

TPA-AA-210 TP9100 Hirose Accessory Adapter Installation Instructions



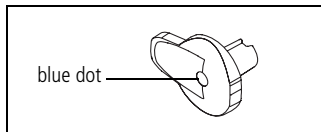
Use the Hirose accessory adapter (TPA-AA-210) to connect a compatible accessory to a TP9100 radio.



Important: The radio produces a specific audio level at the maximum rated power. It is the sole responsibility of the end user to establish the applicability of, and to ensure compliance with, relevant legal regulations defining the noise level an individual can be subjected to.



Note: If there is no blue dot on the P-clip, the adapter is of an older style and Pin 2 (HIROSE PWR) is not connected. Please see [Figure 1.1 on page 4](#).



Ensuring Compatibility



Important: Do not use an accessory that has the PTT switch in series with the microphone. The PTT signal must not be multiplexed on any other signal. It must be a separate signal, made available separately at the connector.

To be compatible, an accessory must meet the following specifications:

- speaker impedance: 32Ω (16Ω minimum)
- speaker power: $0.25 W_{\text{rms}}$ (minimum)
- speaker configuration: single-ended
- microphone: electret, approximately $1k\Omega$

The accessory must also be compatible with the pins and signals on the Hirose accessory adapter. See [page 3](#).

Compatible Hirose Accessories

[Table 1.1](#) shows compatible accessories available from Tait Technical Support (www.taitworld.com/technical) or OTTO Communications (www.ottoeng.com).

Table 1.1 Accessories

Description	Tait product code	OTTO part number
Earbud kit, 2-wire	–	V1-10777
Earphone, beige	–	V1-10167
Earphone, black	–	V1-10168
Headset, heavy-duty BTH	TPA-AA-212	V4-10482
Headset, Hurricane	–	V4-HC2MD3B
Headset, light-duty breeze	TPA-AA-211	V4BA1TP1
Headset, single-speaker	–	V4-10190
Microphone, 2-wire palm, beige	–	V1-10165
Microphone, 2-wire palm, black	–	V1-10166
Microphone kit, 2-wire mini lapel, black	–	V1-10164
Microphone kit, 3-wire mini-lapel, beige	TPA-AA-213	V1-10163



Note: Other accessories may cause voltage compatibility issues, resulting in a significant loss of audio quality.

Attaching an Accessory

The adapter has a Tait connector at one end and an industry-standard Hirose connector at the other. No disassembly is required.

To attach a compatible Hirose accessory to the radio:

1. Attach the adapter's Tait connector to the radio. For details, see the user's guide.
2. Attach the adapter's Hirose connector to the accessory.



Note: The internal speaker in the radio is not muted until you attach the adapter to the accessory.

Pins and Signals on the Hirose Accessory Adapter

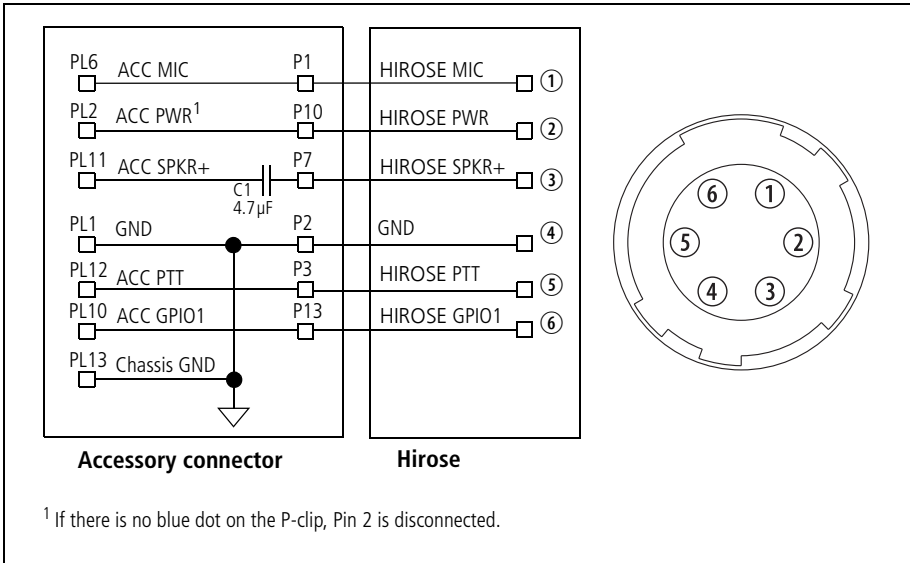
Table 1.2 Pins and signals

Pin	Signal name	Description	Signal type	Signal level	Output impedance/ current	Input impedance
①	HIROSE MIC	External microphone input (electret) Dynamic microphones are not supported.	Analog audio	9.5V _{rms} for 60% modulation at 1 kHz, DC-coupled	–	2.2kΩ
②	HIROSE PWR ¹	Accessory power	DC supply	3.3V nominal	100mA (max)	–
③	HIROSE SPKR+	External speaker output	Analog audio	+6.5V _{pp} ²	To drive 16Ω	–
④	GND	Analog ground	Ground	–	–	–
⑤	HIROSE PTT	External press-to-talk input	Analog DC	0 to 2.5V, PTT=0	–	27kΩ
⑥	HIROSE GPIO1	Accessory sense (internal speaker disable)	3V3 CMOS	high=1 low=0	1mA (max)	–

¹ If there is no blue dot on the P-clip, Pin 2 is disconnected.

² Signal level depends on battery charge level.

Figure 1.1 Circuit diagram and pinout



For more information about the adapter, including disassembly instructions, see the TP9100 Service Manual, MPA-00005-xx.