Application Note

AN #: 293A
DATE: 1-Nov-2021

PYRAMID MODEL #: SVR-200 / SVR-250 / SVR-300 / SVR-350
RADIO MODEL: Motorola APX/XTL Mid/Low Power with Smart Cable
ENGINEER: C. Carbajal

APPROVAL INITIALS
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SVR Jumpers:	JP1	[-]	Remote Enable	**SVR Program:**	Mobile COR Polarity:	Low
	J1	[Out]	Tx audio level		Mobile Type:	Conv/Trunk
	J2	[Out]	Tx audio impedance		On-Air Polarity:	Low
	J4	[Out]	Local mic audio loop		Tx Audio Response:	De-Emp
	J5	[Out]	Local mic PTT loop		Rx Audio Response:	Pre-Emp
	J6	[Out]	Local Mic Sensitivity		Local Mic Repeat	Disabled
	J7	[Out]	Rx Sensitivity			
	J8	[+]	Pull up resistor			
	J9	[In]	MCOR Pull up resistor			

Smart Cable Part Numbers: Order 7506-10-1094 for the SVR-200
Order 7506-10-1294 for the SVR-250 / SVR-P250 / SVR-300 / SVR-350

* 7506-10-xxxx version 1.9 and newer cables are jumper selectable for APX and XTL models. J1= OUT for APX, J1 = In for XTL (see figure 1)

Additional Modifications (SVR-200): None.

Additional Modifications (SVR-250 / SVR-300 / SVR-350): Set EMG jumper or switch to NC.

Additional Modifications (Radio):

1. Connect the SHORT Red wire coming out of the Smart Cable box to 12VDC
2. In the APX CPS, program the **Radio Wide / Advanced** menu options to:
   a. **Aux PTT Audio Source = Aux_ Mic**
   b. **Aux Transmit Sensitivity = 80 mV**
3. In the APX CPS, program the **Radio Configuration / Display & Menu / Menu Items:**
   a. Program One of the Control Head Keys for **PWR**. The SVR will use the Low power menu setting for remote enable/disable.
4. In the APX CPS, program the **Radio Wide / Transmit Power Levels:**
   a. Set Low and High power tx levels equal. This ensures that when enabling the SVR, the radio remains in High power mode.

Note: Generally all Series 05 control heads support low/high power enable/disable. In cases where this setting does not work or you want to use an external switch or device to enable the SVR, use the blue wire provided on the smart cable to enable the repeater. Ensure SVR interface cable is connected to RF Deck DB-26 (Connection to control head NOT supported). Many customers use the BLUE wire on the interface cable to enable/disable the SVR. The remote enable (blue wire) is active low ONLY. DO NOT apply power to this input. The interface does not support any "Y" cables, or adapters between the SVR interface cable and the APX RF DB-26 connector. This enable line is active low.

Figure 1: