VHF Base and Repeater $\underset{132.174 \mathrm{MHz}}{\substack{\text { Stations }}}$

UHF: $6881061 E 55 \$ 36.34$ 38.25


MUST BE USED WITH
Associated Control and Audio Instruction Manual 68P81061E40 (\$54.51)

MOTOROLA INC.
Communications Sector

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DYNAMIC MICROPHONE68 P 81062 E 39
[^0]
## INTERMITTENT DUTY STATION PERFORMANCE SPECIFICATIONS

GENERAL

| Model | Frequency (MHz) | Minimum RF Output Power | Maximum PA Final Input Power | Input Voltage | A.C. Input Current |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Standard Supply |  | Battery Charging*** Supply |  |
|  |  |  |  |  | Stby | Xmit | Stby | X mit |
| $\begin{gathered} \text { C73GRB } \\ \text { C73GSB* } \end{gathered}$ | 146-174 | $110 \mathrm{~W}^{* *}$ | 290 W | 120 V ac $+10 \%$ $-20 \%$; 60 Hz Standard | 1 A | 5.5A | $1.5-2 \mathrm{~A}$ | 5.5A |
| No. of Frequencies |  |  | Single and two-frequency stations (dc and tone remote) Four-frequency stations (tone remote) |  |  |  |  |  |
| Squelch Options |  |  | Carrier squelch, Private-Line coded squelch, and Digital Private-Line coded squelch |  |  |  |  |  |
| Metering |  |  | Optional internal-mounted meter used to measure all essential circuits for tuning and checking. |  |  |  |  |  |

*Fully Optionable Models **Variable Down to $60 \mathrm{~W} \quad$ *** Does Not Include Battery Charging Current
TRANSMITTER 146-174 MHz

| RF Output Power | $110 / 60$ watts intermittent duty (cont. variable) |
| :--- | :--- |
| Output Impedance | 50 ohms |
| Oscillator Frequency Stability | Channel element maintains oscillator frequency within $\pm .0005 \%\left( \pm .0002 \%\right.$ optional) from $-30^{\circ} \mathrm{C}$ <br> to $+60^{\circ} \mathrm{C}$ ambient $\left(+25^{\circ} \mathrm{C}\right.$ reference) |
| Transmitter Sideband Noise | $-90 \mathrm{~dB} @ 30 \mathrm{kHz}$ <br> $-105 \mathrm{~dB} @ \mathrm{MHz}$ |
| Spurious \& Harmonics | More than 85 dB below carrier |
| Modulation | 15 F 2 and $16 \mathrm{~F} 3: \pm 5 \mathrm{kHz}$ for $100 \%$ at 1000 Hz. |
| Audio Sensitivity | Remote telephone line: -20 dBm max. for $60 \% \mathrm{max}$. dev. at 1000 Hz. |
| FM Noise | 55 dB below $60 \%$ system dev. at 1000 Hz |
| Audio Response | $+1,-3 \mathrm{~dB}$ from $6 \mathrm{~dB} /$ octave pre-emphasis, $300-3000 \mathrm{~Hz}$, referenced to 1000 Hz |
| Audio Distortion | Less than $2 \%$ at $1000 \mathrm{~Hz} ; 60 \%$ system dev. |
| FCC Designation | ABZ89FC3632 $( \pm .0005 \%$ stability) <br> ABZ89FC3132C $( \pm .0002 \%$ stability) <br> Licensable under parts $22,74,81$, and 90 of FCC Rules. |

RECEIVER 146-174 MHz



GRB "A" SUFFIX MODELS [BASIC]
GSB "A" SUFFIX MODELS [FULLY OPTIO GSB "A" SUFFIX MODELS [FULLY OPTIONABLE] $\underset{\text { FOR }}{\text { IODEL }}$
MSR 2000 INTERMITTENT DUTY BASE/REPEATER (RT) STATIONS 146.174 MHz 110 W RF POWER OUTPUT EARLIER VERSION

CODE
$0=$ ONE ITEM SUPPLIED
$2=$ INOCACEES SUANTITY SUPLLED




 E- $=$ digital privateline binary coded squelch T $=110$ W RF OUTPUT
DUPLEXER DESCRIPTION GUARD TONE DECODER MODULE F2 TONE DECODER MODULE (C2-R2 CONTROL) REPEATER CONTROL TONE DECODER MODULE PRIVATE-LINE CONTROLTONE DECODER MODULE F2 TONE DECODER MODULE (PAGING CONTROL) GUARD TONE DECODER MODULE (GT RELAY CONTROL) FULLY OPTIONABLE CONTROL CHASSIS (1-RCVR. BASE) FULLY OPTIONABLE CONTROL CHASSIS (2-RCVR. BASE) FULLY OPTIONABLE CONTROL CHASSIS (REPEATERRT)

STANDARD POWER SUPPLY | FULLERY CHARGER POWER SUPPLY |
| :--- |
| OPIONABLE CONTROL CHASSIS (4 4 -BASE) |

# 146-174 MHz 110 W RF POWER OUTPUT EARLIER VERSION 

CODE:

## - = ONE ITEM SUPPLIED

$2,4=$ INDICATES QUANTITY SUPPLIED


GRB "B" SUFFIX MODELS (BASIC GSB "B" MODELS (FULLY OPTIONABLE)
MODEL CHART
FOR
MSR $200 O$
INTERMITTENT DUTY

146 BASE REPEATER (RT) STATIONS 174 MHZ IIO WATT RF POWER OUTPUT LATER VERSION

CODE:
$\bullet=$
$z=$ ONE ITEM SUPPLIED
INTATES QUANTITY
USED IN PLACE OF ONE O.7MHZ I-F RECEIVER STATIONS
WITH CERTAIN FREQUENCY COMBINATIONS


## 


xii
68P81061E50

> MODEL BREAKDOWN CHART FOR
> MSR 2000
> INTERMITTENT DUTY BASE/REPEATER (RT) STATIONS
> $146-174 \mathrm{MHZ} 110$ WATT RF POWER OUTPUT
> LATER VERSION
> CODE :
> - = ONE ITEM SUPPLIED
> $\begin{aligned} \text { - } & =\text { ONE INDICATES QUANTITY SUPPLIED }\end{aligned}$


KRB "A" SUFFIX MODELS [BASIC]
KSB "A" SUFFIX MODE
KSB " $A$ " SUFFIX MODELS [FULLY OPTIONABLE] MODEL CHAR

MSR 2000 CONTINUOUS DUTY
BASE/REPEATER (RT) STATIONS
132.174 MHz 100 W RF POWER OUTPUT EARLIER VERSION

CODE:

- $=$ ONEITEM SUPPLIED
$2=$ INICATES
$2=$ INDICATES QUANTTTY SUPPLIED
$/=$ USED IN PLACE OF ONE 10.7
$=$ USED IN PLACE OF ONE 10.7 MH2 I.F RECEVER ON TWO RECEIVER








## CODE:

$\bullet$ - ONE ITEM SUPPLIED
2,4 = INDICATES QUANTITY SUPPLIED

MSR 2000 VHF INTERMITTENT DUTY STATIONS OPTION CHART

| Option | Add | Delete | Description |
| :---: | :---: | :---: | :---: |
| C11AB | TRN5295A | - | Time-Out Timer |
| C12AG | HLD4052A | - | Receiver Preamplifier |
| C13AA | TLN2445A | - | Remote Squelch Control |
| C14AF | TLN2447A | - | Receive PL Tone On/Off |
| C15AA | TLN2448A | - | "Wild Card" Option |
| C28AN | TPN1192A <br> TKN8295A <br> TRN5155A | TPN1191A <br> TRN5355A <br> - | Battery Revert |
| C28AU | $\begin{aligned} & \text { TKN8295A } \\ & \text { TPN1226A } \\ & \text { TRN5155A } \\ & \hline \end{aligned}$ | TPN1222A <br> TRN5355A <br> - | Battery Revert |
| C28AV | TPN1227A <br> TKN8295A <br> TRN5155A | $\begin{aligned} & \text { TPN1223A } \\ & \text { TRN5355A } \end{aligned}$ | Battery Revert |
| C31DU | - | TRD6172A | Omit Receiver ( $146-174 \mathrm{MHz}$ ) |
| C31EK | - | TRD6292A | Omit Receiver ( $146-174 \mathrm{MHz}$ ) |
| C50AC | - | - | Decreased RF Power Output for Maritime Operation ( $146-174 \mathrm{MHz}$ ) |
| C56AC | TRN5326A | TRN5325A | Tone Mute Second Receiver (F2-R2) |
| C63AK | TRN5239A | TRN5240A | DC Transmit PL On/Off |
| C63AL | TLN2449A | - | Tone Transmit PL On/Off |
| C71AB | - | TMN6054A | Omit Microphone |
| C75AB | - | TRN5295A | Omit Time-Out Timer |
| C83AC | $\begin{aligned} & \text { - } \\ & \text { - } \end{aligned}$ | TLN2443A <br> TRN5322A <br> TRN5236A <br> TKN8286A | Omit Wire Line Control (Carrier Squelch, Tone Stations) |
| C84AC | - - - | TLN2443A <br> TRN5320A <br> TRN5236A <br> TKN8286A | Omit Wire Line Control (PL/DPL, Tone Stations) |
| C85AB | - | TRN5254A TRN5236A TKN8286A | Omit Wire Line Control (Carrier Squelch, DC Stations) |
| C86AC | - | $\begin{aligned} & \hline \text { TRN5240A } \\ & \text { TRN5236A } \\ & \text { TKN8286A } \end{aligned}$ | Omit Wire Line Control (PL/DPL, DC Stations) |
| C92AA | TRN9086A TBN6386A TRN5426A | TRN9085A TBN6385A TRN5425A | 29" Cabinet |
| CII3AA | TMN6054A | - | Dynamic Microphone |
| C116BP | TRD6182A TRN5431A TRN5443A | $\begin{gathered} \text { TRN6172A } \\ \text { TRN5430A } \\ - \\ \hline \end{gathered}$ | Shield Kit (One Receiver) |
| C116BQ | TRN5474A TRN5443A TRD6182A | $\begin{gathered} \text { TRN5429A } \\ \text { TRD6172A } \\ - \end{gathered}$ | Shield Kit (Basic) |
| C116CB | $\begin{aligned} & \hline \text { TRD6302A } \\ & \text { TRN5431A } \\ & \text { TRN5443A } \\ & \hline \end{aligned}$ | $\begin{gathered} \text { TRN6292A } \\ \text { TRN5430A } \\ - \end{gathered}$ | Shield Kit (One Receiver) |
| C116CC | $\begin{aligned} & \text { TRN5474A } \\ & \text { TRN5443A } \\ & \text { TRD6302A } \end{aligned}$ | TRN5429A TRD6292A $\qquad$ | Shield Kit (Basic) |
| C140AD | - | - | "AND" Squelch |
| C143AD | TRN5257A | TRN5254A | Repeater Control (Carrier Squelch, DC Stations) |
| C143AE | TRN5257A | TRN5240A | Repeater Control (PL/DPL, DC Stations) |
| C143AF | TLN2446A | - | Repeater Control (Tone Stations) |

MSR 2000 VHF INTERMITTENT DUTY STATIONS OPTION CHART (Cont'd.)

| Option | Add | Delete | Description |
| :---: | :---: | :---: | :---: |
| C144AH | TRN5235A TKN8287A | TRN5236A TKN8286A | 4-Wire Line Audio (One Receiver) |
| C144AJ | $\begin{aligned} & \text { TRN5235A } \\ & \text { TKN8287A } \end{aligned}$ | TRN5237A TKN8286A | 4-Wire Line Audio (Two Receivers) |
| C149CV | TRN9689A TMN6054A TRN5080A | TRN9688A <br> — | Intercom, Metering and Microphone |
| C149DA | TRN9689A TMN6054A TRN5080A | TRN9688A TRN5353A <br> $\square$ | Intercom, Metering and Microphone |
| Cl50AH | TRN5324A <br> TKN8281A | TRN5254A <br> TRN5353A | RA Base (Carrier Squelch, DC Stations) |
| C150AJ | TRN5324A TKN8281A | TRN5240A TRN5353A | RA Base (PL/DPL, DC Stations) |
| C150AK | TRN5324A TKN8281A | $-$ | RA Base (Tone Station) |
| C158AB | TRN5292A <br> TRN5330A <br> (4)KLN6210A | $\begin{gathered} - \\ - \\ \text { KLN6209A } \end{gathered}$ | Multi PL Encoder (Rptr) |
| C158AE | TRN5292A <br> TRN5330A <br> (4)KLN6210A | $\begin{gathered} - \\ \text { KLN } 6209 \mathrm{~A} \end{gathered}$ | Multi PL Encoder (Base) |
| C181AG | TBN6386A TKN8475A TLD2622A TRN5352A TRN5426A TRN9086A | TBN6385A <br> TKN8289A <br> - $\qquad$ <br> TRN5425A TRN9085A | Add 2 Can Duplexer ( 148 -174 MHz) |
| C182AH | TRN9086A TBN6386A TRN5426A TKN8290A TLD2502A TRN5352A | TRN9085A TBN6385A TRN5425A TKN8289A $\qquad$ - | Add Duplexer (148-174 MHz) |
| C226AH | $\begin{aligned} & \text { TRN5069A } \\ & \text { TRN5079A } \end{aligned}$ | TRN5068A | Intercom Only |
| C226AL | TRN9689A TRN5079A | TRN9688A <br> $\longrightarrow$ | Intercom Only |
| C257AD | TPN1222A <br> TRN9109A <br> TRN9114A <br> TRN9209A | TPN1191A <br> TRN5442A <br> TRN5350A <br> - | Multi-Voltage, 50 Hz , Basic |
| C257AE | TPN1222A <br> TRN9109A <br> TRN9113A <br> TRN9209A | TPN1191A <br> TRN5442A <br> TRN5351A <br> $\longrightarrow$ | Multi-Voltage, 50 Hz , Fully Optionable |
| C261AC | (4)TLN8381A TRN5329A | - | Multi PL Decoder |
| C261AH | (4)TLN8381A TRN6329A | KLN6209A | Multi PL Decoder Rptr |
| C262AE | TRN5292A TRN5329A <br> (4)KLN6210A <br> (4)TLN8381A | (2)KLN6209A | Multi PL Repeater |
| C263AB | TRN5329A <br> TRN5292A <br> TRN5330A <br> (4)KLN6210A <br> (4)TLN8381A | KLN6209A | Multi PL Encoder/Decoder |

MSR 2000 VHF INTERMITTENT DUTY STATIONS OPTION CHART (Cont'd.)

| Option | Add | Delete | Description |
| :---: | :---: | :---: | :---: |
| C266AA | - | KLN6210A | Omit One Vibrasender Reed |
| C267AA | - | TLN8381A | Omit One Vibrasponder Reed |
| C269AP | $\begin{aligned} & \hline \text { TRN5293A } \\ & \text { TRN5294A } \\ & \text { TKN8287A } \\ & \hline \end{aligned}$ | TRN5236A TKN8286A $\qquad$ | Spectra-TAC Operation (Base) |
| C269AQ | TRN5293A TRN5294A TKN8287A TRN5331A | TLN5236A TKN8286A TRN5324A <br> - | Spectra-TAC Operation (Rptr) |
| C276AA | $\begin{aligned} & \text { TRN5075A } \\ & \text { KLN6209A } \end{aligned}$ | TRN5074A | Simplex PL TA-RB |
| C276AB | $\begin{aligned} & \text { TRN5078A } \\ & \text { TRN6005A } \end{aligned}$ | TRN5077A | Simplex DPL TA-RB |
| C323AA | - | TRN5427A | Omit Power Cord |
| C501AJ | - | KXN1088A | Omit One Transmit Element |
| C 502 AH | - | (2)KXN1088A | Omit Two Transmit Elements |
| C503AE | - | (3)KXN1088A | Omit Three Transmit Elements |
| C504AE | - | (4)KXN1088A | Omit Four Transmit Elements |
| C521AR | - | KXN1086B | Omit One Receive Element |
| C522AM | - | (2)KXN1086B | Omit Two Receive Elements |
| C523AH | - | (3)KXN1086B | Omit Three Receive Elements |
| C524AJ | - | (4)KXN1086B | Omit Four Receive Elements |
| C576AA | TLN2442A | - | Single-Tone Decoder |
| C601AC | KXN1095A | KXN1088A | One 2PPM Transmit Element |
| C602AB | (2)KXN1095A | (2)KXN1088A | Two 2PPM Transmit Elements |
| C603AB | (3)KXN1095A | (3)KXN1088A | Three 2PPM Transmit Elements |
| C604AC | (4)KXN1095A | (4)KXN 1088A | Four 2PPM Transmit Elements |
| C621AC | KXN1112AA | KXN1086B | One 2PPM Receive Element |
| C622AB | (2)KXN1112AA | (2)KXN1086B | Two 2PPM Receive Elements |
| C623AB | (3)KXN1112AA | (3)KXN1086B | Three 2PPM Receive Elements |
| C624AB | (4)KXN1112AA | (4)KXN1086B | Four 2PPM Receive Elements |
| C681AB | TPN1223A <br> TRN9114A <br> TRN9110A <br> TRN9210A | TPN1191A <br> TRN5350A <br> TRN5442A <br> $\longrightarrow$ | Multi-Voltage, 60 Hz , Basic |
| C681AC | TPNI223A <br> TRN9110A <br> TRN9113A <br> TRN9210A | TPN1191A <br> TRN5442A <br> TRN5351A <br> $\longrightarrow$ | Multi-Voltage, 60 Hz , Fully Optionable |
| C691AA | TRN5972A | TRN5427A | European Power Cord |
| C692AA | TRN5971A | TRN5427A | United Kingdom Power Cord |

## CONTINUOUS DUTY STATION PERFORMANCE SPECIFICATIONS

GENERAL

| Model | Frequency (MHz) | Minimum RF Output Power | Maximum PA Final Input Power | Input Voltage | A.C. Input Current |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Standard Supply |  | Battery Charging*** Supply |  |
|  |  |  |  |  | Stby | Xmit | Stby | Xmit |
| $\begin{aligned} & \text { C } 73 \mathrm{KRB} \\ & \text { C } 73 \mathrm{KSB}^{*} \end{aligned}$ | 136-174 | $100 \mathrm{~W}^{* *}$ | 200 W | $120 \mathrm{~V} \mathrm{ac}+10 \%$ $-20 \% ; 60 \mathrm{~Hz}$ Standard | 1 A | 4.6A | 1.5-2A | 4.6A |
| No. of Frequencies |  |  | Single and two-frequency stations (dc and tone remote) Four-frequency stations (tone remote) |  |  |  |  |  |
| Squelch Options |  |  | Carrier squelch, Private-Line coded squelch, and Digital Private-Line coded squelch |  |  |  |  |  |
| Metering |  |  | Optional internal-mounted meter used to measure all essential circuits for tuning and checking. |  |  |  |  |  |

*Fully Optionable Models $\quad * *$ Variable Down to $60 \mathrm{~W} \quad * * *$ Does Not Include Battery Charging Current
TRANSMITTER 136-174 MHz

| RF Output Power | $110 / 50$ watts intermittent duty (cont. variable) |
| :--- | :--- |
| Output Impedance | 50 ohms |
| Oscillator Frequency Stability | Channel element maintains oscillator frequency within $\pm .0005 \%$ ( $\pm .0002 \%$ optional) from $-30^{\circ} \mathrm{C}$ <br> to $+60^{\circ} \mathrm{C}$ ambient $\left(+25^{\circ} \mathrm{C}\right.$ reference) |
| Transmitter Sideband Noise | $-90 \mathrm{~dB} @ \pm 30 \mathrm{kHz}$ <br> $-105 \mathrm{~dB} @ \pm 1 \mathrm{MHz}$ |
| Spurious \& Harmonics | More than 85 dB below carrier |
| Modulation | 15 F 2 and $16 \mathrm{~F} 3: \pm 5 \mathrm{kHz}$ for $100 \%$ at 1000 Hz. |
| Audio Sensitivity | Remote telephone line: -20 dBm max. for $60 \%$ max. dev. at 1000 Hz. |
| FM Noise | 55 dB below $60 \%$ system dev. at 1000 Hz |
| Audio Response | $+1,-3 \mathrm{~dB}$ from $6 \mathrm{~dB} /$ octave pre-emphasis, $300-3000 \mathrm{~Hz}$, referenced to 1000 Hz |
| Audio Distortion | Less than $2 \%$ at $1000 \mathrm{~Hz} ; 60 \%$ system dev. |
| FCC Designation | ABZ89FC3640 $( \pm .0005 \%$ stability) <br> ABZ89FC3641C $( \pm .0002 \%$ stability) <br> Licensable under parts $22,74,81$, and 90 of FCC Rules.. |

RECEIVER 132-174 MHz

| Channel Spacing | $30 \mathrm{kHz} / 25 \mathrm{kHz}$ |
| :---: | :---: |
| ElA Modulation Acceptance | $\pm 7 \mathrm{kHz}$ minimum |
| Oscillator Frequency Stability | Channel element maintains oscillator frequency within $\pm .0005 \%$ ( $\pm .0002 \%$ optional) from $-30^{\circ} \mathrm{C}$ to $+60^{\circ} \mathrm{C}$ ambient $\left(+25^{\circ} \mathrm{C}\right.$ reference) |
| Sensitivity 20 dB Quieting EIA SINAD | Without Preamp With Preamp <br> Less than 0.5 uV Less than 0.25 uV <br> Less than 0.35 uV Less than 0.20 uV |
| Intermodulation - EIA SINAD | -85 dB $\quad-80 \mathrm{~dB}$ |
| Selectivity - EIA SINAD | $-100 \mathrm{~dB}(-95 \mathrm{~dB}$ with preamp) |
| Spurious \& Image Rejection | 100 dB minimum 100 dB minimum |
| Squelch Sensitivity Carrier Squelch Tone-Coded Squelch | 0.2 uV or less at threshold 0.10 uV or less at threshold <br> 0.2 uV or less 0.10 uV or less |
| Audio Characteristics Remote Control Models | Telephone Line: <br> Output: +11 dBm @600 ohms <br> Response: +1 , -3 dB <br> Distortion: 3\%@1000 Hz <br> Hum \& Noise: - 55 dB <br> For local service audio: <br> Output Available: 1 W @8 ohms <br> Response: $+2,-8 \mathrm{~dB}$ <br> Distortion: 5\%@1000 Hz <br> Hum \& Noise: - 55 dB |
| FCC Receiver Certification Number | ABZ89FR3633 |

Meets EIA Specifications per RS152B, RS204B, and RS220A.
SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

MSR 2000 VHF CONTINUOUS DUTY STATIONS OPTION CHART

| Option | Add | Delete | Description |
| :---: | :---: | :---: | :---: |
| C11AB | TRN5295A | - | Time-Out Timer |
| C12AG | HLD4052A | - | Receiver Preamplifier ( $146-174 \mathrm{MHz}$ ) |
| C12AH | HLD4051A | - | Receiver Preamplifier ( $132-150.8 \mathrm{MHz}$ ) |
| C13AA | TLN2445A | - | Remote Squelch Control |
| C14AF | TLN2447A | - | Receive PL Tone On/Off |
| C15AA | TLN2448A | - | "Wild Card" Option |
| C28AN | TPN1192A <br> TKN8295A <br> TRN5155A | TPN1191A <br> TRN5355A <br> - | Battery Revert |
| C28AU | TPN1226A <br> TKN8295A <br> TRN5155A | $\begin{aligned} & \text { TPN1222A } \\ & \text { TRN5355A } \end{aligned}$ | Battery Revert |
| C28AV | TPN1227A TKN8295A TRN5155A | TPN1223A <br> TRN5355A | Battery Revert |
| C31DY | - | $\begin{aligned} & \text { TRD6171A } \\ & \text { TRD6172A } \end{aligned}$ | Omit Receiver (132-150.8 MHz) Omit Receiver (146-174 MHz) |
| C31EL | - | $\begin{aligned} & \hline \text { TRD6291A } \\ & \text { TRD6292A } \end{aligned}$ | $\begin{aligned} & \text { Omit Receiver }(132-150.8 \mathrm{MHz}) \\ & \text { Omit Receiver }(146-174 \mathrm{MHz}) \end{aligned}$ |
| C50AC | - | - | Decreased RF Power Output for Maritime Operation ( $132-174 \mathrm{MHz}$ ) |
| C52AA | $\begin{aligned} & \text { TRN5568A } \\ & \text { TRN5570A } \\ & \hline \end{aligned}$ | TRN5567A TRN5569A | 37" Cabinet |
| C56AC | TRN5326A | TRN5325A | Tone Mute Second Receiver (F2-R2) |
| C63AK | TRN5239A | TRN5240A | DC Transmit PL On/Off |
| C63AL | TLN2449A | - | Tone Transmit PL On/Off |
| C71AB | - | TMN6054A | Omit Microphone |
| C75AB | - | TRN5295A | Omit Time-Out Timer |
| C83AC | $\begin{aligned} & - \\ & - \\ & - \end{aligned}$ | $\begin{aligned} & \text { TLN2443A } \\ & \text { TRN5322A } \\ & \text { TRN5236A } \\ & \text { TKN8286A } \end{aligned}$ | Omit Wire Line Control (Carrier Squelch, Tone Stations) |
| C84AC | - | $\begin{aligned} & \text { TLN2443A } \\ & \text { TRN5320A } \\ & \text { TRN5236A } \\ & \text { TKN8286A } \end{aligned}$ | Omit Wire Line Control (PL/DPL, Tone Stations) |
| C85AB | - | $\begin{aligned} & \text { TRN5254A } \\ & \text { TRN5236A } \\ & \text { TKN8286A } \end{aligned}$ | Omit Wire Line Control (Carrier Squelch, DC Stations) |
| C86AC | - | $\begin{aligned} & \text { TRN5240A } \\ & \text { TRN5236A } \\ & \text { TKN8286A } \end{aligned}$ | Omit Wire Line Control (PL/DPL, DC Stations) |
| C113AA | TMN6054A | - | Dynamic Microphone |
| C116BP | TRD6182A TRN5431A TRN5443A | $\begin{gathered} \hline \text { TRN6172A } \\ \text { TRN5430A } \\ - \\ \hline \end{gathered}$ | Shield Kit (One Receiver) |
| C116BQ | $\begin{aligned} & \hline \text { TRN5474A } \\ & \text { TRN5443A } \\ & \text { TRD6182A } \end{aligned}$ | $\begin{aligned} & \text { TRN5429A } \\ & \text { TRD6172A } \\ & - \end{aligned}$ | Shield Kit (Basic) |
| C116BT | TRD6181A TRN5431A TRN5443A | $\begin{aligned} & \text { TRD6171A } \\ & \text { TRN5430A } \end{aligned}$ | Shield Kit ( $146 \cdot 174 \mathrm{MHz}$ ) |
| C116BU | TRD6181A TRN5443A TRN5474A | $\begin{aligned} & \hline \text { TRD6171A } \\ & \text { TRN5429A } \end{aligned}$ | Shield Kit ( $132-150.8 \mathrm{MHz}$ ) |
| C116CB | TRD6302A TRN5431A TRN5443A | $\begin{aligned} & \text { TRN6292A } \\ & \text { TRN5430A } \end{aligned}$ | Shield Kit (One Receiver) |
| C116CC | TRN5474A TRN5443A TRD6302A | $\begin{aligned} & \text { TRN5429A } \\ & \text { TRD6292A } \end{aligned}$ | Shield Kit (Basic) |

MSR 2000 VHF CONTINUOUS DUTY STATIONS OPTION CHART (Cont'd.)

| Option | Add | Delete | Description |
| :---: | :---: | :---: | :---: |
| C116CD | TRD6301A TRN5431A TRN5443A | TRD6291A TRN5430A | Shield Kit (146-174 MHz) |
| C116CE | TRD6301A TRN5443A TRN5474A | $\begin{gathered} \text { TRD6291A } \\ \text { TRN5429A } \\ - \\ \hline \end{gathered}$ | Shield Kit (132-150.8 MHz) |
| C140AD | - | - | "AND" Squelch |
| C143AD | TRN5257A | TRN5254A | Repeater Control (Carrier Squelch, DC Stations) |
| C143AE | TRN5257A | TRN5240A | Repeater Control (PL/DPL, DC Stations) |
| Cl43AF | TLN2446A | - | Repeater Control (Tone Stations) |
| C144AH | TRN5235A TKN8287A | TRN5236A TKN8286A | 4-Wire Line Audio (One Receiver) w/o EIA Rack Mounting |
| C144AJ | TRN5235A TKN8287A | TRN5237A TKN8286A | 4-Wire Line Audio (Two Receivers) w/o EIA Rack Mounting |
| C149CV | TRN9689A TMN6054A TRN5080A | TRN9688A | Intercom, Metering and Microphone |
| C149DA | TRN9689A TMN6054A TRN5080A | TRN9688A | Intercom, Metering and Microphone |
| C150AH | $\begin{aligned} & \text { TRN5324A } \\ & \text { TKN8281A } \end{aligned}$ | $\begin{aligned} & \text { TRN5254A } \\ & \text { TRN5353A } \end{aligned}$ | RA Base (Carrier Squelch, DC Stations) |
| C150AJ | $\begin{aligned} & \text { TRN5324A } \\ & \text { TKN8281A } \\ & \hline \end{aligned}$ | TRN5240A <br> TRN5353A | RA Base (PL/DPL, DC Stations) |
| C150AK | TRN5324A TKN8281A | $\overline{\text { TRN5353A }}$ | RA Base (Tone Station) |
| C158AB | $\begin{gathered} \text { TRN5292A } \\ \text { TRN5330A } \\ \text { (4)KLN6210A } \end{gathered}$ | $\frac{-}{-}$ | Multi PL Encoder (Rptr) |
| C158AE | TRN5292A TRN5330A <br> (4)KLN6210A | KLN6209A | Multi PL Encoder (Base) |
| C164 | - | - | EIA Rack Mounting (see Instruction Manual 68P81112E95) |
| C181AH | TBN6394A TKN8324A TLD2622A TRN5352A TRN5568A TRN5570A | TBN6393A <br> TKN8323A $\qquad$ <br> - <br> TRN5567A <br> TRN5569A | Add 2 Can Duplexer ( 148 -174 MHz) |
| C182AJ | TKN8324A TLD2502A TRN5352A TRN5568A TRN5570A | $\begin{gathered} \text { TRN8323A } \\ - \\ - \\ \text { TRN5567A } \\ \text { TRN5569A } \\ \hline \end{gathered}$ | Add Duplexer ( 148 -174 MHz) |
| C226AH | $\begin{aligned} & \text { TRN5069A } \\ & \text { TRN5079A } \end{aligned}$ | TRN5068A | Intercom Only |
| C226AL | TRN9689A TRN5079A | TRN9689A | Intercom Only |
| C257AD | $\begin{aligned} & \text { TPN1222A } \\ & \text { TRN9109A } \\ & \text { TRN9114A } \\ & \text { TRN9209A } \end{aligned}$ | TPN1191A <br> TRN5442A <br> TRN5350A <br> - | Multi-Voltage, 50 Hz , Basic |
| C257AE | $\begin{aligned} & \text { TPN1222A } \\ & \text { TRN9109A } \\ & \text { TRN9113A } \\ & \text { TRN9209A } \end{aligned}$ | TPN1191A <br> TRN5442A <br> TRN5351A <br> - | Multi-Voltage, 50 Hz , Fully Optionable |
| C261AC | (4)TLN8381A TRN5329A | - | Multi PL Decoder |
| C261AH | (4)TLN8381A TRN5329A | KLN6209A | Multi PL Decoder RPTR |

MSR 2000 VHF CONTINUOUS DUTY STATIONS OPTION CHART (Cont'd.)

| Option | Add | Delete | Description |
| :---: | :---: | :---: | :---: |
| C262AE | $\begin{gathered} \text { TRN5292A } \\ \text { TRN5329A } \\ \text { (4)KLN6210A } \\ \text { (4)TLN8381A } \end{gathered}$ | (2)KLN6209A | Multi PL Repeater |
| C263AB | TRN5329A TRN5292A TRN5330A <br> (4)KLN6210A <br> (4)TLN8381A | KLN6209A | Multi PL Encoder/Decoder |
| C266AA | - | KLN6210A | Omit One Vibrasender Reed |
| C267AA | - | TLN8381A | Omit One Vibrasponder Reed |
| C269AP | TRN5293A TRN5294A TKN8287A | TRN5236A TKN8286A $\qquad$ | Spectra-TAC Operation (Basic) |
| C269AQ | TRN5293A <br> TRN5294A <br> TKN8287A <br> TRN5331A | TLN5236A <br> TKN8286A <br> TRN5324A <br> $\longrightarrow$ | Spectra-TAC Operation (Rptr) |
| C276AA | $\begin{aligned} & \text { TRN5075A } \\ & \text { KLN6209A } \end{aligned}$ | TRN5074A | Simplex PL TA-RB |
| C276AB | $\begin{aligned} & \text { TRN5078A } \\ & \text { TRN6005A } \end{aligned}$ | TRN5077A | Simplex DPL TA-RB |
| C323AA | - | TRN5427A | Omit Power Cord |
| C501AJ | - | KXN1088A | Omit One Transmit Element |
| C502AH | - | (2)KXN1088A | Omit Two Transmit Elements |
| C503AE | - | (3)KXN1088A | Omit Three Transmit Elements |
| C504AE | - | (4)KXN1088A | Omit Four Transmit Elements |
| C521AR | - | KXN1086B | Omit One Receive Element |
| C522AM | - | (2)KXN1086B | Omit Two Receive Elements |
| C523AH | - | (3)KXN1086B | Omit Three Receive Elements |
| C524AJ | - | (4)KXN1086B | Omit Four Receive Elements |
| C576AA | TLN2442A | - | Single-Tone Decoder |
| C601AE | KXN1095A | KXN1088A | One 2PPM Transmit Element |
| C602AC | (2)KXN1095A | (2)KXN1088A | Two 2PPM Transmit Elements |
| C603AC | (3)KXN1095A | (3)KXN1088A | Three 2PPM Transmit Elements |
| C604AD | (4)KXN1095A | (4)KXN1088A | Four 2PPM Transmit Elements |
| C621AC | KXN1112AA | KXN1086B | One 2PPM Receive Element |
| C622AB | (2)KXN1112AA | (2)KXN1086B | Two 2PPM Receive Elements |
| C623AB | (3)KXN1112AA | (3)KXN1086B | Three 2PPM Receive Elements |
| C624AB | (4)KXN1112AA | (4)KXN1086B | Four 2PPM Receive Elements |
| C681AB | TPN1223A <br> TRN9114A <br> TRN9110A <br> TRN9210A | TPNI191A <br> TRN5350A <br> TRN5442A | Multi-Voltage, 60 Hz , Basic |
| C681AC | TPN1223A <br> TRN9110A <br> TRN9210A <br> TRN9113A | TRNII91A TRN5442A TRN5351A <br> - | Multi-Voltage, 60 Hz , Fully Optionable |
| C691AA | TRN5972A | TRN5427A | European Power Cord |
| C692AA | TRN5971A | TRN5427A | United Kingdom Power Cord |


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