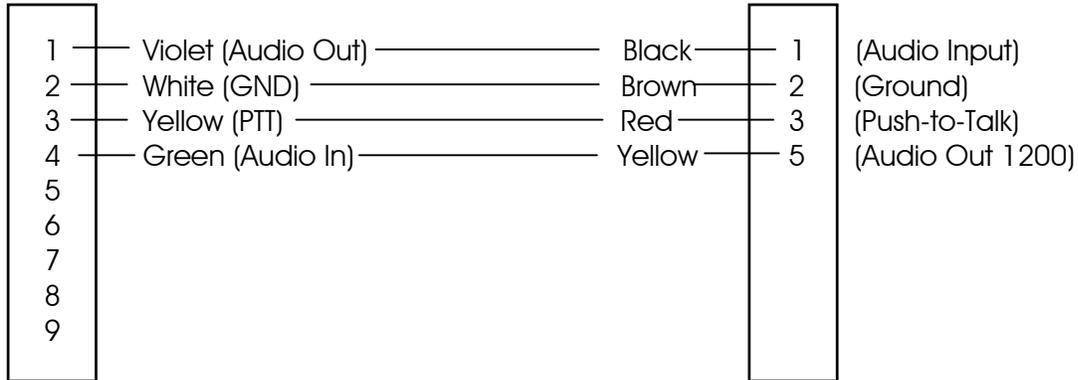


SCS-PTC to Yaesu FT-897D Transceiver

Dr. John A. Allocca WB2LUA

11/29/04

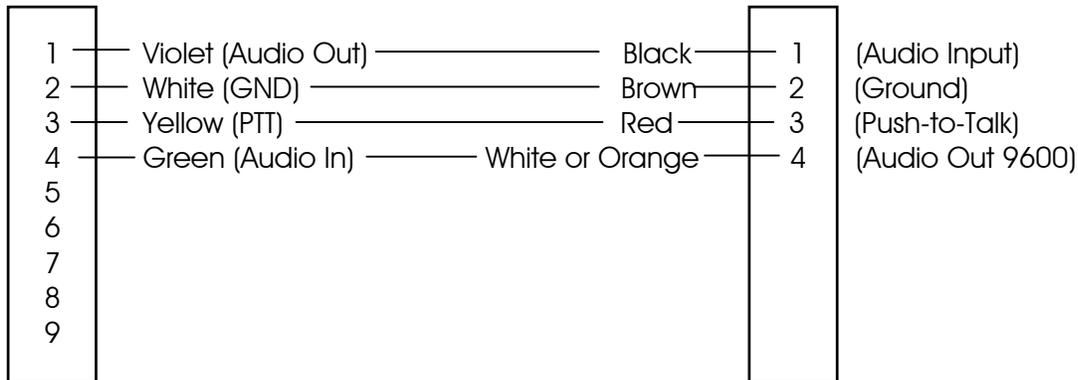
HF and 1200 Baud Packet



8 pin DIN Male

6 Pin mini DIN Male

9600 Baud Packet



8 pin DIN Male

6 Pin mini DIN Male

Transmit Level Adjustment

The PTC's output amplitude has to be adjusted very carefully to the connected transceiver. If you don't pay attention on this item a signal much too wide will be the result! The output amplitudes are adjusted separately depending on the FSK modes (PACTOR-I, AMTOR, RTTY, etc.) and the PSK modes (PACTOR-11/111). A common adjustment with one command was in practice not the best way. If you are using "Airmail" software, you can make the changes from the software and ignore the information below.

The audio input sensitivity of most transceivers is adapted to the output voltage of a common dynamic microphone. 100% modulation is reached at low mic gain settings with 200 mV (peak to peak) input voltage. It is not recommended to use very high **PSKAmpI** values and compensate this by lowering the mic gain setting, because this may already overdrive the first amplifier stages which are very sensitive and located in the signal path before the mic gain controlling device. We recommend for the first approach to use the default PSKA value of 140 and then regulate the output power for PSK with the mic gain setting (if available). To do this connect the TRX to a dummy load resistor capable to dissipate the power or to an antenna with good SWR (take care that the frequency being used is not already occupied). Entering U 3 <Return> starts the Unproto mode 3 (=100 Bd DBPSK). Now you can use the mic gain knob to increase the transmitting power until the ALC voltage reaches the allowed limit.

Don't overdrive the TRX because in this case the signal will be spread by intermodulation!

With proper settings the peak envelope power will nearly be equal to the maximum output power of the TRX. In this case the average power will approximately be the half of the maximum power, so also continuous operation will not cause problems at all. Don't be confused as many modern TRX only display the peak envelope power. If it is necessary to set the MIC-Gain value to more than half of its maximum, it is recommended to increase the *PSKAmpI* value. This for example can be done entering <ESC> **PSKA 200** <RETURN>. If no MIC-Gain potentiometer is available the proper PSK amplitude setting has to be evaluated with only using the *PSKAmpI* command.

After the PSK amplitude is carefully adjusted, the MIC-Gain setting at the transceiver should not be touched any more, otherwise it could be difficult to achieve the desired output level for non-PSK modes.

To adjust the output level for non-PSK modes (FSK, CW, PACTOR-I, AMTOR, RTTY) only the *FSKAmpI* command should be used now. Entering U 1 <RETURN> starts the Unproto mode 1 (=100Bd FSK). Now you have the chance to adjust the output value using the *FSKAmpI* command e.g. <ESC> **FSKA 100** <RETURN>. Same as before, during this procedure take care for not to exceed the ALC limit.

To prevent damage from the transceiver at continuous operation we recommend to limit the FSK output level to half of the maximum possible, that means 50 W if the transceiver is made for 100 W at max.

Yaesu CT-39A Packet Interface Cable

| <u>Wire Color</u> | <u>Pin Number</u> | <u>Function</u> |
|-------------------|-------------------|-----------------------|
| Black | 1 | Data Input (RX Audio) |
| Brown | 2 | Data Ground |
| Red | 3 | PTT (Push-to-Talk) |
| White or Orange | 4 | TX Data Output (9600) |
| Yellow | 5 | TX Data Output (1200) |
| Green | 6 | Squelch Status |