



FM BROADCAST TRANSMITTER FMQ-30KWC/FMQ-20KWC

QEI FMQ Series FM Transmitters, precision crafted to be the very best. The new **FMQ-20KWC** and **FMQ-30KWC** share unique design elements that offer unequalled performance at any price. Conservatively designed for years of trouble free service the FMQ-Series provide a superb broadcast signal. **The FMQ-20KWC** and **FMQ-30KWC** utilize a broadband design that is totally transparent. The new FET Intermediate Power Amplifier (IPA) design draws on decades of QEI experience in solid-state FM transmitters. The IPA utilizes 'off the shelf' switching regulators. All IPA metering is located in the power supply assembly. The IPA is joined to a single grounded grid triode for outstanding performance and stability. These elements have evolved into a transmitter unmatched for its quality and reliability.

QEI designed the **FMQ-Series** to deliver what broadcasters need, **RELIABILITY**. Every step of the way QEI selected only the highest quality components. You can feel it in the smooth and precise control of the tuning and see it in the massive plate transformer. The **FMQ-Series** are the best broadcast transmitters available.

The new FET solid-state modular IPA delivers plenty of drive to the Power Amplifier (PA) tube, allowing generous headroom to ensure the output power remains precisely at its pre-set level.

The **FMQ-20KWC** and **FMQ-30KWC** power amplifiers use a single triode in grounded grid service. The grounded grid triode design utilizing a single 3CX15,000A7 offers inherently greater stability, better performance and is less critical in operation than its tetrode counterparts since it requires no neutralization or additional energy consuming power supplies. QEI perfected this design by eliminating the need for conventional plate blockers and sliding contacts. Tube life in the **FMQ-20KWC** and **FMQ-30KWC** is outstanding. QEI includes a spare parts kit free with every FMQ-series transmitter.

QEI pioneered single-phase high power designs and continues to dominate the industry by offering the option of single and three-phase power on all FMQ-series transmitters.

The logically grouped metering and controls are clearly identified for the operator's convenience. A single panel shows total transmitter output status at a glance. The remote control interface is easily connected to virtually all remote controls in use.

In addition to the **FMQ-Series** ability to tout the best performance specifications, we are equally proud that they require the lowest maintenance.



QEI FMQ-30KWC/FMQ-20KWC FM Transmitters

Technical Specifications

GENERAL

Power Output:

FMQ-20KWC: 1100 to 22000 Watts
FMQ-30KWC: 7500 to 30000 Watts

Frequency Range: 87.5 to 108 MHz (other frequencies optional)

RF Load Impedance:50 ohms

RF Interstage Impedance:50 ohms

Output Connector:3-1/8-inch EIA male

VSWR: 1.8:1 maximum at full power (automatic arc suppression and power control for operation at reduced power into any phase or magnitude).

RF Harmonic/Spurious:..... Suppression meets or exceeds all FCC/DOC/CCIR specifications

Tube Complement:single 3CX15000A7

Exciter:

Model 675B standard
Model 695, 695-50, QUANTUM 20M, or QUANTUM 50M optional

Asynchronous AM S/N Ratio (AM Noise):-55 dBc (no FM modulation present)

Synchronous AM S/N Ratio (Incidental AM):-50 dBc with 100 % FM Modulation

ELECTRICAL/MECHANICAL

AC Power:

Standard:208/240 VAC, 50/60Hz, three phase
Optional:.....208/240 VAC, 50/60Hz, single phase (Tap range 198 to 250 VAC, other line voltages and frequencies are available)

Ambient Temperature Range:

Operating: -15° C to +50° C
Startup: 0° C to +50° C

Maximum Humidity:.....95% non-condensing

Maximum Altitude:..... 10,000 feet AMSL

Make Up Air Requirements (if exhaust stack vented outside):..... 1000 cfm

Cabinet Size: .. 48" (122 cm) W x 34" (86 cm) D x 76" (193 cm) H

Cabinet Weight:

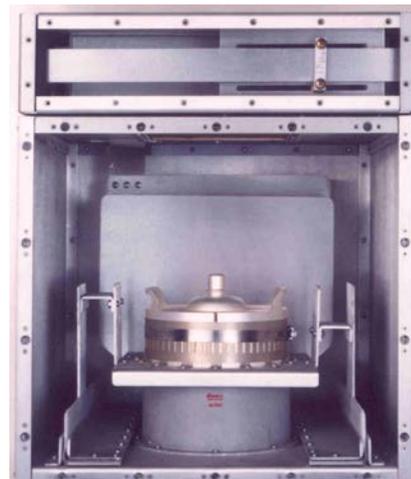
FMQ-20KWC:2150 lbs. (975 kg)
FMQ-30KWC:2200 lbs. (999 kg)

MODULATION PERFORMANCE

QEI's FMQ Series grounded grid design provides the widest bandwidth available in a vacuum tube final RF amplifier; modulation specifications are exciter and stereo generator dependent. QEI recommends the use of a QEI exciter and stereo generator, which are optimized for system performance. See the appropriate exciter and stereo generator specification sheets for detailed wideband composite, monaural, and stereo performance specifications.

Since measurement techniques vary, care should be observed in comparing specifications of different manufacturers.

QEI maintains an ongoing program of research and development to insure the finest product performance and quality.



FMQ-30KWC/FMQ-20KWC

Final Power Amplifier



Transmitter Meter Panel

All specifications are subject to change without notice.

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