

USERS MANUAL

RF DATA LINK RADIOS

70-101BD

70-201BD

Midland Radio Corporation

Important Information

All rights reserved. No part of this publication may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language without the written permission of Midland Radio Corporation

No part of any copyrighted computer programs contained in the products referred to in this manual may be copied or reproduced without the express written consent of Midland Radio Corporation

Midland Radio Corporation reserves the right to change the products described in this manual without prior notice.

© Midland Radio Corporation

This manual is designed to facilitate the set-up of the Midland 70-101BD and 70-201BD RF Data Link Radio series. As necessary, user manual supplements will be published and distributed on the following forms:

Manual Addition (MA).....For supplemental information useful in product service or improvement. Printed on BLUE paper.

Change Notice (CN).....For details about changes made during production by model and serial number. Printed on YELLOW paper.

Manual Correction (MC).....For correcting literature errors not related to production changes. Printed on GREEN paper.

Technical Bulletin (TB)For solutions to field problems and tips for performance improvement. Printed on PINK paper.

Comments or suggestions concerning areas of manual improvement are welcome.

CAUTIONS

Exposure To Radio Frequency Energy

Your Midland radio is designed to comply with the following national and international standards and guidelines regarding exposure of human beings to radio frequency electromagnetic energy:

- United States Federal communications Commission, code of Federal Regulations: 47 CFR part 2 sub-part J
- American National Standards Institute (ANSI) / Institute of Electrical and Electronic Engineers (IEEE) C95. 1-1992
- Institute of Electrical and Electronic Engineers (IEEE) C95. 1-1999 Edition
- National Council on Radiation Protection and Measurements (NCRP) of the United States, Report 86, 1986
- International commission on Non-Ionizing Radiation Protection (ICNIRP) 1998

To control your exposure and ensure compliance with the general population or uncontrolled environment exposure limits, transmit no more than 50% of the time. The radio generates measurable RF energy exposure only when transmitting.

It is recommended that transmit antenna be kept at least 16 inches away from nearby persons to satisfy FCC RF exposure requirements. As part of the RF Exposure assessment procedure, you should also note any additional transmitting antennas in the immediate area that, because they are co-located with yours, could cause the maximum radiated energy to exceed a safe level.

Any antenna placed outdoors must be properly grounded. Please let qualified personnel experienced in antenna installation and familiar with local codes and regulations complete the antenna installation. Use extreme caution when installing antennae and follow all instructions included with the antennas.

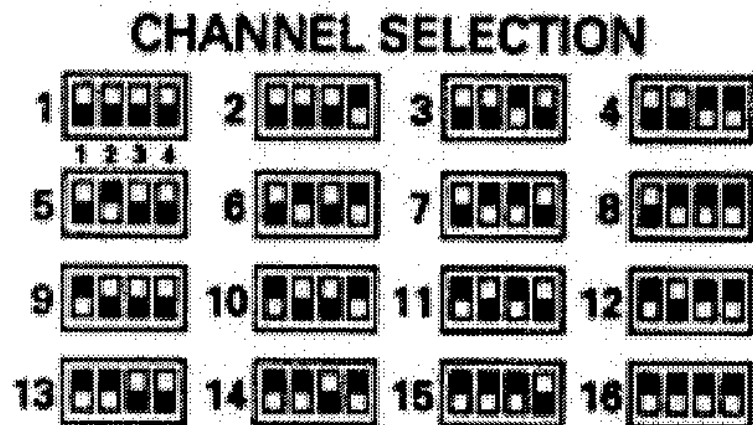
ACRONYMS AND ABBREVIATIONS

Below is a list of common electrical abbreviations used in documentation.

CTCSS----- Continuous Tone -Controlled Squelch System
DCS(or CDCSS) ----- Continuous Digital-Controlled Squelch System
EEPROM ----- Electrically Erasable Programmable Read Only Memory
MIL SPEC ----- Military Specification
RX ----- Receive
TX ----- Transmit
SINAD ----- The ratio in decibels of signal + noise + distortion to noise + distortion
VCO ----- Voltage Controlled Oscillator
TCXO ----- Temperature Controlled Crystal Oscillator
PLL ----- Phase Locked Loop

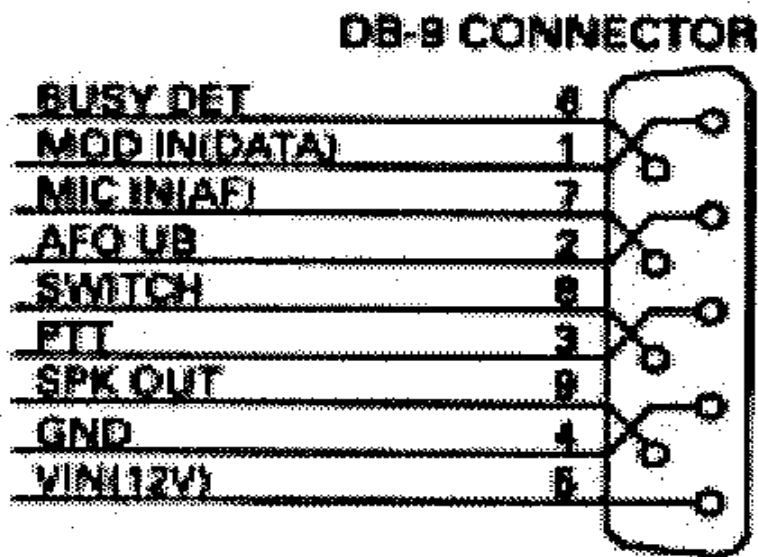
Installation and Setup Information for 70-101BD and 70-201BD Data Link Radios.

Transmit/Receive channels are chosen from the frequencies programmed by switches inside the cover. Refer to the channel data list provided by your dealer or servicer and set the DIP switches for the desired frequency.



Note: Not all of the switches may be useable. Which switches do have a function are set by your dealer or service technician through software.

All connections to the unit are made through the DB9 connector. Connect wiring according to the diagram below.



Connections to DB-9 connector:

1. Mod in (data). Audio sensitivity is 100mV RMS @ 60% Peak deviation.
2. AF out (data) (0.25 volt rms)
3. PTT . Ground to transmit.
4. GND
5. V in . 9-18 VDC
6. Busy Detector 0 volts DC = busy, 5 volts DC = open
7. Audio/Mic in. Sensitivity 5 mV. Typ.
8. Switch
9. Spkr out. 1 V. rms. typ. to 8 ohm load.

PS current:

Power save 15-30 mA. typ.

Standby 30-50 mA. typ.

Receive 35-60 mA. typ.

Transmit Low power 400-650 mA. typ.

Transmit High power 1100-1800 mA. typ.