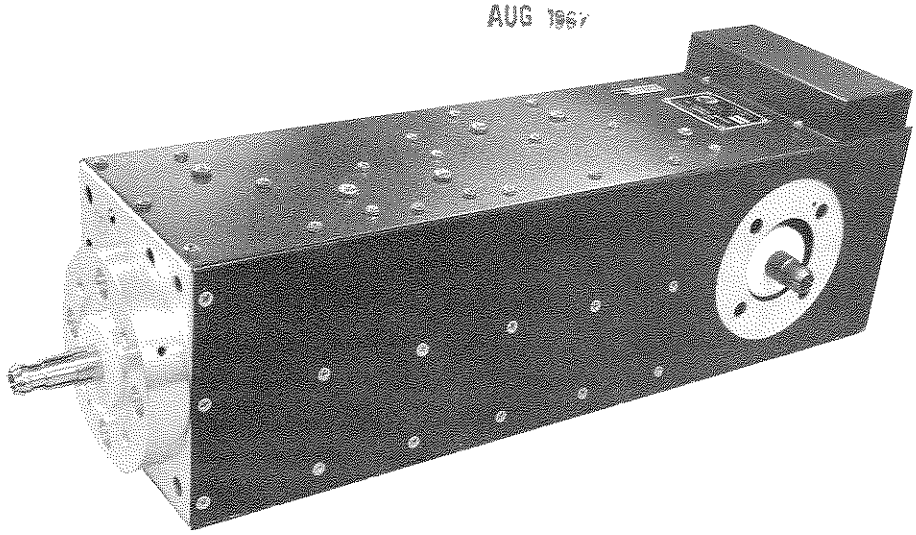
# TMC BULLETIN NUMBER 8017A

Low Pass RF Filters
TMC Models LPFA-1K
LPFA-10K
LPFA-40K





- Low Insertion Loss
- Minimizes Harmonic Interference
- Compact Design
- CCIR & FCC Specified Installations
- 2-30 mcs (MHz) Applications
- Standard RF Fittings
- Ease of Installation

The Low Pass RF Filters Series LPFA are designed to drastically reduce radiation above 32 mcs (MHz) from MF/HF high power transmitters. Such a drastic reduction is essential in order to minimize harmonic interference to radio receivers used in mobile and fixed station communications including fire, police, security, television and other services.

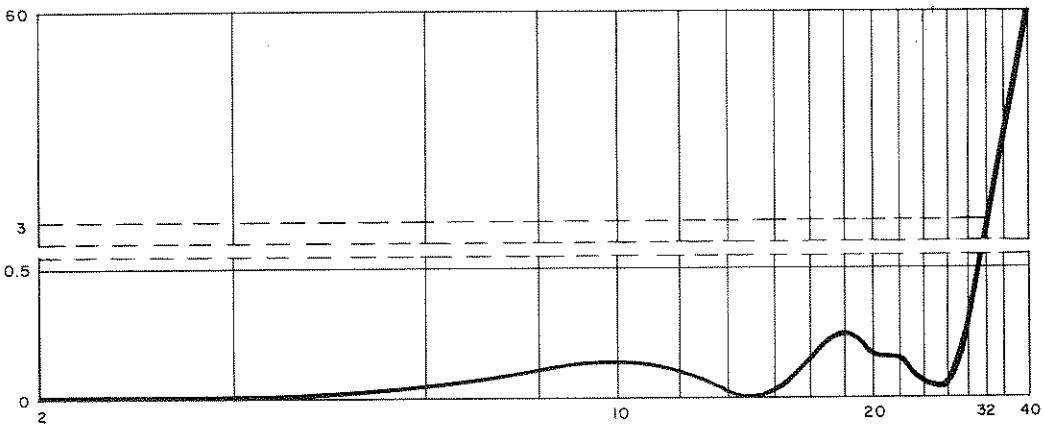
The use of low pass RF filters is often mandatory and always most desirable with fixed station transmitters, mobile transmitters, and with shipboard and other mobile high density electronic equipment environments in general. Often such filters will be required to meet applicable CCIR or FCC installation criteria. These requirements stem from the fact that the increased use of electronic communication, detection and data systems demands that every possible measure be employed to reduce unwanted radiation to an absolute minimum. The frequency spectrum above 32 mcs (MHz) is employed for important low-power services which are particularly susceptible to unwanted harmonics which may be radiated by high power MF/HF transmitters operating below 30 mcs (MHz). Although the design of current TMC transmitters in particular takes the foregoing factors into account, it is possible to reduce unwanted emissions even further by using the Series LPFA low pass filters.

The filters are provided with standard RF fittings for quick installation, and are so fabricated as to assure that they will continue to handle their rated power under VSWR conditions of up to 2.5:1.

Filters available are designed for 1, 10 and 40 kw peak power applications and the models in this series are designated accordingly LPFA-1K, 10K and 40K.

## TECHNICAL SPECIFICATIONS, TMC MODEL LPFA

| | |
|---|---|
| INSERTION LOSS: | Nominally less than 0.25 db (See chart below). |
| PASS BAND: | 2 - 30 mcs (MHz). |
| FREQUENCY CUTOFF: | 32 mcs (MHz) nominal. |
| REJECTION: | Rejection of unwanted RF energy commences at 32 mcs (MHz) and will be reduced at least 60 db below that provided by the tuning circuits of the transmitter at 40 mcs (±1 mc) and beyond. |
| INPUT AND OUTPUT IMPEDANCE: | 50 ohm nominal. Unit will operate at rated power under VSWR conditions up to 2.5:1. |
| INSTALLATION INFORMATION: | |
| 1. LPFA-1K | Size: 2½" x 2½" x 15" mounted on 3½" x 19" panel, Weight: 8 lbs. |
| 2. LPFA-10K | Size: 18" x 5" x 5", Weight: 19 lbs. |
| 3. LPFA-40K | Size: 23" x 7" x 10", Weight: 27 lbs. |
| ORDERING INFORMATION: | |
| 1. LPFA-1K | 1 kw unit provided with standard N type RF fittings. |
| 2. LPFA-10K | 10 kw unit with 1⅝" EIA flange. |
| 3. LPFA-40K | 40 kw units have 3⅛" EIA flange. |
| COMPONENTS AND CONSTRUCTION: | All equipment manufactured in accordance with JAN/MIL specifications wherever practicable. |




TYPICAL FREQUENCY RESPONSE

R



THE TECHNICAL MATERIEL CORPORATION
CABLE "TEPEI" TWX 710-566 1100 MAMARONECK, N.Y. 10543

*THE* WORLD-WIDE SYSTEM OF REMOTE CONTROLLED COMMUNICATIONS

*Subsidiaries*
OTTAWA, CANADA • SPRINGFIELD, VA. • TEMPE, ARIZONA
POMPANO BEACH, FLORIDA • LUZERN, SWITZERLAND