

Sierra Radio Systems

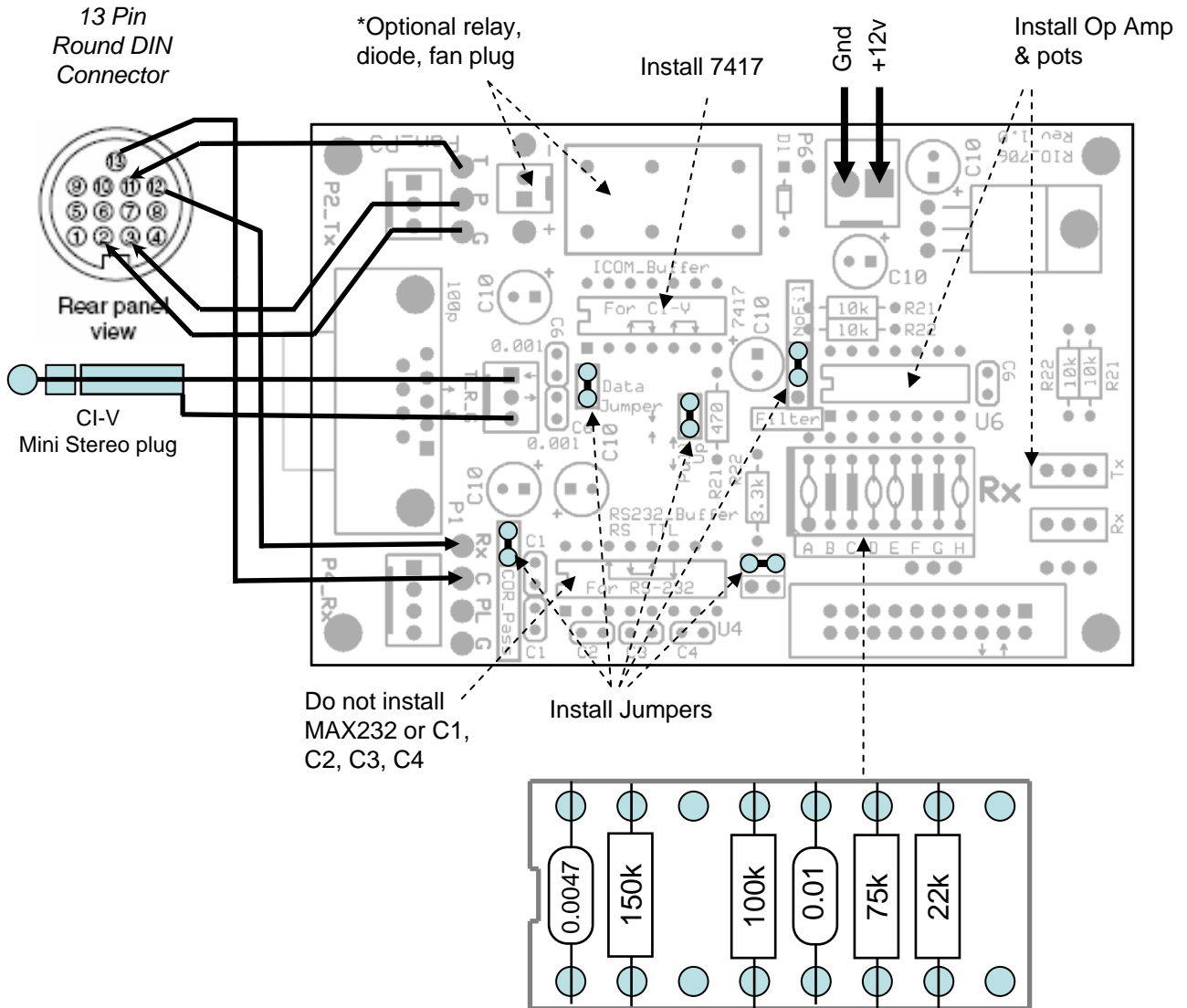
Applications Note AN2

Interfacing the Series 200 Control Systems to an
Icom IC-706 Remote Base Radio

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RIO-II Configuration for the ICOM IC-706 with 13 pin DIN connector



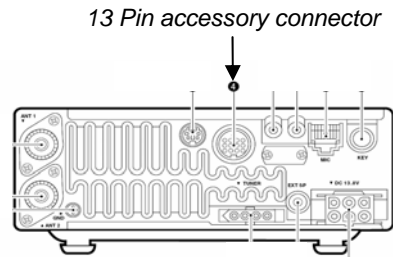
The most convenient way to interface the IC-706 is to use the Radio I/O board series II, called a RIO-II. The RIO-II is a convenient way to connect the control system cable to the 13 pin DIN connector and CI-V interface. The board provides Rx and Tx audio buffers, Rx pre-emphasis, Tx de-emphasis, and TTL to CI-V level conversion.

Interfacing the Icom IC-706


ICOM IC-706 serial radio settings

Address 58h
Data rate 1200 baud

RCB to radio connections:



• ACC SOCKET

ACC	PIN #	NAME	DESCRIPTION	SPECIFICATIONS	COLOR
 <p>Rear panel view</p>	1	8 V	Regulated 8 V output.	Output voltage : 8 V \pm 0.3 V Output current : Less than 10 mA	brown
	2	GND	Connects to ground.	—————	red
	3	HSEND	Input/output pin (HF/50 MHz). Goes to ground when transmitting. When grounded, transmits (connected to 8V line thru 2.2 k Ω resistance/144 MHz operation).	Ground level : -0.5 V to 0.8 V Input current : Less than 20 mA (HF/50 MHz bands)	orange
	4	BDT	Data line for the optional AT-180.	—————	yellow
	5	BAND	Band voltage output. (Varies with amateur band)	Output voltage : 0 to 8.0 V	green
	6	ALC	ALC voltage input.	Control voltage : -4 to 0 V Input impedance : More than 10 k Ω	blue
	7	VSEND	Input/output pin (144 MHz). Goes to ground when transmitting. When grounded, transmits (connected to 8V line thru 2.2 k Ω resistance/HF+50 MHz operation).	Ground level : -0.5 V to 0.8 V Input current : Less than 20 mA (144 MHz band)	purple
	8	13.8 V	13.8 V output when power is ON.	Output current : Max. 1 A	gray
	9	TKEY	Key line for the AT-180.	—————	white
	10	FSKK	RTTY keying input. Connected in parallel to the [RTTY] jack.	Ground level : -0.5 to 0.8 V Input current : Less than 10 mA	black
	11	MOD	Modulator input.	Input impedance : 10 k Ω Input level : Approx. 100 mV rms	pink
	12	AF	AF detector output. Fixed, regardless of [AF] position.	Output impedance : 4.7 k Ω Output level : 100 to 350 mV rms	light blue
	13	SQLS	Squelch output. Goes to ground when squelch opens.	SQL open : Less than 0.3 V/5 mA SQL closed : More than 6.0 V/100 μ A	light green