

**THE MICRO PHASE COMMUNICATION**  
**MP-4020 FM AUDIO**  
**SUB-CARRIER MODULATOR**  
**SPECIFICATIONS**

**OUTPUT CHARACTERISTICS**

|                              |  |
|------------------------------|--|
| OUTPUT FREQUENCY             | 100kHz to 8.5MHz   |
| AGILITY                      | 1kHz step size   |
| SPECTRAL PURITY              | 1) non-harmonic - better than -55dBc<br>2) harmonic - better than -40dBc |
| MAXIMUM OUTPUT CARRIER LEVEL | 100mV bridged across 75 ohm system                                       |
| OUTPUT IMPEDANCE             | 2K Ohm   |
| OUTPUT LEVEL ADJUST RANGE    | 10dB (Front Panel Adjust)  |
| CARRIER ON/OFF RATIO         | 50dBc  |
| FREQUENCY STABILITY          | 10ppm per year<br>5ppm during 1st month<br>7ppm from 5°C to 55°C         |
| FREQUENCY ADJUST             | Internal Trimmer Capacitor   |
| LEVEL STABILITY              | ±.25dB (10°C to 40°C)  |
| OUTPUT CONNECTOR             | Rear Panel BNC (female) Connector  |
| OUTPUT CARRIER MONITOR       | Front Panel BNC (female) Connector                                       |

**MODULATION CHARACTERISTICS**

|                                     |  |
|-------------------------------------|--|
| COMPANDERED                         | DBX 3:1, standard 2:1 or other   |
| MODULATION FREQUENCY                | 50Hz to 3.4kHz (optional)<br>50Hz to 7.5kHz (standard)<br>50Hz to 15kHz (standard)<br>50Hz to 20kHz (optional) |
| FREQUENCY RESPONSE<br>DEVIATION     | ±0.1dB, 50Hz to 20kHz [see note (1)]<br>±75kHz (peak) nominal<br>±100kHz (peak) maximum                        |
| THD                                 | 0.2%, 50Hz to 20kHz [see note (1)]   |
| SIGNAL TO NOISE<br>DEVIATION ADJUST | >70dB (ref to 75kHz pk 50Hz to 15kHz)<br>±5dB range (front panel adjust)                                       |
| AUDIO INPUT LEVEL                   | +18dBm, max  |
| AUDIO INPUT IMPEDENCE               | 600 ohm, Balanced  |
| INPUT CONNECTOR                     | Removable Terminal Block   |
| Note (1)                            | excludes compander distortion  |

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**FRONT PANEL CONTROLS**

|            |  |
|------------|--|
| KEY PAD    | * NUMERIC KEY  |
|            | * FUNCTION KEYS for<br>FREQUENCY SELECT<br>CHANNEL SELECT<br>CARRIER ON/OFF<br>LOCAL SELECT<br>ENTER<br>LOAD (frequency) |
| INDICATORS | * FOUR DIGIT LED DISPLAY   |
|            | * LIGHTED FUNCTION KEYS for<br>CXR ON/OFF<br>LOCAL/REMOTE  |
|            | * POWER ON LIGHT   |

**INTERFACES**

|                   |   |
|-------------------|---|
| REMOTE CAPABILITY | * all Front Panel Functions             |
| CONTROL BUS       | * RS232 Port for external control       |
| LOCAL BUS         | * RS422 Port for linking units together |

**GENERAL SPECIFICATIONS**

|              |   |
|--------------|---|
| POWER        | 100V,120V,220V, 240V $\pm$ 10%<br>AC 50/60Hz 50 Watts |
|              | SIZE 1.75"H x 17"W                                    |
| MOUNTING 19" | RACK MOUNT  |