

RLC-3 FIELD PROGRAMMING SHEETS - QUICK REFERENCE SECTION

USAGE

DESCRIPTION

VERSION 1.77

06-18-1997

000 XY	CONNECT ONE PORT X TO ANOTHER PORT Y
001 XY	MONITOR ONE PORT X FROM ANOTHER PORT Y
002 XY	DISCONNECT ONE PORT X FROM ANOTHER PORT Y
003 X	INTERROGATE WHERE A RECEIVER IS ROUTED
004 X	INTERROGATE WHERE A TRANSMITTER IS ROUTED
005 X(PORT)Y(INPUT 0-5)Z(DTMF 0-5)	PORT'S ACCESS MODE Y & Z 0=NO ACCESS 1=COR 2=PL 3=COR&PL 4=CORORPL 5=ALWAYS ACTIVE (HF)
006 X	RECALL A PORT'S ACCESS MODE
007 X(PORT)M(0-1)C(0-1)U(0-1)	CONFIGURE DTMF MUTE FOR A SELECTED PORT M=MUTE C=COVER TONE U=MUTE BYPASS 1=RECALL
008 X	CHECK DTMF MUTE, COVER TONE, BYPASS SETTINGS FOR A PORT MAY EVENTUALLY BE REMOVED
009	RECALL ENTIRE CONTROLLER'S CROSSPOINT
010 XXXYYYYYY	RE-PROGRAM COMMAND NAMES XXX=CMD# Y=NEW NAME 1 TO 6 DIGITS
011 XXX	INTERROGATE INFORMATION ON A COMMAND NAME BY NUMBER
012 YYYYYY	RECALL INFORMATION ABOUT A COMMAND NAME BY NAME
013	RADIO PORT CARD CONDITIONS PORTS NOT ON SYSTEM OR PORT FAILURE
014..019	***NOT ACTIVE YET***
020 XXXY,YY,YYY,YYYY	PROGRAM A SELECTED TIMER X=SELECTED TIMER PORT # - Y=VALUE TO BE PROG. 000-007 = MESSAGE START TIMER PORT 1-8 / 10MS 001-999 - DEFAULT = 050 008-015 = COURTESY BEEP DELAY TIMER PORT 1-8 / 10MS 001-999 - DEFAULT = 100 016-023 = TRANSMITTER HANG TIMER PORT 1-8 / 10MS 001-999 - DEFAULT = 200 (2 SEC.) 024-031 = DTMF MUTE TIMER PORT 1-8 / 10MS 001-999 - DEFAULT = 100 (1 SEC.) 032-039 = DO NOT MESS WITH THIS TIMER - MOTHER BOARD SPI RETRY TIMER (005) 50 MS 040-047 = DO NOT MESS WITH THIS TIMER - MOTHER BOARD SPI TIME OUT TIMER (024) 240 MS 048 = I/O POLLING TIMER / 10 MS - DEFAULT = 100 (1 SEC.) 049-056 = COURTESY BEEP AFTER VOICE - 10 MS 001-999 - DEFAULT = 100 (1 SEC.) 057 = RBI-1 DELAYED SEND TIMER - 10 MS 001-999 - DEFAULT = 050 (1/2 SEC.) 058 = HF SCAN DELAY TIMER - 10 MS 001-999 - DEFAULT = 050 (1/2 SEC.) 059 = SMALL DVR TIMER - AUTOMATICALLY SET BY THE CONTROLLER 060-067 = MINI HANG TIMER TX PORT 1-8 - 10 MS 001-999 - DEFAULT = 050 (1/2 SEC.) 068-075 = KEYUP DELAY TIMER PORT 1-8 - 10 MS 001-999 - DEFAULT = 050 (1/2 SEC.) 076 = CALCULATING WIND SPEED TIMER - DEFAULT = (2.3 SEC.) 100-107 = IMPOLITE ID TIMER PORT 1-8 / 10 MS 001-999 - DEFAULT = 020 (20 SEC.) 108-115 = INITIAL ID TIMER PORT 1-8 / 1 SEC. 001-999 - DEFAULT = 600 (10 MIN.) 116-123 = PENDING ID TIMER PORT 1-8 / 1 SEC. 001-999 - DEFAULT = 540 (9 MIN.) 124-131 = TIMEOUT TIMERS RX PORT 1-8 / 1 SEC. 001-999 - DEFAULT = 180 (3 MIN.) 132-139 = DIAL TONE TIMER PORT 1-8 / 1 SEC. 001-999 - DEFAULT = 008 (8 SEC.) 140-147 = PREACCESS TIMER PORT 1-8 / 1 SEC. 001-999 - DEFAULT = 008 (8 SEC.) 148-163 = USER TIMERS 00-15 (START WITH C022 STOP WITH C023) (SEE APPENDIX D) 164-171 = DTMF INTERDIGIT TIMER PORT 1-8 / 1 SEC - DEFAULT = 005 (5 SEC.) 172 = REVERSE PATCH RING TIMER / 1 SEC. 001-999 - DEFAULT = 010 (10 SEC.) 173 = PING CARD TIMER / 1 SEC. 001-999 - DEFAULT = 010 (10 SEC.) 174 = DVR START RECORDING TIMER / 1 SEC. 001-999 - DEFAULT = 010 (10 SEC.) 175 = DVR RECORD LENGTH LIMIT / 1 SEC. 001-999 - DEFAULT = 030 (30 SEC.) 176-184 = LOG ON TIMER PORT 1-8 / 1 SEC. 001-999 - DEFAULT = 060 (60 SEC.) 185 = BEACON TIMER / 1 SEC. 000-999 - DEFAULT = 060 (60 SEC.) 186-193 = TAIL MSG. TIMER PORT 1-8 / 1 SEC. 000-999 - DEFAULT = 300 (5 MIN.) 194-201 = RE-ENABLE KEYUP DELAY 1-8 / 1 SEC. 000-999 - DEFAULT = 060 (60 SEC.)
021 XXX	RECALL A TIMER VALUE * SEE COMMAND C020 FOR TIMERS
022 XXX	RESTART A SELECTED TIMER * SEE COMMAND C020 FOR TIMERS
023 XXX	RESET A SELECTED TIMER * SEE COMMAND C020 FOR TIMERS
024 X(PORT 0-8)Y(SPEED)	SET UP THE CONTROLLERS RS-232 SERIAL BAUD RATE X:0=MAIN Y=300-19200 PORT 1-8 <9600
025 XX(HOURS)YY(MIN)Z	SETS THE TIME OF DAY CLOCK * Z IS: 1 = PM, 0 = AM
026	RECALL THE TIME OF DAY CLOCK IN MALE SPEECH
027	RECALL THE TIME OF DAY CLOCK IN FEMALE SPEECH
028 XXYYZZD	SETS THE DATE - X=MONTH - Y=DAY - Z=YEAR - D: 1=SUNDAY THRU 7=SATURDAY
029	RECALL THE DATE
030 YY...YY	SEND A CW MESSAGE
031 YY...YY	SEND A DTMF SEQUENCE
032 Y.....Y	SEND A SERIAL MESSAGE OUT THE RLC-3 PORT
033 X(PORT)Y.....Y	SEND A SERIAL MESSAGE OUT A RADIO CARD'S SERIAL PORT Y=DATA
034 X(PORT)YYY...YYY	SEND A SERIAL MESSAGE OUT A RADIO CARD'S SERIAL PORT Y=DECIMAL DATA 000-255
035	REMOTE RESET THE CONTROLLER
036 YYY...YYY	SEND A VOICE MESSAGE
037 X,XX,XXX,XXXX,IE.	SET AUDIO ROUTING VARIABLE FOR COMMANDS INSIDE A MACRO
038	KILL ALL VOICE/CW RESPONSES FOLLOWING THIS COMMAND IN MACRO
039	RECALL THE PORTS IN THE CURRENT AUDIO ROUTING VARIABLE
040 LLLDDDXXXXXYYY	SEND ONE, TWO OR THREE TONE CHORD L=LENGTH 10MS 000-255 / D=DELAY 10MS 000-255 / X=TONE 1 (0350 HZ) / Y=TONE 2 (1200 HZ) / Z=TONE 3 NOT ACTIVE YET
041 X(PORT)Y(0-3)	COURTESY BEEP ENABLE/DISABLE FOR SELECTED PORT 0=NEVER 1=ONLY RPT. 2=& EVEN LINKS
042 X(PORT)YY(WPM)	SET CW SPEED FOR A SELECTED PORT Y=05-50 WPM
043 WXXXXYYYYZZZZ	SET CW 3-TONE CHORD FREQUENCIES FOR SELECTED PORT W=PORT XYZ=(0000-9999 HZ)
044 WXXXXYYYY	SET UP DTMF REGENERATE PARAMETERS W=PORT X=DTMF LENGTH Y=PAUSE
045 SSMXXXTTTTNNYD..D	SETUP BEACON TABLE S=SLOT #, M=MACRO, X=# OF TIMES, T=TIME TO WAIT, N=NEXT SLOT 01-50 0=STOP, Y=TYPE OF BEACON 0=RADIO PORT(S) 1=BEACON OUT OF THE AUTOPATCH, D=AUDIO PATH OR PHONE NUMBER
046 SS(01-50)	START BEACON
047	CANCEL BEACON
048 SS ENGLISH_WORDS	START BEACON USING ENGLISH WORDS EXAMPLE: 048 THIS_IS_A_TEST_ERROR_MESSAGE - SEE 066
049	COMMAND DESCRIPTIONS ***NOT ACTIVE YET***
050 SS(01-12)X.X(PORTS)	SET UP DEFAULT AUDIO ROUTING VARIABLES SSO=CLEAR DEFAULT/AUDIO NOT TO BE SENT ANYWHERE 01-08 CMDS ENT FROM RECEIVERS 09=SERIAL 10=AUTOMATIC MACRO/EVENT TRIGGER 11=SCHEDULER 12=I/O ALARM
051	START DIAL-TONE DTMF DIGIT SENT WILL KILL DIAL TONE ON THAT PORT (SEE CMD 020)
052	COMMAND DESCRIPTIONS ***NOT CURRENTLY USED***
053 WWWXXXZZZ...ZZ	PROGRAM A SINGLE COMMAND MACRO SEQUENCE W=MACRO X=COMMAND Z=DATA CMD USES

054 XXX RECALL MACRO CONTENTS M=MACRO#, N=# OF CMDS, C=CMD, D=DIGITS OF DATA, ? PERCENTAGE FILLED
055 XXX DELETE MACRO
056 WWWWXZZZ...ZZ APPEND A COMMAND TO A MACRO SAME ENTRY TYPE AS C053
057 XXXYYY COPY A MACRO X=SOURCE Y=DESTINATION
058 XXXYY DELETE A COMMAND IN A MACRO X=MACRO # - Y= # OF COMMANDS IN THE MACRO
059 XXXYYZZZDDD INSERT A COMMAND IN A MACRO X=MACRO # - Y=NEW COMMAND LOCATION WITHIN THE MACRO
Z=NEW COMMAND # FOR INSERT D=DATA FOR THE COMMAND
060 XYZQ SERIAL PORTS U/L CASE & LINEFEED X=U CASE Y=1 LF ON O=LF OFF
Z=1 SUPPRESS SERIAL BY DTMF O=SEND SERIAL FROM DTMF Q=1 QUEUED SERIAL O= SEND BEFORE CONT.
061 X(PORTS) DISCONNECT ALL PORTS FROM A RADIO PORT
062 XXXYYY,Z,ZZZ CHANGE THE BEGINNING OF COMMAND NAMES X=FIRST CMD IN RANGE Y=LAST CMD IN RANGE
Z=NEW FIRST DIGITS FOR THE RANGE OF CMDS (062*000999# THEN CMDS ARE #000-#999)
063 YYY...YYY SEND A POLITE VOICE MESSAGE KERCHUNK WILL INTERRUPT MSG. - SAME AS CMD 036
064 XXXYYY...YYY SEND A POLITE VOICE MESSAGE AND IF INTERRUPTED EXECUTE COMMAND C=CMD Y=WORD
065 RESTORE THE AUDIO ROUTING VARIABLE (UNDO 037 AND 038)(MUST BE USED WITHIN A MACRO.)
066 VOICE_TEXT_ENGLISH SEND A VOICE MESSAGE USING ENGLISH WORDS WORD LIST 000-685 OR SPELLED IF NOT IN LIST
~~067..069~~ ~~COMMAND DESCRIPTION ***NOT CURRENTLY USED***~~
070 X(PORT) CONFIGURE A REPEATER FOR PREACCESS
071 X(PORT)Y(O-1)ZZ CONFIGURE A LINK FOR PREACCESS Y:1=DIAL TONE ON O=OFF - Z=SITE ACCESS CODE#
072 X DISABLE PREACCESS REQUIREMENT FOR A PORT SETS PORT BACK TO FACTORY DEFAULTS
073 RECALL PORTS WITH PREACCESS REQUIREMENT
074 ALLOW ACCESS TO A PORT THAT REQUIRES PREACCESS
075 P(PORT)XYZ(O-1) SET STOP ACCESS CONDITIONS X:O=STOP ACCESS CMD EXEC Y:O=STOP ACCESS CMD INVALID
Z:O=STOP ACCESS WHEN COR DROPS AFTER DTMF ENTERED
RECALL STOP ACCESS CONDITIONS
076 P(PORT) ISOLATE A PORT FROM THE REST OF THE SYSTEM
077 X(PORT) SET THE COMMAND ENTRY FUNCTIONS 9=SERIAL IS "I", C=CHAIN, T=TIME, E=NEW DIGIT O=OFF
078 X(PORT1-9)CTE RECALL THE COMMAND ENTRY SETUP FOR A PORT PORT-9=SERIAL C=CHAIN T=TIME E=DIGIT
079 X(PORT1-9) ~~COMMAND DESCRIPTION ***NOT CURRENTLY USED***~~
~~080..081~~
082 XXYMM SET UP A SCHEDULER EVENT HOURLY X=SCHEDULER SLOT# Y=COMMAND # M=MIN.
082 XYYYYHHMMP SET UP A SCHEDULER EVENT DAILY H=HOUR P=0 AM 1 PM
082 XYYYYWHMMP SET UP A SCHEDULER EVENT WEEKLY W=DAY OF WEEK 1=SUNDAY THRU 7= SATURDAY
082 XYYYYDDHMM SET UP A SCHEDULER EVENT MONTHLY D=DAY OF MONTH 01-31
082 XYYYYNDDHHMMP SET UP A SCHEDULER EVENT YEARLY N=MONTH OF THE YEAR 01-12
083 XX RECALL A SCHEDULER EVENT X=SLOT S=ON/OFF C=CMD FREQ O=YEAR 1=MONTH 2=WK 3=DAILY 4=HR
084 XX(SLOT)Y(O-1) ENABLE/DISABLE A SCHEDULER EVENT X=SLOT - Y O=EVENT OFF 1=EVENT ON
085 X(PORT)Y(O-1) ENABLE/DISABLE IDING A PORT O=ID OFF - 1=ID ON
086 RECALL WHICH PORTS HAVE IDS ENABLED
087 X(PORT)Y(O-1) SET RANDOM OR ROTATING PENDING IDS O=ROTATING 1=RANDOM
088 RECALL RANDOM OR ROTATING PENDING ID SELECTION VOICE WILL LIST ROTATE
~~089~~ ~~COMMAND DESCRIPTION ***NOT CURRENTLY USED***~~
090 XY,Y..Y READ WHETHER INPUT LINE IS HIGH OR LOW X=BOARD# (1 OR 2) Y=INPUT LINE# (1-8)
091 XY,Y..Y EXECUTE INPUT LINE HIGH OR LOW MACRO X=BOARD# (1 OR 2) Y=INPUT LINE# (1-8)
092 XYZQ* ENABLE/DISABLE INPUT LINE ALARM X=BOARD Y=LINE# Z:O=LOW/1=HIGH Q:O=ALARM OFF
1=ALARM ON
093 XY,Y..Y TURN OUTPUT LINE ON X=BOARD# (1 OR 2) Y=OUTPUT LINE# (1-8)
094 XY,Y..Y TURN OUTPUT LINE OFF X=BOARD# (1 OR 2) Y=OUTPUT LINE# (1-8)
095 XY,Y..Y RECALL WHETHER OUTPUT LINE IS ON OR OFF X=BOARD# (1 OR 2) Y=INPUT LINE# (1-8)
~~096..099~~ ~~PULSE OUTPUT LINES ***NOT ACTIVE YET***~~
100 XY,Y..Y READ ANALOG INPUT LINE X=BOARD# (1 OR 2) Y=INPUT LINE# (1-8)
101 XYZ SET RESOLUTION FOR ANALOG INPUT X=BOARD# (1 OR 2) Y=INPUT LINE# (1-8) Z=#DIGITS
AFTER DECIMAL POINT
102-COMMAND-SEE BELOW SET CONVERSION RATIO FOR ANALOG INPUT

COMMAND	DESCRIPTION	RESOLUTION	FORMAT: C101 IS THE DEFAULT COMMAND NAME.
102 X Y N WWWW M ZZZZ	GENERAL FORM		X - IS THE I/O BOARD NUMBER (1-2)
102 X Y 1 0460 0 0440	TEMPERATURE	1 DEGREE F (0)	Y - IS THE ANALOG INPUT NUMBER (1-8)
102 X Y 1 0273 0 0227	TEMPERATURE	1 DEGREE C (0)	N IS 1 FOR NEGATIVE, 0 FOR POSITIVE FOR THE FOLLOWING NUMBER
102 X Y 0 0000 0 0005	(0)0 TO 5 VOLTS	1 VOLT (0)	W IS THE READING WITH A 0 VOLT INPUT WITH LEADING 0s IF NECESSARY-
102 X Y 0 0000 0 0050	(1)0 TO 5 VOLTS	1/10 VOLT (1)	M IS 1 FOR NEGATIVE, 0 FOR POSITIVE FOR THE FOLLOWING NUMBER
102 X Y 0 0000 0 0500	0 TO 5 VOLTS	1/100 VOLT (2)	Z IS THE READING WITH A 5 VOLT INPUT TO THE PROCESSOR WITH LEADING
102 X Y 0 0000 0 0025	0 TO 25 VOLTS	1 VOLT (0)	0s IF NECESSARY. IF THE VOLTAGE DIVIDER ON THE I/O BOARD IS
102 X Y 0 0000 0 0250	0 TO 25 VOLTS	1/10 VOLT (1)	TURNED ON, THIS IS THE READING WITH A 25 VOLT INPUT.
102 X Y 0 0000 0 2500	0 TO 25 VOLTS	1/100 VOLT (2)	
102 X Y 0 0000 0 0100	0 TO 100 %	1 PERCENT (0)	
102 X Y 0 0000 0 0360	0 TO 360 DEG	1 DEGREE (0)	
103 XYNWWWW	CALIBRATE AN ANALOG INPUT XY2=RESET		
104 XYLNNWWWW	SET AN ANALOG ALARM L:O=ALARM LOW 1=ALARM HIGH		
105 XYWWWW	SET ANALOG ALARM HYSTERESIS		
106 XYLN	ENABLE/DISABLE AN ANALOG ALARM L:O=ALARM LOW 1=HIGH N:O=DISABLE 1=ENABLE		
107 X	RECALL ANALOG LINES IN ALARM		
108 XY	RECALL ANALOG LINE CONFIGURATION X,Y,W,Z,CALIBRATE,LO,L1,HYSTERESIS,LO ON/OFF, L1 ON/OFF		
109	PULSE INPUT LINE COUNTER ANEMOMETER-WIND SPEED COUNTER - COUNTS CONTACT CLOSURES		
110 X(PORT)Y(O-3)	CONFIGURE THE AUTOPATCH O=NO READ BACK 1=READ ALL# 2=READ AND MUST BE KERCHUNKED BEFORE, DURING OR SHORTLY AFTER NUMBER READBACK TO DIAL 3=READ BACK AND STOP DIAL IF KERCHUNKED		
111	MANUAL OFF HOOK		
112 XXX,ORYYY...YYYY	NORMAL FORWARD DIAL X=AUTODIAL SLOT (000-999) OR Y=11 DIGIT PHONE #		
113 XXX,ORYYY...YYYY	FORWARD DIAL WITH NO LONG DISTANCE CHECKING X=AUTODIAL SLOT OR Y=11 DIGIT PHONE #		
114	HANG UP THE AUTOPATCH		
115	HANG UP FROM ONLY PORTS THAT ARE CONNCTED AND THAT CAN HEAR AUTOPATCH		
116 IIIAAAD...D	SET AND RECALL PREDIAL DIGITS AND TIMING I=INITIAL DELAY 10MS A=AFTER PREDIAL 10MS D=ANY UP TO 10 DIGITS FOR PREDIAL		
117..118	COMMAND DESCRIPTION ***NOT CURRENTLY USED***		

119 SSSN..N SET ALLOWED PREFIX SLOT S=SLOT # N=AREA CODE/PREFIX #=WILDCARD DIGITS
120 SSS(000-499) RECALL ALLOWED PREFIX SLOT
121 SSS(000-099)N..N SET NUISANCE NUMBER SLOT S=SLOT # N=AREA CODE/PREFIX #=WILDCARD DIGITS
122 SSS(000-099) RECALL NUISANCE NUMBER SLOT
123 N..N TEST DIALING TABLES N=NUMBER WITH DIALING TABLE
124 SSS(000-999)N..N SET PROGRAM AUTODIAL SLOT S=SLOT # N=UP TO ANY 11 DIGIT PHONE #
125 SSS(000-999) RECALL AUTODIAL SLOT
126 SSS(000-999)X(0-1)C(0-1) SET WHETHER TO SEND PREDIAL DIGITS FOR AUTODIAL SLOT AND CALL SIGN
S=SLOT # X 0=NO 1=SEND PREDIAL C 1=CALL SIGN OF USER ASSIGNED TO THAT SLOT IS SENT
0=AUTODIAL SLOT NUMBER IS SENT
AUTODIAL SLOT S=SLOT # X: 0=DISABLE 1=ENABLE SLOT
127 SSS(000-999)X(0-1)
128 X(PORT)Y(0-1) SET HALF-FULL DUPLEX MODE FOR A PORT Y: 1=HALF DUPLEX 0=FULL DUPLEX
129 X RECALL ALL HALF DUPLEX PORTS
130 PCCC,&DDD BLOCK COMMAND EXECUTION FROM PORT P=PORT C=CMD RANGE LOW# D=CMD RANGE HIGH#
131 PCCC,&DDD ALLOW COMMAND EXECUTION FROM PORT P=PORT C=CMD RANGE LOW# D=CMD RANGE HIGH#
132 CCC RECALL BLOCKED PORTS C=COMMAND NUMBER TO BLOCK
133 0 DISABLE REVERSE PATCH MODE
1 XX(RINGS)Y....Y RING OVER THE AIR MODE AFTER XX RINGS Y=PORTS
2 XX(RINGS)N....N CONTROL MODE 9 SECONDS TO ENTER ACCESS CODE N..N AND 134(DTMF "ABCD" WILL HAVE TO BE RENAMED)
134 ACCESS REVERSE PATCH CONTROL MODE (FOR THE CONTROLLERS INTERNAL USE)
135 ANSWER A REVERSE AUTOPATCH OVER THE AIR (MUST BE RINGING TO ANSWER)
136 XXXYYYYZZZZ REVERSE AUTOPATCH RING X=RING LENGTH Y=TONE 1 FREQ 0660 HZ Z=TONE 2 FREQ 1000 HZ
137 XXX(000-999) DIAL A AUTODIAL SLOT NUMBER
138 P(PORT)XX...XX DIRECT SPI SEND OUT OF RADIO CARD'S SERIAL PORT A HEX NUMBER 00-FF (BYTE OF DATA)
139 C SS OR 000 SETUP RBI-1 / RLC-ICM 900/901 INTERFACE 000=DEFAULT FOR THE RBI-1
C=CONNECTOR 1-4 SS=SET UP CODE - BAND OFFSET TX/RX
28MHZ=00 50MHZ=05 140-160MHZ=10 220MHZ=15 430-440MHZ=20 1200MHZ=25
OFFSET 100KHZ=30 500KHZ=35 600KHZ=40 1MHZ=45 1.6MHZ=50 1.7MHZ=55 5MHZ=60 12MHZ=65
20MHZ=70
TRANSCIVEE ENABLE=85 RECEIVE ONLY=90 DISABLE MODULE=95
140 P(PORT) SET A PORT FOR RBI-1 (MUST BE SET FOR RBI-1 COMMANDS TO WORK)
141 XXXX RBI-1 OR RLC-ICM BAND UNIT TO SELECT(28,50,140,220,440,1240IE.) RBI-1 N/A=28 50 150 160
142 XXXXXY RBI-1 OR RLC-ICM SET FREQUENCY X=NEW FREQUENCY Y=OPTIONAL OFFSET
143 X(0-3) RBI-1 OR RLC-ICM SET OFFSET FORMAT 0 0=-,1 =+,2=SIMP,3=-20 FORMAT 1 0=-,2=SIMP,3=+
144 X RBI-1 OR RLC-ICM SET OFFSET FORMAT 0=FORMAT 0(DEFAULT) 1=FORMAT 1
145 X(0-2) RBI-1 SET RF POWER LEVEL 0=LOW 1=MEDIUM 2=HIGH
146 XXXX RBI-1 OR RLC-ICM SET PL TONE FREQ. 67.0=67,670,6700 / 250.3=250,2503 RLC-ICM=33.0/254.1
147 X(0-1) RBI-1 OR RLC-ICM TURN PL ENCODE OFF / ON 0=OFF 1=ON
148 X(0-1) RBI-1 OR RLC-ICM TURN PL DECODE OFF / ON 0=OFF 1=ON
149 RBI-1 OR RLC-ICM RECALL BAND, FREQUENCY, AND OFFSET VOICE RESPONSE XXX.YYY 0
150 RBI-1 OR RLC-ICM RECALL ALL RBI-1 SETTINGS PORT,FREQ.,OFFSET,POWER,PL,PL-TX,PL-RX
151 X RBI-1 TURN RADIO POWER ON OR OFF 0=OFF 1=ON
152 X..X RBI-1 GOTO RADIO MEMORY X=MEMORY CHANNEL SUPPORTED BY THE RADIO
~~153~~ ~~COMMAND DESCRIPTION ****NOT CURRENTLY USED****~~
~~154~~ ~~COMMAND DESCRIPTION ****NOT CURRENTLY USED****~~
155 P(PORT)F(0-1) PTT ENABLE OR DISABLE 0=PTT LINE OFF 1=PTT LINE ON (DEFAULT)
156 RECALL WHICH PTT LINES ARE ENABLED
157 YYY(000-252)ZZZ EVENT MACRO ASSIGN Y=EVENT NUMBER (SEE EVENT TABLE) Z=COMMAND NUMBER
158 XXX RECALL EVENT MACRO X=EVENT NUMBER
159 XXX(000-252)Y(0-1) EVENT MACRO ENABLE/DISABLE 0=OFF 1=ON
160 I(1-2)H(0-2)L(1-8) CLEAR ANALOG HIGHS/LOWS I=I/O BOARD H:0=LOW 1=HIGH 2=BOTH L=I/O LINE
161 I(1-2)L(1-8)XX(TIME) SET ANALOG SMOOTHING 50=9SEC,60=13,70=18,80=30,90=50,95=120,97=220,98=325,99=11 MIN
162 Y....Y ALWAYS SEND A SERIAL MESSAGE OUT THE MOTHER BOARD PORT IMPOLITE - LIKE C032
163 X....X KEYPAD TEST TO CHECK DTMF DIGITS "*"S "#"=P
164 RECALL CONTROLLERS SOFTWARE VERSION
165 RESET COP WATCHDOG TIMER COP=COMPUTER OPERATING PROPERLY - MACRO TOO LONG CAUSES RESET
166 DISPLAY STATUS SCREEN FORMATTED SCREENS OF SERIAL INFORMATION OUT THE MOTHER BOARD PORT
167 DO NOTHING RETURNS THE OK ERROR CODE - DEFAULT COMMAND TO EXECUTE COMMANDS LIKE C164
168 PX SET DTMF ACCEPTANCE REQUIREMENTS P=PORT X= 0=COR OR PL 1=PORT ACTIVE
169 CCC...CCC ALWAYS SEND SERIAL OUT MAIN SERIAL PORT BY ASCII CODE 032 IE.
170 DVR - RECORD AND PLAY AUDIO TEST
171 T,TT,TTT DVR - RECORD TRACK (NON-PROMPTED)
172 T,TT,TTT DVR - RECORD TRACK (PROMPTED)
173 TTT,T..T,TTT...TTT DVR - PLAY TRACKS TTT=PLAY SINGLE T..T=PLAY MULTIPLE TTT...TTT...=PLAY MULTIPLE SEPARATE
174 TTT,T..T,TTT...TTT DVR - ERASE TRACKS TTT=SINGLE T..T=MULTI IN A ROW TTT...TTT=START THRU FINISH
175 DVR - RECORD PUBLIC MAIL
176 DVR - CHECK PUBLIC MAIL
177 S(1-9) DVR - RETRIEVE PUBLIC MAIL
178 DVR - ERASE PUBLIC MAIL ERASES ONLY THE LAST MESSAGE THAT WAS RETRIEVED
179 SSS DVR - RECORD PRIVATE MAIL SSS=NUMBER OF THE MAIL BOX TO LEAVE MESSAGE IN
180 SSS DVR - RETRIEVE PRIVATE MAIL SSS=NUMBER OF THE MAIL BOX TO GET THE MAIL FROM
181 DVR - ERASE PRIVATE MAIL ERASES ALL THE CONTENTS OF A MAIL BOX THAT WAS RETRIEVED
182 X DVR - SELECT DVR TYPE 0=NONE INSTALLED 1=LARGE DVR INSTALLED 2=SMALL DVR INSTALLED
183 SS,SS..EE DVR - RECORD A MESSAGE ON THE SMALL DVR SS=START SLOT NUMBER EE=END SLOT (OPTIONAL)
184 S,SS,SS..SS DVR - PLAYBACK A SMALL DVR MESSAGE S=SINGLE 0-9 SS=SINGLE 00-34 SS..SS=MULTI 00-34
185 SS,SS..EE DVR - ERASE SMALL DVR MESSAGE SS=SLOT TO ERASE SS(START)..EE(END)=MULTI-EE(OPTIONAL)
186 UUU,E,L,T,P..P SET UP USER PASSWORD U=USER # E=ENABLE/DISABLE L=LEVEL 1-7 T=TYPE 0=NONE/FIXED 1-4=DIGITS OF
CHALLENGE PASSWORDS P..P=PASSWORD (A MAXIMUM OF UP TO 8 DIGITS 0-9 & A-D CAN BE USED)
186 UUU=RECALLS PASSWORD INFO FOR A USER (IT IS NOT A GOOD IDEA BROADCAST THIS INFO OVER THE AIR)
ENABLE THE SECURITY PASSWORD SYSTEM - LEVEL 0=186 000 1 0 LEVEL 2=186 000 12 DISABLE=1860001 7
187 UUP..P USER LOG-ON U=USER NUMBER P=PASSWORD (7 TO 4 DECAY DIGITS CAN BE ADDED WITH TYPE 1-4
CHALLENGED PASSWORD ENTRY REQUESTS - A MAXIMUM OF 8 PASSWORD DIGITS FOR ENTRY IS ALLOWED)

188 RECALL THE USER THAT IS CURRENTLY LOGGED INTO THE CONTROLLER
189 USER LOG-OFF
190 CCC,L OR CCCEE,L ASSIGN A USER LEVEL TO A COMMAND CCC=RECALL CCCL=ASSIGN EEE=END OF RANGE OF CMDS
191 UUU OR UUUWWW...WWW ASSIGN / RECALL A CALLSIGN TO A USER U=USER # W=WORDS FROM WORD LIST < 255 8 WORD MAX
~~192..194~~ ~~COMMAND DESCRIPTION~~ ~~***NOT CURRENTLY USED***~~
195 D(O-3)P CONFIGURE HF MODE 0=DISABLE 1=ENABLE/P=PREFIX DIGIT 2=HF OFF W/O DISABLING 3=RECALL SETTINGS
196 O,PRX.XX CONFIGURE HF RADIO 0=RECALL CONFIG, P=PORT, R=RIG MANF/1=ICOM 2=KENWOOD 3=YAESU, X=RIG MODEL
ICOM 735=04 R7000=08 275=16 375=18 475=20 575=22 1275=24 R71=26 751=2761=30 271=32
471=34 1271=36 781=38 725=40 R9000=42 765=44 970=46 726=48 R72=50 7100=52
XX..OTHER
KENWOOD 450,850,870,570,690,950 AND OTHER RECENT RADIOS=0 TS-50,940,440,140,680,711,790A,811,
R5000 AND OTHER EARLY RADIOS=1
YAESU 736=0 757=1 767=2 890,900,990,747,FT1000=3 NOT SUPPORTED ARE 727 AND FRG8800
197E(O-1),C(INOV=0 EXTRA=4) SET/RECALL TRANSMIT/SCAN BAND EDGES E=RECALL BAND EDGES C=SET BANDS-CLASS OF LICENSE
EBB(OO-15) RECALL EDGES FOR ONE BAND 88 00=160 01=80 02=40 03=30 04=20 05=17 06=15 07=12 08=10
09=6 10=2 11=1,25 12=70CM 13=33CM 14=23CM 15=USER DEFINED
EBBC SET EDGES FOR ONE BAND FOR A CLASS
EBBUF..F*F..F SET UPPER OR LOWER EDGE FOR ONE BAND TO A SPECIFIC FREQUENCY U 0=LOWER EDGE /
1=UPPER EDGE F=FREQUENCY *=SEPARATOR BETWEEN MHZ AND KHZ
198 HF MODE ENABLE TURNS ON THE RE-DEFINED HF DTMF REMOTE ADDRESS KEYBOARD PAD
"KEYPAD" DIRECT ENTRY P(PREFIX)29*600# OR UNKEY - RECALL MEM P(PREFIX)5(RECALL)15(MEM CH)#
1=REMOTE IN RECEIVE ONLY OR WITH ADDED DATA DIGIT 1=USB 2=LSB 3=AM 4=FM 5=CW
2=RECEIVE AND TRANSMIT ON OR WITH ADDED DATA DIGIT(S) 1=TOGGLE PL RX 2=TOGGLE PL TX 3=PL OFF
8=RECALL PL <HZ>=SET PL FREQUENCY
3=HF MODE OFF/EXIT HF MODE - RECEIVE AND TRANSMIT OFF
4=REMOTE DOWN 100 HZ OR ADDED DATA DIGITS <XXX>=MACRO CMD EXAMPLE: 026 RECALLS THE TIME
5=SELECT VFO A OR ADDED DATA DIGITS RECALL MEMORY CHANNEL ## 00..99
6=REMOTE UP 100 HZ
7=REMOTE DOWN 500 HZ OR ADDED DATA START SCAN 1=DOWN SLOW 3=UP SLOW 4=DOWN MED. 6=UP MED.
7=DOWN FAST 9=UP FAST
8=RECALL FREQUENCY OF CURRENT VFO OR ADDED DATA DIGIT(S) 0=OFFSET OFF 1=OFFSET ON 11=MINUS OFFSET
10=PLUS OFFSET 1XY=SET SIZE OF OFFSET FOR THIS BAND 00=0 01=100KHZ 02=500KHZ 03=600KHZ
04=1MHZ 05=1.6MHZ 07=5MHZ 08=12MHZ 09=20MHZ
9=REMOTE UP 500 HZ
0=SELECT VFO B OR ADDED DATA DIGITS WRITE MEMORY CHANNEL ## 00..99
*=FREQUENCY <POINT> KEY
#=ENTER / FORCE-EXECUTION DIGIT
A=REMOTE UP 20 HZ
B=REMOTE DOWN 20 HZ
C=NOT DEFINED
D=NOT DEFINED
199PH..H ENTER HF COMMAND W/O BEING IN HF MODE P=PREFIX H=HF KEYPAD 198 COMMANDS
200..499 EXECUTE AN INTERNAL MACRO (CAN BE UTILIZED AS USER MACROS)
500..999 EXECUTE A USER MACRO

AUTOMATIC MACRO NUMBERS

<p>200 - COMMAND LENGTH NOT MATCHED 201 - TOO FEW DATA DIGITS ENTERED 202 - TOO MANY DATA DIGITS ENTERED 203 - INVALID # OF DATA DIGITS ENTERED 204 - EXECUTION BLOCKED FROM THIS PORT 205 - USER LEVEL TO LOW TO EXECUTE CMD 206 - MACRO RESERVED FOR INTERNAL USE 207 - COMMAND EXECUTED OK 208 - INTERNAL ERROR JUST OCCURRED 209 - NESTED MACRO DEPTH LIMIT REACHED 210 - INVALID VALUE ENTERED 211 - COMMAND DOESN'T EXIST 212 - BAD AUTOPATCH NUMBER 213 - GENERAL AUTOPATCH ERROR 214 - USER REQUESTED DISABLED- INVALID 215 - DIGITAL VOICE RECORDER IS BUSY 216 - MACRO IS FULL 217 - HF ERROR 218 - RESERVED 219 - RESERVED 220 - INITIAL ID PORT 1 221 - INITIAL ID PORT 2 222 - INITIAL ID PORT 3 223 - INITIAL ID PORT 4 224 - INITIAL ID PORT 5 225 - INITIAL ID PORT 6 226 - INITIAL ID PORT 7 227 - INITIAL ID PORT 8 228 - PENDING ID #1 PORT 1 229 - PENDING ID #1 PORT 2 230 - PENDING ID #1 PORT 3 231 - PENDING ID #1 PORT 4 232 - PENDING ID #1 PORT 5 233 - PENDING ID #1 PORT 6 234 - PENDING ID #1 PORT 7 235 - PENDING ID #1 PORT 8 236 - PENDING ID #2 PORT 1 237 - PENDING ID #2 PORT 2 238 - PENDING ID #2 PORT 3 239 - PENDING ID #2 PORT 4 240 - PENDING ID #2 PORT 5 241 - PENDING ID #2 PORT 6 242 - PENDING ID #2 PORT 7 243 - PENDING ID #2 PORT 8 244 - PENDING ID #3 PORT 1 245 - PENDING ID #3 PORT 2 246 - PENDING ID #3 PORT 3 247 - PENDING ID #3 PORT 4 248 - PENDING ID #3 PORT 5 249 - PENDING ID #3 PORT 6 250 - PENDING ID #3 PORT 7</p>	<p>251 - PENDING ID #3 PORT 8 252 - PENDING ID #4 PORT 1 253 - PENDING ID #4 PORT 2 254 - PENDING ID #4 PORT 3 255 - PENDING ID #4 PORT 4 256 - PENDING ID #4 PORT 5 257 - PENDING ID #4 PORT 6 258 - PENDING ID #4 PORT 7 259 - PENDING ID #4 PORT 8 260 - IMPOLITE ID PORT 1 261 - IMPOLITE ID PORT 2 262 - IMPOLITE ID PORT 3 263 - IMPOLITE ID PORT 4 264 - IMPOLITE ID PORT 5 265 - IMPOLITE ID PORT 6 266 - IMPOLITE ID PORT 7 267 - IMPOLITE ID PORT 8 268 COURTESY BEEP COMMAND SLOT PORT 1 269 COURTESY BEEP COMMAND SLOT PORT 2 270 COURTESY BEEP COMMAND SLOT PORT 3 271 COURTESY BEEP COMMAND SLOT PORT 4 272 COURTESY BEEP COMMAND SLOT PORT 5 273 COURTESY BEEP COMMAND SLOT PORT 6 274 COURTESY BEEP COMMAND SLOT PORT 7 275 COURTESY BEEP COMMAND SLOT PORT 8 276 - I/O #1 ANALOG HIGH ALARM #1 277 - I/O #1 ANALOG HIGH ALARM #2 278 - I/O #1 ANALOG HIGH ALARM #3 279 - I/O #1 ANALOG HIGH ALARM #4 280 - I/O #1 ANALOG HIGH ALARM #5 281 - I/O #1 ANALOG HIGH ALARM #6 282 - I/O #1 ANALOG HIGH ALARM #7 283 - I/O #1 ANALOG HIGH ALARM #8 284 - I/O #2 ANALOG HIGH ALARM #1 285 - I/O #2 ANALOG HIGH ALARM #2 286 - I/O #2 ANALOG HIGH ALARM #3 287 - I/O #2 ANALOG HIGH ALARM #4 288 - I/O #2 ANALOG HIGH ALARM #5 289 - I/O #2 ANALOG HIGH ALARM #6 290 - I/O #2 ANALOG HIGH ALARM #7 291 - I/O #2 ANALOG HIGH ALARM #8 292 - I/O #1 ANALOG LOW ALARM #1 293 - I/O #1 ANALOG LOW ALARM #2 294 - I/O #1 ANALOG LOW ALARM #3 295 - I/O #1 ANALOG LOW ALARM #4 296 - I/O #1 ANALOG LOW ALARM #5 297 - I/O #1 ANALOG LOW ALARM #6 298 - I/O #1 ANALOG LOW ALARM #7 299 - I/O #1 ANALOG LOW ALARM #8 300 - I/O #2 ANALOG LOW ALARM #1 301 - I/O #2 ANALOG LOW ALARM #2</p>	<p>302 - I/O #2 ANALOG LOW ALARM #3 303 - I/O #2 ANALOG LOW ALARM #4 304 - I/O #2 ANALOG LOW ALARM #5 305 - I/O #2 ANALOG LOW ALARM #6 306 - I/O #2 ANALOG LOW ALARM #7 307 - I/O #2 ANALOG LOW ALARM #8 308 - I/O #1 ANALOG ALARM TO NORMAL #1 309 - I/O #1 ANALOG ALARM TO NORMAL #2 310 - I/O #1 ANALOG ALARM TO NORMAL #3 311 - I/O #1 ANALOG ALARM TO NORMAL #4 312 - I/O #1 ANALOG ALARM TO NORMAL #5 313 - I/O #1 ANALOG ALARM TO NORMAL #6 314 - I/O #1 ANALOG ALARM TO NORMAL #7 315 - I/O #1 ANALOG ALARM TO NORMAL #8 316 - I/O #2 ANALOG ALARM TO NORMAL #1 317 - I/O #2 ANALOG ALARM TO NORMAL #2 318 - I/O #2 ANALOG ALARM TO NORMAL #3 319 - I/O #2 ANALOG ALARM TO NORMAL #4 320 - I/O #2 ANALOG ALARM TO NORMAL #5 321 - I/O #2 ANALOG ALARM TO NORMAL #6 322 - I/O #2 ANALOG ALARM TO NORMAL #7 323 - I/O #2 ANALOG ALARM TO NORMAL #8 324 - I/O #1 INPUT LINE HIGH #1 325 - I/O #1 INPUT LINE HIGH #2 326 - I/O #1 INPUT LINE HIGH #3 327 - I/O #1 INPUT LINE HIGH #4 328 - I/O #1 INPUT LINE HIGH #5 329 - I/O #1 INPUT LINE HIGH #6 330 - I/O #1 INPUT LINE HIGH #7 331 - I/O #1 INPUT LINE HIGH #8 332 - I/O #2 INPUT LINE HIGH #1 333 - I/O #2 INPUT LINE HIGH #2 334 - I/O #2 INPUT LINE HIGH #3 335 - I/O #2 INPUT LINE HIGH #4 336 - I/O #2 INPUT LINE HIGH #5 337 - I/O #2 INPUT LINE HIGH #6 338 - I/O #2 INPUT LINE HIGH #7 339 - I/O #2 INPUT LINE HIGH #8 340 - I/O #1 INPUT LINE LOW #1 341 - I/O #1 INPUT LINE LOW #2 342 - I/O #1 INPUT LINE LOW #3 343 - I/O #1 INPUT LINE LOW #4 344 - I/O #1 INPUT LINE LOW #5 345 - I/O #1 INPUT LINE LOW #6 346 - I/O #1 INPUT LINE LOW #7 347 - I/O #1 INPUT LINE LOW #8 348 - I/O #2 INPUT LINE LOW #1 349 - I/O #2 INPUT LINE LOW #2 350 - I/O #2 INPUT LINE LOW #3 351 - I/O #2 INPUT LINE LOW #4 352 - I/O #2 INPUT LINE LOW #5</p>
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353 - I/O #2 INPUT LINE LOW #6
 354 - I/O #2 INPUT LINE LOW #7
 355 - I/O #2 INPUT LINE LOW #8
 356 - TIME-OUT TIMER MESSAGE #1
 357 - TIME-OUT TIMER MESSAGE #2
 358 - TIME-OUT TIMER MESSAGE #3
 359 - TIME-OUT TIMER MESSAGE #4
 360 - TIME-OUT TIMER MESSAGE #5
 361 - TIME-OUT TIMER MESSAGE #6
 362 - TIME-OUT TIMER MESSAGE #7
 363 - TIME-OUT TIMER MESSAGE #8
 364 - TIME-OUT CLEAR MESSAGE #1
 365 - TIME-OUT CLEAR MESSAGE #2
 366 - TIME-OUT CLEAR MESSAGE #3
 367 - TIME-OUT CLEAR MESSAGE #4
 368 - TIME-OUT CLEAR MESSAGE #5
 369 - TIME-OUT CLEAR MESSAGE #6
 370 - TIME-OUT CLEAR MESSAGE #7
 371 - TIME-OUT CLEAR MESSAGE #8
 372 - PRE-ACCESS PORT 1
 373 - PRE-ACCESS PORT 2
 374 - PRE-ACCESS PORT 3
 375 - PRE-ACCESS PORT 4
 376 - PRE-ACCESS PORT 5
 377 - PRE-ACCESS PORT 6
 378 - PRE-ACCESS PORT 7
 379 - PRE-ACCESS PORT 8
 380 - POWER ON RESET MACRO
 381 - TEMPORARY MACRO
 382 - USER TIMER 00 EXPIRED
 383 - USER TIMER 01 EXPIRED
 384 - USER TIMER 02 EXPIRED
 385 - USER TIMER 03 EXPIRED
 386 - USER TIMER 04 EXPIRED
 387 - USER TIMER 05 EXPIRED
 388 - USER TIMER 06 EXPIRED
 389 - USER TIMER 07 EXPIRED
 390 - USER TIMER 08 EXPIRED
 391 - USER TIMER 09 EXPIRED
 392 - USER TIMER 10 EXPIRED
 393 - USER TIMER 11 EXPIRED
 394 - USER TIMER 12 EXPIRED
 395 - USER TIMER 13 EXPIRED
 396 - USER TIMER 14 EXPIRED
 397 - USER TIMER 15 EXPIRED
 398 - BEFORE PATCH OFF HOOK
 399 - AFTER PATCH ON HOOK
 400 - PATCH BUSY MESSAGE
 401 - BEFORE PATCH NUMBER READBACK
 402 - AFTER PATCH NUMBER READBACK
 403 - DIAL PATCH IF READBACK INTERRUPT
 404 - VOICE MESSAGE "AUTOPATCH OFF"
 405 - DTMF COVER TONE
 406 - USER LOG-ON MESSAGE
 407 - USER LOG-ON FAIL MESSAGE
 408 - USER LOG-OFF MESSAGE
 409 - BEACONING MESSAGE MACRO
 410 - BEACONING MESSAGE MACRO
 411 - SPEAK "AUTODIAL" LIKE 401
 412..499 - RESERVED
 500..999 - USER MACROS

EVENT TABLE

000 - COR ACTIVE PORT 1
 001 - COR ACTIVE PORT 2
 002 - COR ACTIVE PORT 3
 003 - COR ACTIVE PORT 4
 004 - COR ACTIVE PORT 5
 005 - COR ACTIVE PORT 6
 006 - COR ACTIVE PORT 7
 007 - COR ACTIVE PORT 8
 008 - COR INACTIVE PORT 1
 009 - COR INACTIVE PORT 2
 010 - COR INACTIVE PORT 3
 011 - COR INACTIVE PORT 4
 012 - COR INACTIVE PORT 5
 013 - COR INACTIVE PORT 6
 014 - COR INACTIVE PORT 7
 015 - COR INACTIVE PORT 8
 016 - PL ACTIVE PORT 1
 017 - PL ACTIVE PORT 2
 018 - PL ACTIVE PORT 3
 019 - PL ACTIVE PORT 4
 020 - PL ACTIVE PORT 5
 021 - PL ACTIVE PORT 6
 022 - PL ACTIVE PORT 7
 023 - PL ACTIVE PORT 8
 024 - PL INACTIVE PORT 1
 025 - PL INACTIVE PORT 2
 026 - PL INACTIVE PORT 3
 027 - PL INACTIVE PORT 4
 028 - PL INACTIVE PORT 5
 029 - PL INACTIVE PORT 6
 030 - PL INACTIVE PORT 7
 031 - PL INACTIVE PORT 8
 032 - PORT ACTIVE PORT 1
 033 - PORT ACTIVE PORT 2
 034 - PORT ACTIVE PORT 3
 035 - PORT ACTIVE PORT 4
 036 - PORT ACTIVE PORT 5
 037 - PORT ACTIVE PORT 6
 038 - PORT ACTIVE PORT 7
 039 - PORT ACTIVE PORT 8
 040 - PORT INACTIVE PORT 1
 041 - PORT INACTIVE PORT 2
 042 - PORT INACTIVE PORT 3
 043 - PORT INACTIVE PORT 4

044 - PORT INACTIVE PORT 5
 045 - PORT INACTIVE PORT 6
 046 - PORT INACTIVE PORT 7
 047 - PORT INACTIVE PORT 8
 048 - ANY CONNECTED RX ACTIVE 1
 049 - ANY CONNECTED RX ACTIVE 2
 050 - ANY CONNECTED RX ACTIVE 3
 051 - ANY CONNECTED RX ACTIVE 4
 052 - ANY CONNECTED RX ACTIVE 5
 053 - ANY CONNECTED RX ACTIVE 6
 054 - ANY CONNECTED RX ACTIVE 7
 055 - ANY CONNECTED RX ACTIVE 8
 056 - ALL CONNECTED RX INACTIVE 1
 057 - ALL CONNECTED RX INACTIVE 2
 058 - ALL CONNECTED RX INACTIVE 3
 059 - ALL CONNECTED RX INACTIVE 4
 060 - ALL CONNECTED RX INACTIVE 5
 061 - ALL CONNECTED RX INACTIVE 6
 062 - ALL CONNECTED RX INACTIVE 7
 063 - ALL CONNECTED RX INACTIVE 8
 064 - ANY DTMF ACTIVE PORT 1
 065 - ANY DTMF ACTIVE PORT 2
 066 - ANY DTMF ACTIVE PORT 3
 067 - ANY DTMF ACTIVE PORT 4
 068 - ANY DTMF ACTIVE PORT 5
 069 - ANY DTMF ACTIVE PORT 6
 070 - ANY DTMF ACTIVE PORT 7
 071 - ANY DTMF ACTIVE PORT 8
 072 - ANY DTMF INACTIVE PORT 1
 073 - ANY DTMF INACTIVE PORT 2
 074 - ANY DTMF INACTIVE PORT 3
 075 - ANY DTMF INACTIVE PORT 4
 076 - ANY DTMF INACTIVE PORT 5
 077 - ANY DTMF INACTIVE PORT 6
 078 - ANY DTMF INACTIVE PORT 7
 079 - ANY DTMF INACTIVE PORT 8
 080 - PORT 1 DTMF ACTIVE 0
 081 - PORT 1 DTMF ACTIVE 1
 082 - PORT 1 DTMF ACTIVE 2
 083 - PORT 1 DTMF ACTIVE 3
 084 - PORT 1 DTMF ACTIVE 4
 085 - PORT 1 DTMF ACTIVE 5
 086 - PORT 1 DTMF ACTIVE 6
 087 - PORT 1 DTMF ACTIVE 7
 088 - PORT 1 DTMF ACTIVE 8
 089 - PORT 1 DTMF ACTIVE 9
 090 - PORT 1 DTMF ACTIVE A
 091 - PORT 1 DTMF ACTIVE B
 092 - PORT 1 DTMF ACTIVE C
 093 - PORT 1 DTMF ACTIVE D
 094 - PORT 1 DTMF ACTIVE *
 095 - PORT 1 DTMF ACTIVE #
 096 - PORT 2 DTMF ACTIVE 0
 097 - PORT 2 DTMF ACTIVE 1
 098 - PORT 2 DTMF ACTIVE 2
 099 - PORT 2 DTMF ACTIVE 3
 100 - PORT 2 DTMF ACTIVE 4
 101 - PORT 2 DTMF ACTIVE 5
 102 - PORT 2 DTMF ACTIVE 6
 103 - PORT 2 DTMF ACTIVE 7
 104 - PORT 2 DTMF ACTIVE 8
 105 - PORT 2 DTMF ACTIVE 9
 106 - PORT 2 DTMF ACTIVE A
 107 - PORT 2 DTMF ACTIVE B
 108 - PORT 2 DTMF ACTIVE C
 109 - PORT 2 DTMF ACTIVE D
 110 - PORT 2 DTMF ACTIVE *
 111 - PORT 2 DTMF ACTIVE #
 112 - PORT 3 DTMF ACTIVE 0
 113 - PORT 3 DTMF ACTIVE 1
 114 - PORT 3 DTMF ACTIVE 2
 115 - PORT 3 DTMF ACTIVE 3
 116 - PORT 3 DTMF ACTIVE 4
 117 - PORT 3 DTMF ACTIVE 5
 118 - PORT 3 DTMF ACTIVE 6
 119 - PORT 3 DTMF ACTIVE 7
 120 - PORT 3 DTMF ACTIVE 8
 121 - PORT 3 DTMF ACTIVE 9
 122 - PORT 3 DTMF ACTIVE A
 123 - PORT 3 DTMF ACTIVE B
 124 - PORT 3 DTMF ACTIVE C
 125 - PORT 3 DTMF ACTIVE D
 126 - PORT 3 DTMF ACTIVE *
 127 - PORT 3 DTMF ACTIVE #
 128 - PORT 4 DTMF ACTIVE 0
 129 - PORT 4 DTMF ACTIVE 1
 130 - PORT 4 DTMF ACTIVE 2
 131 - PORT 4 DTMF ACTIVE 3
 132 - PORT 4 DTMF ACTIVE 4
 133 - PORT 4 DTMF ACTIVE 5
 134 - PORT 4 DTMF ACTIVE 6
 135 - PORT 4 DTMF ACTIVE 7
 136 - PORT 4 DTMF ACTIVE 8
 137 - PORT 4 DTMF ACTIVE 9
 138 - PORT 4 DTMF ACTIVE A
 139 - PORT 4 DTMF ACTIVE B
 140 - PORT 4 DTMF ACTIVE C
 141 - PORT 4 DTMF ACTIVE D
 142 - PORT 4 DTMF ACTIVE *
 143 - PORT 4 DTMF ACTIVE #
 144 - PORT 5 DTMF ACTIVE 0
 145 - PORT 5 DTMF ACTIVE 1
 146 - PORT 5 DTMF ACTIVE 2
 147 - PORT 5 DTMF ACTIVE 3
 148 - PORT 5 DTMF ACTIVE 4
 149 - PORT 5 DTMF ACTIVE 5
 150 - PORT 5 DTMF ACTIVE 6

151 - PORT 5 DTMF ACTIVE 7
 152 - PORT 5 DTMF ACTIVE 8
 153 - PORT 5 DTMF ACTIVE 9
 154 - PORT 5 DTMF ACTIVE A
 155 - PORT 5 DTMF ACTIVE B
 156 - PORT 5 DTMF ACTIVE C
 157 - PORT 5 DTMF ACTIVE D
 158 - PORT 5 DTMF ACTIVE *
 159 - PORT 5 DTMF ACTIVE #
 160 - PORT 6 DTMF ACTIVE 0
 161 - PORT 6 DTMF ACTIVE 1
 162 - PORT 6 DTMF ACTIVE 2
 163 - PORT 6 DTMF ACTIVE 3
 164 - PORT 6 DTMF ACTIVE 4
 165 - PORT 6 DTMF ACTIVE 5
 166 - PORT 6 DTMF ACTIVE 6
 167 - PORT 6 DTMF ACTIVE 7
 168 - PORT 6 DTMF ACTIVE 8
 169 - PORT 6 DTMF ACTIVE 9
 170 - PORT 6 DTMF ACTIVE A
 171 - PORT 6 DTMF ACTIVE B
 172 - PORT 6 DTMF ACTIVE C
 173 - PORT 6 DTMF ACTIVE D
 174 - PORT 6 DTMF ACTIVE *
 175 - PORT 6 DTMF ACTIVE #
 176 - PORT 7 DTMF ACTIVE 0
 177 - PORT 7 DTMF ACTIVE 1
 178 - PORT 7 DTMF ACTIVE 2
 179 - PORT 7 DTMF ACTIVE 3
 180 - PORT 7 DTMF ACTIVE 4
 181 - PORT 7 DTMF ACTIVE 5
 182 - PORT 7 DTMF ACTIVE 6
 183 - PORT 7 DTMF ACTIVE 7
 184 - PORT 7 DTMF ACTIVE 8
 185 - PORT 7 DTMF ACTIVE 9
 186 - PORT 7 DTMF ACTIVE A
 187 - PORT 7 DTMF ACTIVE B
 188 - PORT 7 DTMF ACTIVE C
 189 - PORT 7 DTMF ACTIVE D
 190 - PORT 7 DTMF ACTIVE *
 191 - PORT 7 DTMF ACTIVE #
 192 - PORT 8 DTMF ACTIVE 0
 193 - PORT 8 DTMF ACTIVE 1
 194 - PORT 8 DTMF ACTIVE 2
 195 - PORT 8 DTMF ACTIVE 3
 196 - PORT 8 DTMF ACTIVE 4
 197 - PORT 8 DTMF ACTIVE 5
 198 - PORT 8 DTMF ACTIVE 6
 199 - PORT 8 DTMF ACTIVE 7
 200 - PORT 8 DTMF ACTIVE 8
 201 - PORT 8 DTMF ACTIVE 9
 202 - PORT 8 DTMF ACTIVE A
 203 - PORT 8 DTMF ACTIVE B
 204 - PORT 8 DTMF ACTIVE C
 205 - PORT 8 DTMF ACTIVE D
 206 - PORT 8 DTMF ACTIVE *
 207 - PORT 8 DTMF ACTIVE #
 208 - TRIED TO HANG UP PATCH WHEN
 WAS ALREADY HUNG UP,
 209 - BEFORE TURN HF MODE ON
 210 - AFTER TURN HF MODE OFF
 211 - HF BAND 160M
 212 - HF BAND 80M
 213 - HF BAND 40M
 214 - HF BAND 30M
 215 - HF BAND 20M
 216 - HF BAND 17M
 217 - HF BAND 15M
 218 - HF BAND 12M
 219 - HF BAND 10M
 220 - HF BAND 6M
 221 - HF BAND 2M
 222 - HF BAND 1.25GM
 223 - HF BAND 70GM
 224 - HF BAND 33GM
 225 - HF BAND 23GM
 226 - HF BAND OTHER BAND
 227 - HANG UP COMMAND 115 BLOCKED
 228 - TAIL MSG 1 TX 1
 229 - TAIL MSG 2 TX 1
 230 - TAIL MSG 3 TX 1
 231 - TAIL MSG 1 TX 2
 232 - TAIL MSG 2 TX 2
 233 - TAIL MSG 3 TX 2
 234 - TAIL MSG 1 TX 3
 235 - TAIL MSG 2 TX 3
 236 - TAIL MSG 3 TX 3
 237 - TAIL MSG 1 TX 4
 238 - TAIL MSG 2 TX 4
 239 - TAIL MSG 3 TX 4
 240 - TAIL MSG 1 TX 5
 241 - TAIL MSG 2 TX 5
 242 - TAIL MSG 3 TX 5
 243 - TAIL MSG 1 TX 6
 244 - TAIL MSG 2 TX 6
 245 - TAIL MSG 3 TX 6
 246 - TAIL MSG 1 TX 7
 247 - TAIL MSG 2 TX 7
 248 - TAIL MSG 3 TX 7
 249 - TAIL MSG 1 TX 8
 250 - TAIL MSG 2 TX 8
 251 - TAIL MSG 3 TX 8
 252 - REVERSE PATCH ANSWERED

VOICE WORD TABLE

000	ZERO	101	BLOWING	204	FLAPS	306	MAY
001	ONE	102	BLUE KNOB	205	FLIGHT	307	MAYDAY
002	TWO	103	BOARD	206	FLOW	308	ME
003	THREE	104	BOOST	207	FOG	309	MEAN
004	FOUR	105	BOZO	208	FOR	310	MEASURE
005	FIVE	106	BRAKE	209	FOURTH	311	MEETING
006	SIX	107	BRAVO	210	FOXTROT	312	MEGA
007	SEVEN	108	BREAK	211	FREEDOM	313	MESSAGES
008	EIGHT	109	BROKEN	212	FREEZING	314	METER
009	NINE	110	BUSY	213	FREQUENCY	315	MICRO
010	TEN	111	BUTTON	214	FRIDAY	316	MIKE
011	ELEVEN	112	BY	215	FROM	317	MILES
012	TWELVE	113	CABIN	216	FRONT	318	MILL
013	THIRTEEN	114	CALIBRATE	217	FULL	319	MILLI
014	FOURTEEN	115	CALL	218	GALLONS	320	MINUS
015	FIFTEEN	116	CALLING	219	GATE	321	MINUTES
016	SIXTEEN	117	CALM	220	GAUGE	322	MIST
017	SEVENTEEN	118	CANCEL	221	GEAR	323	MOBILE
018	EIGHTEEN	119	CAUTION	222	GET	324	MODERATE
019	NINETEEN	120	CEILING	223	GLIDE	325	MONDAY
020	TWENTY	121	CELSIUS	224	GO	326	MONTH
021	THIRTY	122	CENTER	225	GOLF	327	MORE THAN
022	FORTY	123	CHANGE	226	GOODBYE	328	MOTOR
023	FIFTY	124	CHARLIE	227	GREEN	329	MOUNT HAMILTON
024	SIXTY	125	CHECK	228	GREENWICH	330	MOUNT TAMALPAIS
025	SEVENTY	126	CIRCUIT	229	GROUND	331	MOVE
026	EIGHTY	127	CLEAR	230	GURNEE	332	MOVING
027	NINETY	128	CLIMB	231	GUSTING_TO	333	MUCH
028	HUNDRED	129	CLOCK	232	HAIL	334	NEAR
029	THOUSAND	130	CLOSED	233	HALF	335	NEGATIVE
030	MILLION	131	CLUB	234	HAM	336	NET
031	A	132	CODE	235	HAMFEST	337	NEW
032	B	133	COLUMBUS	236	HAMVENTION	338	NEWINGTON
033	C	134	COME	237	HAVE	339	NEW HAVEN
034	D	135	COMPLETE	238	HAZARDOUS	340	NEXT
035	E	136	COMPUTER	239	HAZE	341	NIGHT
036	F	137	CONDITION	240	HEAVY	342	NO
037	G	138	CONGRATULATIONS	241	HELLO	343	NORTH
038	H	139	CONNECT	242	HELP	344	NORTHEAST
039	I	140	CONNECTICUT	243	HENRY	345	NORTHWEST
040	J	141	CONTACT	244	HERTZ	346	NOT
041	K	142	CONTROL	245	HIGH	347	NOVEMBER
042	L	143	CONVERGING	246	HOLD	348	NUMBER
043	M	144	COSHOCKTON	247	HOME	349	OAKS
044	N	145	COUNT	248	HOTEL	350	OBSCURED
045	O	146	COURSE	249	HOUR	351	O'CLOCK
046	P	147	CRANE	250	HOURS	352	OCTOBER
047	Q	148	CROSSWIND	039	I	353	OF
048	R	149	CURRENT	251	ICE	354	OFF
049	S	150	CUYAHOGA FALLS	252	ICING	045	OH
050	T	151	CYCLE	253	IDENTIFY	355	OHIO
051	U	152	DALLAS	254	IGNITE	356	OHMS
052	V	153	DANGER	255	IGNITION	357	OIL
053	W	154	DATE	256	IMMEDIATELY	358	ON
054	X	155	DAY	257	IN	359	OPEN
055	Y	156	DAYS	258	INBOUND	360	OPERATION
056	Z	157	DAYTON	259	INCH	361	OPERATOR
057	ABORT	158	DECEMBER	260	INCREASE	362	OSCAR
058	ABOUT	159	DECREASE	261	INCREASING	363	OTHER
059	ABOVE	160	DECREASING	262	INCREASING_TO	364	OUT
060	ACKNOWLEDGE	161	DEGREES	263	INDIA	365	OUTER
061	ACTION	162	DELTA	264	INDICATED	366	OVER
062	ADJUST	163	DEPARTURE	265	INFLIGHT	367	OVERCAST
063	ADVANCED	164	DEVICE	266	INFORMATION	368	PAPA
064	ADVISE	165	DIAL	267	INNER	369	PARTIALLY
065	AERIAL	166	DINNER	268	INSPECTOR	370	PASS
066	AFFIRMATIVE	167	DIRECTION	269	INTRUDER	371	PASSED
067	AIR	168	DISPLAY	270	IS	372	PATCH
068	AIRPORT	169	DIVIDED	271	IT	373	PATH
069	AKRON	170	DOOR	272	JANUARY	374	PELLETS
070	ALERT	171	DOWN	273	JULIET	375	PER
071	ALL	172	DOWNWIND	274	JULY	376	PERCENT
072	ALOFT	173	DRIVE	275	JUNE	377	PHONE
073	ALPHA	174	DRIZZLE	276	KENTUCKY	378	PICO
074	ALTERNATE	175	DUST	277	KEY	379	PLEASE
075	ALTITUDE	176	EAST	278	KILO	380	PLUS
076	AMATEUR	177	ECHO	279	KNOTS	381	POINT
077	AMPS	178	ELECTRICIAN	280	LAND	382	POLICE
078	AND	179	ELEVATION	281	LANDING	383	POSITION
079	ANSWER	180	EMERGENCY	282	LATE	384	POWER
080	APPROACH	181	ENGINE	283	LAUNCH	385	PRACTICE
081	APRIL	182	ENTER	284	LEAN	386	PRESS
048	ARE	183	EQUAL	285	LEFT	387	PRESSURE
082	AREA	184	EQUALS	286	LEG	388	PRIVATE
083	ARRIVAL	185	ERROR	287	LESS THAN	389	PROBE
084	AS	186	ESTIMATED	288	LEVEL	390	PROGRAMMING
085	ASSOCIATION	187	EVACUATE	289	LIGHT	391	PULL
086	AT	188	EVACUATION	290	LIMA	392	PUSH
087	AUGUST	189	EXIT	291	LINE	393	P.M.
088	AUTO	190	EXPECT	292	LINK	394	QUEBEC
089	AUTOMATIC	191	FAIL	293	LIST	395	RADAR
090	AUTOPILOT	192	FAILURE	294	LITTON	396	RADIO
091	AUXILIARY	193	FARAD	295	LOCK	397	RAIN
092	AVON	194	FAHRENHEIT	296	LONG	398	RAISE
093	AVON MOUNTAIN	195	FARMINGTON	297	LOOK	399	RANGE
094	A.M	196	FAST	298	LOW	400	RATE
095	BAND	197	FEBRUARY	299	LOWER	401	RATTLESNAKE MOUNTAIN
096	BANK	198	FEET	300	LUNCH	402	READY
097	BASE	199	FILED	301	MACHINE	403	REAR
098	BATTERY	200	FINAL	302	MAINTAIN	404	RECEIVE
032	BE	201	FINDLAY	303	MANUAL	405	RED
099	BELOW	202	FIRE	304	MARCH	406	RELEASE
100	BETWEEN	203	FIRST	305	MARKER	407	REMARK

408 REMOTE
409 REPAIR
410 REPEAT
411 REPEATER
412 RICH
413 RICHMOND
414 RIG
415 RIGHT
416 ROAD
417 ROGER
418 ROMEO
419 ROUTE
420 RUNWAY
421 SAFE
422 SAINT PETERSBURG
423 SAND
424 SANTA CLARA
425 SAN LEANDRO
426 SATURDAY
427 SCATTERED
033 SEA
428 SECOND
429 SECONDS
430 SECURITY
033 SEE
431 SELECT
432 SEPTEMBER
433 SEQUENCE
434 SERVICE
435 SET
436 SEVERE
437 SEXY
438 SHORT
439 SHOWERS
440 SHUT
441 SIDE
442 SIERRA
443 SIGHT
444 SLEET
445 SLOPE
446 SLOW
447 SMOKE
448 SNOW
449 SOUTH
450 SOUTHEAST
451 SOUTHWEST
452 SPEED
453 SPRAY
454 SQUAWK
455 STALL
456 START
457 STOP
458 STORM
459 SUNDAY
460 SWITCH
461 SYSTEM
462 TANGO
463 TANK
464 TARGET
465 TARPON SPRINGS
466 TAXI
050 TEA
050 TEE
467 TEEN
468 TELEPHONE
469 TEMPERATURE
470 TERMINAL
471 TEST
472 THANK YOU
473 THAT
474 THE_LONG_E
475 THE_SHORT_E
476 THE_NORMAL_E
477 THIN
478 THINLY
479 THIRD
480 THIS_IS
481 THIS_
482 THUNDERSTORM
483 THURSDAY
484 TIME
485 TIMER
486 TIMES
487 TO
488 TODAY
489 TOMORROW
490 TONIGHT
491 TOOL
492 TORNADO
493 TORONTO
494 TOUGHDOWN
495 TOWER
496 TRAFFIC
497 TRANSMIT
498 TRIM
499 TUESDAY
500 TURBULENCE
501 TURN
502 UNDER
503 UNIFORM
504 UNIT
505 UNLIMITED
506 UNTIL
507 UP
508 USE (NOUN)
509 USE (VERB)
510 VALLEY

511 VALVE
512 VARIABLE
513 VERIFY
514 VICTOR
515 VISIBILITY
516 VOLTS
517 WAIT
518 WAKE
519 WAKEUP
520 WARNING
521 WATCH
522 WATTS
523 WAY
524 WEATHER
525 WEDNESDAY
526 WELCOME
527 WEST
528 WEST HARTFORD
529 WHISKEY
530 WILL
531 WIND
532 WISKEY
533 WITH
534 WRONG
535 X_RAY
536 YANKEE
537 YELLOW
538 YESTERDAY
539 YOU
540 YOUR
541 ZED
542 ZONE
543 ZULU

PREFIXES AND SUFFIXES

544 FIF
545 THIR-
546 -ED
547 -ER
548 -ING
549 -S
550 -TEEN
551 -TH
552 -TY

JULIET'S WORDS

553 OH
554 ONE (F)
555 TWO (F)
556 THREE (F)
557 FOUR (F)
558 FIVE (F)
559 SIX (F)
560 SEVEN (F)
561 EIGHT (F)
562 NINE (F)
563 TEN (F)
564 ELEVEN (F)
565 TWELVE (F)
566 THIRTEEN (F)
567 FOURTEEN (F)
568 FIFTEEN (F)
569 SIXTEEN (F)
570 SEVENTEEN (F)
571 EIGHTEEN (F)
572 NINETEEN (F)
573 TWENTY (F)
574 THIRTY (F)
575 FORTY (F)
576 FIFTY (F)
577 GOOD (F)
578 MORNING (F)
579 AFTERNOON (F)
580 EVENING (F)
581 THE (F)
582 TIME (F)
583 IS (F)
584 AM (F)
585 PM (F)
586 O'CLOCK (F)

PAUSE

587 PAUSE

SOUND EFFECTS

588 LASER
589 WHISTLE
590 PHASER
591 TRAIN
592 EXP
593 CROWD
594 TIC
595 TOC
596 HIGH-LOW TONE
597 LOW-HIGH TONE
598 HIGH TONE

JUNIOR'S WORDS

599 ALARM
600 AMATEUR
601 ANALOG

602 ARIZONA
603 AUTOPATCH
604 BACHELOR
605 BAD
606 BASE
607 BATTERY
608 BAY
609 BILLINGS
610 BOZEMAN
611 CANOE
612 CAPROCK
613 CENTRAL
614 CHARGING
615 CLOUDS
616 CLUB
617 COMMUNICATIONS
618 CONTROLLER
619 DIGITAL
620 EMPIRE
621 EVENT
622 FIELD
623 FLASH
624 FLOOD
625 FRIENDLY
626 GOLDEN
627 GREYCLIFF
628 HAM
629 HAMFEST
630 HARRISON
631 HOLLEY
632 HOME
633 INFORMATION
634 INLAND
635 INPUT
636 INSIDE
637 KOOTENAI
638 LINK
639 LITTLEROCK
640 MEDIUM
641 MEETING
642 MICA
643 MONITOR
644 MOUNTAIN
645 NET
646 OBED
647 OREGON
648 OUTSIDE
649 PEAK
650 POUND
651 PUMP
652 PYRAMID
653 RACES
654 RADIO
655 RATTLESNAKE
656 REMOTE
657 REPEATER
658 RIDGE
659 SANDRA
660 SCAN
661 SIDNEY
662 SKYWARN
663 SOCIETY
664 SPOKANE
665 STAR
666 STATE
667 SUNDANCE
668 SYSTEM
669 TACOMA
670 THIS
671 TIGER
672 TODAY
673 TOMORROW
674 TONIGHT
675 VALUE
676 VOLTAGE
677 WASHINGTON
678 WATCH
679 WATER
680 WELCOME
681 WITH
682 YAKIMA
683 YELLOWHEAD
684 YELLOWKNIFE
685 ZED

INTERNAL VARIABLE WORDS (DON'T USE)

800 UNUSED
801 START POLITE
802 END POLITE
803 END POLITE DO CMD
804 DO DELAYED DIAL
805 START DVR TIMER

VARIABLE WORDS

810 MALE TIME
811 HOUR OF DAY (12 HR)
812 HOUR OF DAY (24 HR)
813 MINUTE OF HOUR
814 AM / PM
815 DATE
816 MONTH OF YEAR
817 DAY OF MONTH
818 YEAR
819 DAY OF WEEK

830 TIME (F)
831 HOUR OF DAY (12 HR) (F)
832 HOUR OF DAY (24 HR) (F)
833 MINUTE OF DAY (F)
834 AM / PM (F)
835 MORN/AFT/EVEN (F)
840 I/O 1 ANALOG 1
841 I/O 1 ANALOG 2
842 I/O 1 ANALOG 3
843 I/O 1 ANALOG 4
844 I/O 1 ANALOG 5
845 I/O 1 ANALOG 6
846 I/O 1 ANALOG 7
847 I/O 1 ANALOG 8
848 I/O 2 ANALOG 1
849 I/O 2 ANALOG 2
850 I/O 2 ANALOG 3
851 I/O 2 ANALOG 4
852 I/O 2 ANALOG 5
853 I/O 2 ANALOG 6
854 I/O 2 ANALOG 7
855 I/O 2 ANALOG 8
856 I/O 1 HIGH 1
857 I/O 1 HIGH 2
858 I/O 1 HIGH 3
859 I/O 1 HIGH 4
860 I/O 1 HIGH 5
861 I/O 1 HIGH 6
862 I/O 1 HIGH 7
863 I/O 1 HIGH 8
864 I/O 2 HIGH 1
865 I/O 2 HIGH 2
866 I/O 2 HIGH 3
867 I/O 2 HIGH 4
868 I/O 2 HIGH 5
869 I/O 2 HIGH 6
870 I/O 2 HIGH 7
871 I/O 2 HIGH 8
872 I/O 1 HIGH TIME 1
873 I/O 1 HIGH TIME 2
874 I/O 1 HIGH TIME 3
875 I/O 1 HIGH TIME 4
876 I/O 1 HIGH TIME 5
877 I/O 1 HIGH TIME 6
878 I/O 1 HIGH TIME 7
879 I/O 1 HIGH TIME 8
880 I/O 2 HIGH TIME 1
881 I/O 2 HIGH TIME 2
882 I/O 2 HIGH TIME 3
883 I/O 2 HIGH TIME 4
884 I/O 2 HIGH TIME 5
885 I/O 2 HIGH TIME 6
886 I/O 2 HIGH TIME 7
887 I/O 2 HIGH TIME 8
888 I/O 1 LOW 1
889 I/O 1 LOW 2
890 I/O 1 LOW 3
891 I/O 1 LOW 4
892 I/O 1 LOW 5
893 I/O 1 LOW 6
894 I/O 1 LOW 7
895 I/O 1 LOW 8
896 I/O 2 LOW 1
897 I/O 2 LOW 2
898 I/O 2 LOW 3
899 I/O 2 LOW 4
900 I/O 2 LOW 5
901 I/O 2 LOW 6
902 I/O 2 LOW 7
903 I/O 2 LOW 8
904 I/O 1 LOW TIME 1
905 I/O 1 LOW TIME 2
906 I/O 1 LOW TIME 3
907 I/O 1 LOW TIME 4
908 I/O 1 LOW TIME 5
909 I/O 1 LOW TIME 6
910 I/O 1 LOW TIME 7
911 I/O 1 LOW TIME 8
912 I/O 2 LOW TIME 1
913 I/O 2 LOW TIME 2
914 I/O 2 LOW TIME 3
915 I/O 2 LOW TIME 4
916 I/O 2 LOW TIME 5
917 I/O 2 LOW TIME 6
918 I/O 2 LOW TIME 7
919 I/O 2 LOW TIME 8
920XXX - READ ANALOG 1-16
AS S-METER
921XXX - READ ANALOG 1-16
AS A DIRECTION N, NE
E, SE, S ETC.
922XXX - EXECUTE COMMAND XXX
(UP TO 900 OR SO, MAY
NOT GO ALL THE WAY TO
999) WILL NOT HAPPEN
UNTIL THIS WORD IS -
ACTUALLY SPOKEN.
923XXX - SPEAK 24 HOUR TIME
IN MALE VOICE ADDING XXX
HOURS, CAN USE TO SPEAK
THE TIME FOR ANY TIME
ZONE.
924XXX - SAME AS ABOVE IN
FEMALE VOICE

CW CODE TABLE

00	0
01	1
02	2
03	3
04	4
05	5
06	6
07	7
08	8
09	9
10	A
11	B
12	C
13	D
14	E
15	F
16	G
17	H
18	I
19	J
20	K
21	L
22	M
23	N
24	O
25	P
26	Q
27	R
28	S
29	T
30	U
31	V
32	W
33	X
34	Y
35	Z
36	/
37	.
38	?
39	AR
40	SPACE
41	PAUSE

DTMF CODE TABLE

00	DIGIT 0
01	DIGIT 1
02	DIGIT 2
03	DIGIT 3
04	DIGIT 4
05	DIGIT 5
06	DIGIT 6
07	DIGIT 7
08	DIGIT 8
09	DIGIT 9
10	DIGIT *
11	DIGIT #
12	DIGIT A
13	DIGIT B
14	DIGIT C
15	DIGIT D
16	<PAUSE>

RADIO PORT PIN-OUT

1,6,8,9	GROUND
2	PL INPUT (ACTIVE H/L)
3	PTT (ACTIVE LOW 150MA)
4	AUDIO OUT (600 OHM)
5	AUDIO IN (10K OHM)
7	CDR INPUT (ACTIVE H/L) (CDR 10K 4MA ^ TO GND)

RADIO PORT DIP SW

1	OFF (SPEAKER AUDIO)
UP	ON (DISCRIMINATOR)
2	OFF CDR HIGH
UP	ON CDR LOW
3	OFF PL HIGH
UP	ON PL LOW
4	SPARE
5	SPARE

J1 TX &

J3 RX

1,2	AUDIO PATH COMPLETE
3	GROUND
4	+10 VOLT

J5 RS232*

*=WHEN JUMPERS ARE REMOVED, REQUIRES DALLAS DS1275 -DO NOT JUMP 1,2 AND 3,4 W/DS1275. -12 TO +12 VOLTS

J5 TTL**

**=WHEN JUMPERS ARE PRESENT = TTL SIGNALS FROM 68HC11 - THIS MODE IS USED FOR DOUG HALL AND RLC-1CM CONTROL. 0-5 VOLTS

AUDIO ADJUSTMENT

RECEIVER:

ADJUST THE "RX" POT ON EACH PORT, CHECKING THE SIGNAL ON P4 SO THAT ALL RECEIVER INPUTS ARE SET TO THE SAME LEVEL OF 1 VOLT PEAK-TO-PEAK. (P4 IS A 10 PIN CONNECTOR NEAR THE POWER CONNECTOR ABOVE THE MOTHER- BOARD SERIAL PORT)

TRANSMITTER:

AFTER RX ADJUSTMENT, ADJUST THE "TX" POTS ON ALL CONNECTED TRANSMITTERS TO OBTAIN THE DESIRED DEVIATION. (TRANSMITTERS SHOULD NOT NEED ANY ADDITIONAL ADJUSTMENTS AFTER AT LEAST 1 RECEIVER IS SET UP)

VOICE LEVEL:

THIS ADJUSTMENT R12 SHOULD BE SET FOR 2 KHZ DEVIATION. (R12 IS LOCATED ON THE MOTHER- BOARD BETWEEN PORT CARDS 2 AND 3)

TONE GENERATOR:

ADJUST THE "TN" POT ON EACH PORT CARD FOR 1.5 KHZ DEVIATION.

RS232 COMMUNICATION PARAMETERS

9600	NS1
BAUD (DEFAULT)	9600
START BITS	1
STOP BITS	1
PARITY	NONE
WORD LENGTH	8
DUPLEX	FULL

RS232 SIGNALS AND INTERFACING MODEM

USE A STRAIGHT-THROUGH CABLE (NOT A NULL MODEM CABLE OR ADAPTER) WITH AT LEAST * PINS CONNECTED

DB25 TO DB9

8	1	CARRIER DETECT
3 *	2	RECEIVE DATA
2 *	3	TRANSMIT DATA
20	4	DATA TERM. READY
7 *	5	GROUND
6	6	DATA SET READY
4	7	REQUEST TO SEND
5	8	CLEAR TO SEND
22	9	RING INDICATOR

CONTROLLER- COMPUTER - OR MODEM

DB9	-DB9	DB25	-DB9	DB25		
PIN 2		2	3		3	2
PIN 3		3	2		2	3
PIN 5		5	7		5	7

MODEM DEFAULTS

AT&F = FACTORY DEFAULTS
 AT33 = AUTO ANSWER 3RD RING OR (AT30 NO ANSWER)
 AT30 = AUTO ANSWER OFF
 AT&K0 = DISABLE FLOW CONTROL
 ATED = DISABLE LOCAL ECHO
 ATQ1 = STOP MODEM RESULT CODES
 AT&W = STORE MODEM SETTINGS

IF UNABLE TO DISABLE THE MODEMS FLOW CONTROL, SHORT PINS 4 AND 5 TOGETHER AND PINS 6, 8 AND 20 TOGETHER THIS SHOULD FOOL THE FLOW CONTROL

SERIAL DOWNLOADS

IF MORE THAN A DOZEN COMMANDS OR SO ARE DOWNLOADED, THE RLC-3 MAY GET WAY BEHIND, OR EVEN GET LOST. THIS DOES NOT AFFECT THE COMMANDS THAT ARE BEING SENT TO THE RLC-3 IN ANY WAY - JUST THE RESPONSES. IF YOU NEED TO KNOW WHAT THE RESPONSES ARE CHANGE THE ASCII TRANSFER SETTINGS ON YOUR COMMUNICATIONS SOFTWARE TO INSERT A 1.5 SECOND DELAY AFTER EACH LINE (LONGER FOR SLOW BAUD RATES, SHORTER FOR FAST BAUD RATES) THIS WILL GIVE THE RLC-3 TIME TO SEND THE RESPONSES BACK WITHOUT OVERFLOWING THE QUEUE.

SETTING 050 090 BEFORE THE DOWNLOAD WILL TURN OFF VOICE RESPONSES.

TO TURN LOWER CASE AND LINEFEEDS ON ENTER 06011 BEFORE THE DOWNLOAD.

DTMF VOICE FALSING

CHECK TO SEE IF R12 ON THE RADIO PORT CARD IS 470K OHMS.

(NOT THE MOTHER BOARD) THE RLC3 EARLY RELEASES WERE SHIPPED WITH R12 AS 300K. THIS CHANGE INCREASES THE DECODE TIME FROM 40MS TO 50MS. IF MORE THAN 50MS IS NEEDED, VALUES OVER 700K SHOULD BE AVOIDED AS THEY MAY CAUSE THE RLC3 NOT TO DECODE AT ALL. ANY ADDITIONAL AUDIO FALSING CAN BE LESS ANNOYING BY SETTING DTMF MUTE TIMER RELATIVELY SHORT 1..2 SEC. (OR LESS WITH AUDIO DELAY MODULE)

IO CARD DB-25

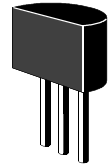
DB-PIN	LINE-#	I/O Type
1	N/A	GROUND
14	8	ANALOG
2	7	ANALOG
15	6	ANALOG
3	5	ANALOG
16	4	ANALOG
4	3	ANALOG
17	2	ANALOG
5	1	ANALOG
18	8	INPUT
6	7	INPUT
19	6	INPUT
7	5	INPUT
20	4	INPUT
8	3	INPUT
21	2	INPUT
9	1	INPUT
22	8	OUTPUT
10	7	OUTPUT
23	6	OUTPUT
11	5	OUTPUT
24	4	OUTPUT
12	3	OUTPUT
25	2	OUTPUT
13	1	OUTPUT

I/O CARD

S1 UP ON FOR LM335 TEMP SEN
 S2 UP ON FOR V-DIVIDER 25V

LM335 TEMPERATURE SENSOR

THE SENSOR CONVERTS TEMPERATURE INTO VOLTAGE WHICH IS READ BY THE CONTROLLERS ADC (ANALOG-DIGITAL CONVERTER). POWERING THE SENSOR IS ACCOMPLISHED BY TURNING THE APPROPRIATE DIP SWITCH 'ON' ON THE I/O BOARD. THE POWER SWITCH MUST BE ON AND THE VOLTAGE DIVIDER SWITCH OFF FOR THE TEMPERATURE SENSOR TO WORK.



1=N/C 2=Analog 3=Ground

Pins on the LM-335

SYSTEM RE-INITIALIZATION

METHOD #1 -PRESS AND HOLD THE INIT BUTTON ON THE MOTHER-BOARD. TURN ON THE POWER. WAIT FOR ABOUT 3 SECONDS (OR LONGER. RELEASE THE INIT BUTTON.

METHOD #2-WITH THE POWER ON. PRESS AND HOLD BOTH THE INI AND THE RESET BUTTONS. RELEASE THE RESET BUTTON WAIT AT LEAST 3 SECONDS. RELEASE THE INITIAL BUTTON.

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