Interface

Type
USB 2.0

Analogue Audio

Audio Connectors
RCA, White = Left channel, Red = Right channel

Output
2v RMS nominal

Impedance
10kΩ

Smart Card

Type
ISO 77816 parts 1, 2 & 3
Voltages supported
3.3v and 5v cards

Digital Audio Interface

Type
S/P DIF electrical to IEC 60958

Connector
RCA (Black)

Impedance
75Ω
Output
0.4Vpp - 0.6Vpp, <0.05Vdc (75ohm terminated)

Power Interface

Connector
DC10B 2.1mm x 5.5mm

Type
DC power socket, centre positive

Input
5V ± 10%

Power
Less than 8W typical usage

Transport Stream System

MPEG
MPEG-2 ISO/IEC 13818

Transport Stream Decoder

Profile
MPEG-4 pt10/H.264
MPEG-4 pt2
MPEG-2 pt2

Aspect Ratio
4:3, 16:9

Video Resolution
NTSC (720 x 480i), PAL (720 x 576i)

Graphics Resolution
1280 x 720 (720p) for High Definition,
640 x 480 (525 line) NTSC or 640 x 576
(625 line) PAL, 15-bit RGB color, Alpha
blending.

Audio Decoding
Dolby Digital (AC-3), MPEG-1 layers I
and II, MPEG-4 low complexity AAC,
16-bit PCM

Video Cables

Composite Video Interface

Type
Composite Video

Connector
RCA (Yellow)

Output
1Vp-p

Component Video

Type
Separate Luminance and Red and Blue
color difference signals

Connectors

3 x RCA, Green = Y, Red = Pr, Blue = Pb

Output
1Vp-p

External Power Supply

Specification

Type
High-efficiency switch-mode

Input
100~240V AC, 50~60Hz, 0.2A Max

Output
5V DC, 7.5W, 1.5A

Weight (not including power cable and plug) approx
156g (5.5oz)

Dimensions (approximate)

Packaging

Specification

Type
Cardboard Printed Gift-Pack

Weight (includes power supply, US mains lead and all leads)
1.4kg (49.4oz)

Dimensions (approximate)
70mm (2.8") high, 296mm (11.7") wide,
261mm (10.3") deep