



**COMPANY  
PROFILE**

*To Inform,  
Entertain,  
Educate and  
Connect the  
World  
Population  
Through Wireless  
Technology*

----- **FOR MORE THAN FOUR DECADES** THE PRINCIPALS OF LOMA SCIENTIFIC INTERNATIONAL HAVE SERVED THE NEEDS OF THE TELECOMMUNICATIONS INDUSTRY IN OVER 40 COUNTRIES. THE COMPANY'S FOUNDER, J. PATRICK LOUGHBORO, WAS INSTRUMENTAL IN THE CREATION OF FCC RULES ALLOWING FOR THE ALLOCATION OF SPECTRUM FOR INSTRUCTIONAL TELEVISION FIXED SERVICE (ITFS), CHANGING THE WAY THE WORLD LOOKS AT EDUCATION.

WHEN THE FCC DECIDED TO ALLOCATE PART OF THE SPECTRUM FOR COMMERCIAL USE (MDS), WE WERE THERE TO LEAD THE WAY IN THE DESIGN AND MANUFACTURE OF QUALITY EQUIPMENT TO MEET THE NEEDS OF THIS NEW INDUSTRY. WITH THE ADVENT OF MULTICHANNEL MDS, LOMA SCIENTIFIC HAS EXCELLED IN THE CONTINUED DEVELOPMENT AND MANUFACTURE OF THIS PROVEN TECHNOLOGY.

LOMA SCIENTIFIC INTERNATIONAL IS A LEADING MANUFACTURER OF STATE OF THE ART TRANSMISSION EQUIPMENT FOR THE BROADCAST INDUSTRY. AS A RESULT, WE ARE THE ONLY MANUFACTURER TO INCORPORATE A TRUE "**ULTRA-LINEAR**" DESIGN PHILOSOPHY INTO ALL OF OUR TRANSMITTERS.

WITH LOMA SCIENTIFIC, YOU ARE ASSURED OF A PRODUCT OF EXCEPTIONAL QUALITY, BACKED BY A FULL TWO-YEAR WARRANTY. WITH BUILT IN SELF-TEST DIAGNOSTICS CONFIRMING PROPER OPERATION, THERE IS NO NEED FOR EXPENSIVE TEST EQUIPMENT. OUR MODULAR DESIGN IS COMPACT YET OFFERS EASY ACCESS AND SERVICEABILITY.

STANDARDIZED AND INTERCHANGEABLE PARTS MAKE FIELD REPLACEMENT A 'SNAP'. TEDIOUS AND COMPLICATED EQUIPMENT TUNING IS NOT NEEDED. ALL OF OUR TRANSMITTERS ARE BUILT FOR MANY YEARS OF CONTINUOUS OPERATION TO GIVE YOU, THE OPERATOR, THE GREATEST RETURN OF ALL: PEACE OF MIND.

**PRODUCTS**

- COMPLETE BROADCAST SYSTEMS
- DIGITAL & ANALOG MMDS TRANSMITTERS
- LMDS TRANSMITTERS
- MOTION PICTURE TRANSMITTERS
- POWER AMPLIFIERS
- CHANNEL COMBINERS
- DIPLEXERS
- ANTENNAS
- ANTENNA TOWERS
- TRANSMISSION LINE
- RECEIVE SITE EQUIPMENT
- TRANSCIVERS
- REPEATERS
- BEAM BENDER AMPLIFIERS
- UNINTERRUPTIBLE POWER SUPPLIES
- WAVEGUIDE
- SCRAMBLING SYSTEMS
- LOW NOISE BLOCK DOWN CONVERTERS
- TEST EQUIPMENT
- SATELLITE RECEIVERS (TVRO)
- INSTALLATION, TEST AND ALIGNMENT SERVICES
- STUDIO TO TRANSMITTER LINKS (STL)

**TRANSMISSION  
EQUIPMENT**

*Bringing*

*Televi-*

*sion*

*to*

*Life*

*Around*

*The*

*Globe*

**TECHNICAL  
SUPPORT**

----- **AT LOMA SCIENTIFIC INTERNATIONAL**, WE RECOGNIZE THE NECESSITY OF PROVIDING THE VIEWER WITH A CLEAR AND SHARP PICTURE. OUR ENGINEERS HAVE DEVELOPED THE MOST EFFECTIVE DESIGNS TO ENSURE SIGNAL QUALITY.

WE HAVE CHOSEN TO CASCADE SUFFICIENT AMPLIFIER STAGES TO PROVIDE THE DESIRED HIGH POWER OUTPUT WHILE OPERATING WELL BELOW EACH AMPLIFIER'S PEAK-RATED LEVEL. THIS INCREASE IN HEADROOM ELIMINATES WAVEFORM DISTORTION AND OTHER FORMS OF SPURIOUS INTERFERENCE, ASSURING A CLEAR AND TROUBLE FREE SIGNAL.

BY OPERATING WELL BELOW THE PEAK SATURATION POINT, OUR "**ULTRA LINEAR**" DESIGN ELIMINATES THE NEED FOR COMPLEX PRE-CORRECTION DEVICES, THUS ALLOWING THE USE OF SIMPLE, LOW COST MODULATORS AND UP CONVERTERS.

OUTSTANDING PICTURE AND SOUND DEFINITION IS OBTAINED BY SEPARATELY AMPLIFYING THE VISUAL AND AURAL COMPONENTS OF THE SIGNAL. THIS "SPLIT CARRIER" FEATURE SUPPRESSES 3RD ORDER INTERMODULATION, HARMONIC INTERFERENCE, AND UNWANTED IN-BAND AND OUT-OF-BAND SIGNAL DISTORTIONS. THIS APPROACH TO TRANSMITTER DESIGN SIMPLIFIES THE EQUIPMENT, ENSURES THE MOST RELIABLE OPERATION, AND PROVIDES THE HIGHEST QUALITY SIGNAL TRANSMISSION POSSIBLE.

OUR COMPACT, MODULAR DESIGN MINIMIZES SPACE REQUIREMENTS. OUR RUGGED, RACK READY SYSTEMS ARE EASY TO INSTALL AND OPERATE. COMPACT YET MODULAR DESIGN ALLOWS EASY ACCESS AND UPGRADEABILITY. ONE SPARE SET OF MODULES CAN BACK UP 31 TRANSMITTERS!

AUTOMATIC SWITCHING TO STANDBY PROTECTS OUR EQUIPMENT FROM DAMAGE RELATED TO ANTENNA FAILURE OR ABSENCE OF INPUT VIDEO SIGNAL. THIS GATE INTERLOCK SYSTEM READYLINE PROVIDES UNPARALLELED SECURITY TO THE INTERNAL SOLID STATE COMPONENTS. EMI SHIELDING AND BIAS DECOUPLING ARE FOUND THROUGHOUT THE EQUIPMENT TO ELIMINATE ANY POSSIBILITY OF RF INTERFERENCE.

HIGH VOLUME FORCED AIR AND CONVECTION COOLING ENABLE OPERATION AT HIGH ALTITUDE AND ELEVATED AMBIENT TEMPERATURES. RUGGED, CORROSION RESISTANT PLATING WITHSTANDS HUMID ENVIRONMENTS. FULL PROTECTION AGAINST DAMAGE CAUSED BY EXCESSIVE VSWR IS ALSO BUILT IN TO ALL OF OUR EQUIPMENT.

OUR TRANSMITTERS ARE ABLE TO MEET YOUR POWER REQUIREMENTS FROM ONE MILLIWATT TO EIGHT HUNDRED WATTS. OUR ENTIRE LINE OF TRANSMITTERS IS COMPATIBLE WITH EVERY BASEBAND AND IF SCRAMBLING SYSTEM ON THE MARKET.

ALL OF OUR EQUIPMENT CAN BE CONFIGURED TO NTSC, PAL, OR SECAM. PAY-PER-VIEW, CHANNEL MAPPING, OR REMOTE CONTROL OPERATIONS CAN BE INCORPORATED AS WELL. THE MMDS FREQUENCY OF EACH TRANSMITTER CAN BE CHANGED WITH THE FLIP OF A COUPLE OF SWITCHES AND MINIMAL FINE TUNING. YES, IT REALLY IS THAT EASY!

STEREO SOUND, STANDBY TEST PATTERN VIDEO, REMOTE CONTROL OF MULTIPLE TRANSMITTERS, SO THAT STATUS BY TELEMETRY CAN BE IMMEDIATELY OBTAINED, AS WELL AS SWITCHING OF PROGRAMMING SOURCES AT THE TOUCH OF A BUTTON, ARE ALL AVAILABLE OPTIONS.

----- **WE TAKE GREAT PRIDE** IN PROVIDING YOU WITH THE MOST COMPREHENSIVE TECHNICAL MANUALS AVAILABLE IN THE INDUSTRY. EASY TO FOLLOW BLOCK AND LEVEL DIAGRAMS AND SCHEMATICS, TOGETHER WITH PRECISE AND EASY TO UNDERSTAND TEXT ARE INCLUDED WITH EVERY PURCHASE.

WHETHER YOUR BUSINESS PLAN INCLUDED MDS, ANALOG MMDS, DIGITAL MMDS, LMDS, ITFS, OFS, UHF, OR VHF, WE HAVE A QUALITY PRODUCT AT A PRICE THAT MAKES SENSE. LOMA SCIENTIFIC ALSO OFFERS FULL INSTALLATION, FIELD SUPPORT, AND TRAINING ANYWHERE IN THE WORLD.