



**MOTOROLA**  
Communications Parts Division

**RLN-4008B**  
**RADIO INTERFACE BOX**



The "RIB" allows interfacing between a radio and either the IBM PC, IBM AT, or Epson HX20 computers by changing RS232 levels to TTL levels. The "RIB" may be powered either by an optional internal 9 volt battery (60-82728J01) or by an optional 110 volt wall adapter (01-80357A57). For international use, a 198-242 volt 50 Hz adapter (General European Plug) is also available (01-80358A56). Below is a list of cables needed for particular radios and type of computer.

**RIB to Radio Model**  
**25 Pin Connector (P2)**

HT600	RTK-4205A
MOSTAR SMARTNET	30-80367B90
MSF 5000 DIGITAL	01-80355A30
RADIUS (P10)	01-80358A62
RADIUS (P100)	RTK-4208B
SABER	RTK-4203A
SPECTRA 900	30-80369B73
STX	01-80357A54
SYNTOR X9000	01-80353A75

**RIB to Computer**  
**15 Pin Connector (P4)**

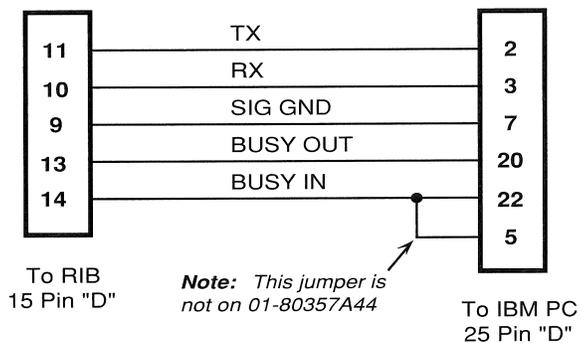
IBM PC	30-80369B71
IBM AT	30-80369B72
Epson HX20	01-80357A45

**Note**

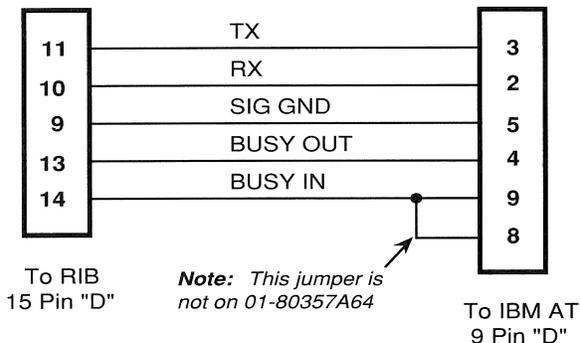
**Leaving the Radio Interface Box turned on and connected to an unpowered radio will shorten battery life.**

# CABLE SCHEMATICS

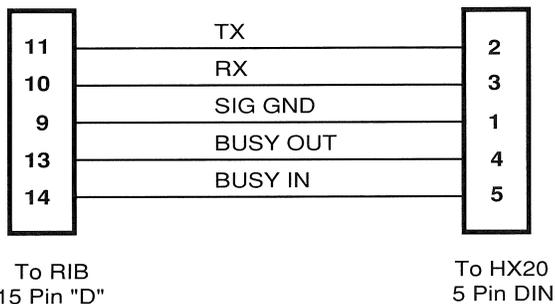
**30-80369B71 COMPUTER INTERFACE CABLE**  
(Later Version) From "RIB" to "IBM PC"



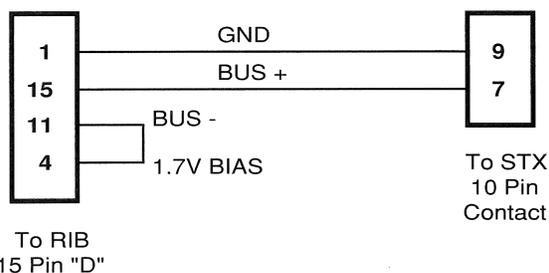
**30-80369B72 COMPUTER INTERFACE CABLE**  
(Later Version) From "RIB" to "IBM AT"



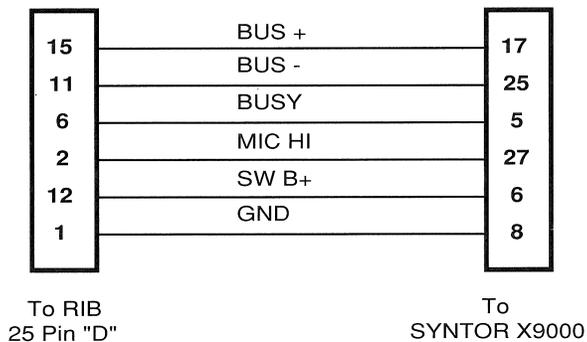
**01-80357A45 COMPUTER INTERFACE CABLE**  
From "RIB" to "HX20"



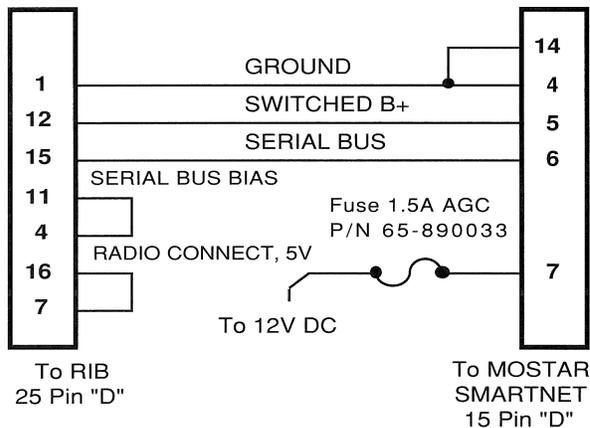
**01-80357A54 RADIO INTERFACE CABLE**  
From "RIB" to "STX"



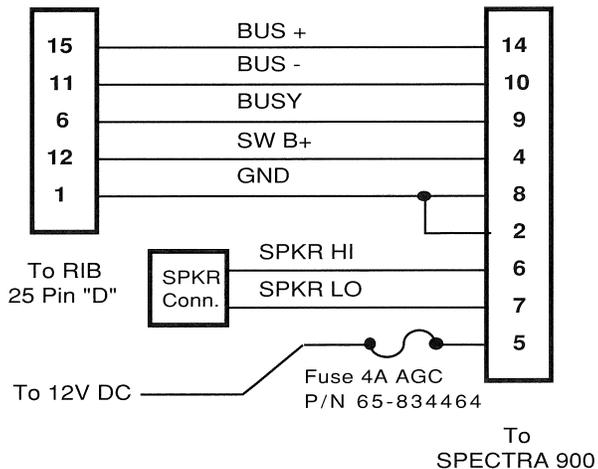
**01-80353A75 RADIO INTERFACE CABLE**  
From "RIB" to "SYNTOR X9000"



**30-80367B90 RADIO INTERFACE CABLE**  
From "RIB" to "MOSTAR SMARTNET"



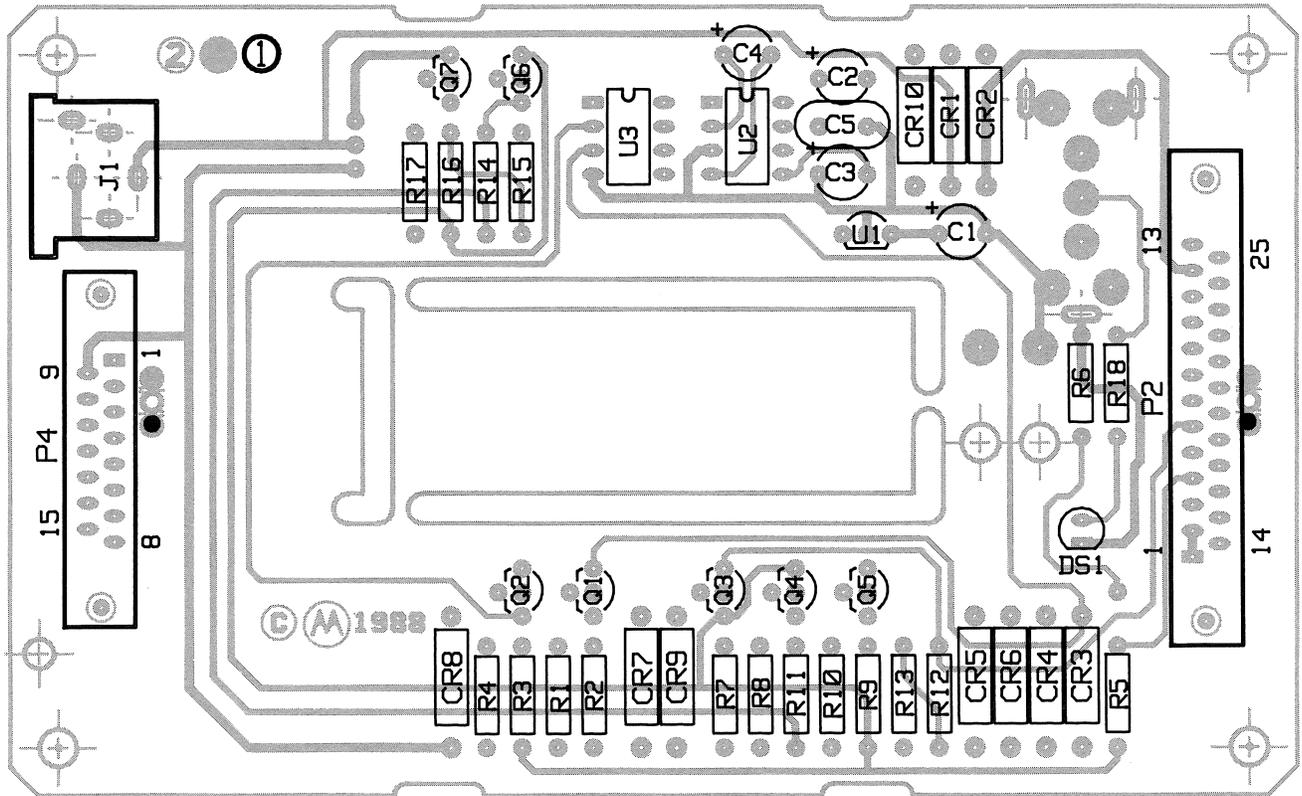
**30-80369B73 RADIO INTERFACE CABLE**  
From "RIB" to "SPECTRA 900"



The schematics for the following cables may be found in their respective manuals:

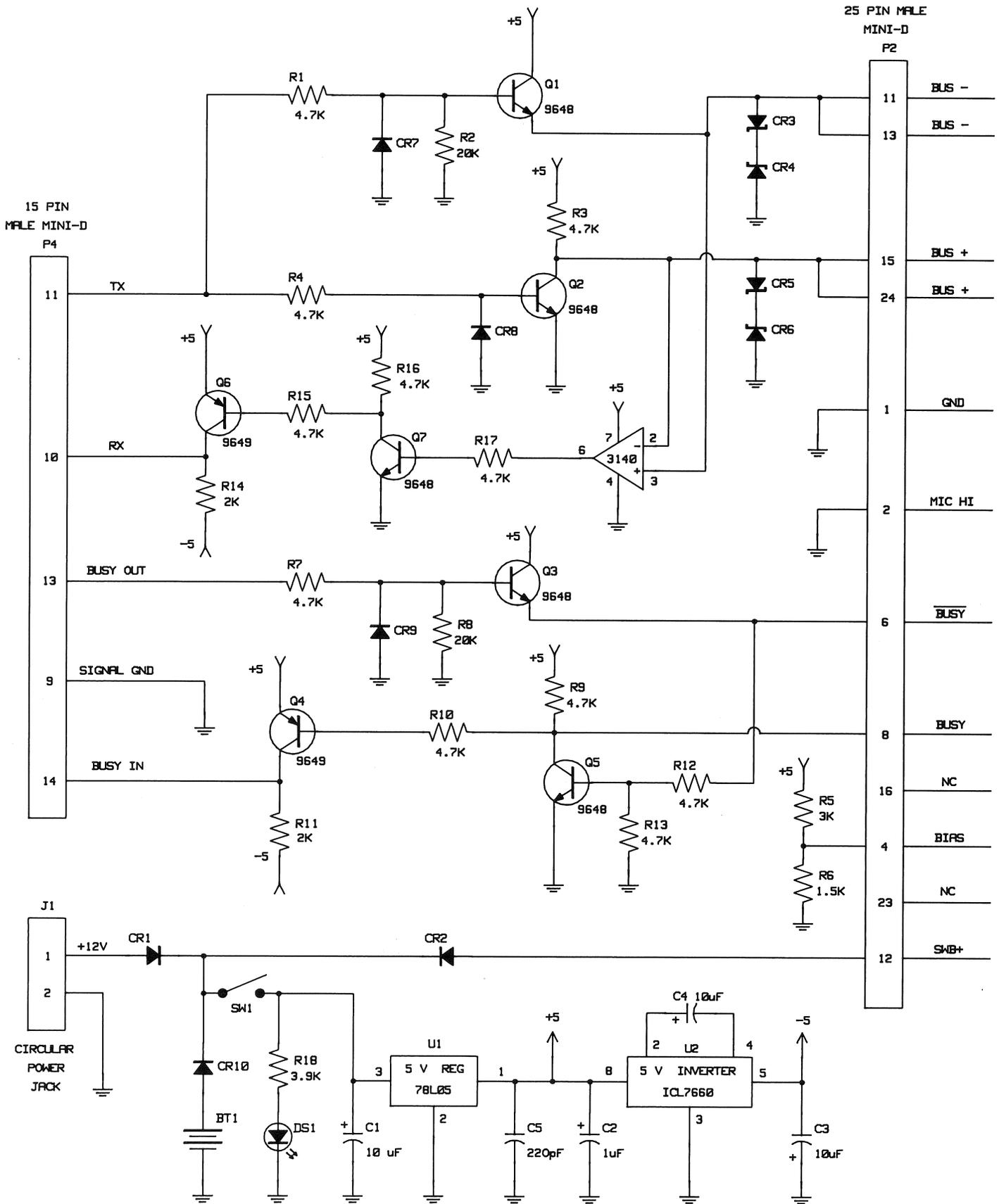
- |                 |             |
|-----------------|-------------|
| HT600           | RTK-4205A   |
| MSF5000 DIGITAL | 01-80355A30 |
| RADIUS (P10)    | 01-80358A62 |
| RADIUS (P100)   | RTK-4208B   |
| SABER           | RTK-4203A   |

## CIRCUIT BOARD COMPONENT LAYOUT DIAGRAM



REFERENCE SYMBOL	MOTOROLA PART NO.	DESCRIPTION
C1, C3, C4 C2 C5	23-11019A20 23-11019A09 21-11015B05	<b>CAPACITOR:</b> Electrolytic; 10 $\mu$ F; 25 V Electrolytic; 1 $\mu$ F; 50 V Disc; 220 pF; X5F
CR1, CR2, CR7 CR8, CR9, CR10 CR3, CR4, CR5 CR6	48-83654H01 48-05189E02	<b>DIODE:</b> Silicon; Signal  Zener; 7.5 V; 1/2 W
DS1	48-80379B06	<b>DISPLAY:</b> LED, Red Low Current
J1	09-80378B40	<b>JACK:</b> Receptacle, Power
P2 P4	28-80378B89 28-80378B88	<b>PLUG:</b> Connector, 25 Pos "D" Connector, 15 Pos "D"
Q1, Q2, Q3, Q5, Q7 Q4, Q6	48-00869648 48-00869649	<b>TRANSISTOR:</b> NPN; M9648 PNP; M9649
R1, R3, R7, R9, R10, R12, R13, R15, R16, R17 R2, R8 R5 R6	06-11009A65 06-11009A65  06-11009A80 06-11009A60 06-11009A53	<b>RESISTOR: FCF</b> 4.7K; 5%; 1/4 W 4.7K; 5%; 1/4 W  20K; 5%; 1/4 W 3.0K; 5%; 1/4 W 1.5K; 5%; 1/4 W

R11, R14 R18	06-11009A56 06-11009A63	2.0K; 5%; 1/4 W 3.9K; 5%; 1/4 W
S1	40-80378B39 40-80382B11	<b>SWITCH:</b> Rocker (RLN4008A only) Rocker (RLN4008B only)
U1 U2 U3	51-84621K01 51-83629M53 51-80345A01	<b>IC:</b> 78L05 Voltage Regulator ICL7660 Inverter CA3140E
<b>NONREFERENCED ITEMS</b>		
	02-80347B83 03-10907C23	Nut, M3 x .5; 4per Screw, M3 x .5 x 10; 4per
<i>RLN4008A version only</i>		
	03-00140375  15-80378B41 15-80378B42 15-80378B86 26-80379B38 32-80379B07 43-80378B93 75-84215A03	Screw, Tapping 4-40 x 7/8 Phillips Pan; 4per Housing, Top Housing, Bottom Housing, Battery Shield, Power Switch Seal, Dust Standoff Bumper, Foot; Rubber
<i>RLN4008B version only</i>		
	03-10945A14  09-80382B42 15-80380B40 42-80382B43 64-80382B12	Screw, Tapping P3.12 x 1.27 x 16 Star Pan; 4per Connector, Battery Housing Retainer, Battery Cover, Battery Comp.



RADIO INTERFACE BOARD SCHEMATIC