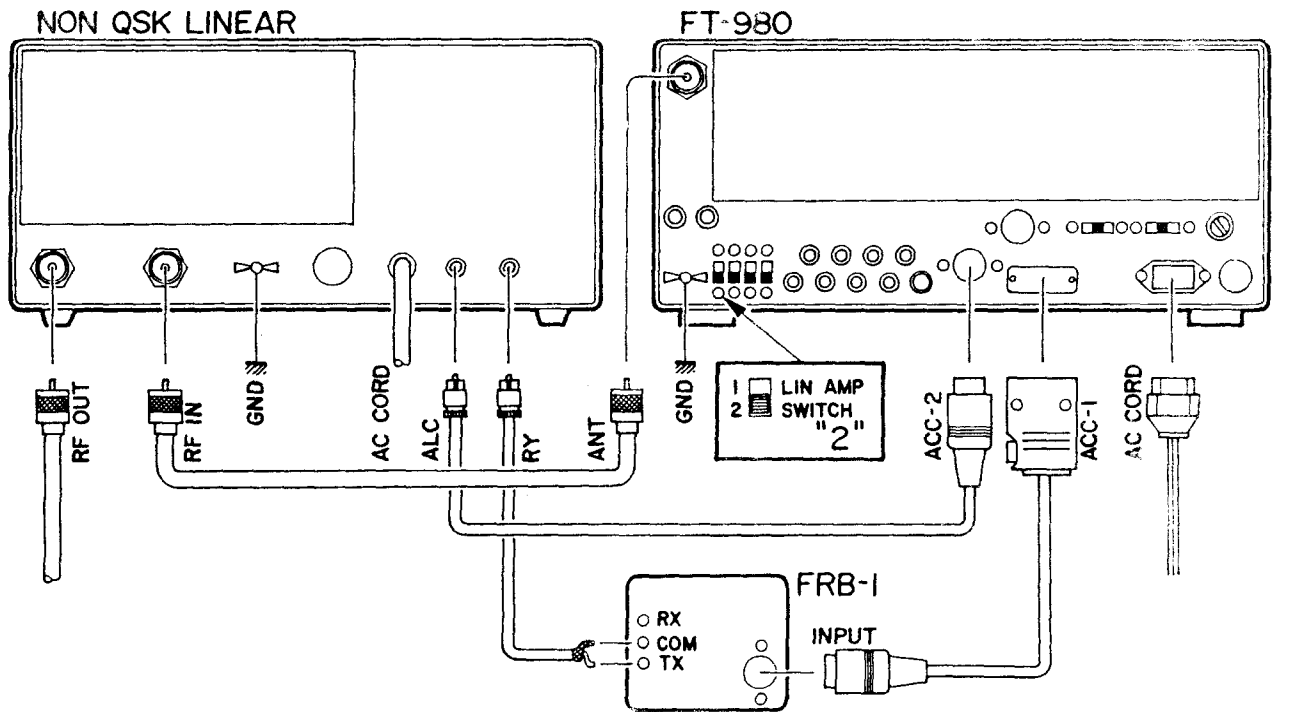


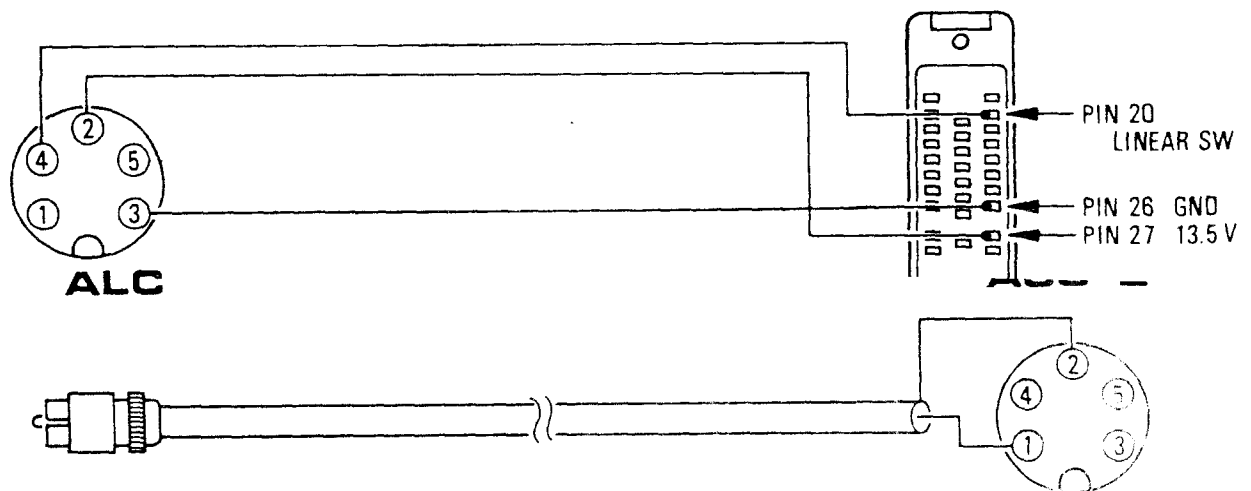
FRB-1 RELAY BOX FOR
CONTROLLING A LINEAR AMPLIFIER
WITH THE FT-980

The FRB-1 incorporates a transistor switch and an extra heavy duty relay for controlling all types of linear amplifiers without endangering the delicate internal QSK switching circuitry of the FT-980 HF Transceiver. Full break-in (QSK) amplifiers that require only 12 to 20 VDC at less than 300 mA, such as the Alpha 78, can be connected directly to the FT-980 via the ACC-2 jack without using the FRB-1. However, many other amplifiers include T/R relays that require voltage in excess of 50V, and/or current in excess of 300 mA, and these must not be connected directly to the FT-980 for T/R relay control. In such cases, or when the T/R relay requirements of the amplifier are unknown, connect the FRB-1 as shown in the diagram below.



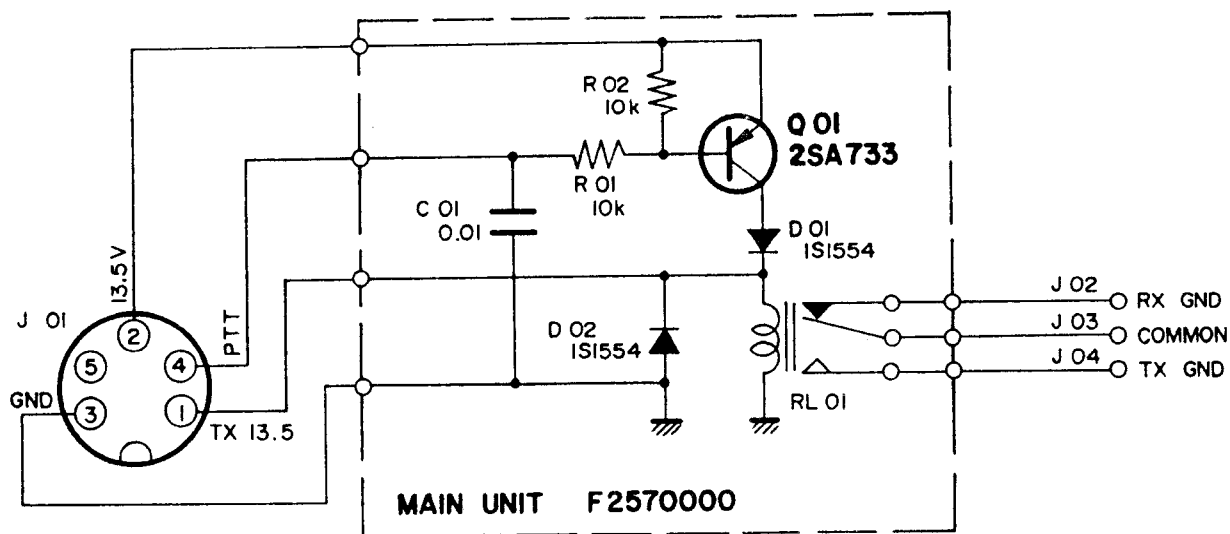
INPUT

ACC-1



FRB-1 Relay Specifications

Type	MR31-12 (NEC)
Contact rating	AC 600VA, DC 150W (non-reactive load)
Max switching current	5A (non-reactive load)
Max switching voltage	AC 250V, DC 30V (for DC voltage between 30 and 350V, max switching current must be limited to 50%, or 2.5A)
Min contact current	0.1A at 5V
Closure speed (make)	less than 15msec at standard coil voltage
Opening speed (break)	less than 10msec at standard coil voltage



**FRB-1
CIRCUIT DIAGRAM**