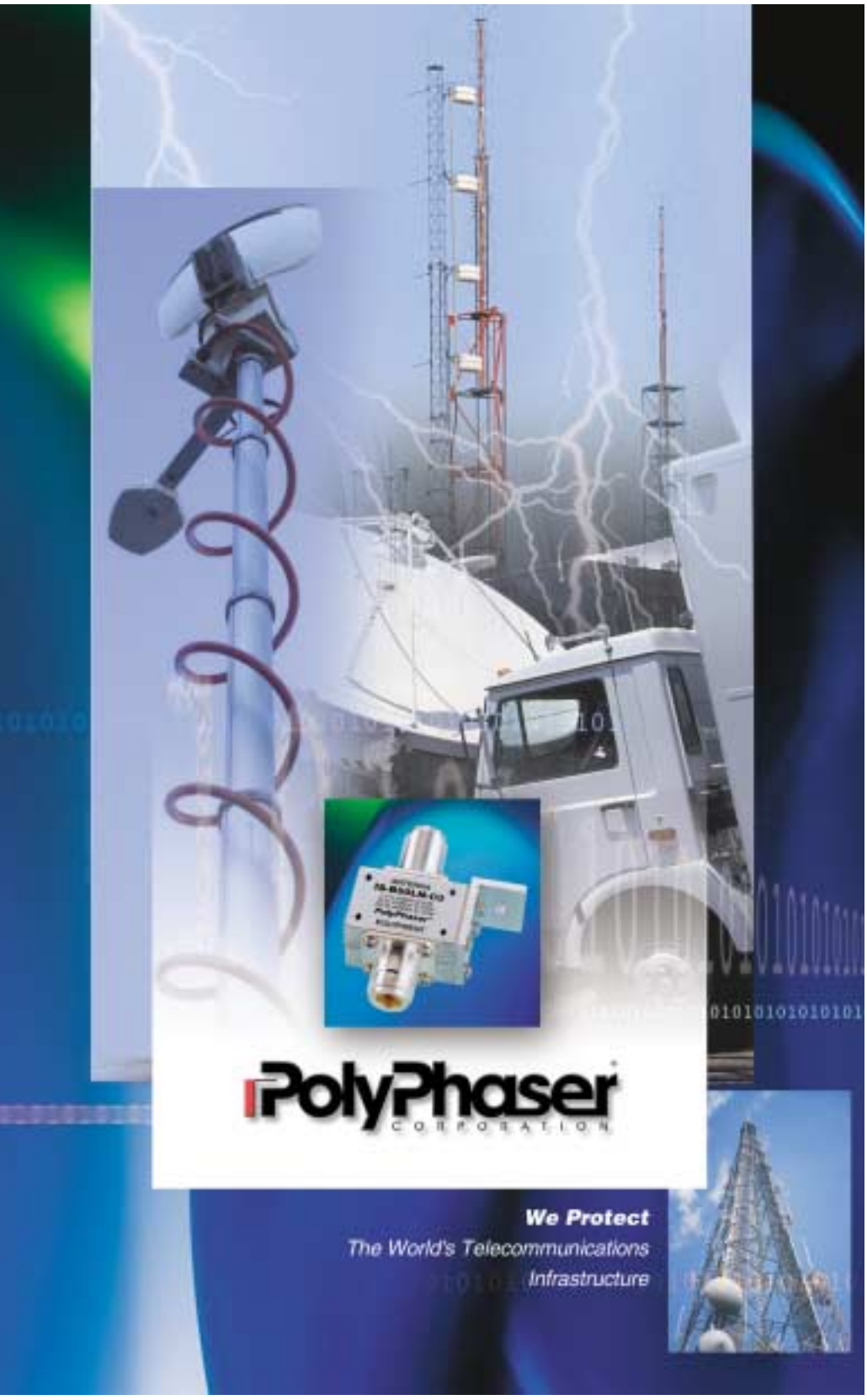


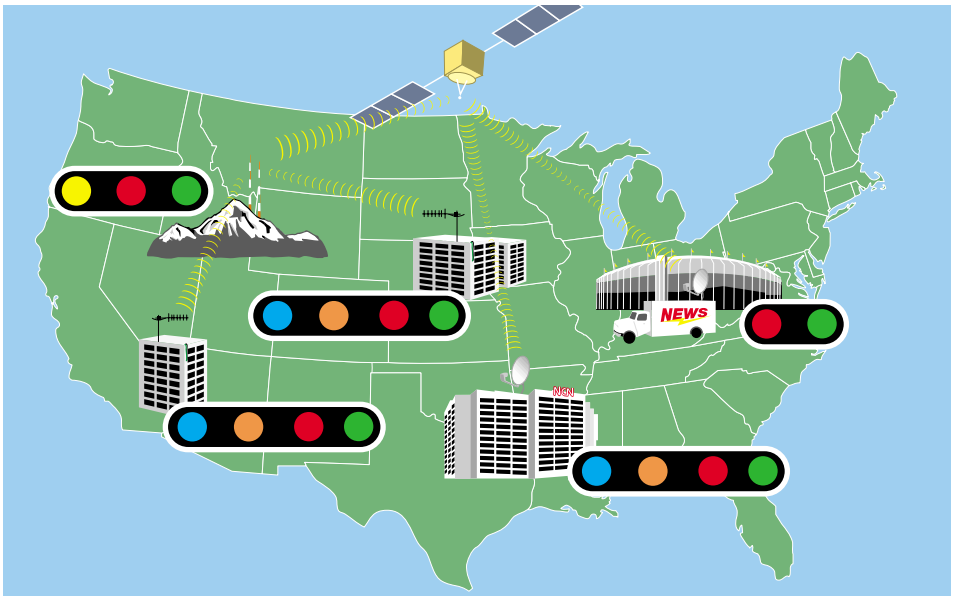
We Protect Broadcasting

Market Issues:

In television, AM, and FM broadcasting "dead air" can be equated to lost revenue. Lightning often strikes broadcast antenna, studio to remote transmitter links, and translators causing this dreaded "dead air" necessitating tower climbing and equipment replacement expenses. In spite if these dangers most broadcast sites are typically under protected.

Broadcast towers can have dozens of antennas and several hundred feet of coaxial cable that act as conduits for lightning energy. During a thunderstorm, a tower is the most likely object for a lightning strike. It is likely to hit the tower or in close proximity. Either way there is a current induced onto the coax that runs upwards to the antenna and downwards to the transmitter. These currents, depending on conditions, could be in excess of 100,000 Amps on any one cable. Grounding alone is not the answer, a quality lightning protection system is.

We Protect Broadcasting



Resolution:

Broadcast sites and rigid coax are usually well grounded, but semi-rigid coaxial lines still require separate lightning protection because of differential voltages between the center pin and shield. These coaxial lines funnel lightning energy directly into the communication equipment. The best way to protect a broadcast site is to use single point grounding system on the tower and the communications shelter. In short, the closest tower leg should be connected to the perimeter ground ring of the hut. A single point grounded (SPG) entry panel should be used and connected back to the ground ring. All lightning protection devices should be mounted to the panel via a grounding pigtail. This will allow all devises and equipment to maintain the same potential.

It is recommended that all coaxial shields be connected to ground and a center pin surge protector be utilized at the entry point of the hut and impedance matching networks. It is also advisable to protect equipment at the rack on co-located sites. Protection is also required for the AC from the power utility and the DC supply from the emergency generator if located adjacent to the facility.

Products:

The DC blocking B50 series protectors are built for HF, UHF and VHF single transmitter applications utilizing power levels up to 500 Watts VHF, 250 Watts UHF, and 3kW HF. These hybrid devices are typically installed at the base of the tower at the point of entry to the hut or building and at the OEM equipment. The DC blocked UHF50 and VHF50 are high powered protectors for broadcast lines that are doing transmitter combining up to 750 Watts and come in either "N" or 7/16" Din connectors. Both the B50 and HF series protectors are multi-strike capable and are a significant barrier to lightning damage.

For mobile broadcasting applications in the 6-10GHz range the WSXM is available. At 3Vdc let-through it has the lowest let-through voltage and possesses the best RF specification of any protector at this frequency.

With PolyPhaser you can put our proven protection, knowledge, and experience to work for you. Visit our website or contact us for details on how we can keep you communicating.

At PolyPhaser we protect people, data, and equipment.

HF Series	AC/DC Series	Data	B50 Series	SXL
dc blocked filters for 100-980 MHz	12Vdc to 240Vac power protectors	RJ45 or hard wired data protectors	dc blocked protectors for HF, UHF and VHF radios	dc blocked cavity filters for 700-2700 MHz