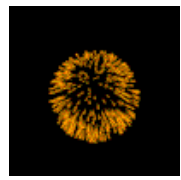


# Microphone plug and socket pinouts

[Back To Home Page](#)

PAGE STARTED  
25/12/2006

37227 hits



**! CQ DX CQ DX CQ DX CQ DX CQ !**



I would like to thank G4WPW for the use of this information from his site



I accept no responsibility for any problems that may result from using this information.

I accept no responsibility for information that is copied from this website and reproduced in any format on other websites.



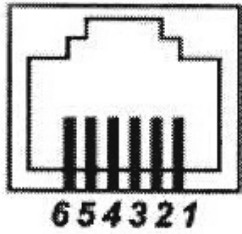
## POPULAR MICROPHONE PLUG AND SOCKET PINOUTS.



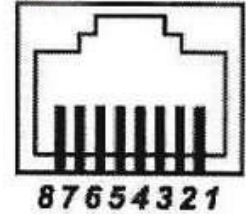


**XLR Plug**

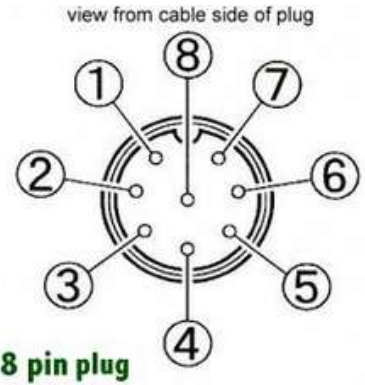
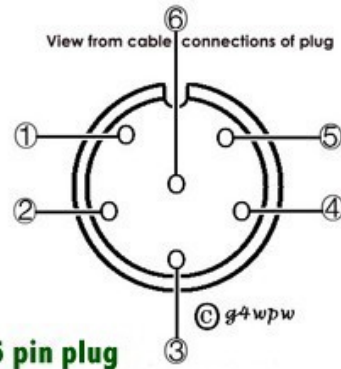
**6 Pin modular**



**8 pin modular**



diagrams © g4wpw



**KENWOOD MICROPHONES .**

### Five Most Popular Connections

The following diagrams demonstrate different types of connections for microphones, packet data and amplifiers. These diagrams will help answer some of the most commonly asked questions regarding connections to Kenwood radios.

<p><b>8 Pin Round Microphone Connection</b></p> <p>Microphone connection diagram</p> <ul style="list-style-type: none"> <li>Pin 1 Microphone</li> <li>Pin 2 Push To Talk</li> <li>Pin 3 Down</li> <li>Pin 4 Up</li> <li>Pin 5 Svc (150ma Max)</li> <li>Pin 6 RX Audio (Some Models)</li> <li>Pin 7 Mic Ground</li> <li>Pin 8 Ground</li> </ul>	<p><b>Speaker Microphone Connection</b></p> <p>2.5mm Plug</p> <ul style="list-style-type: none"> <li>Tip Speaker</li> <li>Sleeve Speaker Ground &amp; PTT</li> </ul> <p>3.5mm Plug</p> <ul style="list-style-type: none"> <li>Tip No Connection</li> <li>Center Ring Microphone</li> <li>Sleeve PTT</li> </ul> <p>Speaker microphone connection</p>
<p><b>Modular Microphone Plug</b></p> <p>Modular microphone plug</p> <ul style="list-style-type: none"> <li>Pin 1 Up</li> <li>Pin 2 Svc (100ma Max)</li> <li>Pin 3 Ground</li> <li>Pin 4 Push To Talk</li> <li>Pin 5 Ground</li> <li>Pin 6 Microphone</li> <li>Pin 7 RX Audio (Some Models)</li> <li>Pin 8 Down</li> </ul>	<p><b>Data Connection</b></p> <p>Data connection</p> <ul style="list-style-type: none"> <li>Pin 1 Packet Data Input (Microphone)</li> <li>Pin 2 Ground (Microphone Ground)</li> <li>Pin 3 Packet Standby (Push To Talk)</li> <li>Pin 4 9600bps Rx Audio Output</li> <li>Pin 5 1200bps Rx Audio Output</li> <li>Pin 6 Squelch Control Output</li> <li>Shell Earth (GND)</li> </ul>
<p><b>Amplifier Connection (Most HF Radios)</b></p> <p>Amplifier connection (most HF radios)</p> <ul style="list-style-type: none"> <li>Pin 2 Ground (Shield)</li> <li>Pin 4 Relay</li> <li>Pin 6 ALC</li> </ul>	





[MORE KENWOOD CONNECTIONS INFO.pdf file](#)

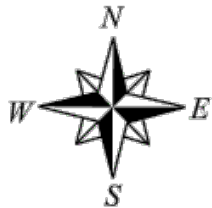
[KENWOOD MC30-MC35 MICROPHONE.](#)

[KENWOOD MC-42S MICROPHONE.](#)

[KENWOOD MC-43 MICROPHONE.](#)

[KENWOOD MC-44 MICROPHONE.](#)

[KENWOOD MC-45 MICROPHONE.](#)



[KENWOOD MC-46 MICROPHONE.](#)

[KENWOOD MC-47 MICROPHONE.](#)

[KENWOOD MC-48B MICROPHONE.](#)

[KENWOOD MC-55 MICROPHONE.](#)

[KENWOOD MC-57 MICROPHONE. \(photo only\)](#)

[KENWOOD MC-60 MICROPHONE.](#)

[KENWOOD MC-60A MICROPHONE.](#)



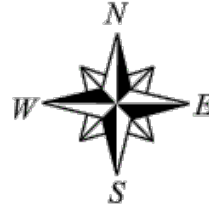
[KENWOOD MC-80 MICROPHONE.](#)

[KENWOOD MC-85 MICROPHONE.](#)

[KENWOOD MC-90 MICROPHONE.](#)

[KENWOOD TH22A SPEAKER/MIC.](#)

[KENWOOD TH78A SPEAKER/MIC.](#)



KENWOOD-TS120S-120V-700G-  
700S-130S-130V-490-520S-530S-  
820S-830S-  
TR2300-TR2200-TR7200-TR7400A-  
TR7500

PIN1	MIC
PIN2	PTT
PIN3	PTT/EARTH
PIN4	SCREEN AND EARTH



7 PIN REMOTE PLUG/SOCKET.

KENWOOD-TS120-130-140-180-430-440-450-530-570-680-690-  
830-870-940-950.

PIN1	SPEAKER OUT
PIN2	RELAY COMMON GROUND/EARTH
PIN3	PTT FOR FOOT SWITCH
PIN4	RELAY CLOSED ON TRANSMIT
PIN5	RELAY OPEN ON TRANSMIT
PIN6	ALC INPUT
PIN7	+12VOLTS ON TRANSMIT ( 10 Ma Max )

PLUG SHELL EARTH.

-----  
 6 PIN ACC PLUG/SOCKET.  
 KENWOOD-TS-450-690-570-850-870-950.  
 PIN1 SIGNAL GROUND/EARTH  
 PIN2 TRANSMIT DATA  
 PIN3 RECEIVE DATA  
 PIN4 CTS ENABLE TX  
 PIN5 RTS ENABLE RX  
 PIN6 N/C  
 SHELL EARTH  
 -----

13 PIN ACC2 PLUG.

KENWOOD-TS440-450-680-690-570-711-790-811-850-870-940-950  
 PIN1 N/C  
 PIN2 N/C  
 PIN3 RX AUDIO OUT  
 PIN4 SCREEN FOR PIN3  
 PIN5 SQUELCH CONTROL OR N/C  
 PIN6 S/METER OUTPUT  
 PIN7 N/C  
 PIN8 CHASSIS/GROUND  
 PIN9 PTT- STANDARD MIC INPUT IS MUTED  
 PIN10 N/C  
 PIN11 MIC INPUT  
 PIN12 SCREEN FOR PIN 11  
 PIN13 PTT- STANDARD MIC INPUT IS ACTIVE  
 SHELL EARTH  
 -----

-

KENWOOD-TR9000-9030-9130-9300-9500-7700-7730-7750-7800-7850-  
 7930-7950-8400  
 PIN1 MIC  
 PIN2 PTT  
 PIN3 DOWN  
 PIN6/CENTER EARTH  
 PIN4 UP  
 PIN5 NC + 8VOLT SOME MODELS  
 -----

-

KENWOOD-TR7600-TR7625  
 PIN1 MIC  
 PIN2 PTT  
 PIN3 N/C  
 PIN4 CHASSIS/GROUND  
 PIN5 MIC SCREEN  
 -----

-

KENWOOD-TS480 ( 8 Pin modular )  
 PIN1 UP

PIN2 +8 VOLTS  
PIN3 GND  
PIN4 PTT  
PIN5 MIC GND  
PIN6 MIC  
PIN7 N/C  
PIN8 DOWN

-----  
-  
KENWOOD-TS-50-60-140-430-440-450-570-660-670-780-930-430-670-711 TS-811-850-870-930-940-950-440-701-790-680-690-TS-2000  
TR-3200-7900-7950-50-751-851  
TM-201A-201B-401A-TM401B-211-221-231-241-321-331-3530-421-431-441-521-531-541  
TM-621-631-701-721-731-2530-2550-2570  
TW4000-4100  
PIN1 MIC  
PIN7.8 SCREEN EARTH  
PIN2 PTT  
PIN3 DOWN  
PIN4 UP  
PIN5.6 NC + 8VOLT SOME MODELS

-----  
-  
MODULAR MIC PLUG/SOCKET.  
KENWOOD-TM-251-255-261-451-455-461-641-642-732-733-741-742-941-942  
YAESU MICROPHONES.  
TMG-707. V7A.

[YAESU-MB1B8.MH-1B8 MICROPHONES](#)

[YAESU-MD-1C8 MICROPHONE](#)

-----  
-  
[YAESU YM47.YM49 MICROPHONES](#)  
[YAESU YM50 MICROPHONE](#)  
[YAESU YM34.YM35.YM36.YM37.YM38.MICROPHONES](#)  
  
[YAESU YD148 MICROPHONE](#)  
[YAESU YD844 MICROPHONE](#)  
[YAESU YE7A MICROPHONE](#)  
[YAESU MH15D8 MICROPHONE](#)  
[YAESU MH25A8J MICROPHONE](#)  
[YAESU MH31 MICROPHONE](#)  
[YAESU MH36 MICROPHONE](#)  
[YAESU MH48 MICROPHONE](#)  
  
[YAESU MD100 MICROPHONE](#)

YAESU MD200 MICROPHONE

YAESU-FT736-FT747GX-FT757GX-FT650-FT655-FT767-FT890-FT920-FT990-FT990D-  
FT480R-FT847  
FT1000-FT1000D-FT1000MP + MKV

PIN1	MIC UP
PIN2	EARTH (+ 5VOLTS FT847-FT920-FT1000MP )
PIN3	DOWN
PIN4	FAST SCAN
PIN5	EARTH
PIN6	PTT
PIN7	SCREEN/EARTH
PIN8	MIC

-----  
YAESU FT221R-FT101B-FT101E-FT101Z-FT101ZD-FT902-FT902DM. ( see YD148/YD844  
microphone above.)

PIN1	MIC SCREEN/EARTH ( PTT EARTH ON FT101B/101E.FT101Z/101ZD.FT902/902DM.)
PIN2	MIC
PIN3	PTT
PIN4	EARTH ON FT221R.( N/C ON FT101Z/101ZD.FT101B/101E.FT902/902DM. )

-----  
YAESU FT200-FT201-FT125C-FTC212-FT2B-FT300C-FT224-FT225RD-FT2FB-FT223-  
FT220-FTC212-FT301.  
FT7-FT227R-FT401B-FT501-FL101-FTDX401-FTDX-560.

( See YD-148 microphone above.)

-----  
YAESU FT840-FT2200-FT990.

8 PIN CONNECTOR.  
PIN4 (external speaker some models)(black)  
PIN6 PTT (red)  
PIN7 GRND (green)  
PIN8 MIC (yellow)

-----  
YAESU FT2400-FT2500.

8 PIN CONNECTOR.  
PIN2 (external speaker some models)(black)  
PIN3 PTT (red)  
PIN5 GRND (green)  
PIN4 MIC (yellow)

---

 YAESU FT290R-FT730-FT790R

PIN1	MIC SCREEN/EARTH
PIN2	MIC
PIN3	PTT
PIN4	+ 12VOLT ( + 5VOLT FT730 )
PIN5	SPEAKER
PIN6	UP
PIN7	DOWN

---

 YAESU FT708R-FT208R HAND HELD.

PIN1	MIC ( white )
PIN2	SPEAKER ( black )
PIN3	PTT ( red )
PIN4	MIC SCREEN
PIN5	NC
PIN6	SPEAKER ( blue )

---

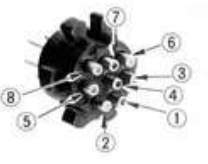
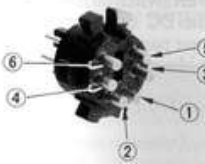
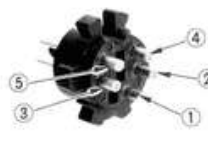
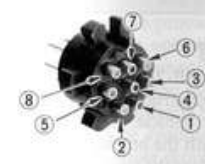
 YAESU-FT100-FT90-FT8100 ( 6 pin Modular Plug ) (SEE MH36 microphone above.)

PIN1	Multi-function switching for P,P1,P2 SW2.
PIN2	N.C. 9600bps packet data out FT90
PIN3	+ 9VOLT
PIN4	EARTH
PIN5	MIC.
PIN6	SW1.PTT,UP,DOWN,Acc

[CLICK FOR YAESU FT100 SERIES DATA CONNECTION DIAGRAM](#)

---

**Connector Pinouts**

BAND DATA	CAT
 <p>1. +13.5 V 2. TX GND 3. GND 4. BAND DATA A 5. BAND DATA B 6. BAND DATA C 7. BAND DATA D 8. LINEAR</p>	 <p>1. GND 2. SERIAL OUT 3. SERIAL IN 4. PTT 5. S/PO 6. NC</p>
TUNER 1 (used w / FC-800)	TUNER 2 (used w / FC-10)
 <p>1. GND 2. +13.5V 3. DATA 4. GND 5. GND BY FC-800</p>	 <p>1. +13.5V 2. TX GND 3. GND 4. DATA IN 5. DATA OUT 6. TUNER SENSE 7. RESET 8. TX INH</p>

Yaesu "cat" pinout connections

## YAESU-FT897-FT857-FT817-FT900 ( 8 pin Modular Plug )

PIN1	DOWN
PIN2	UP
PIN3	+ 5VOLT
PIN4	MIC EARTH
PIN5	MIC
PIN6	PTT
PIN7	GROUND
PIN8	FAST SCAN

-----  
YAESU-FT2800-FT7800M-FT8800E-FT8900R ( See MH48 microphone above )

PIN1	SW2
PIN2	SW1
PIN3	+ 8VOLT
PIN4	GROUND
PIN5	MIC
PIN6	PTT

-----  
YAESU-FTDX9000D ( 3 pin XLR Plug front panel) PLUS ( 8 pin Plug rear panel.)  
( XLR PLUG FRONT PANEL.)

PIN1	MIC GRND.
PIN2	MIC HOT.
PIN3	MIC COLD.

( 8 PIN PLUG REAR PANEL.)

PIN1	UP.
PIN2	+5 VOLTS.
PIN3	DOWN.
PIN4	FAST SCAN.
PIN5	GROUND.
PIN6	PTT.
PIN7	MIC GROUND.
PIN8	MIC.

( [Click for more](#) ) [FTDX9000D data.](#)

**ICOM MICROPHONES.**

[Click here to Download Icom manuals FREE.](#)

ICOM-IC7400-IC746-IC756PRO-IC7800

PIN1	MIC + DC VOLTS FOR ICOM ONLY MICROPHONE
PIN2	+ 8VOLTS 10Ma TO AVOID DAMAGING THE REGULATOR DO NOT SHORT TO GROUND
PIN3	UP/DOWN
PIN4	SQUELCH
PIN5	PTT
PIN6	GROUND
PIN7	MIC SCREEN/EARTH
PIN8	AUDIO OUT



-----  
ICOM-IC703-IC706MK1-IC706MK2-IC706MK3-IC2000 ( 8 Pin Modular Plug )

PIN1 + 8VOLT  
PIN2 UP/DOWN  
PIN3 AUDIO OUT  
PIN4 PTT  
PIN5 MIC GROUND  
PIN6 MIC  
PIN7 GROUND/EARTH  
PIN8 SQUELCH

-----  
ICOM-IC-202-215-22S-245-280-402-502

PIN1 MIC (yellow)  
PIN2 PTT (red )  
external speaker plug ( green)  
PIN4 GROUND.(black)

-----  
ICOM-IC-211

PIN1 MIC  
PIN2 PTT  
PIN3 N/C  
PIN4 GROUND.

-----  
ICOM-IC-120-271A-271E-275-1200-1201-1271-1275-228-229-22U-2400-25-27-28-  
2500-255-260-290-3200  
IC-3210-3220-37A-38A-375-45-47-471-475-48-490-505-551-560-575-707-720-725-  
726-728  
IC-729-730-735-737-740-745-751-761-765-781-821-900-901-910X.

PIN1 MIC (yellow)  
PIN2 REPEATER TONE (+ 8/9 volts some models)  
PIN3 UP/DOWN  
PIN4 N/C (squelch some models )  
PIN5 PTT(red)  
PIN6 EARTH (black)  
PIN7 MIC SCREEN  
PIN8 N/C (green)(external speaker some models )

ICOM-IC251E-IC451E. (See SM5 hand mic & SM5 desc mic.)

PIN1 MIC ( white. connection at + 9VOLTS above earth )  
 PIN2 NC  
 PIN3 NC  
 PIN4 NC  
 PIN5 PTT ( red )  
 PIN6 PTT ( black )  
 PIN7 MIC SCREEN  
 PIN8 NC

[ICOM... SM20 MIC CONNECTIONS.](#)

[ICOM... IC-HM7 HAND MIC PHOTO.](#)

---

[ICOM... IC-HM7 HAND MIC SCHEMATIC.](#)

[ICOM...IC-SM2 MIC CONNECTIONS.](#)

[ICOM...IC-SM5 DESC MIC CONNECTIONS.](#)

[ICOM... SM6 MIC CONNECTIONS.](#)

[ICOM... SM10 MIC CONNECTIONS.](#)

[ICOM... IC-HM12 MIC CONNECTIONS.](#)

[MORE IC-HM12 - SM20 MIC INFORMATION.](#)

[ICOM... IC-HM5 MIC CONNECTIONS.](#)

[ICOM... IC-HM15 MIC CONNECTIONS.](#)

[ICOM...HM12 MIC CONNECTIONS.](#)

[ICOM...HM103 MIC CONNECTIONS.](#)

[ICOM...HM151 MIC CONNECTIONS \(IC-7000 \).](#)

[ICOM...HM77-HM78-HM79-HM95-HM97 MIC CONNECTIONS.](#)

[IC-821H.... ACC SOCKET CONNECTIONS.](#)

### MORE ICOM MICROPHONE INFO

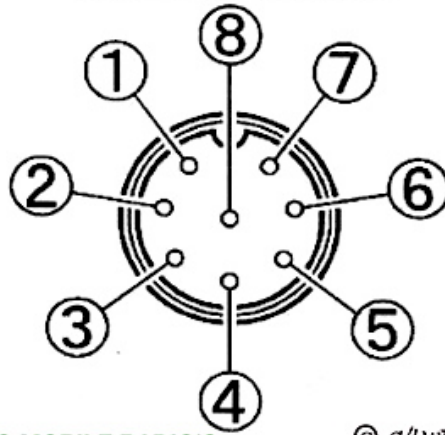
MODEL	PIN NUMBERS								
	1	2	3	4	5	6	7	8	
IC740	mic	9 volts	n/c	n/c	ptt	earth	mic	earth	n/c
IC730	mic	8 volts	up/down	n/c	ptt	earth	mic	earth	n/c
IC740	mic	8 volts	up/down	squelch	ptt	earth	mic	earth	n/c
IC745	mic	8 volts	up/down	squelch	ptt	earth	mic	earth	n/c
IC751	mic	8 volts	up/down	squelch	ptt	earth	mic	earth	audio out
IC505	mic	8 volts	up/down	squelch	ptt	earth	mic	earth	n/c
IC560	mic	9 volts	up/down	squelch	ptt	earth	mic	earth	n/c
IC255	mic	9 volts	up/down	n/c	ptt	earth	mic	earth	n/c
IC260	mic	9 volts	up/down	n/c	ptt	earth	mic	earth	n/c
IC290	mic	8 volts	up/down	squelch	ptt	earth	mic	earth	n/c
IC25	mic	8 volts	up/down	squelch	ptt	earth	mic	earth	n/c
IC251	mic	9 volts	n/c	n/c	ptt	earth	mic	earth	n/c
IC271	mic	8 volts	up/down	squelch	ptt	earth	mic	earth	audio out
IC45	mic	8 volts	up/down	squelch	ptt	earth	mic	earth	audio out
IC490	mic	8 volts	up/down	squelch	ptt	earth	mic	earth	tone
IC451	mic	9 volts	up/down	squelch	ptt	earth	mic	earth	n/c
IC471	mic	8 volts	up/down	squelch	ptt	earth	mic	earth	audio out
IC120	mic	8 volts	up/down	squelch	ptt	earth	mic	earth	audio out

## ALINCO.

[Click here to Download ALINCO Instruction/Service manuals FREE.](#)

**PIN 1** MIC (yellow)  
**PIN 2** PTT ( orange)  
**PIN 3** DWN (white)  
**PIN 4** UP (green)  
**PIN 5** +5v (red) max current 25mA  
**PIN 6** (purple) see notes:  
**PIN 7** MIC GND (black/shield)  
**PIN 8** GND (grey)  
 note:  
**PIN 6 info:**  
 DR-590/592/599/600=bus line for remote commands from mic  
 DR-110/112/570=no connection  
 DR-130=pc programing bus

view from cable side of plug



ALINCO MOBILE RADIO'S

© g4wpw

ALINCO DX70-DX70T-DR150TE-DR430-DR510-DR570-DR590-DR592T-DR599T-DR600T-ALR22H-ALD24T-ALR22T-ALR72T-DR110-DR112

PIN1 MIC  
 PIN2 PTT  
 PIN3 DOWN  
 PIN4 UP  
 PIN5 + 5VOLT ( Max current 25Ma )  
 PIN6 AUDIO OUT ( remote DR150TE-DR590-DR592-DR599-DR600 ) SEE ABOVE  
 DIAGRAM REFERENCE.  
 PIN7 MIC SCREEN/EARTH  
 PIN8 EARTH

-----  
 ALINCO DR605 ( Modular Plug )

PIN1 + 5VOLT  
 PIN2 DOWN  
 PIN3 N/C  
 PIN4 PTT  
 PIN5 MIC EARTH  
 PIN6 MIC  
 PIN7 GROUND/EARTH  
 PIN8 UP

-----  
 ALINCO 22T/E.24E/T

PIN1 MIC  
 PIN2 PTT  
 PIN3 DOWN  
 PIN4 UP  
 PIN5 + 8VOLT  
 PIN6 N/C  
 PIN7 MIC EARTH  
 PIN8 GROUND

-----  
 ALINCO EMS-14. - ADONIS AM-508E. -WATSON AM308 MICROPHONES.

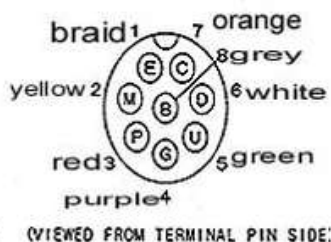
YELLOW MIC  
 SCREEN EARTH (ground)  
 GREY PTT ( + VOLTAGE FEED ON ADONIS D80 )  
 BLUE PTT EARTH ON WATSON 308.  
 PURPLE PTT EARTH (ground)  
 GREEN MIC UP  
 ORANGE COMMON (connect to ground)  
 WHITE MIC DOWN ( + VOLTS WATSON AM-308 )  
 BLACK MIC DOWN ON WATSON AM-308  
 RED + VOLTS FEED( PTT ON ADONIS D80 AND WATSON AM-308 )

[ALINCO EMS-14 information document.](#)

#### ADONIS AM708E.

ADONIS AM-708E  
 Terminals of Microphone Output Connector and ⑩ & ⑪  
 and "ADONIS" standard terminal layout (8P)  
 (Fig. 2)

BRAID ⑩ E: MICEARTH  
 YELLOW ② M: MIC  
 RED ③ P: PRESS TO TALK  
 PURPLE ④ G: PRESS TO TALK (EARTH)  
 GREEN ⑤ U: UP  
 WHITE ⑥ D: DOWN  
 ORANGE ⑦ C: U/D COMMON  
 GREY ⑧ B: DC FEEDING (DIRECT CURRENT)



ASDEN.

PCS-5000-6000-7000

PIN 1 MIC.  
 PIN 2 MIC GROUND.  
 PIN 3 -  
 PIN 4 DOWN.  
 PIN 5 UP.  
 PIN 6 COMMON GROUND.  
 PIN 7 PTT.  
 PIN 8 +13.8 VOLTS

STANDARD.

C58-C78-C88-C1100-C4100-C5800-C7800-C8800-C8900

PIN 1 MIC.  
PIN 2 PTT.  
PIN 3 SPEAKER.  
PIN 4 COMMON (NOTE:+8VOLTS ON THIS CONNECTION.)  
PIN 5 DOWN.  
PIN 6 UP.  
PIN 7 GROUND.

Note.0.001uF capacitor is connected between pin 1 and pin 7

-----  
-----

STANDARD.

C5000-C5200-C6000-C6000S

PIN 1 MIC.  
PIN 2 PTT.  
PIN 3 SPEAKER.  
PIN 4 COMMON.  
PIN 5 UP.  
PIN 6 DOWN.  
PIN 7 CALL.  
PIN 8 GROUND.

-----  
-----

STANDARD.

C5900 ( 8 pin modular type plug.)

PIN 1  
PIN 2  
PIN 3  
PIN 4 PTT.  
PIN 5 GROUND.  
PIN 6 MIC.  
PIN 7  
PIN 8

-----  
-----

DRAKE TR7

[TEN-TEC.](#)

PIN 1 MIC. [ORION ETC. microphone info and Schematic.](#)  
PIN 2 PTT.  
PIN 3/4 EARTH/GROUND.  
JRC.JST-135  
PIN1 MIC UP  
PIN2 NC  
PIN3 MIC DOWN  
PIN4 + 9 VOLTS  
PIN5 PTT EARTH  
PIN6 PTT  
PIN7 MIC EARTH  
PIN8 MIC

[RADIO SHACK.](#)

[RADIO SHACK. RJ45 CONNECTOR](#)  
Models HTX-212.HTX242.  
PIN2 GROUND/EARTH (black)  
green EXTERNAL SPEAKER  
PIN5 MIC (yellow)  
PIN6 PTT (red)  
[RADIO SHACK HTX-100 MICROPHONE](#)

[MFJ.](#)

[MFJ-8621. DATA CONNECTIONS.](#) Must be configured for 1200 baud operation.

Note:This radio has un-squelched output.use "software DCD"

PIN1 AFSK In (yellow)  
PIN2 GROUND/EARTH (black)  
PIN3 PTT (red)  
PIN4 AFSK Out (green)

[COLLINS S-line \(KWM-2\)](#)

[Click for Connection illustration.](#)

[HEATHKIT.](#)

[Click for Connection schematic.](#)

[SHURE 444.](#)

[Click for Shure 444 schematic.](#)



[for latest updates please click this link](#)

