

**IMPORTANT NOTICE ! Caution:**

I have spent many years drawing diagrams, gathering information, and compiling this document. I have made every effort to verify, and confirm the information contained in these pages and drawings. Having made the above statement, I accept no responsibility for information contained in this document. All information in this document is under copyrights, and displayed with permissions. ***I am NOT responsible for any errors, I accept no responsibility for any issues that may result from using the information contained in this document*** G. E. Rogers K4ABT, d/b/a BUXCOMM Corporation

**Cables and drawings shown in this document may be combined to connect your transceiver to:  
RASCAL, TNC, or related device; For quote, call BUXCOMM Toll Free, 1 800 726 2919  
Or 1 866 300 1969, Monday – Friday, 9:00 AM – 4:00 PM. Saturday 9 AM to 2 PM**

**Shown below, are miscellaneous accessory drawings and late additions.**

**For the six (6) pin Mini DIN shown next , see Note 10 on page 4 of this document.**



Rear panel view

| PIN #/NAME | DESCRIPTION                                           |
|------------|-------------------------------------------------------|
| ① DATA IN  | Communication data input.                             |
| ② GND      | Ground for DATA IN, DATA OUT and AF OUT.              |
| ③ PTP      | Transmits when grounded.                              |
| ④ DATA OUT | Outputs 9600 bps receive data.                        |
| ⑤ AF OUT   | Outputs 1200 bps receive data.                        |
| ⑥ SQ       | Squelch output.<br>Goes to ground when squelch opens. |



**ISO Standard, SIX (6) pin Mini DIN accessory (data I/O) on most late model transceivers.**



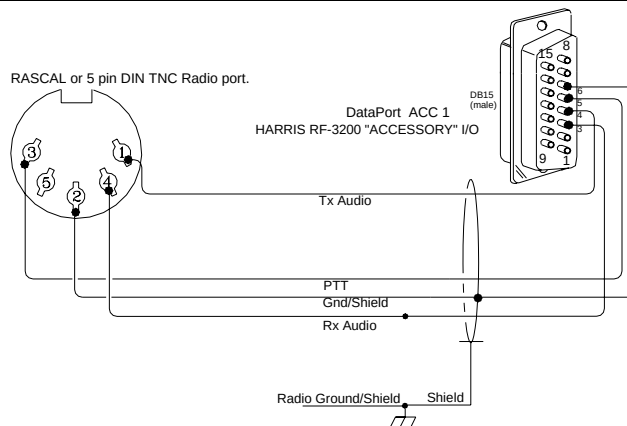
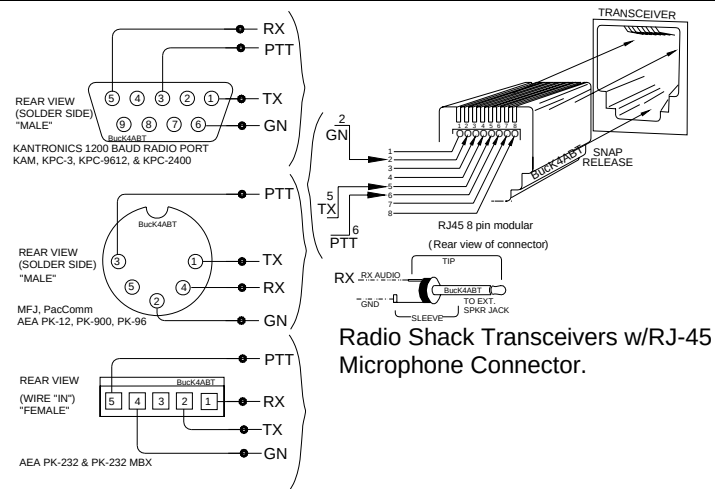
| ACC(1)                                                                                                     | PIN NO. | PIN NAME | DESCRIPTION                                                                                      | SPECIFICATIONS                                                                                                                                          |
|------------------------------------------------------------------------------------------------------------|---------|----------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p>Rear panel view</p> | 1       | RTTY     | Controls RTTY keying.                                                                            | "HIGH" level : More than 2.4 V<br>"LOW" level : Less than 0.6 V<br>Output current : Less than 2 mA                                                      |
|                                                                                                            | 2       | GND      | Connects to ground.                                                                              | Connected in parallel with ACC(2) pin 2.                                                                                                                |
|                                                                                                            | 3       | SEND     | Input/output pin.<br>Goes to ground when transmitting.<br>When grounded, transmits.              | Ground level : -0.5 V to 0.8 V<br>Output current : Less than 20 mA<br>Input current (Tx) : Less than 200 mA<br>Connected in parallel with ACC(2) pin 3. |
|                                                                                                            | 4       | MOD      | Modulator input.<br>Connects to a modulator.                                                     | Input impedance : 10 kΩ<br>Input level : Approx. 100 mV rms                                                                                             |
|                                                                                                            | 5       | AF       | AF detector output.<br>Fixed, regardless of [AF] position in default settings. (see notes below) | Output impedance : 4.7 kΩ<br>Output level : 100 to 300 mV rms                                                                                           |
|                                                                                                            | 6       | SQLS     | Squelch output.<br>Goes to ground when squelch opens.                                            | Squelch open : Less than 0.3 V/5 mA<br>Squelch closed : More than 6.0 V/100 μA                                                                          |
|                                                                                                            | 7       | 13.8 V   | 13.8 V output when power is ON.                                                                  | Output current : Max. 1 A<br>Connected in parallel with ACC(2) pin 7.                                                                                   |
|                                                                                                            | 8       | ALC      | ALC voltage input.                                                                               | Control voltage : -4 to 0 V<br>Input impedance : More than 10 kΩ<br>Connected in parallel with ACC(2) pin 5.                                            |



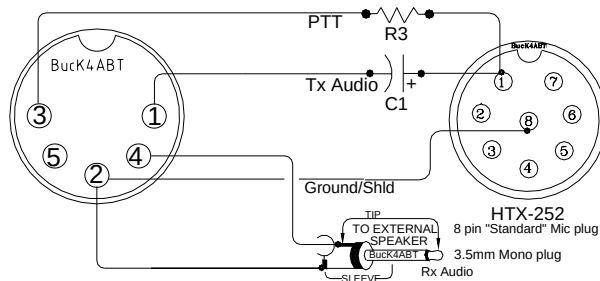
**Late Model (most) ICOM transceivers with 8 pin DIN (ACC1) jack.**



This ACC1 jack may also work with early Icom transceivers,  
however FSK may not be present at pin 1.

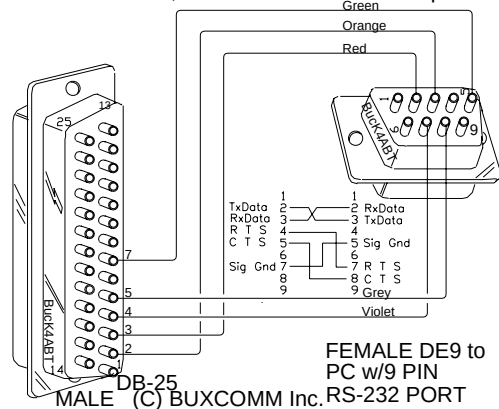


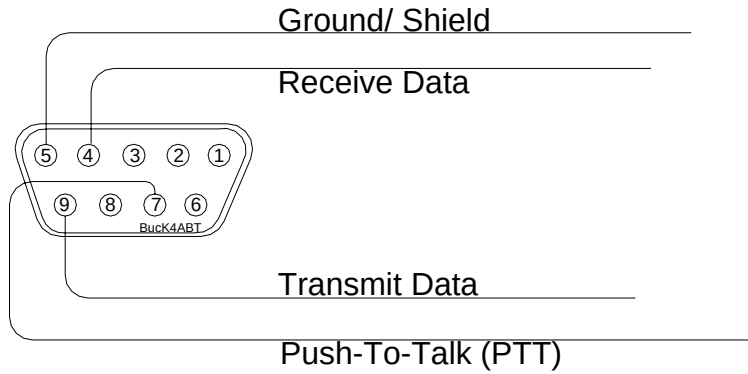
### RASCAL GLX to HARRIS RF-3200



### BUXCOMM RASCAL GLX to Radio Shack, HTX-252

DB25M to DB9F, 6 ft TNC to PC serial comport cable

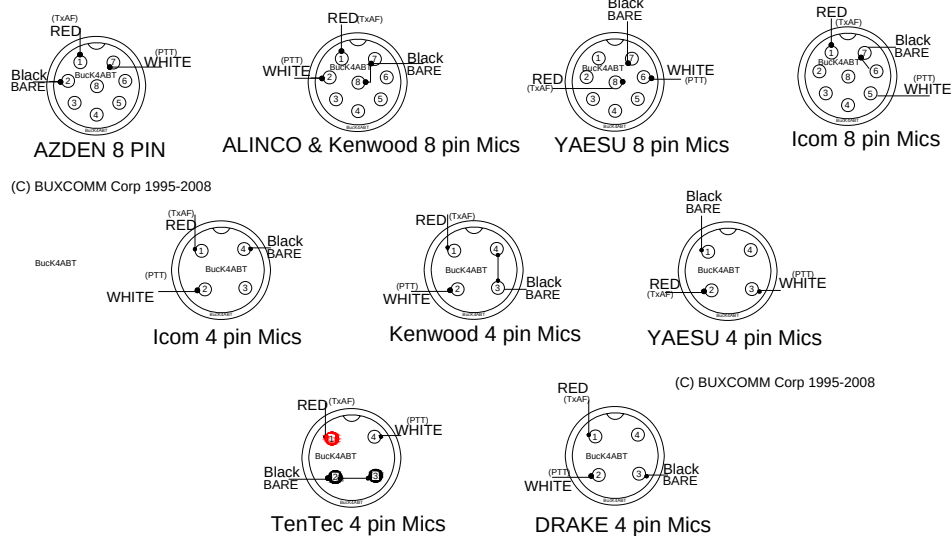




ALINCO DR-135 @ 1.2kb/s

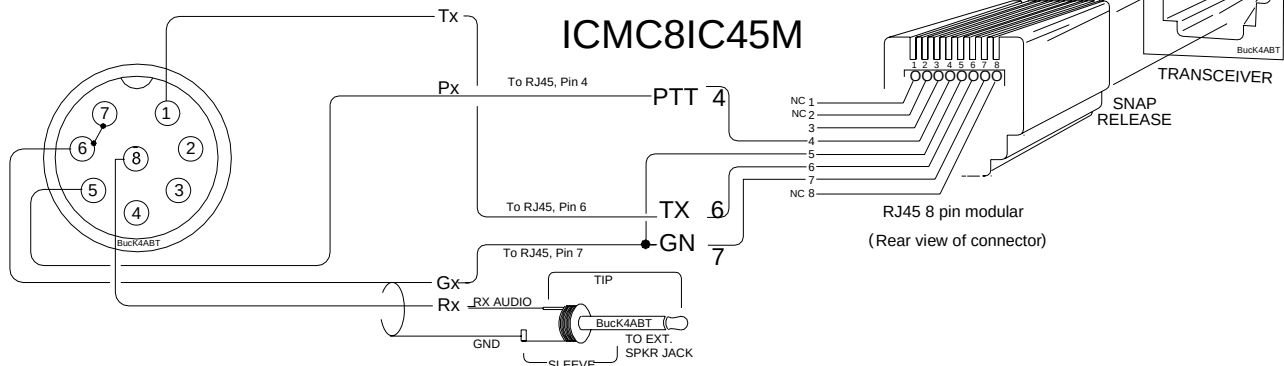
KPC3 DB9M

Alinco DR-135, Data I/O accessory jack



### ICOM RJ-45 MIC CONNECTOR I/O

CMC8 MIC "Male" wired for Icom  
SOLDER-SIDE



Adapter, Icom 8 pin Screw-On Mic to Icom 8 pin (RJ45) Modular Mic

**Orders Only; Toll Free, Monday thru Friday, 9 am to 7 pm 1 800 726 2919, or 1 866 300 1969  
SATURDAY 9am to 2 pm (All Times Eastern) Orders Only**

**\*Tech Support; Email; [support@buxcomm.com](mailto:support@buxcomm.com) Tech Support line, 434 485 0294**

Serving HAM Radio Operator's since 1959, on the Web since 1995 - We accept:

All text and graphics on these pages are ©<sup>®</sup>™ of G. E. Rogers Sr and BUX COMM Corp 1986 - 2008



## Radio Connection Notes: *Figures Begin, Page 9* <http://www.buxcomm.com>

**Note 1** Receive audio is not available on the microphone jack of all radios. If you make this connection and are unable to receive, use the speaker jack on the rear panel of the radio as a source of receive audio.

**Note 2** Your radio may not require a plug with 3 connections, i.e. tip, ring, and sleeve. We suggest you use the 3conductor "stereo" plug wired as shown so that if you change radios in the future to another model with this same connections scheme, your cable will be compatible without modification.

**Note 3** Older Icom transceivers which use the 8-pin microphone plug may not have receive audio connected to the microphone jack on pin 8. In this case pin 8 is not used. We suggest you make the connection as diagrammed even if your radio does not have receive audio available at pin 8, so that if you change to a newer model Icom radio the cable will be ready to use without modifications. If you make this connection and are unable to receive, use the speaker jack on the rear panel of the radio as a source of receive audio.

**Note 4** If you have difficulty in locating an 8-pin DIN plug for this connection, a 5-pin DIN may be used in its place. A 5-pin DIN has all the required pins for connections to Icom HF rigs, because pins 6, 7, and 8 are not used. The numbering and arrangement of the remaining pins is unchanged.

**Note 5** In most Ten-Tec radios where an FSK input is provided, a pull-up resistor to a positive power source is required to produce proper function of the FSK keyer in the radio. Contact Ten-Tec for recommendations on how to add this resistor to the radio to which you are connecting.

**Note 6** This connection only valid with PCB-88, PK-96, DSP-1232, DSP-2232, and PK-900 Radio Port 2 only. This connection is also appropriate for use at 9600 baud applications with radio in 9k6 DATA mode.

**Note 7** This connection only valid with PCB-88, PK-96, DSP-1232, DSP-2232, and PK-900 Radio Port 2 only.

**Note 8** This radio uses negative push-to-talk signaling.

**Note 9 Based** on our experiences with this radio and its RF susceptibility we recommend using this connection diagram if you choose to use **the ACC2 connector**. This radio has shown susceptibility to RF ingress at pin 11 of the ACC2 connector, so we do not connect the AFSK (White wire) in this diagram. Use the FSK mode of this radio when you wish to operate data modes.

**Note 10** This connector is valid for ALL make and Models transceivers with 6 pin Mini DIN, Data I/O jack. For the first time in HAM radio history, the Big-Three Icom, Kenwood, & Yaesu Ham radio OEMs agreed on this ISO connector as a standard, making accessory TNC and RASCAL GLX interfacing easier. *Alinco did NOT !*

### Transceiver Microphone and Accessory jack diagrams

| ALINCO             | Figure | Note | ALINCO      | Figure | Note |
|--------------------|--------|------|-------------|--------|------|
| ALD-24T            | 1      |      | DJ-F1T      | 5      | 2    |
| ALR-22HT           | 1      |      | DJ-G1T      | 5      | 2    |
| ALR-22T            | 1      |      | DR-110T     | 1      | 1    |
| ALR-72T            | 1      |      | DR-112T     | 1      | 1    |
| DJ-100             | 45     |      | DR-119T     | 2      | 1    |
| DJ-120T            | 45     |      | DR-1200T    | 2      | 1    |
| DJ-160T            | 5      | 2    | DR-130T     | 50     | 1    |
| DJ-162T            | 5      | 2    | DR-430T     | 1      | 1    |
| DJ-180T            | 5      | 2    | DR-510T     | 1      | 1    |
| DJ-200             | 45     |      | DR-570T     | 1      | 1    |
| DJ-500             | 45     |      | DR-590T     | 3      | 1    |
| DJ-560T            | 5      | 2    | DR-592T     | 3      | 1    |
| DJ-580T            | 5      | 2    | DR-599T 3 1 |        |      |
|                    |        |      | DR-600T 3 1 |        |      |
| AZDEN              | Figure | Note | COLLINS     | Figure | Note |
| All W/ 12-PIN CONN | 4      | 6    | KWM-380     | 6      |      |
| All W/8-PIN AMP    | 4      |      |             |        |      |
| PCS-2000           | 46     |      |             |        |      |
| PCS-5000           | 4      |      |             |        |      |
| PCS-6000           | 4      |      |             |        |      |
| PCS-7000           | 4      |      |             |        |      |

| <b>DRAKE</b> | <b>Figure</b> | <b>Note</b> |
|--------------|---------------|-------------|
| T4X          | 8             | 8           |
| T4XB         | 8             | 8           |
| T4XC         | 8             |             |
| TR-22        | 7             |             |
| TR-3         | 8             |             |
| TR-33        | 7             |             |

| <b>ICOM</b>  | <b>Figure</b> | <b>Note</b> |
|--------------|---------------|-------------|
| IC-02 SERIES | 5             | 2           |
| IC-03 SERIES | 5             | 2           |
| IC-04 SERIES | 5             | 2           |
| IC-12        | 5             | 2           |
| IC-120       | 12            | 3           |
| IC-1201      | 12            | 3           |
| IC-1271      | 12            | 3           |
| IC 1275      | 12            | 3           |
| IC-12G       | 5             | 2           |
| IC-2         | 5             | 2           |
| IC-20        | 10            |             |
| IC-202       | 11            |             |
| IC-21        | 10            |             |
| IC-211       | 15            |             |
| IC-215       | 11            |             |
| IC-22        | 10            |             |
| IC-228       | 12            | 3           |
| IC-229       | 49            |             |
| IC-22A       | 10            |             |
| IC-22S       | 11            |             |
| IC-22U       | 12            | 3           |
| IC-230       | 10            |             |
| IC-2330      | 49            |             |
| IC-2400      | 12            | 3           |
| IC-2410      | 49            |             |
| IC-245       | 11            |             |
| IC-24AT      | 5             | 2           |
| IC-25        | 12            | 3           |
| IC-2500      | 12            | 3           |
| IC-251       | 15            |             |
| IC-255       | 12            | 3           |
| IC-255       | 14            |             |
| IC-260       | 12            | 3           |
| IC-260       | 14            |             |
| IC-27        | 12            | 3           |
| IC-271       | 12            | 3           |
| IC-275       | 12            | 3           |
| IC-28        | 12            | 3           |
| IC-280       | 11            |             |
| IC-281       | 51            |             |
| IC-281       | 52            | 6           |
| IC-290       | 12            | 3           |
| IC-2G        | 5             | 2           |
| IC-2GX       | 5             | 2           |
| IC-21        | 5             | 2           |
| IC-2S        | 5             | 2           |
| IC-2SR       | 9             |             |
| IC-3         | 5             | 2           |
| IC-30        | 10            |             |
| IC-3200      | 12            | 3           |
| IC-3210      | 12            | 3           |
| IC-3220      | 12            | 3           |

| <b>DRAKE</b> | <b>Figure</b> | <b>Note</b> |
|--------------|---------------|-------------|
| TR-4         | 8             | 8           |
| TR-4C        | 8             | 8           |
| TR-4CW       | 8             |             |
| TR-6         | 8             | 8           |
| TR-7         | 7             |             |
| UV-3         | 7             |             |

| <b>ICOM</b> | <b>Figure</b> | <b>Note</b> |
|-------------|---------------|-------------|
| IC-3230     | 49            |             |
| IC-375      | 12            | 3           |
| IC-37A      | 12            | 3           |
| IC-38A      | 12            | 3           |
| IC-3S       | 5             | 2           |
| IC-4        | 5             | 2           |
| IC-402      | 11            |             |
| IC-449      | 49            |             |
| IC-45       | 12            | 3           |
| IC-451      | 15            |             |
| IC-47       | 12            | 3           |
| IC-471      | 12            | 3           |
| IC-475      | 12            | 3           |
| IC-48       | 12            | 3           |
| IC-490      | 12            | 3           |
| IC-4G       | 5             | 2           |
| IC-4S       | 5             | 2           |
| IC-4SR      | 9             |             |
| IC-502      | 11            |             |
| IC-505      | 12            | 3           |
| IC-551      | 12            | 3           |
| IC-551      | 15            |             |
| IC-560      | 12            | 3           |
| IC-575      | 12            |             |
| IC-575      | 12            | 3           |
| IC-60       | 10            |             |
| IC-707      | 12            | 3           |
| IC-720      | 12            | 3           |
| IC-720A     | 15            |             |
| IC-725      | 12            | 3           |
| IC-725      | 16            | 4           |
| IC-726      | 12            | 3           |
| IC-726      | 16            | 4           |
| IC-728      | 12            | 3           |
| IC-728      | 16            |             |
| IC-729      | 12            | 3           |
| IC-729      | 16            |             |
| IC-730      | 12            | 3           |
| IC-735      | 12            | 3           |
| IC-735      | 16            | 4           |
| IC-737      | 12            | 3           |
| IC-737      | 16            |             |
| IC-740      | 12            | 3           |
| IC-740      | 13            |             |
| IC-745      | 12            | 3           |
| IC-745      | 13            |             |
| IC-751      | 12            | 3           |
| IC-751      | 13            |             |
| IC-761      | 12            | 3           |
| IC-761      | 17            | 4           |
| IC-765      | 12            | 3           |
| IC-765      | 17            | 4           |

| <b>ICOM</b> | <b>Figure</b> | <b>Note</b> |
|-------------|---------------|-------------|
| IC-781      | 12            | 3           |
| IC-781      | 17            | 4           |
| IC-901      | 12            | 3           |
| IC-970      | 16            | 4           |
| IC-D1A      | 9             |             |
| IC-P2       | 5             | 2           |
| IC-P3       | 5             | 2           |

| <b>ICOM</b> | <b>Figure</b> | <b>Note</b> |
|-------------|---------------|-------------|
| IC-P4       | 5             | 2           |
| IC-U2       | 5             | 2           |
| IC-U4       | 5             | 2           |
| IC-V21      | 5             | 2           |
| IC-W21      | 5             | 2           |
| IC-W2A      | 9             |             |
| IC-X21      | 5             | 2           |
| IC-X2A      | 9             |             |

| <b>KANTRONICS</b> | <b>Figure</b> | <b>Note</b> |
|-------------------|---------------|-------------|
| D4-10             | 43            |             |
| DVR 2-2           | 43            |             |

| <b>KENWOOD</b> | <b>Figure</b> | <b>Note</b> |
|----------------|---------------|-------------|
| TH-205         | 31            |             |
| TH-21          | 31            |             |
| TH-215         | 31            |             |
| TH-22          | 31            |             |
| TH-225         | 31            |             |
| TH-25          | 31            |             |
| TH-27          | 31            |             |
| TH-28          | 31            |             |
| TH-31          | 31            |             |
| TH-315         | 31            |             |
| TH-41          | 31            |             |
| TH-42          | 31            |             |
| TH-45          | 31            |             |
| TH-47          | 31            |             |
| TH-48          | 31            |             |
| TH-75          | 31            |             |
| TH-77          | 31            |             |
| TH-78          | 31            |             |
| TM-201         | 3             |             |
| TM-221         | 3             |             |
| TM-231         | 3             |             |
| TM-231         | 53            | 7           |
| TM-241         | 3             |             |
| TM-241         | 53            | 7           |
| TM-2530        | 3             |             |
| TM-2550        | 3             |             |
| TM-2570        | 3             |             |
| TM-321         | 3             |             |
| TM-331         | 3             |             |
| TM-331         | 53            | 7           |
| TM-3530        | 3             |             |
| TM-401         | 3             |             |
| TM-421         | 3             |             |
| TM-431         | 53            | 7           |
| TM-441         | 3             |             |
| TM-531         | 3             |             |
| TM-531         | 53            | 7           |
| TM-541         | 3             |             |
| TM-621         | 3             |             |
| TM-631         | 3             |             |
| TM-631         | 53            | 7           |
| TM-641         | 47            |             |
| TM-701         | 53            | 7           |
| TM-721         | 3             |             |
| TM-731         | 3             |             |

| <b>KENWOOD</b> | <b>Figure</b> | <b>Note</b> |
|----------------|---------------|-------------|
| TM-731         | 53            | 7           |
| TM-732         | 47            |             |
| TM-741         | 47            |             |
| TM-742         | 47            |             |
| TM-941         | 47            |             |
| TM-942         | 47            |             |
| TR-2200        | 11            |             |
| TR-2300        | 11            |             |
| TR-2400        | 33            |             |
| TR-2500        | 32            |             |
| TR-2600        | 31            |             |
| TR-3200        | 3             |             |
| TR-50          | 3             |             |
| TR-7400        | 11            |             |
| TR-7500        | 32            |             |
| TR-751         | 3             |             |
| TR-7600        | 37            |             |
| TR-7730        | 36            |             |
| TR-7750        | 36            |             |
| TR-7800        | 36            |             |
| TR-7850        | 36            |             |
| TR-7930        | 36            |             |
| TR-7950        | 36            |             |
| TR-851         | 3             |             |
| TR-9000        | 36            |             |
| TR-9130        | 36            |             |
| TR-9500        | 36            |             |
| TS-120         | 11            |             |
| TS-130         | 11            |             |
| TS-140         | 3             |             |
| TS-140         | 35            |             |
| TS-430         | 3             |             |
| TS-440         | 3             |             |
| TS-440         | 34            |             |
| TS-450         | 3             |             |
| TS-450         | 38            |             |
| TS-450         | 54            | 9           |
| TS-490         | 11            |             |
| TS-50          | 39            |             |
| TS-50          | 53            | 7           |
| TS-520         | 11            |             |
| TS-530         | 11            |             |
| TS-60          | 39            |             |
| TS-60          | 53            | 7           |
| TS-670         | 3             |             |

| <b>KENWOOD</b> | <b>Figure</b> | <b>Note</b> |
|----------------|---------------|-------------|
| TS-680         | 3             |             |
| TS-680         | 35            |             |
| TS-690         | 3             |             |
| TS-690         | 35            |             |
| TS-700         | 11            |             |
| TS-701         | 3             |             |
| TS-711         | 3             |             |
| TS-711         | 34            |             |
| TS-780         | 3             |             |
| TS-790         | 3             |             |
| TS-790         | 35            |             |
| TS-811         | 3             |             |
| TS-811         | 34            |             |

| <b>KENWOOD</b> | <b>Figure</b> | <b>Note</b> |
|----------------|---------------|-------------|
| TS-820         | 11            |             |
| TS-830         | 11            |             |
| TS-850         | 3             |             |
| TS-850         | 39            |             |
| TS-850         | 55            | 9           |
| TS-900         | 11            |             |
| TS-930         | 3             |             |
| TS-940         | 3             |             |
| TS-940         | 34            |             |
| TS-940         | 56            | 9           |
| TS-950         | 3             |             |
| TS-950         | 39            |             |
| TW-4000        | 3             |             |
| TW-4100        | 3             |             |

| <b>RADIO SHACK</b> | <b>Figure</b> | <b>Note</b> |
|--------------------|---------------|-------------|
| HTX-100            | 2             |             |
| HTX-202            | 5             | 2           |
| HTX-404            | 5             | 2           |

| <b>RANGER</b> | <b>Figure</b> | <b>Note</b> |
|---------------|---------------|-------------|
| AR-2500       | 44            |             |

| <b>STANDARD</b> | <b>Figure</b> | <b>Note</b> |
|-----------------|---------------|-------------|
| C-128           | 5             | 2           |
| C-168           | 5             | 2           |
| C-188           | 5             | 2           |
| C-228           | 5             | 2           |
| C-288           | 5             | 2           |
| C-468           | 5             | 2           |
| C-468           | 5             | 2           |
| C-488           | 5             | 2           |
| C-500           | 5             | 2           |
| C-528           | 5             | 2           |
| C-558           | 5             | 2           |
| C-628           | 5             | 2           |

| <b>TEN-TEC</b>   | <b>Figure</b> | <b>Note</b> |
|------------------|---------------|-------------|
| All W/ 4-PIN AMP | 41            | 5           |
| ALL W/.25" PLUG  | 42            |             |
| ARGONAUT II      | 41            |             |
| DELTA II         | 41            |             |
| PARAGON          | 41            | 5           |

| <b>UNIDEN</b> | <b>Figure</b> | <b>Note</b> |
|---------------|---------------|-------------|
| HR-2510       | 40            |             |
| HR-2600       | 40            |             |

| <b>WILSON</b> | <b>Figure</b> | <b>Note</b> |
|---------------|---------------|-------------|
| MARK II       | 29            |             |
| MARK IV       | 29            |             |
| WE-800        | 29            |             |

| <b>YAESU</b>   | <b>Figure</b> | <b>Note</b> |
|----------------|---------------|-------------|
| CPU-2500       | 28            |             |
| FT-1           | 18            |             |
| FT-1           | 20            |             |
| FT-1000 SERIES | 18            |             |
| FT-1000 SERIES | 20            |             |
| FT-101         | 22            |             |
| FT-101B        | 22            |             |
| FT-101E        | 22            |             |
| FT-101EE       | 22            |             |
| FT-101EX       | 22            |             |
| FT-101ZD       | 22            |             |
| FT-102         | 18            |             |
| FT-103R        | 5             | 2           |
| FT-107         | 18            |             |
| FT-109         | 5             | 2           |
| FT-11          | 5             | 2           |
| FT-200         | 23            |             |

| <b>YAESU</b> | <b>Figure</b> | <b>Note</b> |
|--------------|---------------|-------------|
| FT-203       | 5             | 2           |
| FT-207       | 29            |             |
| FT-208       | 29            |             |
| FT-209       | 5             | 2           |
| FT-211       | 18            |             |
| FT-211RH     | 27            |             |
| FT-212RH     | 27            |             |
| FT-2200      | 18            |             |
| FT-221       | 22            |             |
| FT-227       | 22            |             |
| FT-23        | 5             | 2           |
| FT-230       | 26            |             |
| FT-231R      | 27            |             |
| FT-2400      | 30            |             |
| FT-26        | 5             | 2           |
| FT-270       | 26            |             |
| FT-2700      | 27            |             |

| YAESU | Figure | Note |
|-------|--------|------|
|-------|--------|------|

|              |    |   |
|--------------|----|---|
| FT-290 MK I  | 26 |   |
| FT-290 MK II | 18 |   |
| FT-290 MK II | 27 |   |
| FT-2F        | 22 |   |
| FT-311RM     | 27 |   |
| FT-33        | 5  | 2 |
| FT-41        | 5  | 2 |
| FT-411       | 5  | 2 |
| FT-415       | 5  | 2 |
| FT-416       | 5  | 2 |
| FT-470       | 5  | 2 |
| FT-4700      | 27 |   |
| FT-480       | 18 |   |
| FT-5100      | 18 |   |
| FT-5100      | 48 |   |
| FT-5200      | 27 |   |
| FT-530       | 5  | 2 |
| FT-6200      | 27 |   |
| FT-650       | 18 |   |
| FT-690 MK I  | 26 |   |
| FT-690 MK II | 18 |   |
| FT-690 MK II | 27 |   |
| FT-703       | 5  | 2 |
| FT-707       | 18 |   |
| FT-708       | 29 |   |
| FT-709       | 5  | 2 |
| FT-711RH     | 27 |   |
| FT-712       | 18 |   |
| FT-7200      | 18 |   |

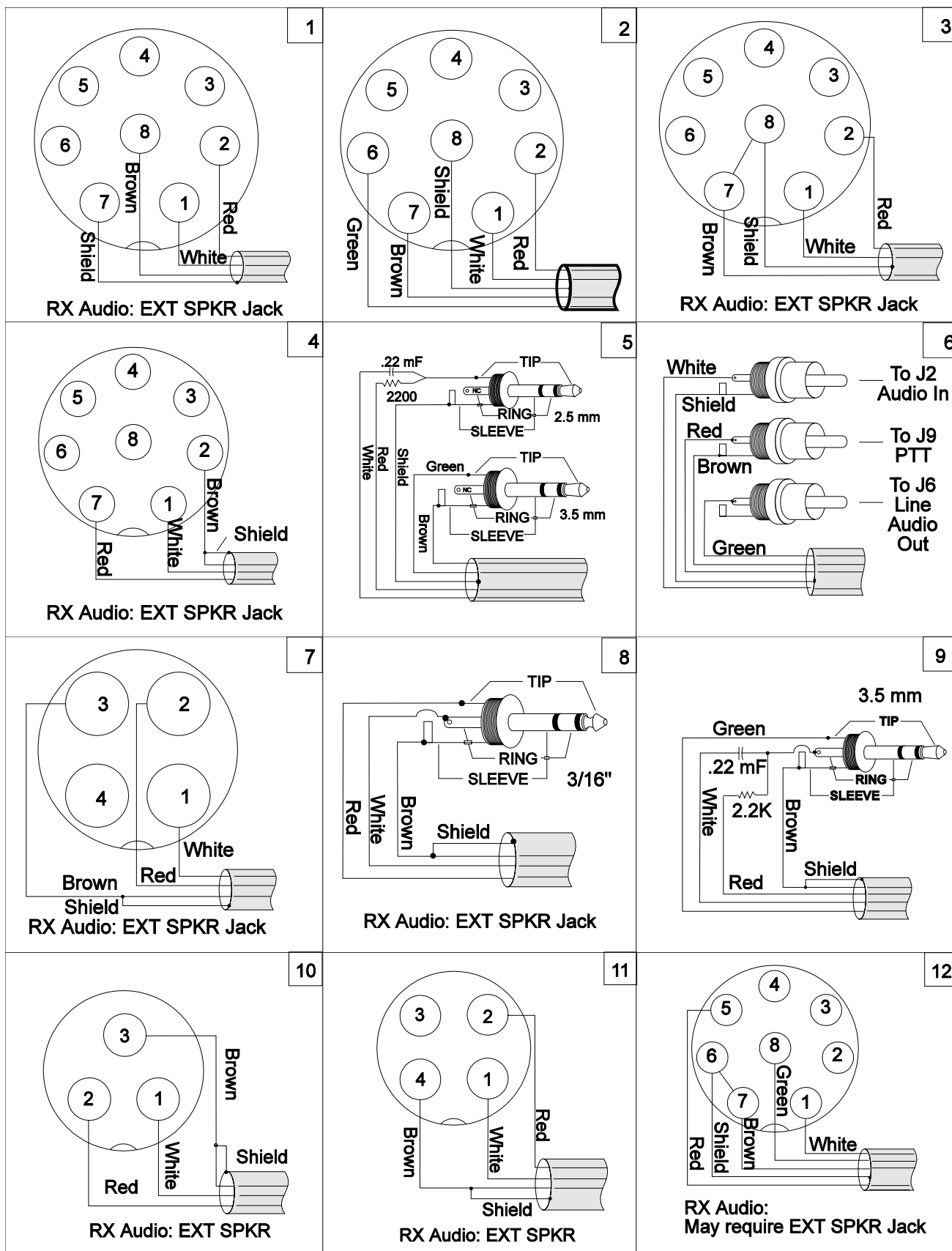
| YAESU | Figure | Note |
|-------|--------|------|
|-------|--------|------|

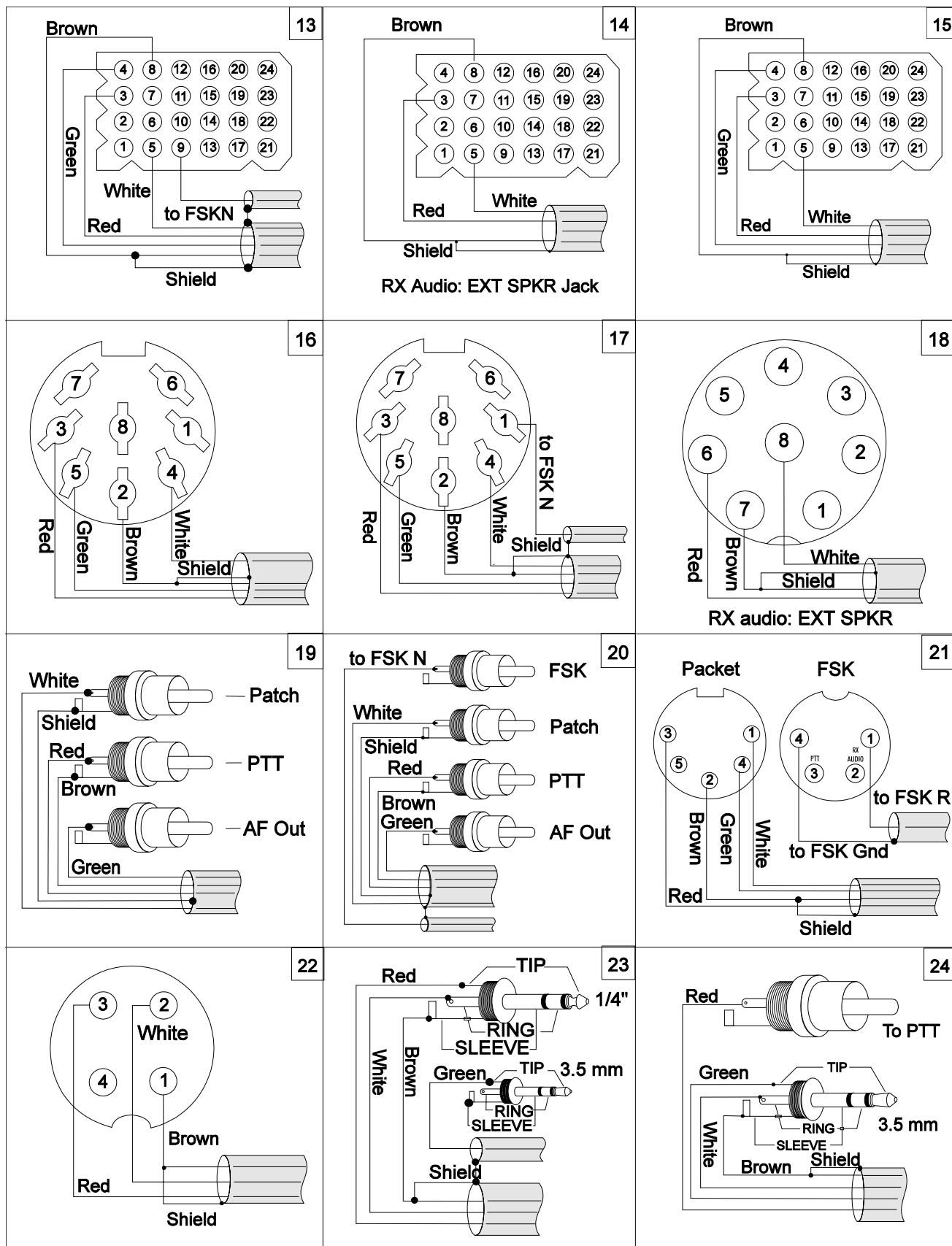
|              |    |   |
|--------------|----|---|
| FT-726       | 18 |   |
| FT-727       | 5  | 2 |
| FT-73        | 5  | 2 |
| FT-730       | 26 |   |
| FT-736       | 18 |   |
| FT-736       | 25 |   |
| FT-7400      | 30 |   |
| FT-747       | 18 |   |
| FT-757       | 18 |   |
| FT-757       | 19 |   |
| FT-76        | 5  | 2 |
| FT-767       | 18 |   |
| FT-767       | 19 |   |
| FT-767       | 24 |   |
| FT-77        | 18 |   |
| FT-790 MK I  | 26 |   |
| FT-790 MK II | 18 |   |
| FT-790 MK II | 27 |   |
| FT-811       | 5  | 2 |
| FT-815       | 5  | 2 |
| FT-816       | 5  | 2 |
| FT-840       | 18 |   |
| FT-890       | 18 |   |
| FT-901       | 22 |   |
| FT-902       | 22 |   |
| FT-911       | 5  | 2 |
| FT-912       | 18 |   |
| FT-980       | 18 |   |
| FT-990       | 18 |   |
| FT-990       | 21 |   |

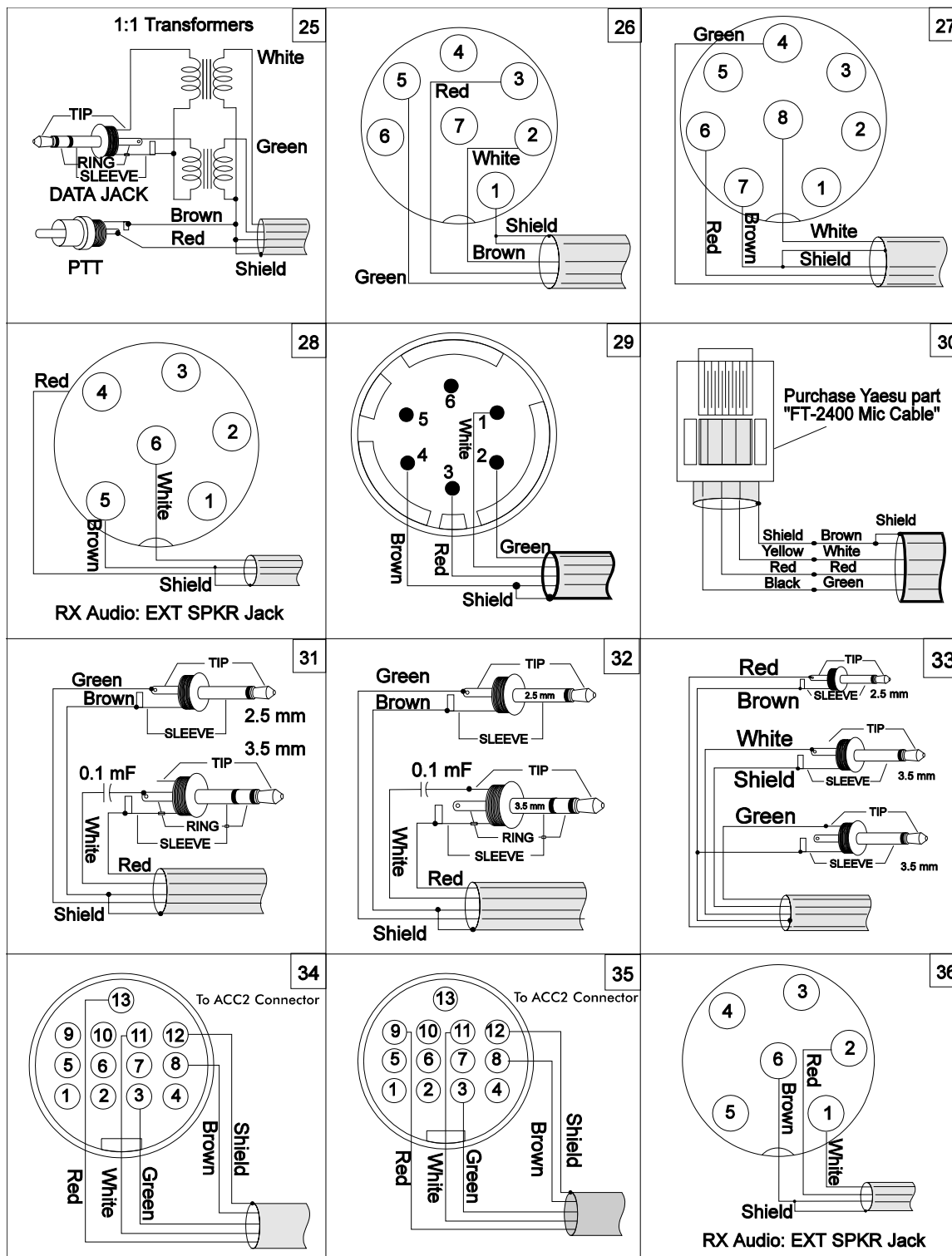
**Figures Begin on (next)Page 9 V**

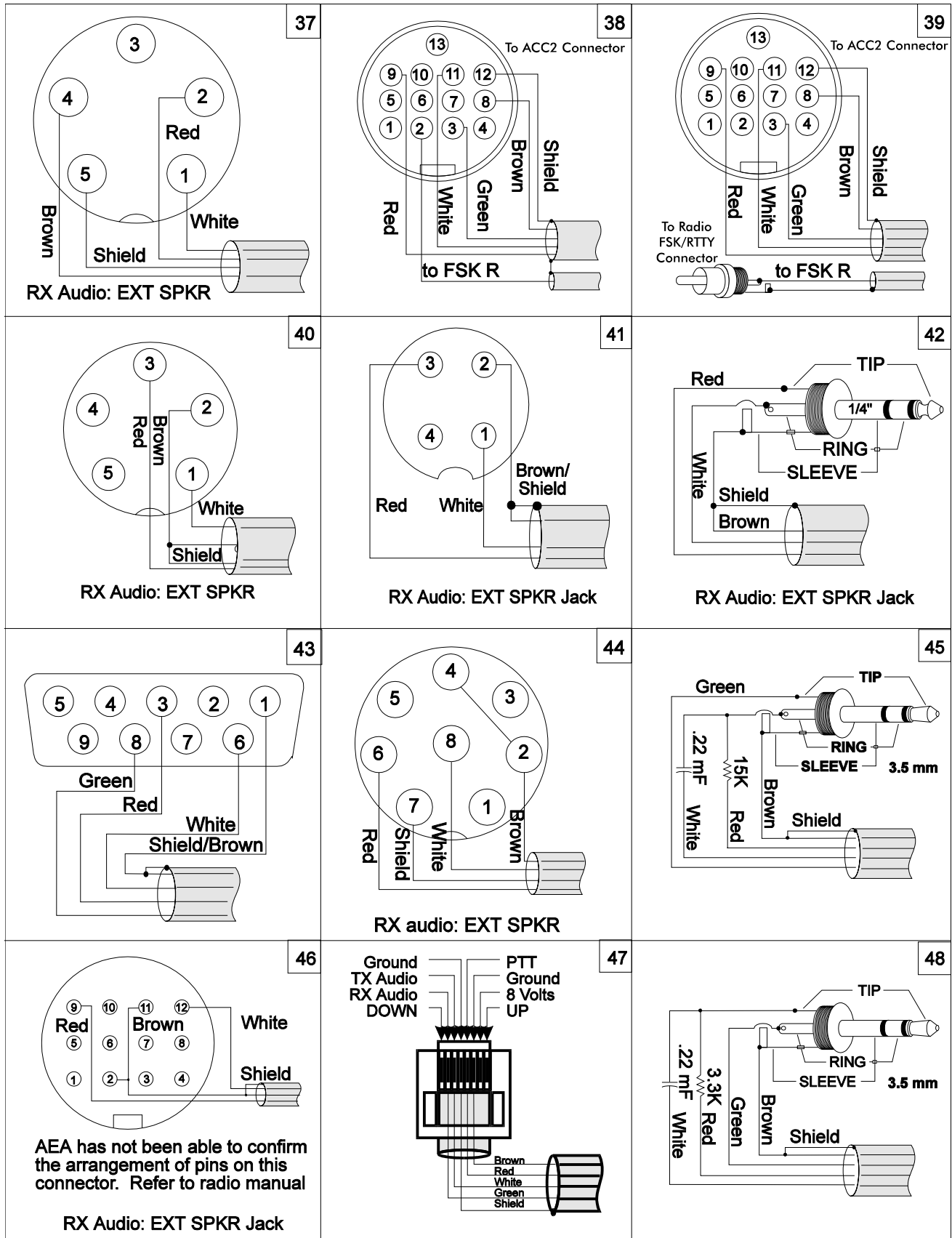
**Figures Begin on (next)Page 9**

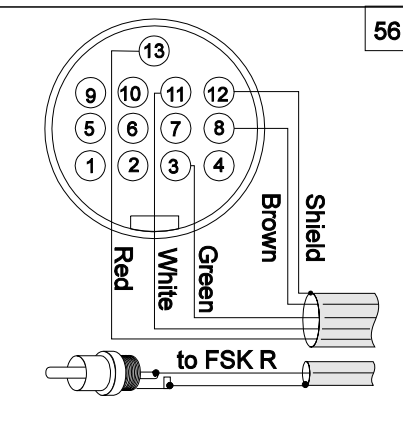
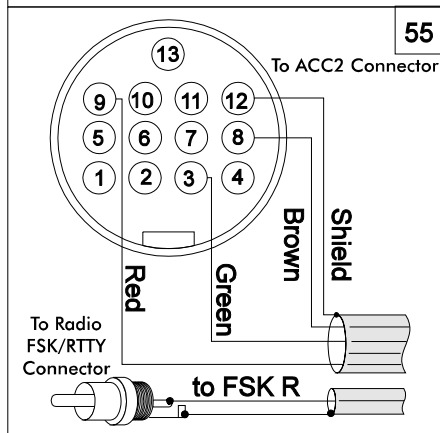
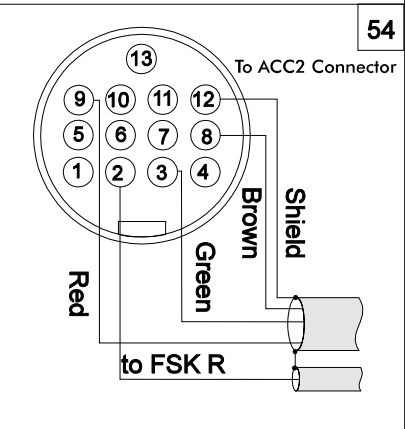
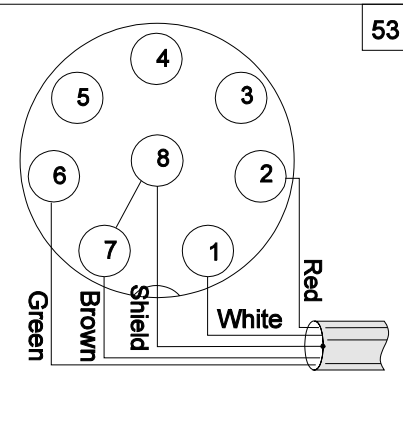
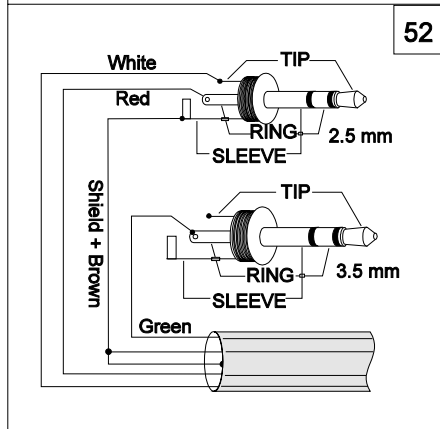
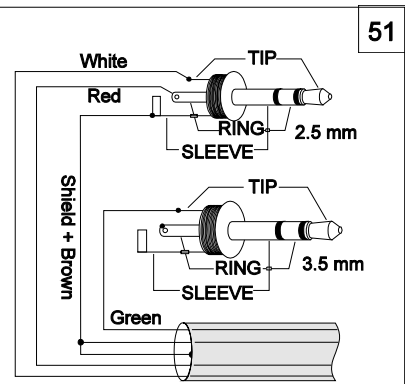
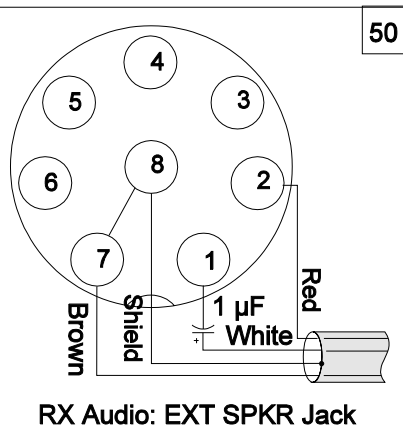
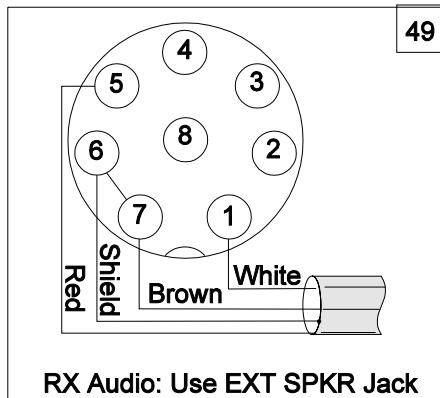












Other diagrams and notes are located page 1 thru 3 of this document.  
For more related information, go to: <http://www.buxhamsales.com>