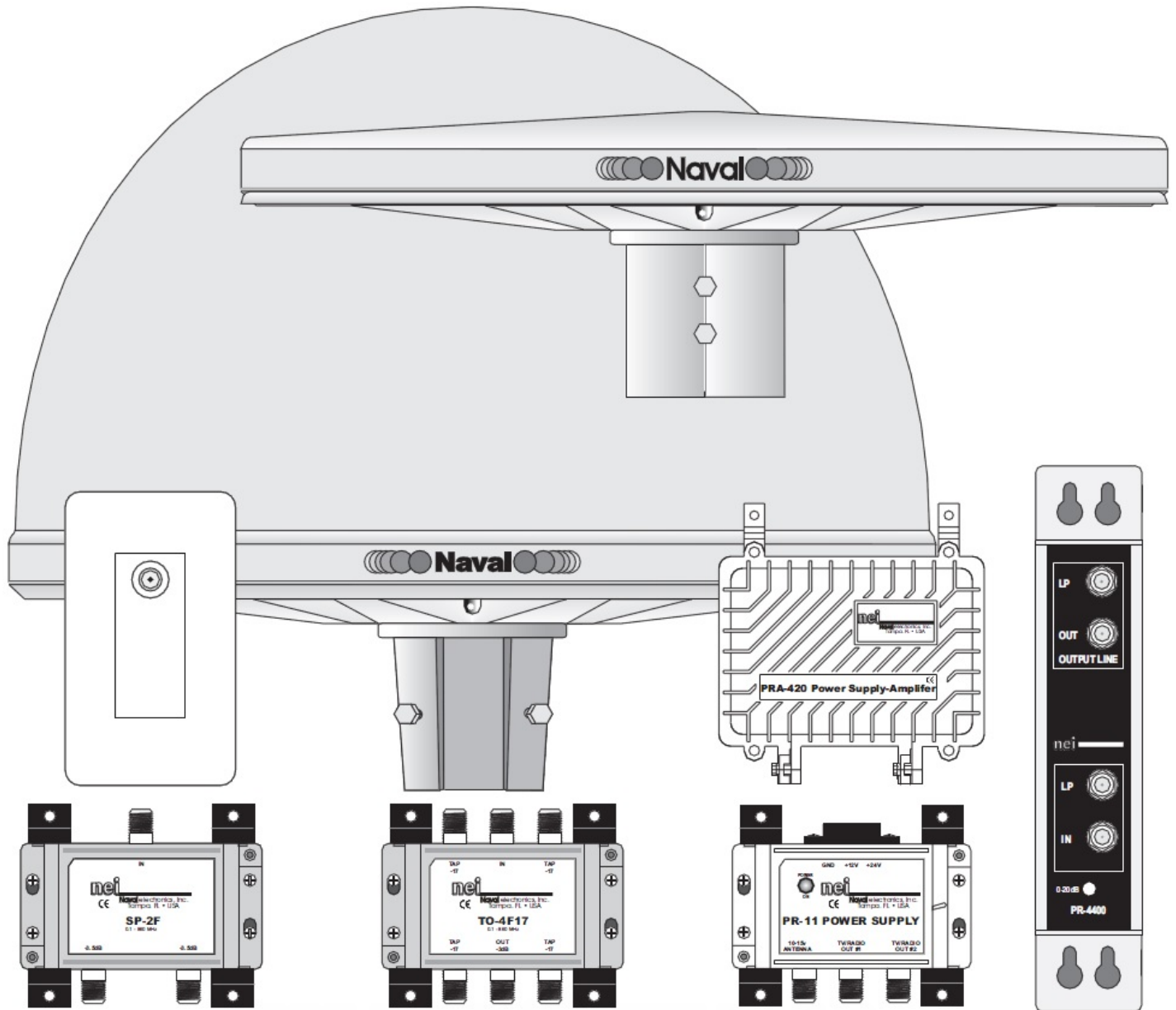




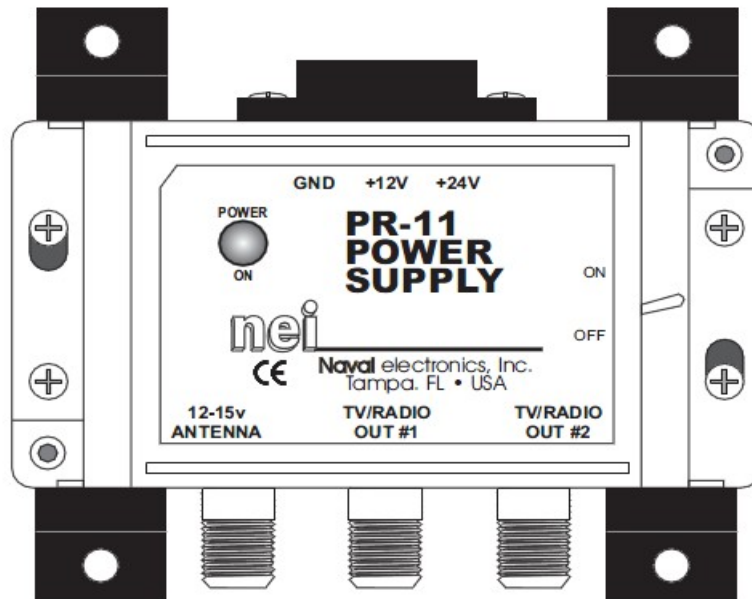
Antenna Systems for Marine Applications



Naval Electronics, Inc

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PR-11 DC Antenna Power Supply



The PR-11 power supply provides DC power to all of our 400 Series antennas and decouples the signal from the antenna amplifier while splitting it to supply two Radios or TV sets, or the combination. It incorporates a Voltage Regulator and will work from 12 VDC or 24VDC primary power sources. The attractive cast metal case is plated and well shielded against electromagnetic interference. It has been thoroughly laboratory tested and designed with special line filters to meet CE compliance in Europe.

All "F" type connectors are cast into the metal case and allow the coax cable connectors to be "wrench torqued" without damaging the internal circuitry. An optional "ground isolation" base is available at low cost to eliminate interference caused by ground loops. The base also raises the power supply off of the bulkhead for ease in connecting the coax cables.

Specifications : PR-11 DC Antenna Power Supply

- Primary Voltage : 12 or 24 VDC
- Current Capability: 150mA continuous
- Frequency Range: 100 kHz- 860 MHz
- Temperature Range: -40 + 55 C
- Impedance in-out: 75 ohm
- Connector type: "F" type female cast in case
- Return loss: 15 db typical
- EMI Suppression > 80 dB

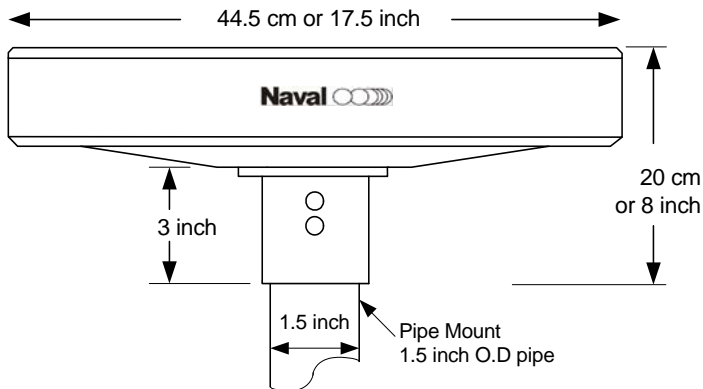
Naval Electronics, Inc

PR-414 AM-SW-FM/DAB+ and TV Marine Antenna

The PR414 is an omnidirectional, active, wideband terrestrial AM-SW-FM/DAB+ and TV receiving antenna (0.1-860 MHz) for marine use, specially designed for commercial craft equipped with one or two Radio and TV sets as on Coasters in limited international trade, Fishing Boats, Tugs, Pilot Service Craft and Rescue Cruisers, where extra performance in a robust package is appreciated.

PR414 is a low profile product, based on 3 independent low noise amplifiers integrated directly to the omnidirectional multi-element antenna. The antenna's exterior is made of UV protected thick ABS plastic, which requires no maintenance. All inner parts are embedded in solid polyurethane foam for protection from heavy vibration, moisture and sub zero temperatures. Mounting hardware is made of Marine Grade Almag Aluminum alloy. The integral low noise 3 band 6 transistor amplifier increases the sensitivity of the system as well as compensating for cable losses in the antenna. Separating the amplifiers benefits intermod rejection and allows for more gain with less noise. The PR414 features high performance 5 GHz bipolar microwave transistors, which are protected against static charge.

Specifications: PR-414 Antenna



- Frequency range: 0.1-860 MHz
- Average AM HF SW gain: 0.1~26.5 MHz, 12-15 dB (Ka=0.12)
- Average Band 1/FM gain: : 40~110 MHz, 25dB
- Average VHF/DAB+ gain: 170~240 MHz, 25dB
- Average UHF gain: 470~890 MHz, tilt 20-25 dB (amp)
- VHF Noise figure: 3.0 dB
- UHF Noise figure: 2.5 dB
- Max output level: 106 dBuV min (2 signals 60 dBIM)
- Third order intermod: >20 dB IP3
- Filters: Band pass 100 kHz-30 MHz., 40-110 MHz. 174-230 MHz., 470-860 MHz.
- Broadband rejection filter: 140-165 MHz.
- Polarization: horizontal
- Antenna pattern: omni-directional
- Supply voltage to antenna: 15VDC nominal
- Current consumption: approx, 120 mA (with LED) approx, 80-90 mA (w/o LED)
- Operating temperature: - 40 to +55 C.
- Radome material: UV protected ABS
- Flange material: Stainless, Almag or Powder Coated Almag
- Element material: Almag Marine Alloy Flange 3" high and mount on a 1.5" od pipe
- Element type: copper foil
- Element type: Two looped dipoles with Z match pcb
- Antenna dimension: 17.5 inch x 8 inch
- Shipping weight: 9-14 lbs (depend on cable lengths)
- Shipping container dim: 19 x 19 x 9 inches

The PR414 utilizes a "dual broadband dipole element configuration" with each element covering a 360 degree view of the surroundings and a much improved omnidirectional antenna pattern when compared with other antennas.

The PR414 antenna is delivered with 4ft (around 1.2 meters) or 50ft (15.24 meters), or 80ft (24.38 meters) of 75 Ohm RG6U low loss coaxial cable and custom lengths can be arranged. The antenna includes a coax seal F connector splice kit. Our special taps and splitters are needed for AM and SW operation and reverse path is not available in this case.

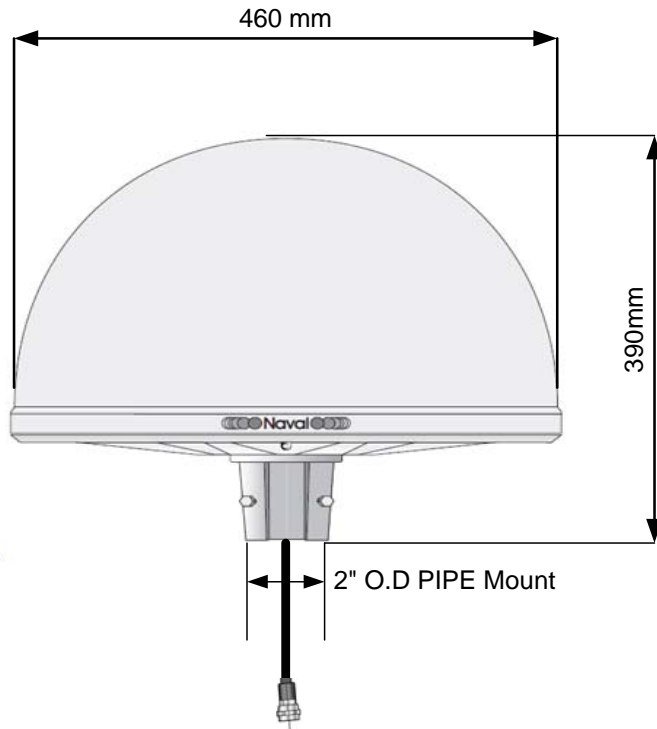
PR-414 antenna RG6 cable lengths available in 4ft, 50ft or 80ft

Naval Electronics, Inc

PR-422 AM-SW-FM/DAB+ and TV Marine Antenna

The PR-422CA is an Active Extra High Performance Omni-directional wide-band Terrestrial AM-FM/DAB+ -TV Antenna (0.1-30 and 40-860 MHz) designed for Maritime purposes where second rate efficiency is unacceptable. Constructed for High End Commercial and Military use, this compact and robust antenna shell is made of thick UV protected ABS plastic filled with polyurethane foam which provides both structural support and environmental protection. The mounting base is cast from Almag Marine Aluminum Alloy which is powder coated and then oven baked. Mounting hardware is made of acid-proof stainless steel. The Shielded Low Noise Amplifier is protected from static charges and is removable for field repair or replacement.

PRA-422 or PR-422CA is same product and CA means "Changeable Amplifier"



Specifications: PR-422CA antenna

- Frequency range: 0.1-860 MHz
- Average AM HF SW gain: 0.1~26.5 MHz, 12-15 dB (Ka=0.12)
- Average Band 1/FM gain: 40~110 MHz, 25dB
- Average VHF/DAB+ gain: 170~240 MHz, 25dB
- Average UHF gain: 470~890 MHz, tilt 20-25 dB (amp)
- VHF Noise figure: 3.0 dB (amp)
- UHF Noise figure: 2.5 dB (amp)
- Max output level: 111 dBuV min (2 signals-60 dBIM)
- Third order intermod products: >20dB IP3
- Antenna factor: Ka = 0.12 AM
- Filters: Band pass 100 KHz- 30 MHz., 40-110 MHz., 174-230 MHz.,470-860 MHz.
- Broadband rejection filter: 140-165 MHz.
- Polarization: horizontal
- Antenna pattern: omni-directional
- Supply voltage to antenna: 15VDC nominal
- Current consumption: 130 mA Nominal
- Operating temperature: -40 to +55 C.
- Impedance: 75 ohm nominal
- Connector "F" type or BNC-75 (Standard come with "F" connector)
- Return loss: >10dB with optional output connector.
- Radome material: UV protected ABS
- Flange material: Stainless, Almag or Powder Coated Almag Almag Marine Alloy Flange 3" high and mount on a 2" od pipe
- Internal stabilization material: Polyurethane foam injection
- Element material: copper foil
- Element type: three looped dipoles with Z match pcb
- Antenna conforms to protection class IP68
- Shipping Weight: 12-13 lbs with 1 ft coax and flange
- Shipping container dim : 19 x 19 x 16 inches

The PR-422CA is based on a construction of 3 circular dipoles coupled to a low noise amplifier via a broadband filter network. Maximum performance is assured through the extensive use of a Network Analyzer in the initial design and in the final construction and tuning of each unit. Microwave transistors provide needed gain with a minimum of internally generated noise. Careful engineering and the use of very high quality components yields excellent intermod performance and sharp hand tuned filters greatly reduce the chance of interference from outside of the TV bands

The PR-422CA is at the head of a new 4000 Series Marine Cassette Amplifier System with distribution passives introduced in 1998. The Series 4000 is the result of painstaking engineering and the use of state of the art components such as high performance GaAs Heterojunction Bipolar Transistors.

PR- 420CA is identical with the omission of AM-SW radio reception.

Antenna easy to install, no additional parts and no adjustments

Naval Electronics, Inc

PR-430 series Active AM/FM Radio Vertical Antenna



The PR-430 series active antenna is optimized for AM-SW Band reception from 100 kHz to 30 MHz and the FM Broadcast Band of 88-108 MHz. The antenna is omni-directional and senses vertical polarization. Custom Active Antennas are routinely made at Naval for Military Applications.

- **The PR-430** Active HF Antenna covers the International AM-SW Broadcast Band 100KHz-30MHz including Navtex 490-518KHz.
- **The PR-431** Active FM Antenna covers the International Commercial FM Broadcast band only.
- **The PR-432** Active Radio Antenna covers both bands.

Specifications: PR-430 series antenna

- Frequency range: 0.1-30 MHz
- Navtex 490-518KHz
- Max output level: 111 dBuV min (2 signals-60 dBIM)
- Third order intermod products: >20dB
- Antenna factor: $K_a = 0.12$ AM
- Filters: Band pass 100 KHz-30 MHz. AM/SW
88-110 MHz. Band II FM (optional)
174-230 MHz. Band III DAB (optional)
- Antenna pattern: omni-directional
- Polarization: Vertical
- Supply voltage to antenna: 15VDC nominal
- Current consumption: 60 mA Nominal
- Operating temperature: -40 to +55 C.
- Protection circuits: static discharge device fires at 65 volts
- Impedance: 75 ohm nominal, 50 ohm optional
- Connector "F" type electroplate or BNC-75
- Return loss: >10dB with optional output connector.
- Radome material: UV protected ABS
- Flange material: Stainless, Almag or Powder Coated Almag
- Internal stabilization material: Polyurethane foam injection
- Element material: copper foil
- Element type: single vertical element pcb
- Cable RG-6
- Shipping Weight: 6 pounds with 2 ft coax
- Shipping container dim: 5 x 5 x 50 inches

Naval Electronics, Inc

PR-440 series DAB(Digital Audio Broadcast) Radio Vertical Antenna



The PR-440 series DAB (Digital Audio Broadcast) Radio Antenna

Specifications: PR-440 series antenna

- Frequency range: 40-88 MHz Band I DAB
170-240 MHz Band III DAB
- Optional bands AM/SW and or FM
- 0.1-30 MHz AM/SW
- 88-110 MHz Band II FM
- Average VHF gain: 25 dB (amp)
- VHF Noise figure: 1.6 dB (amp)
- Max output level: 111 dBuV min (2 signals-60 dBIM)
- Third order intermod products: >20dB
- Antenna factor: Ka = 0.12 AM
- Filters: Band pass
100 Khz-30 MHz. AM/SW (optional),
47-88 MHz. Band I DAB
88-110 MHz. Band II FM (optional)
174-230 MHz. Band III DAB
- Broadband rejection filter: 140-165 MHz.
- Polarization: vertical
- Antenna pattern: omni-directional
- Supply voltage to antenna: 15VDC nominal
- Current consumption: 60 mA Nominal
- Operating temperature: -40 to +55 C.
- Protection circuits: static discharge device fires at 65 volts
- Impedance: 75 ohm nominal
- Connector "F" type electroplate or BNC-75
- Return loss: >10dB with optional output connector.
- Radome material: UV protected ABS
- Flange material: Stainless, Almag or Powder Coated Almag
- Internal stabilization material: Polyurethane foam injection
- Element material: copper foil
- Element type: single vertical element pcb
- Cable RG-6
- Shipping Weight: 6 pounds with 2 ft coax
- Shipping container dim: 5 x 5 x 50 inches

Naval Electronics, Inc

PRA-420 and PRA-422 Power Supply-Amplifiers

The PRA-420 is an antenna power supply, low noise MMIC amplifier and splitter combination to supply up to 10 Shipboard Radios and/or TV Receivers. It covers all International TV and FM radio frequencies. Amplification is adjustable from +20 dB to +40dB via an onboard attenuator. An internal low loss passive 2-way ferrite splitter is provided. An input port is provided for an external signal source such as a VCR, Modulator or Cable TV.

The hinged cast metal EMI shielded case is gasket sealed and highly water resistant. External CATV type "F" connectors are provided for the external antenna input and 2 branch line outputs as well as for the external signal source. An "O" ring cable gland is provided for the primary power cable.

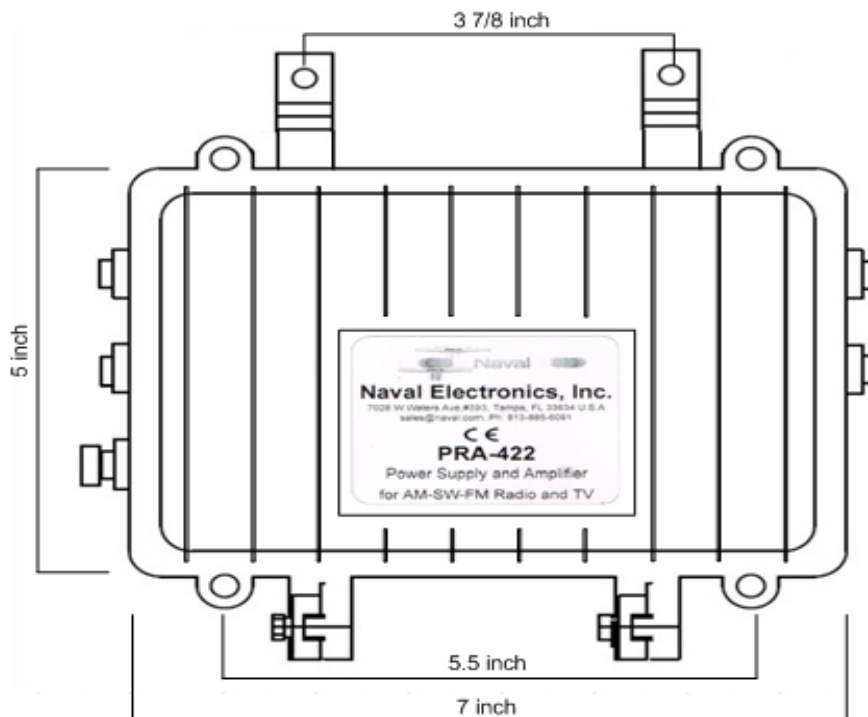
PRA-422 is identical to the PRA-420 with the addition of an AM radio amplifier with a 20dB adjustable attenuator. Both devices will power two active antennas such as a PR-420 and the PR-430.

PRA-422/PRA-422BE and PRA-420/PRA-420BE both are same part number.
"BE" for CE mark and now just call PRA-422 or PRA-420.

Specifications

PRA-420 and PRA-422 Power Supply-Amplifiers

- AM frequency range: 0.1-30MHz
- FM TV range: 40-860 MHz
- AM gain: adjustable from 0dB to +20dB
- FM DAB+ TV gain: adjustable from +20dB to +40dB
- Antenna current: 150mA Cont.
- Antenna voltage: + 15v DC
- Hum and ripple: <50mV
- Primary power: 117/230 VAC,50/60 Hz
- Noise: <5.5dB
 - VCR input level: 60dBuV nominal
- Amplifier Output: 105 dBuV
- Operating Temperature: -40 +60C



Naval Electronics, Inc

PR-12BE, PR-20BE Antenna Power Supplies

The PR12BE is an AC/DC full wave rectifier power supply, antenna power inserter and 2 way signal splitter combination. It can be powered with 110/220 VAC or 12/24 VDC. It provides regulated 15 VDC to the internal gold plated F connector antenna port to power the PR411, PR414 or PR30 active antennas. It provides 90mA of continuous current. The low loss metal ferrite signal splitter feeds two receivers (Radio or TV) via internal gold plated F connectors and covers the frequency range to of 100kHz to 900 MHz. The hinged cast metal EMI shielded case is highly water resistant and "O" ring cable glands are provided for all connecting cables. The package is complete with spare fuses, 3 "F" connectors and instructions for installation. The Older PR12 is not CE marked.

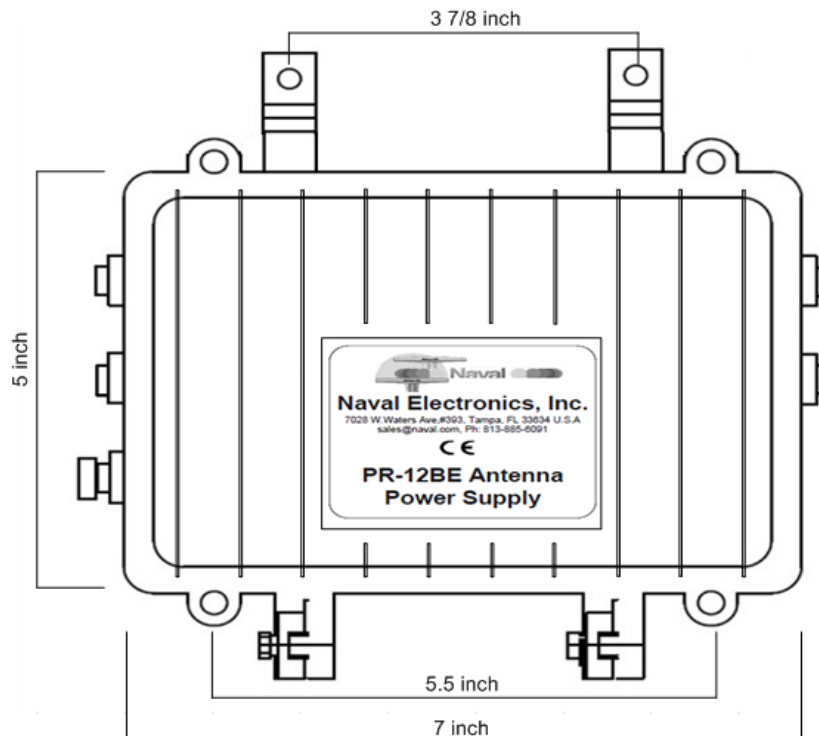
Both are marked "BE" designating a CE marked version for Europe. and are supplied with shrouded transformers and other "shock free" components and feature fuses on both primary and secondary power supply circuits.

The PR20E is also CE marked and it's 300mA output will supply our large PR420 and PR422 antennas. A 20dB signal attenuator is included for use in high signal areas.

Specifications

PR-12BE, PR-20BE Antenna Power Supplies Low Band VHF TV Amplifier

- Primary Power: 110/220 VAC 12 or 24 VDC
- Frequency Range: 100kHz 860 MHz
- Impedance in/out: 75 ohm
- Coax Cable connector: Spin on type RG6
- Cable gland: RG6
- Current Capability: 90/200mA continuous
- Temperature Range: 40 +60 C
- Internal Connector: "F" type female
- Return loss: 15dB



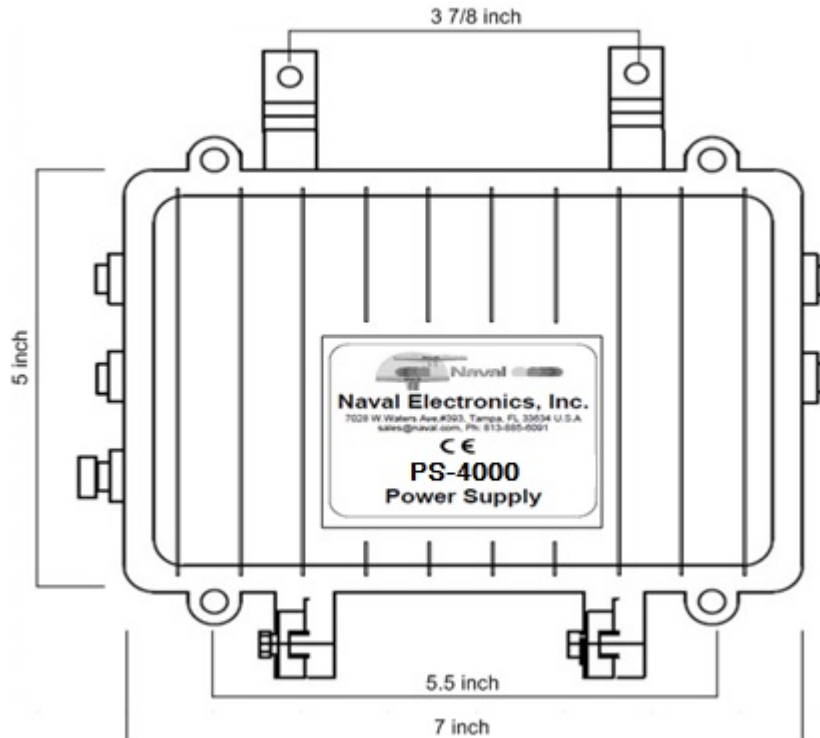
Naval Electronics, Inc

PS-4000 24VDC Switch Mode Power Supply

The PS-4000 supplies 24VDC to the 4000 series cassette amplifier system. It will operate from 85-240 VAC inputs. The hinged cast metal EMI shielded case is highly water resistant and "o" ring cable glands are provided for all connecting cables.

Specifications PS-4000 24VDC Switch Mode Power Supply

- Primary Power: 85-240 VDC
- Temperature Range: -40 +60C
- Current Capability: 1.2 amps
- Cable glands: RG6



Naval Electronics, Inc

PR-4010 Input Cassette and Power Conditioner



The PR-4010 provides 15 VDC power for several active antennas, including the PR-430 AM-SW antenna and PR-420 or PR-422 omni TV antennas. It also supplies 24 VDC regulated to the 4000 series amplifiers. Inputs are provided for cable TV and an auxiliary input such as a modulator or group of modulators.

The PR-4010 provides a cut out feature with a 3 second time delay to disable the active antennas when the ship's main transmitters are in operation.

The PR-4010 will accept 26-30 VDC as primary power. If 110/220 VAC input is required, feed the PR-4010 with our PS-4000 external power supply.

Specifications

PR-4010 Input Cassette and Power Conditioner

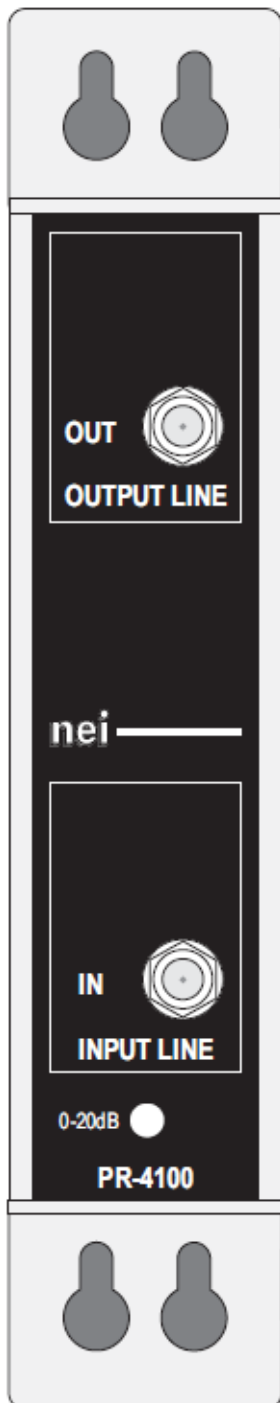
- Antenna RF input : 40-860 MHz, high pass filter, (PR-420 antenna)
- Antenna RF-input : 100kHz - 860 MHz, unfiltered,(PR-422 antenna)
- VCR RF-input : (Option 2: Plug in VCR filter board)
- Antenna power A+B+C: 15 VDC regulated, apx 350 mA full load
- Antenna voltage ON/OFF: 3 X 2 pole jumpers at PCB level
- DC Supply input: 3 pole screw terminal
- Antenna cut off relay: 2 pole screw terminal
- Temperature Range: -40 +60C
- Return Loss: 15dB typical
- Output voltage to Amps: Two DC connectors wired in parallel. 24 VDC regulated.

All 4000 Series Cassettes are mounted in a Chromate treated extruded aluminum EMI shielded case with Gold plated "F" connectors. When mounted in the AC-4000 Lockable Cabinet, EMI shielding is further enhanced. BNC connectors are available as an option.

Naval Electronics, Inc

PR-4100 AM-SW Band Amplifier

The PR-4100 is an AM-SW band amplifier covering the range 100 KHz to 30 MHz which includes the Low Frequency, Medium Frequency and High Frequency International Short Wave Bands. It is for use in larger Series 4000 systems and provides a high output across it's entire frequency range. The output level is adjustable over a 20 dB range with a convenient front panel Attenuator Control.



Specifications

PR-4100 AM Amplifier

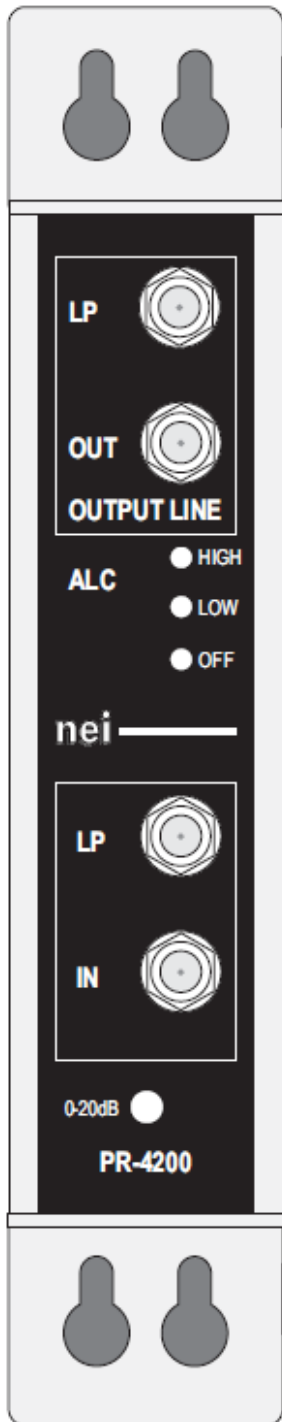
- Frequency Range: 100kHz-30MHz
- Gain: 40-25 dB
- Noise Figure: <10 dB
- Max Level out: 126 dBuV
- Impedance in-out: 75 ohms
- Attenuator Range: 20dB
- 3rd Order IM: VO 60dB (DIN 45004B)
- Supply Voltage: 24 VDC regulated
- Current Consumed: 100 mA.
- Connector: "F" type
- Temperature Range: -40 +60C
- Return Loss: 15 - 20dB

All 4000 Series Cassettes are mounted in a Chromate treated extruded aluminum EMI shielded case with Gold plated "F" connectors. When mounted in the AC-4000 Lockable Cabinet, EMI shielding is further enhanced. BNC connectors are available as an option.

Ref: 3265 / 3365 / 3465 / 3565 / 3665 / 3765

Naval Electronics, Inc

PR-4200 Low Band VHF TV-FM Amplifier



The PR-4200 is a low noise TV-FM Band Amplifier for use in the 4000 series Marine TV Head End System. The band 40-88MHz is amplified through two stages of High Frequency Transistors and an Automatic Level Control (ALC) protects from overload in high signal areas. A series of front panel LED's indicates signal conditions and ALC action. A 20dB attenuator is provided on the front panel to adjust the output signal level.

Specifications

PR-4200 Low Band VHF TV-FM Amplifier

- Frequency Range: 40-88MHz
- Gain: 38dB
- Noise Figure: <6dB
- Max Output Level: 115dBuV
- ALC Range: 30dB
- Attenuator Range: 20dB
- 3rd Order IM: 060dB VO (DIN 45004B)
- Return Loss: 15-20dB
- Supply Voltage: 24 VDC regulated
- Current Consumed: 180mA
- Connector: "F" type
- Temp Range: -40+60 C
- Dimensions: 210mm x 41mm x 96 mm

All 4000 Series Cassettes are mounted in a Chromate treated extruded aluminum EMI shielded case with Gold plated "F" connectors. When mounted in the AC-4000 Lockable Cabinet, EMI shielding is further enhanced. BNC connectors are available as an option.

Ref: 3250-0 / 3350-0 / 3450-0 / 3550-0 / 3650-0 / 3750-0

Naval Electronics, Inc

PR-4300 FM Radio Amplifier

The PR-4300 is a low noise FM Band Amplifier for use in the 4000 series Marine AM-FM-TV Head End System. The FM band 88-110MHz is amplified through three stages of High Frequency Bi-Polar Transistors and a 20dB attenuator is provided on the front panel to adjust the output signal level.



Specifications

PR-4300 FM Radio Amplifier

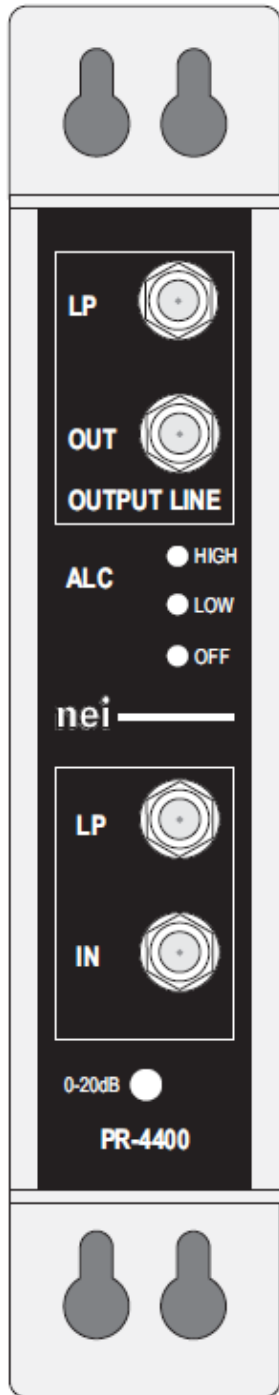
- Frequency Range: 88-110MHz
- Gain: 45dB
- Noise Figure: <6dB
- Max Output Level: 115dBuV
- Attenuator Range: 20dB
- 3rd Order IM: 060dB VO (DIN 45004B)
- Return Loss: 15-20dB
- Supply Voltage: 24 VDC regulated
- Current Consumed: 160mA
- Connector: "F" type
- Temp Range: -40+60 C
- Dimensions: 210mm x 41mm x 96 mm

All 4000 Series Cassettes are mounted in a Chromate treated extruded aluminum EMI shielded case with Gold plated "F" connectors. When mounted in the AC-4000 Lockable Cabinet, EMI shielding is further enhanced. BNC connectors are available as an option.

Ref: 3266 / 3366 / 3466 / 3566 / 3666 / 3766

Naval Electronics, Inc

PR-4400 High Band VHF TV Amplifier



The PR-4400 is a low noise TV Band Amplifier for use in the 4000 series Marine AM-FM-TV Head End System. The Cable TV band 170-470MHz is amplified through three stages of High Frequency Bi-Polar Transistors and a 20dB attenuator is provided on the front panel to adjust the output signal level.

Specifications

PR-4400 High Band VHF TV Amplifier

- Frequency Range: 170-470MHz
- Gain: 45dB
- Noise Figure: <6dB
- Max Output Level: 115dBuV
- Attenuator Range: 20dB
- 3rd Order IM: 060dB VO (DIN 45004B)
- Return Loss: 15-20dB
- Supply Voltage: 24 VDC regulated
- Current Consumed: 160mA
- Connector: "F" type
- Temp Range: -40+60 C
- Dimensions: 210mm x 41mm x 96 mm

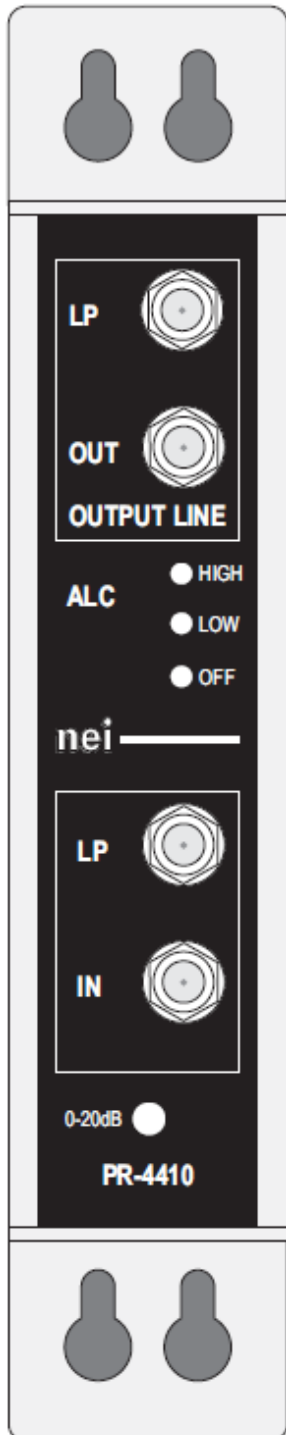
All 4000 Series Cassettes are mounted in a Chromate treated extruded aluminum EMI shielded case with Gold plated "F" connectors. When mounted in the AC-4000 Lockable Cabinet, EMI shielding is further enhanced. BNC connectors are available as an option.

Ref: 3251ss / 3351ss / 3451ss / 3551ss / 3651ss / 3751ss

Naval Electronics, Inc

PR-4410 High Band VHF TV Amplifier

The PR-4410 is a low noise TV Band Amplifier for use in the 4000 series Marine AM-FM-TV Head End System. The TV band 170-230MHz is amplified through three stages of High Frequency Bi-Polar Transistors and a 20dB attenuator is provided on the front panel to adjust the output signal level.



Specifications

PR-4410 High Band VHF TV Amplifier

- Frequency Range: 170-230MHz
- Gain: 38dB
- Noise Figure: <6dB
- Max Output Level: 115dBuV
- ALC Range: 30dB
- Attenuator Range: 20dB
- 3rd Order IM: 060dB VO (DIN 45004B)
- Return Loss: 15-20dB
- Supply Voltage: 24 VDC regulated
- Current Consumed: 160mA
- Connector: "F" type
- Temp Range: -40+60 C
- Dimensions: 210mm x 41mm x 96 mm

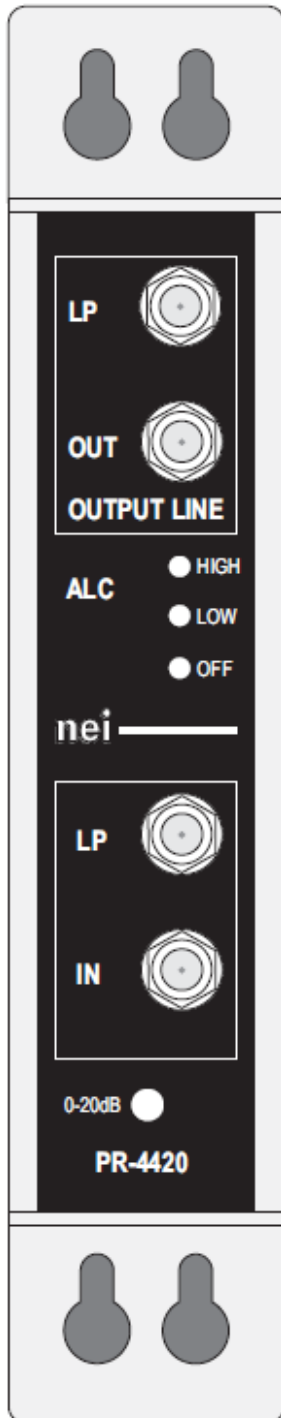
All 4000 Series Cassettes are mounted in a Chromate treated extruded aluminum EMI shielded case with Gold plated "F" connectors. When mounted in the AC-4000 Lockable Cabinet, EMI shielding is further enhanced. BNC connectors are available as an option.

Ref: 3251 / 3351 / 3451 / 3551 / 3651 / 3751

Naval Electronics, Inc

PR-4420 High Band VHF TV Amplifier

The PR-4420 is a low noise TV Band Amplifier for use in the 4000 series Marine AM-FM-TV Head End System. The TV band 170-400MHz is amplified through three stages of High Frequency Bi-Polar Transistors and a 20dB attenuator is provided on the front panel to adjust the output signal level.



Specifications

PR-4420 High Band VHF TV Amplifier

- Frequency Range: 170-400MHz (EU Band II)
- Gain: 45dB
- Noise Figure: < 6dB
- Max Output Level: 115dBuV
- Attenuator Range: 20dB
- ALC Range: 30dB
- 3rd Order IM: 060dB VO (DIN 45004B)
- Return Loss: 15-20dB
- Supply Voltage: 24 VDC regulated
- Current Consumed: 160mA
- Connector: "F" type
- Temp Range: -40+60 C
- Dimensions: 210mm x 41mm x 96 mm

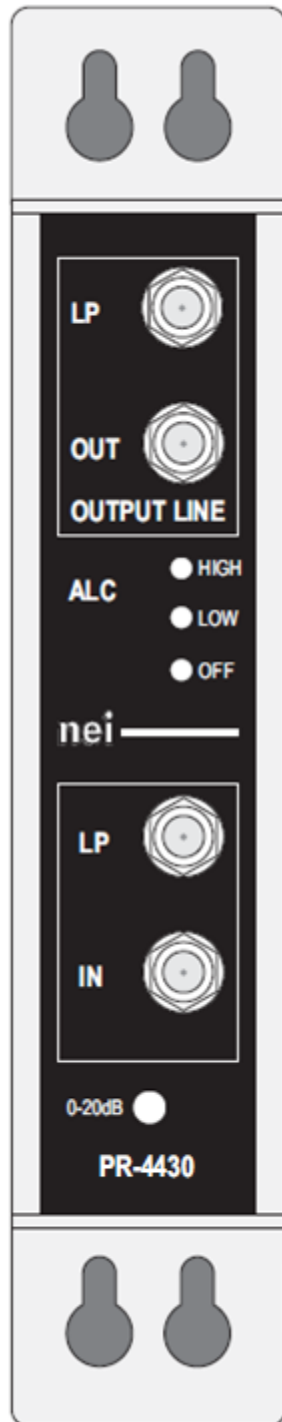
All 4000 Series Cassettes are mounted in a Chromate treated extruded aluminum EMI shielded case with Gold plated "F" connectors. When mounted in the AC-4000 Lockable Cabinet, EMI shielding is further enhanced. BNC connectors are available as an option.

Ref: 3251s / 3351s / 3451s / 3551s / 3651s / 3751s

Naval Electronics, Inc

PR-4430 VHF-UHF TV Amplifier

The PR-4430 is a low noise VHF-UHF TV Amplifier for use in the 4000 series Marine AM-FM-TV Head End System. It covers all international TV channels and features a GaAs FET IC driving three low noise bipolar transistors. A 20dB attenuator is provided on the front panel to adjust the output signal level.



Specifications

PR-4430 VHF-UHF TV Amplifier

- Frequency Range: 40-88 MHz
170-230 MHz
470-860 MHz
- Gain: VHF >38dB
UHF >45dB
- Noise Figure: <6dB
- Max Output Level: 116dBuV
- Attenuator Range: 20dB
- ALC Range: 30dB
- 3rd Order IM: 060dB VO (DIN 45004B)
- Return Loss: 15dB typical
- Supply Voltage: 24 VDC regulated
- Current Consumed: 280mA
- Connector: "F" type
- Temp Range: -40+60 C
- Dimensions: 210mm x 41mm x 96 mm

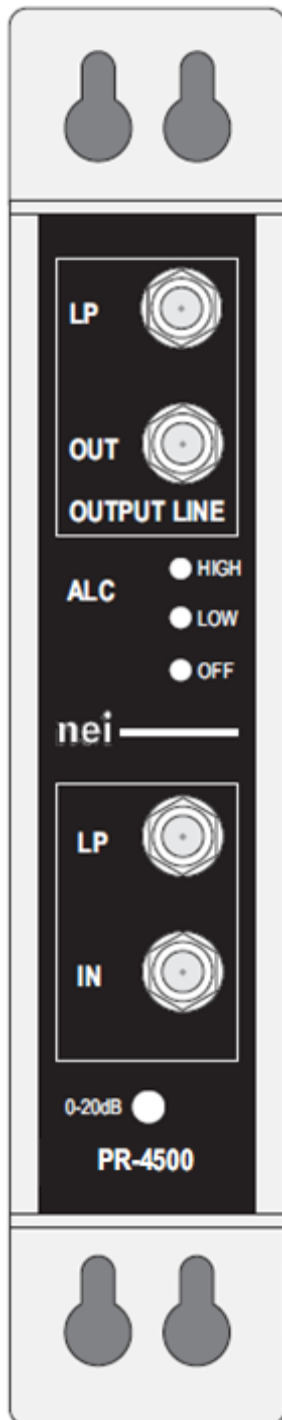
All 4000 Series Cassettes are mounted in a Chromate treated extruded aluminum EMI shielded case with Gold plated "F" connectors. When mounted in the AC-4000 Lockable Cabinet, EMI shielding is further enhanced. BNC connectors are available as an option.

Ref: 3240 / 3340 / 3440 / 3540 / 3640 / 3740

Naval Electronics, Inc

PR-4500 UHF- TV Amplifier

The PR-4500 is a low noise UHF-TV Band Amplifier for use in the 4000 series Marine AM-FM-TV Head End System. The TV band 470-860MHz is amplified through a microwave integrated circuit and three stages of High Frequency Bi-Polar Transistors. A 20dB attenuator is provided on the front panel to adjust the output signal level.



Specifications

PR-4500 UHF TV Amplifier

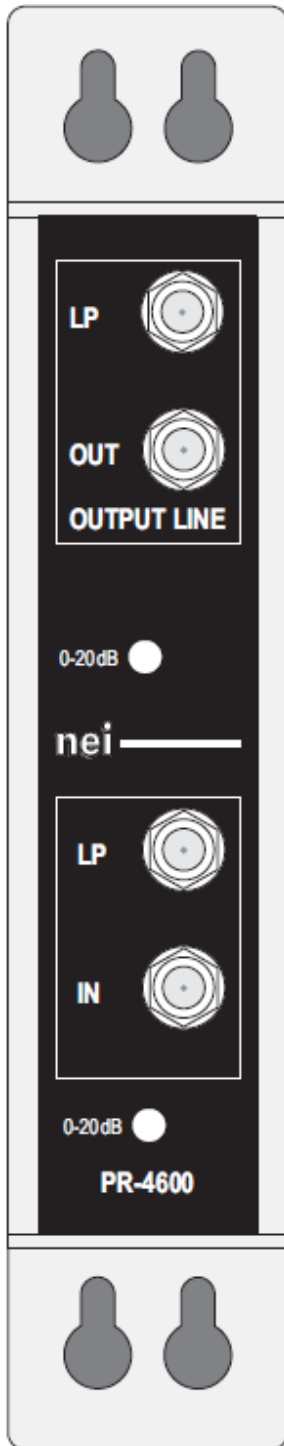
- Frequency Range: 470-860MHz
- Gain: 45dB
- Noise Figure: <6dB
- Max Output Level: 115dBuV
- Attenuator Range: 20dB
- ALC Range: 30dB
- 3rd Order IM: 060dB VO (DIN 45004B)
- Return Loss: 15-20dB
- Supply Voltage: 24 VDC regulated
- Current Consumed: 260mA
- Connector: "F" type
- Temp Range: -40+60 C
- Dimensions: 210mm x 41mm x 96 mm

All 4000 Series Cassettes are mounted in a Chromate treated extruded aluminum EMI shielded case with Gold plated "F" connectors. When mounted in the AC-4000 Lockable Cabinet, EMI shielding is further enhanced. BNC connectors are available as an option.

Ref: 3252 / 3352 / 3452 / 3552 / 3652 / 3752

Naval Electronics, Inc

PR-4600 AM-FM Radio Amplifier



The PR-4600 is a low noise AM-FM Radio Amplifier for use in the 4000 series Marine AMFM-TV Head End System. It covers the AM (100kHz-30MHz) and the FM (88-110MHz) radio bands. A 20dB attenuator is provided on the front panel for each band to adjust the output signal level.

Specifications

PR-4600 AM-FM Radio Amplifier

- Frequency Range: 100kHz-30MHz and 88-110MHz
- AM Gain: 40-25 dB
- FM Gain: 38dB
- Noise Figure: AM <10dB ; FM <7dB
- Max Output Level: AM 125dBuV ; FM 116dBuV
- Attenuator Range: 20dB
- 3rd Order IM: 060dB VO (DIN 45004B)
- Return Loss: 15-20dB
- Supply Voltage: 24 VDC regulated
- Current Consumed: 190mA
- Connector: "F" type
- Temp Range: -40+60 C
- Dimensions: 210mm x 41mm x 96 mm

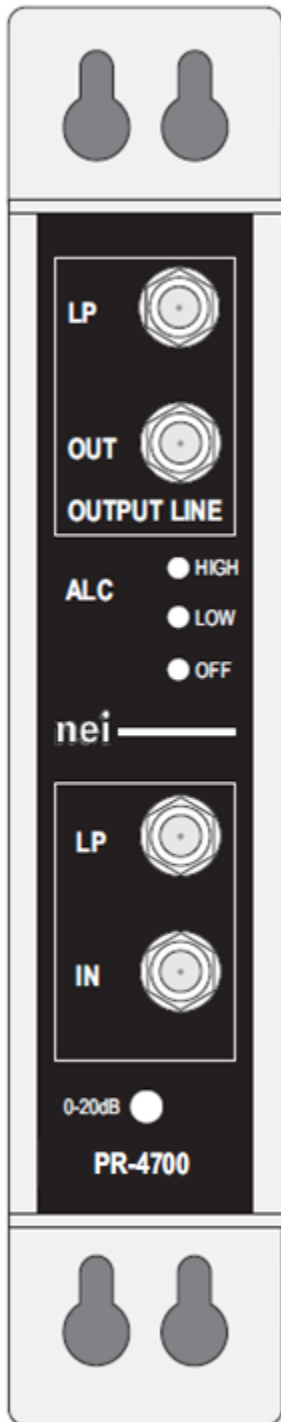
All 4000 Series Cassettes are mounted in a Chromate treated extruded aluminum EMI shielded case with Gold plated "F" connectors. When mounted in the AC-4000 Lockable Cabinet, EMI shielding is further enhanced. BNC connectors are available as an option.

Ref: 3260 / 3360 / 3460 / 3560 / 3660 / 3760

Naval Electronics, Inc

PR-4700 FM-TV Amplifier

The PR-4700 is a low noise broadband FM-TV Amplifier covering all international TV frequencies as well as the FM Radio Band. A 20dB attenuator is provided on the front panel to adjust the output signal level.



Specifications

PR-4700 FM-TV Amplifier

- Frequency Range: 40-230MHz and 470-860MHz
- VHF Gain: 38dB
- UHF Gain: 44dB
- Noise Figure: <10dB
- Max Output Level: 116dBuV
- Attenuator Range: 20dB
- 3rd Order IM: 060dB VO (DIN 45004B)
- ALC Range: 30dB
- Return Loss: 15-20dB
- Supply Voltage: 24 VDC regulated
- Current Consumed: 300mA
- Connector: "F" type
- Temp Range: -40+60 C
- Dimensions: 210mm x 41mm x 96 mm

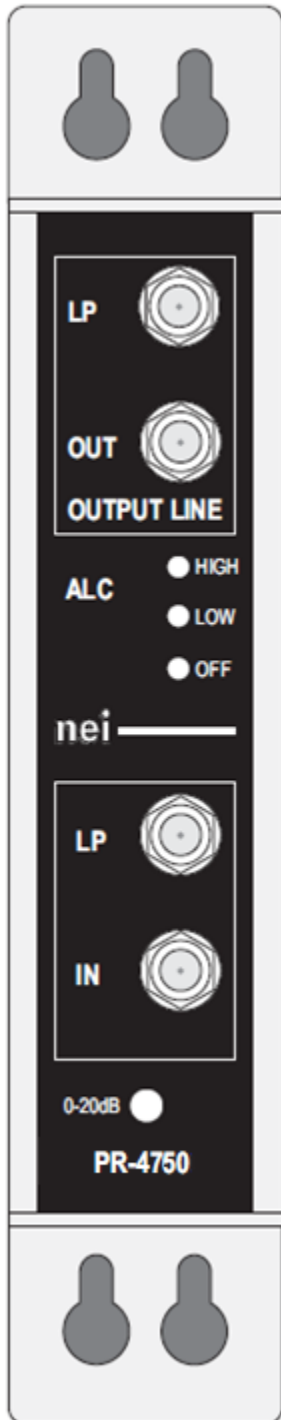
All 4000 Series Cassettes are mounted in a Chromate treated extruded aluminum EMI shielded case with Gold plated "F" connectors. When mounted in the AC-4000 Lockable Cabinet, EMI shielding is further enhanced. BNC connectors are available as an option.

Ref: 3241 / 3341 / 3441 / 3541 / 3641 / 3741

Naval Electronics, Inc

PR-4750 CATV Amplifier

The PR-4750 is a low noise broadband CATV Amplifier. A 20dB attenuator is provided on the front panel to adjust the output signal level.



Specifications

PR-4750 CATV Amplifier

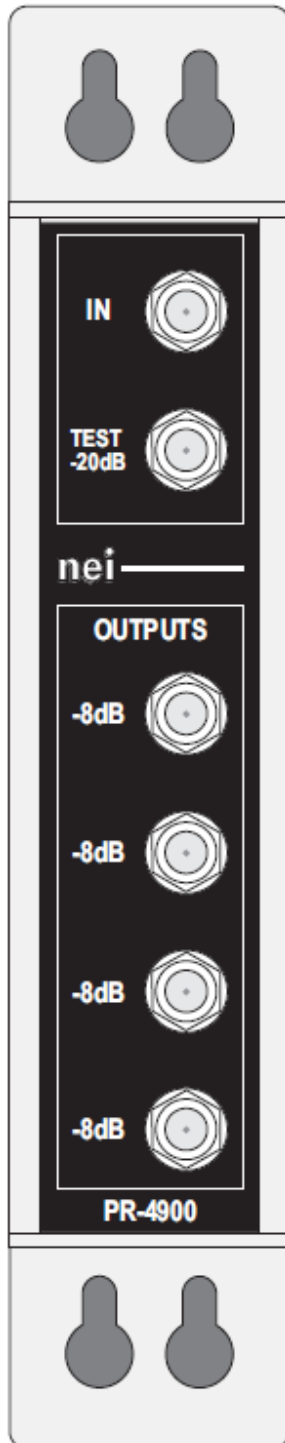
- Frequency Range: 70-170MHz and 230-470MHz "S" Band
- VHF Gain: 38dB
- UHF Gain: 44dB
- Noise Figure: <10dB
- Max Output Level: 116dBuV
- Attenuator Range: 20dB
- 3rd Order IM: 060dB VO (DIN 45004B)
- ALC Range: 30dB
- Return Loss: 15-20dB
- Supply Voltage: 24 VDC regulated
- Current Consumed: 300mA
- Connector: "F" type
- Temp Range: -40+60 C
- Dimensions: 210mm x 41mm x 96 mm

All 4000 Series Cassettes are mounted in a Chromate treated extruded aluminum EMI shielded case with Gold plated "F" connectors. When mounted in the AC-4000 Lockable Cabinet, EMI shielding is further enhanced. BNC connectors are available as an option.

Ref: 3241

Naval Electronics, Inc

PR-4900 4-Way Output Filter



The PR-4900 is a low loss ferrite transformer coupled splitter for use in the 4000 series Marine TV Head End System. Four -8 dB outputs are provided for connection to the ship's branch lines. A -20 dB test point is provided for monitoring levels without disturbing system operation.

Specifications

PR-4900 4-Way Output Filter

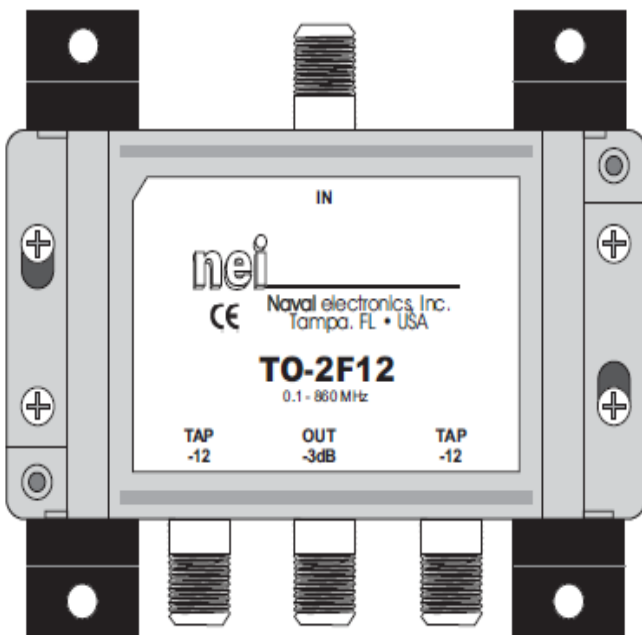
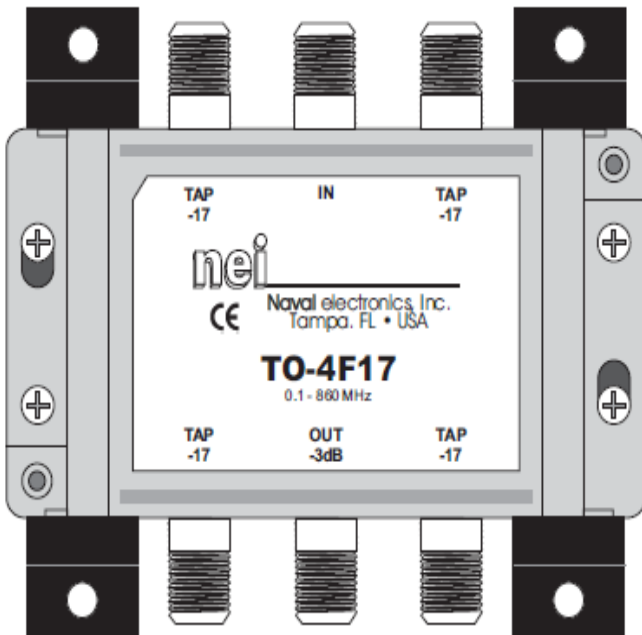
- Frequency Range: 100 kHz - 860 MHz
- In-Out Impedance: 75 ohm
- Connector: "F" type
- Splitter Loss: 8dB
- Return Loss: 15dB typical
- Dimensions: 21mm X 41mm X 97mm

All 4000 Series Cassettes are mounted in a Chromate treated extruded aluminum EMI shielded case with Gold plated "F" connectors. When mounted in the AC-4000 Lockable Cabinet, EMI shielding is further enhanced. BNC connectors are available as an option.

Ref: 3281 / 3381 / 3481 / 3581 / 3681 / 3781

Naval Electronics, Inc

TO-4F and TO-2F Directional Couplers



The new series of directional couplers or "tap offs" are designed for Marine and MATV applications where the complete Radio and TV spectrum is passed throughout the vessel. They feature a robust insulated plastic mounting base to keep the distribution system isolated from ship's ground and thus avoid problems associated with ground loops. The standoff base also allows more room for making cable connections. *Unused outlets must be terminated in 75ohm (TR-75F).*

Several values of tap isolation are available from 21 to 8 dB for use along branch lines as signal values fall and to help provide a balance of signal levels throughout the network. All "F" connectors are an integral part of the cast casings and allow the connecting cables to be wrench "torqued" without causing damage to the internal circuitry.

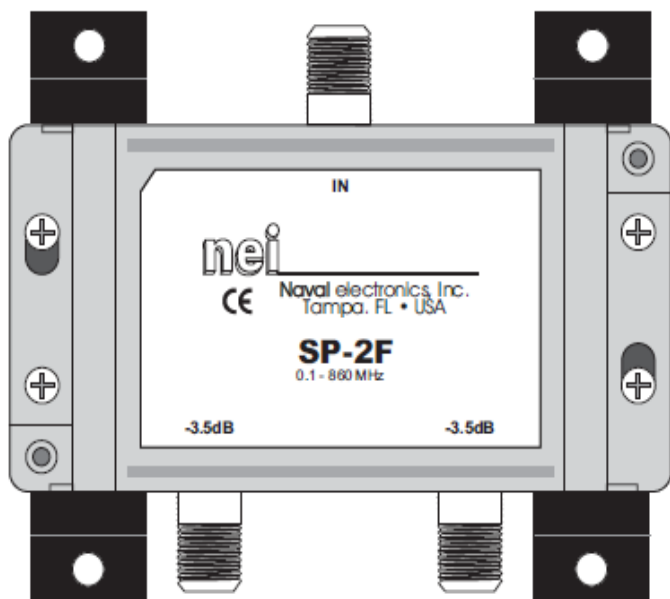
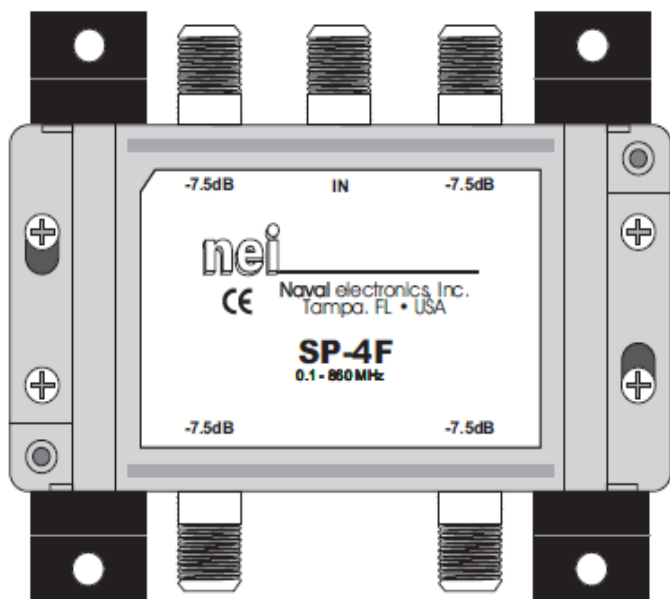
Specifications

TO-4F and TO-2F Directional Couplers

- Frequency Range: 100 kHz - 860 MHz
- Tap Isolation: 8 - 21 dB
- Directional Isolation: >17 dB
- Port to Port Isolation: >36 dB
- Return Loss: >20 dB
- Temp Range: -40+60 C
- Screening Factor: >75 dB
- Impedance: 75 ohm
- Through Loss: **TO-2F8 -3.8dB**
TO-2F12 -2.8dB
TO-2F17 -1.2dB
TO-2F21 -1.2dB
TO-4F10 -4.5dB
TO-4F12 -4.0dB
TO-4F17 -2.8dB
TO-4F21 -2.8dB

Naval Electronics, Inc

Passive Splitters SP-2F and SP-4F



The new series of Passive Splitters are designed for Marine and MATV systems and especially to work with the 4000 series system as they pass both Radio and TV frequencies from 100 kHz to 860 MHz.

They feature a robust insulated plastic mounting base to keep the distribution system isolated from Ship's ground and thus avoid problems associated with ground loops. The standoff base also allows more room for making cable connections. All "F" connectors are an integral part of the cast casings and allow the connecting cables to be wrench "torqued" without causing damage to the internal circuitry. *Unused outlets must be terminated in 75ohm (TR-75F).*

Specifications

Passive Splitters SP-2F and SP-4F

- Frequency Range: 100 kHz-860 MHz
- Splitter Loss 4-way: 7.5 dB
- Splitter Loss 2-way: 3.5 dB
- Impedance: 75 ohm
- Isolation port to port: >20 dB
- Return Loss: >20 dB
- Temp Range: -40+60 C

Naval Electronics, Inc