# Application Note

***AN #: 306B***
DATE: 29-Nov-2022


**PYRAMID MODEL #**: SVR-200 / SVR-250 / SVR-300 / SVR-350
**RADIO MODEL**: Tait TM9300 Series DMR
**ENGINEER**: C. Carbajal

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| **Connections:** | ***SVR*** | ***Function*** | ***Radio*** **(Auxillary Connector DB15)** |
|---|---|---|---|
| | Black/Shield | Ground | Pin 15 |
| | White | Tx Audio Out | Pin 7 |
| | Blue | Remote enable/disable | Pin 9 |
| | Green | PTT Out | Pin 12 |
| | Red | Switched B+ | Pin 8 |
| | Yellow | Rx Audio In | Pin 13 |
| | Violet | COR | Pin 2 |
| | Brown | Local Mic In | Pin 5 |
| | Grey | On Air Detect | Pin 10 (Not Connected In Factory Cable) |
| | Black/White | Emergency | Pin 5 (SVR-250 ONLY) |

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

**Note:** *Due to possible TDMA noise, ensure proper grounding. Pyramid offers a universal Tait TM Series interface cable P/N 7500-10-1010 (SVR-200) and 7500-10-1211 (for SVR-250/300). These cables do not have On-Air Detect wired, which is used for Pyramid Smart Trunking operation. These cables have 3 wires coming out of the DB-15. Orange=Ignition Sense, Red = 12V Output from the radio accy connector, Black = GPIO4, which can be used to enable an external accessory, such as a horn relay or as an input.*

** Use 7500-02-1212 Power Injector on SVR-300, SVR-P250 & SVR-350 Installations.

**Additional Modifications (Radio):**

1. In the TM9300 Programming Application:
   a. In the **Global Parameters / Programmable I/O / Digital** screen
      1. Set AUX_GPI1, Mode = *All*, Direction = *Input*, Action = *External PTT 1*, Active = *Low*
      2. Set AUX_GPIO4, Mode = *All*, Direction = *Output*, Action = *Transmission Status*, Active = *Low*
      3. Set AUX_GPIO5, Mode = *All*, Direction = *Output*, Action = *Signalling Audio Mute Status*, Active = *Low*
      4. Set AUX_GPIO6, Mode = *All*, Direction = *Output*, Action = *F3 Key Status*, Active = *High*, Signal = *Latching*
      5. Set AUX_GPI2, Mode = *All*, Direction = *Input*, Action = *Enter Emergency Mode*, Active = *Low*

   b. In the **Global Parameters / Programmable I/O / Audio** screen
      1. Set RX/PTT Type **RX**, Tap Out = *R10*, Tap Out Type = *D*, Tap Out Unmute = *Except on PTT*
      2. Set RX/PTT Type **EPTT1**, Tap In = *T3*, Tap In Type = *A*, Tap In Unmute = *On PTT*
   c. In the **Trunked Features and/or Conventional Features / Key Settings** screen
      1. Program one desired key = *Action Digital Output Line*. This will set one key as the remote enable of the SVR.
   d. In the **Global Parameters / PTT / External PTT (1)** screen
      1. PTT Transmission Type = Voice
      2. Audio Source = Audio Tap In