



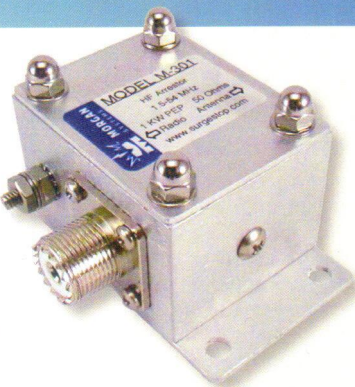
MORGAN
SYSTEMS



Manufacturers of time tested surge and lightning protection products, found in commercial and amateur radio sites worldwide.

COAXIAL ARRESTORS

Morgan HF Coaxial Arrestors are *the* first line of defense in lightning protection! Used worldwide by the U.S. Army, Boeing Corporation, AT&T, NASA, commercial broadcasters, public safety, government, and amateur enthusiasts, Morgan's M-300 Series arrestors offer a complete, nearly perfect blocking/shunting system for induced voltages. Morgan Systems arrestors are continuously active, draining coax center conductor static to ground. The result? Solid protection for station equipment and related noise. All M-300 Series units feature toroid inductors which neutralize voltages on the antenna side of a central high-voltage blocking capacitor. Inert gas tubes are used to limit the natural back-EMF voltages often induced across the inductor when large fast rising input currents are presented to the unit.



- M-300 .1-54Mhz, 1000w arrestor. 50-75Ω UHF, N, BNC connectors. DC blocking.
- M-300-PP .1-54Mhz, 1000w arrestor. 50-75Ω UHF, N, BNC connectors. Power pass version.
- M-301 1.5-54Mhz, 1000w arrestor. 50-75Ω UHF, N, BNC connectors. DC blocking.
- M-303 1.5-54Mhz, 3000w arrestor. 50-75Ω UHF, N, BNC connectors. DC blocking.
- M-303-PP .1-54Mhz, 1000w arrestor. 50-75Ω UHF, N, BNC connectors. Power pass version.

VHF/UHF Coaxial Arrestors are built similar to HF versions above, but designed for VHF/UHF frequency ranges. M-302 and M-304 feature continuous static drainage of center conductor to ground thru an inductor on the antenna side of a center blocking capacitor, plus a gas discharge unit. M-306 has extended frequency range to 1GHz and has additional static bleeder resistors rather than an inductor. All units block DC and come in UHF, N, or BNC connectors. Power pass versions available upon request.



- M-302 50-500 MHz, 50Ω, 300w UHF or N connectors. 150w BNC connectors.
- M-304 50-500 MHz, 50Ω, 1000w N connectors, 300w UHF connectors.
- M-306 50-1000 MHz, 50Ω, N connector only. 300w 50 to 500 MHz; 150w from 500-1000 MHz.

75 OHM COAXIAL ARRESTORS



LF/MF/HF/VHF/UHF 75 Ohm Coaxial Arrestors are built similar to HF/VHF versions, but designed for 75 Ohm receive antennas for low band, CATV, or OTA TV. Units feature gas discharge tubes for overvoltage protection and either bleeder resistors or toroidal inductors (model dependant).

- M-320 3-2000 MHz, 75Ω, F connectors. DC blocking. Designed for cable TV and over-the-air TV. Receive only.
- M-322 135 KHz - 60 MHz, 75Ω, F connectors. DC blocking. Designed for low band receive only antennas.
- M-325 0-2000 MHz, 75Ω, F connectors. 50 V AC/DC for preamp. Designed for cable TV and OTA TV. Receive only.

TELEPHONE LINE IMPULSE SUPPRESSOR



Telephone Line Suppressor is a combination multi-stage unit that isolates telephone circuits, providing dual-action voltage protection with gas-discharge and metal oxide components, and noise/RF filtering by twin stage decouple bypassing. Modern solid-state telephone equipment, computer modems, telephone patches, and interconnection equipment are all easily damaged by fast rising transients caused by lightning discharges and electromagnetic fields.

AC LINE SURGE ARRESTORS

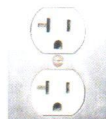


Power Mains Impulse Suppressor is a must for all buildings! Model M-330 offers transient and overvoltage protection throughout an entire building to all devices connected to AC power lines on the main electrical panel. Unit hard wires into main breaker panel with double pole breaker. Once installed, the M-330 attacks transients and provides a safe leakage path to ground for the duration of the intermittent spike occurring to power lines outside the building. The unit is inert during normal operation but provides filtering of electromagnetic signals which often cause noise and interference to household electronic equipment. Maximum 60,000 Amp fast switch capacity.

AC Power line filter/arrestor will keep RF noise and power surges from damaging modern electronic equipment. Morgan Systems line filters are a complete package of overvoltage control, capacitive decoupling, and interference control of both common mode and differential mode signals across a broad frequency spectrum range. Two models offer currents to 20 Amps and up to 6 plug-in outlets. Filters are constructed in a tough, single piece heavy chassis measuring 4" square, and each includes 6 foot molded line cord, fuse (replaced if necessary from the outside), and stainless steel ground terminal. Design update in 2019 includes more durable outlets, increased filtering ability with up to 45dB of noise attenuation, and fast surge attack speeds with gas discharge devices. All are designed for flat surface mounting and may be used with or without ground terminal connection.



M-474 uses standard NEMA 5-15 plug



M-476 uses NEMA 5-20 plug with one spade horizontal. Requires this type of outlet!

- M-474-3 AC line filter 120V AC, 3 outlets, 15A capacity combined total of 3 outlets.
- M-474-6 AC line filter 120V AC, 6 outlets, 15A capacity combined total of 6 outlets.
- M-476-3 AC line filter 120V AC, 3 outlets, 20 A capacity combined total of 3 outlets.
- M-476-6 AC line filter 120V AC, 3 outlets, 20 A capacity combined total of 6 outlets.



ROTOR/CONTROL LINE ARRESTORS



AC/DC Control Line Protection is often ignored or overlooked when setting up station protection. Unshielded control line conductors used to operate remote switches, antenna rotators, and home weather stations are easily charged to thousands of volts by overhead lightning events, frequently causing severe damage to equipment. These same leads also couple into transmitted RF energy and re-radiate signals at ground level, resulting in interference to nearby equipment tuned to other services. Easy to install and virtually permanent, models M-347, M-348, and M-349 shunt RF currents and voltages over 20V, 50V or 120V respectively, directly to a facility ground terminal connection. New for 2020, Model M-346 also has a 20v working range but uses TVS diodes and gas discharge tubes to protect sensitive RS-422 data lines.

- M-346 For up to 8 conductors, 20v AC/DC
- M-347 For up to 8 conductors, 20v AC/DC
- M-348 For up to 8 conductors, 50v AC/DC
- M-349 For up to 8 conductors, 120v AC/DC

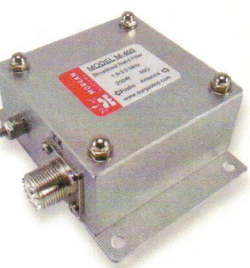
- M-346B For up to 12 conductors, 20v AC/DC
- M-347B For up to 12 conductors, 20v AC/DC
- M-348B For up to 12 conductors, 50v AC/DC
- M-349B For up to 12 conductors, 120v AC/DC

RF FILTERS



Broadcast Band Filters can eliminate hearing the broadcast band stations that spill over into the low HF bands. AM broadcast stations transmitting in the frequency range from 550kHz to 1700kHz cause havoc with HF and VHF receiving operations, often inducing carriers, modulation, broadband noise and other disturbances into delicate equipment. Filter allows transmitting through it with up to 200W power.

- M-400X BCB filter, attenuates below 3.5MHz
- M-402X BCB filter, attenuates below 1.8MHz



Bandpass Filters are used widely to pass only the listed frequency segments for which they are tuned, blocking all frequencies above and below the passband. Use bandpass filters anywhere that critical single band performance is required, or where nearby transmitting stations cause interference to needed communications. Excellent for multiple-operator stations, portable or field use, indoor or outdoor service. Circuit uses a twin section dual resonator design in a compact 3" square heavy chassis. Units are rated for 200 Watts transmitter power. SO-239 connectors standard.

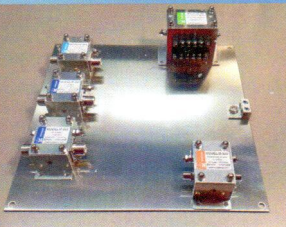
- M-403 bandpass filter, 160m
- M-404 bandpass filter, 80m
- M-405 bandpass filter, 40m
- M-406 bandpass filter, 30m
- M-407 bandpass filter, 20m
- M-408 bandpass filter, 17m
- M-409 bandpass filter, 15m
- M-410 bandpass filter, 12m
- M-411 bandpass filter, 10m
- M-411CB bandpass filter, CB band

BALANCED LINE / LONGWIRE ARRESTOR



Ladderline/Twinlead/Longwire Arrestors are built for transmit/receive applications using 300-600Ω twinlead, balanced line, ladder line, or single longwire antennas. All units use blocking capacitors and toroid inductors, which present near dead DC short on antenna side of arrestor, constantly draining feedline wires of static which causes noise in the receiver. Compatible with both split capacitor type antenna tuner and balun output stages common in modern antenna tuning products.

- M-308 .1-54MHz, 1000w arrestor for single wire/longwire antennas.
- M-308H .1-54MHz 3000w arrestor for single wire/longwire antennas.
- M-309 .1-54MHz 1000w arrestor for twinlead/ladderline antennas.
- M-309H .1-54MHz 3000w arrestor for twinlead/ladderline antennas.



Mounting Bulkhead Panel provides single-point grounding scheme for lightning or other transient currents, and introduces a low inductance method of bringing filter cases to ground potential. Made from 1/8" thick aluminum and available in a variety of sizes. Each is outfitted with a twin aluminum lug for attaching a #2-14 AWG ground cable, comes with anti-oxidant compound, and the corners come hole punched for easy installation. Arrange lightning arrestors, filters, switches, or other important station hardware to complete proper station bonding.



M-350A 12"x12"

M-350C 12"x24"

M-350E 18"x24"

M-350B 12"x18"

M-350D 18"x18"

M-350F 24"x24"

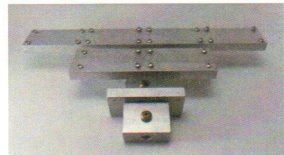
Mounting Frames are used with M-300 Series arrestors for attaching units directly to ground rods (keeping lead inductance to a near-zero). This mounting method provides the highest possible performance for voltage protection. And they're built as if they're expecting you to be hit time after time, made from 1/2" thick solid aluminum bar stock.

For M-300-306, and M-320-325:

- M-318A 3/8" rod, holds one unit
- M-318B 1/2" rod, holds one unit
- M-318C 5/8" rod, holds one unit
- M-318D 3/8" rod, holds two units
- M-318E 1/2" rod, holds two units
- M-318F 5/8" rod, holds two units
- M-318G 3/8" rod, holds four units
- M-318H 1/2" rod, holds four units
- M-318I 5/8" rod, holds four units

For M-308-309, M-346-349:

- M-319A 3/8" rod, holds one unit
- M-319B 1/2" rod, holds one unit
- M-319C 5/8" rod, holds one unit
- M-319D 3/8" rod, holds two units
- M-319E 1/2" rod, holds two units
- M-319F 5/8" rod, holds two units
- M-319G 3/8" rod, holds four units
- M-319H 1/2" rod, holds four units
- M-319I 5/8" rod, holds four units



Anti-Oxidant Chemicals: Electrical contact between dissimilar metal surfaces can be rapidly compromised in the presence of oxygen, water, salts, pollutants, and other oxidizing agents. Aluminum antenna tubing, copper grounding electrodes, and even the integrity of mated galvanized tower section joints can be improved with the application of M-600 Series conductive surface coatings. Non-miscible with water or other environmental agents, anti-oxidants provide a conductive medium under pressure to fill voids between mated metal surfaces where low resistance and long term reliability in harsh surroundings are required.

- M-601 Copper based anti-oxidant for copper to copper and copper/brass connections.
- M-602 For aluminum to aluminum and aluminum to copper connections.
- M-603 Nickel based anti-oxidant for steel, galvanized steel, and stainless steel connections.
- M-615 Silicone dielectric filler grease to fill voids in RF or high voltage connectors.

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