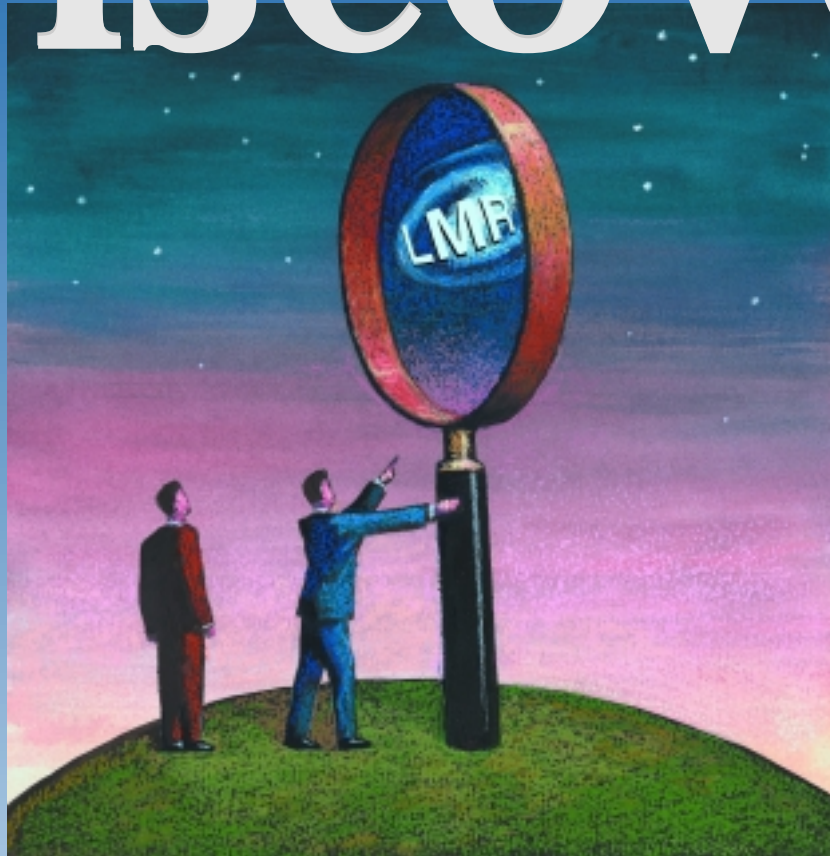


# Discover



# Discover



 **TIMES** MICROWAVE SYSTEMS

# Discover...

**a coax cable with excellent RF performance,  
that's flexible and non-kinking with easy to  
install connectors.**

# Discover...

**Times Microwave Systems' LMR<sup>®</sup> Flexible  
Communications Coax.**

Until Times Microwave Systems' LMR<sup>®</sup> Flexible Communications Coax came along, you had to deal with hard-to-install connectors and be extra careful not to kink your corrugated feeder cables, cable assemblies and jumpers.

Now, with the unsurpassed flexibility of Times LMR<sup>®</sup> Coax, you're assured ease of installation, while maintaining excellent low loss RF performance.



## What is LMR® cable?

Times LMR® cables are high performance, flexible, low loss, 50 ohm coaxial communication cables designed for use in wireless systems such as: cellular, PCS, paging, 2-way radio, LMDS, WLL, CLEC, ISM, wireless data, telemetry and virtually any other wireless application. LMR® cables are actually a complete "system" of cables, connectors, installation tools and accessories — everything you need to make your job simple and successful!



## Where can LMR® cables be used?

Times LMR® cables can be used virtually anywhere high performance coaxial cables are used:

- Internal equipment wiring
- Inter/Intra cabinet jumpers
- Base station & antenna jumpers
- Mobile antennas
- Tower feeder runs
- In-building runs
- Building top installations

## What sizes of LMR® cable are available?

A full range of LMR® cables are available from LMR®-100 (0.100") all the way up to LMR®-1700 (1¼"). Because LMR® cables are so flexible, it's possible to eliminate jumpers entirely in many feeder cable applications. The elimination of jumper cables provides reduced cost, better reliability and lower loss — or may even allow the use of a smaller size feeder cable, while achieving the same loss as for a larger corrugated feeder.

## Why LMR®?

Times LMR® cables have RF performance comparable to corrugated copper cables, but are highly flexible, non-kinking and offer unsurpassed ease and speed of connector installation. Compared to RG type braided cables, LMR® cables offer far lower loss and better RF shielding. These features make LMR® cables the best choice for any wireless application.

## What makes LMR® cable different than corrugated cable?

Design features of Times LMR® cable include:

1. Polyethylene Foam Dielectric
  - Closed cell, high velocity, low loss
2. High Performance Flexible Shield
  - Aluminum tape bonded to dielectric
    - Provides > 90dB shielding (180dB cross talk)
    - Acts as 2nd moisture barrier
  - Outer braid (tinned copper)
    - Provides means for grounding and connector retention
3. Polyethylene Outer Jacket
  - Heavy duty, UV & weather resistant, 20 year life

## How does LMR® cable compare to RG type braided cable or 9913?

LMR® cables have lower loss and far better shielding than comparably sized braided cables. The weather resistance of LMR® cable is far superior to braided cables and 9913 due to their polyethylene jackets, closed cell polyethylene foam dielectric and bonded tape outer conductors.

## Is there one type of LMR® cable or are there options?

Besides standard LMR® cable, Times offers several options, including:

**LMR®-FR** — fire retardant cables for installation in vertical building risers, both UL and CSA listed: CMR/MPR (PCC-FT4).

**LMR®-LLPL** — low loss plenum cables for use in virtually any in-building application, including air handling plenums and spaces where maximum fire retardancy and minimum smoke generation are required. Cables are both UL and CSA listed: CMP/MPP (PCC-FT6).

**LMR®-DB** — watertight cables with an inert flooding compound to completely eliminate water migration - 10 year warranty.

**LMR® Ultraflex** — stranded center conductor cables with more flexible outer jacket.





## Do I need special connectors for LMR® cables?

Standard connectors are suitable for LMR® -100 and LMR® -195 cables. For LMR®-200 and larger, Times offers a comprehensive assortment of connector interface types, including: N, TNC, BNC, 7-16 DIN, SMA, UHF, mini-UHF and reverse polarity. Many other special connectors are also available. In addition, Times has a complete line of cable prep and installation tools.

## Do all LMR® connectors require soldering?

Beside solder pin type connectors, Times also provides high performance 'EZ' non-solder connectors. With center pin contacts made from silver or gold plated beryllium-copper these are the ideal choice for quick and foolproof connector installations.

## Can I get tower installation accessories that are compatible with LMR® cables?

Times furnishes a complete line of site installation hardware — everything you need from the antenna to the base station:

- Ground kits
- Hangers (snap-in, butterfly, blocks)
- Hoisting grips
- Weatherproofing kits (universal, cold shrink)
- Tie wraps
- Mounting hardware
- Entry ports and accessories



## What about price?

In most cases Times LMR® cables and connectors are less expensive than corrugated cable. By combining the lower purchase price with the ease and speed of connector installation, tremendous savings can be achieved. LMR® cables also offer significant performance advantages compared to RG type cables at comparable prices.

## Why hasn't anybody done this before?

Times Microwave Systems has been providing high performance coaxial cables, connectors and assemblies for aerospace and military applications for more than 50 years. In 1992, Times was a newcomer to the commercial wireless market. Utilizing our depth of expertise in coaxial cable design, Times developed and introduced its innovative line of LMR® cables as a flexible alternative to corrugated copper and other older cable designs. The market acceptance of this exceptional product has been overwhelming!

## What about jumpers and cable assemblies?

Times also manufactures high quality custom LMR® cable assemblies and Flextech™ jumpers — 100% factory tested before shipment for insertion loss and VSWR.

## Where are LMR® cables made?

Times LMR® cables are manufactured in our Wallingford, Connecticut plant, which is ISO 9001 certified. We have been making high quality cables and cable assemblies at this location for over 50 years.



## How about availability?

Times LMR® cables are stocked by our network of national, international and regional distributors, who also carry the Times connectors, installation tools and tower accessories.

## How can I get started using LMR® cables?

Easy. Just call our friendly Sales Department at 1-800-TMS-COAX (1-800-867-2629) or visit our website at [www.timesmicrowave.com](http://www.timesmicrowave.com).



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