

This document applies to all THP-700RTS family members

11636 GOLDRING RD • ARCADIA, CALIFORNIA 91006-5815
626-358-2559 • FAX 626-359-5701 • 800-525-6925

Instructions - THP-700RTS Telephone Headset Radio Transfer Switch with Dry Switch Closure Output

The THP-700RTS is an interface between telephones or Automatic Call Directors and radio consoles with headsets. It outputs a dry switch closure for use by the radio to transfer the headset from the radio to the telephone. It also outputs analog audio of the telephone conversation to a recorder, if desired. An RJ11 jack outputs the recorder audio on pins 3 & 4, and the dry switch closure on pins 2 & 5 of the jack (see diagrams). The audio output need not be used if recording is not desired.

There are several members in the THP-700RTS family. Some are listed below.

	VOX	Manual Switch to Phone	Manual Switch to Radio	Record Output	Alert Tone	15 Sec Beep	LED	Contact Closure	2nd Cont Closure	DynaMetric RADIO TELEPHONE TRANSFER SWITCHES
THP-700RTS	Y	Y	Y*	Y	Y	N	Y	Y	N	Standard unit
THP-700RTU	Y*	Y	Y*	N	N	N	Y	Y	Y	VOX=>phone, push button=>radio, 2 cntct closure outputs
RTS-1	N	Y	Y	Y	Y	N	Y	Y	N	Manual switching, no VOX
RTS-2	Y	Y	Y*	Y	Y	N	Y	Y	N	THP-700RTS with 2.5mm 3 conductor plug on pigtail
THP-700RTM	N	Y	Y	N	N	N	Y	Y	Y	Manual switching, no VOX, no Alert Tone, 2 cntct cl outs
THP-701RTS	Y	Y	Y*	Y	Y	Y	Y	Y	N	700RTS with Beeps
THP-702RTS	Y	Y	Y*	Y	N	N	Y	Y	N	700RTS with NO Alert Tone
THP-703RTS	Y	Y	Y*	Y	Y	N	Y	Y	N	700RTS + toggle switch to disable contact closure
THP-710RTS	Y	Y	Y*	Y	Y	N	Y	Y	Y	2nd contact closure on RJ11 pins 1 & 6
	*VOX switches to phone, button switches back to radio.		*VOX has priority over push button.							Many different variations can be made. Contact us and tell us what combination of features you want at Sales@DynaMetric.com

The THP-700RTS detects an audio signal on the incoming telephone talk path and connects the headset and simultaneously outputs the dry switch closure. An LED indicates to the operator that the telephone talk path to the phone is connected. The dry switch closure and the headset connection are maintained as long as there is audio signal on the phone. After a settable quiet time of 5 to 30 seconds (usually 10 seconds) on the phone, the dry switch closure opens and the headset is disconnected and reverts to the radio. A "TALK" push button adjacent to the LED on the THP-700RTS will toggle the headset connection from the telephone to the radio and back again. If the LED is ON (headset connected to telephone), the push button will revert the headset to the radio (opens the dry switch closure) as long as there is no telephone audio. If the LED is OFF (headset connected to the radio), the push button will reconnect the headset to the telephone. The push button allows the immediate connection of the headset to either radio or telephone. The telephone call must be placed ON HOLD for the headset to remain connected to the radio in the presence of audio on the telephone line.

Each time the unit switches to phone, a short Alert Tone is heard on the phone and the headset to let all parties know the operator is back on the call. The volume of the Alert Tone is adjustable, including turning it off completely.



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Installation (see diagrams on the last 2 pages):

1. Connect the modular cord from the rear of the THP-700RTS into the modular headset jack on the phone base. If the headset jack is a ¼" dual pin jack, use a modular to dual pin adapter (P/N 43174, order if needed).
2. Plug a modular cable (headset size, 4P4C) into the bottom jack of the THP-700RTS. The 4 wires on the other end of the modular cable are connected to the switched headset connector of the radio console.
3. Connect a cable from THP-700RTS RJ11 jack (on the top of the unit) pins 2 & 5, to the input of the radio console dry switch closure input. If desired, pins 3 & 4 of the RJ11 have telephone audio that may be connected to a recorder.
4. Plug the AC adapter into a nearby 120VAC power outlet, and the cord into the THP-700RTS.

Operation:

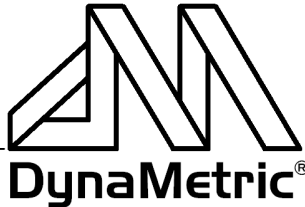
The THP-700RTS is almost completely automatic. The only user operation needed is to press the TALK Switch if a long pause in the conversation causes the unit to return the headset to radio. After the preset quiet time on the talk path (usually 10 seconds) the headset connection will automatically revert to the radio.

For detailed instructions for integrating your telephone and radio systems using the THP-700RTS, download the document:

<http://www.dynametric.com/pdf/THP-700RTS%20Connection%20Procedure.pdf>

You can also Google: DynaMetric THP-700RTS Connection Procedure

There are three adjustments available to accommodate individual phone installations. The units are adjusted at the factory to normal settings that work with most telephones. Do not readjust unless it is indicated after testing on the actual telephones. If it is necessary, follow the **Adjustment Procedure** on page 4.



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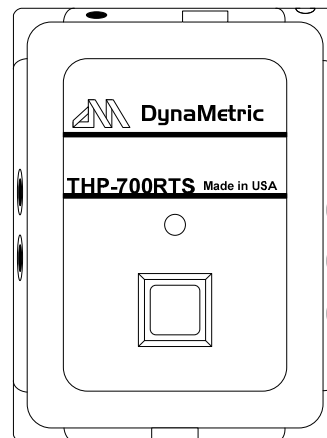
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System Test:

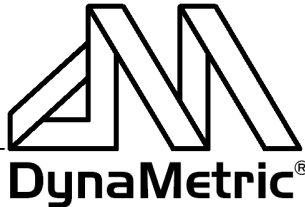
- A. With the talk LED OFF, have someone route a call to your extension. Push the button on the phone to accept the call.
- B. The headset should transfer from the radio when the call comes through and the LED should light.
- C. Carry on normal conversation. Your headset should remain connected to the telephone, unless there are long periods of silence (in which case, simply push the "TALK" switch on the unit).
- D. Now hang up. After 10 seconds of silence, the Talk light on the THP-700RTS should go OFF, and your headset should revert to the radio.
- E. Push the "TALK" switch on the THP-700RTS. Your headset should reconnect to the telephone.
- F. Place an outgoing call. When Dial tone or similar tone is on the outgoing line the headset should reconnect automatically and you can place the call.
- G. If problems occur, retest. If the problem persists, adjustments may be necessary. If so, follow the **Adjustment Procedure** on the next page.

The adjustment controls are factory preset for standard applications. Once the unit has been installed per the instructions above, they normally should not require adjustment. The adjustments are located as follows, front to back:

- A. **Alert Tone Volume** Control – Sets the volume of the alert tone which indicates that the headset is connected to the phone. Factory preset at $\frac{1}{4}$ volume (CW increases volume). Adjust for comfort level.
- B. **VOX Time Delay** Control – Sets Headset disconnect time delay, from 5 to 30 seconds after talk path goes quiet. Factory preset at 10 seconds (CW increases time).
- C. **Audio Sensitivity** Control – Sets talk path audio detection sensitivity. Factory preset for most applications (CCW increases sensitivity).



- ← AUDIO SENSITIVITY ADJUST
- ← VOX DELAY ADJUST
- ← ALERT TONE VOLUME



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Adjustment Procedure:

The controls are accessible through three small holes in the right side of the THP-700RTS with a small screwdriver. These adjustments must be made while connected to the phone in the installation.

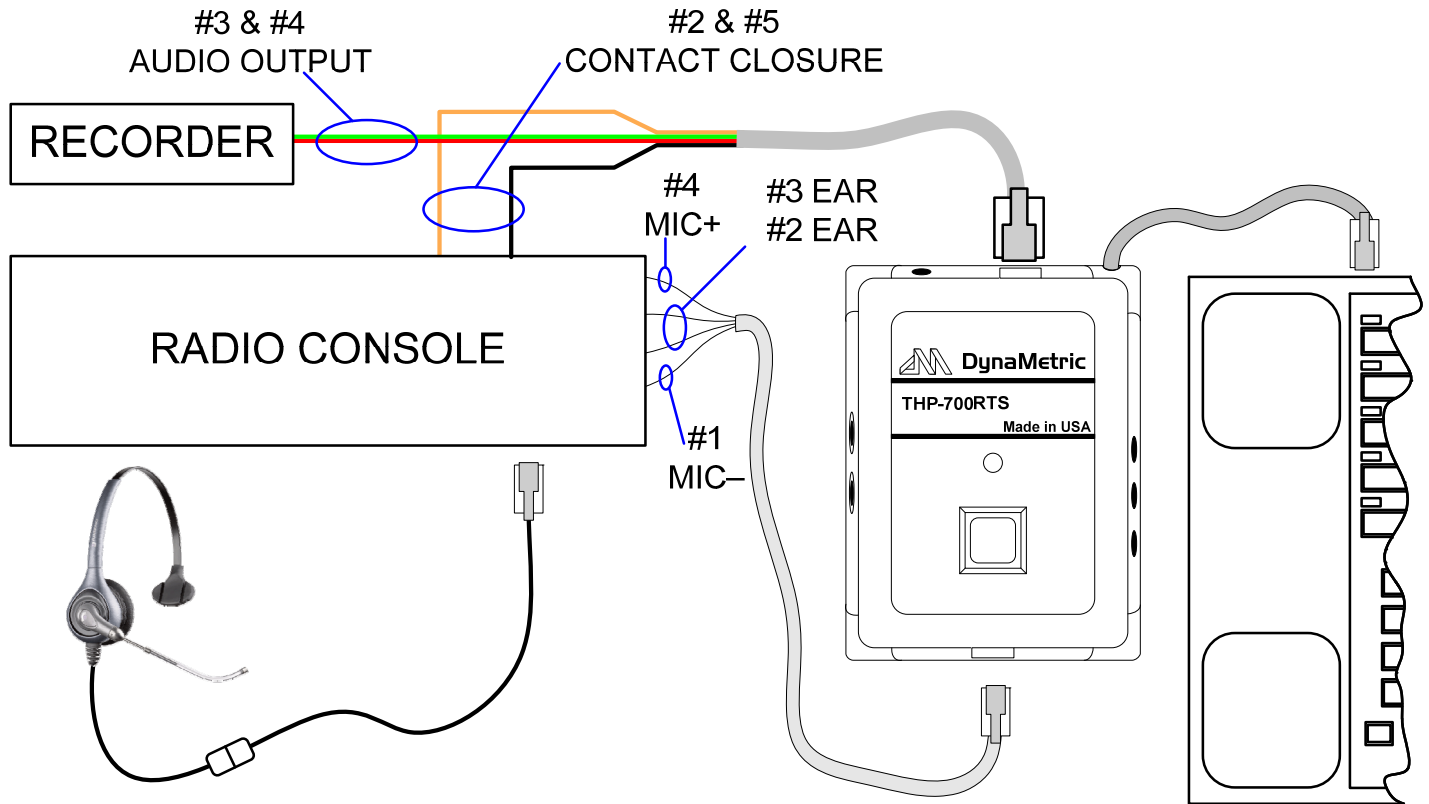
Do not adjust these controls unless necessary.

1. Alert Tone - To adjust, simply turn the control until the desired tone volume level is reached, clockwise louder, counter-clockwise softer.
2. VOX Time Delay - Sets the phone quiet time delay prior to reconnecting to radio. To set this, disconnect the modular cord from the phone base and push the Talk switch. The Talk light will remain ON for the set time period, and then shut OFF. Clockwise increases delay time, from a minimum of 5 to a maximum of 30 seconds. Remember to re-connect modular cord plug to the phone when finished.
3. Audio Sensitivity to Connect - Do not adjust unless absolutely necessary. Adjustment is required only if A) unit reverts to radio in the middle of conversations, or B) unit never goes back to radio, even when the line is silent for long periods. If adjustment is needed, set control by the following procedure:
 - A. Place a call to someone who can assist you, using your headset.
 - B. Note position of the time delay control. Turn it fully counter-clockwise, to shorten the delay time for the test.
 - C. Turn the audio threshold control fully counter-clockwise. This increases sensitivity to maximum. Push the Talk switch.
 - D. Make sure the headset is in a quiet environment. Slowly turn the control clockwise until the Talk light turns OFF. At this setting the line noise and background noise will not trigger the 700RTS.
 - E. Press the Talk switch and carry on a normal quiet conversation. Verify that the Talk light stays ON. Remember the time delay is set short, so 5 second pauses in the conversation may turn it OFF inadvertently and invalidate the test. Be sure to talk without pauses for this test.
 - F. If the Talk light goes OFF during normal conversation, turn the control slightly counter-clockwise, increasing sensitivity. If the Talk light never turns OFF, even with silence on the line, turn the control slightly clockwise, until a proper balance is reached.
 - G. Return the time delay control to its original position. The adjustments are complete.



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Connection Accessories Available from DynaMetric

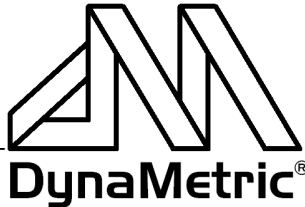
- 39317-3 4 Cond Cable, 14" Modular 4P4C (handset size plug) to Stripped & Tinned end
- 44509-1 6 Cond Cable, 12" Modular 6P6C (RJ11 plug) to Stripped & Tinned end
- CBL-27 4 Cond Cable, 7' RJ11 Modular Line Cord, RJ11 Plugs on each end
- CBL-28 4 Cond Cable, 14' RJ11 Modular Line Cord, RJ11 Plugs on each end
- CBL-29 4 Cond Cable, 25' RJ11 Modular Line Cord, RJ11 Plugs on each end

Custom cables are also available, contact DynaMetric.

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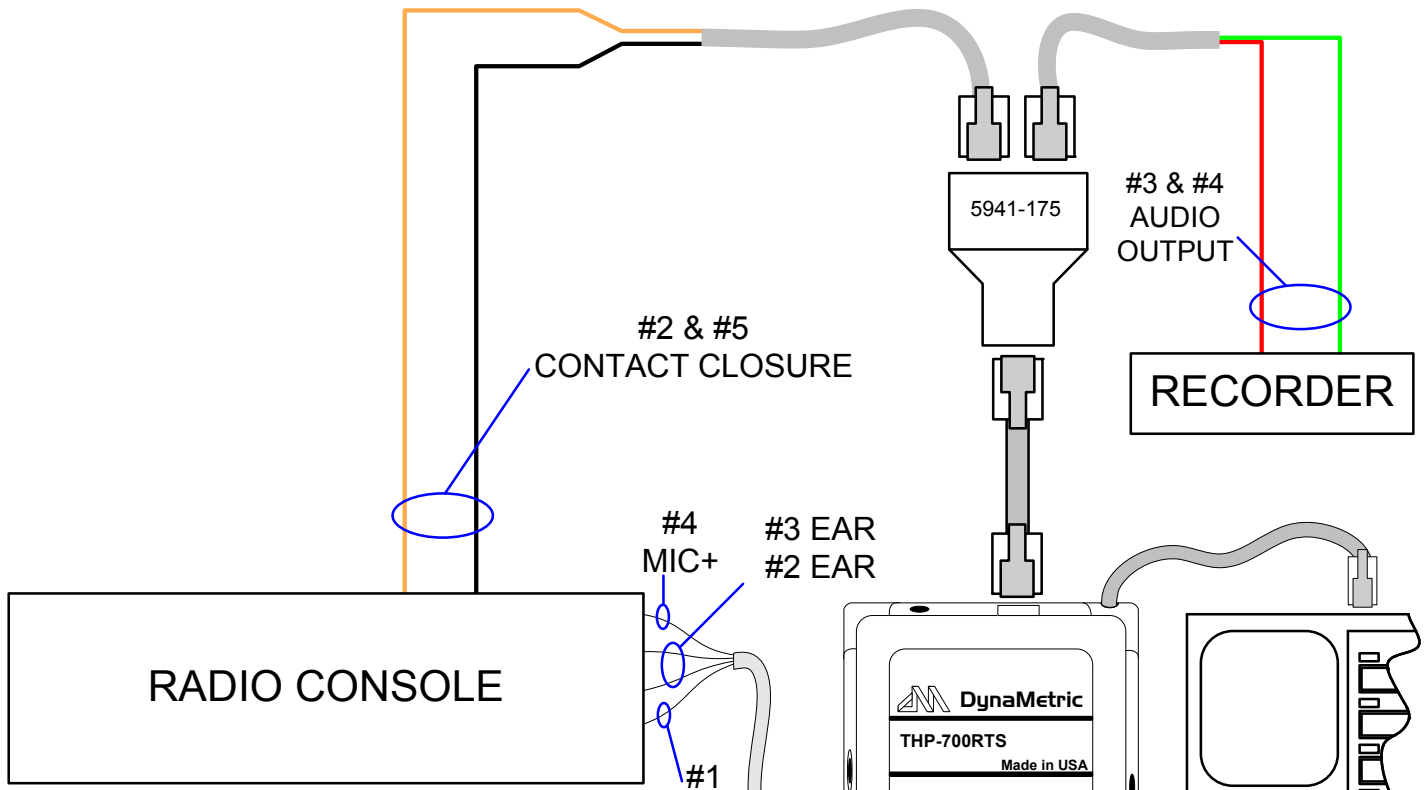
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Alternative Connection Technique for Output to Recorder & Radio Console



Connection Accessories Available from DynaMetric

- 5941-175 Modular 3 port Female-Female-Female RJ11 Adapter, 4 Conductor
- 39317-3 4 Conductor Cable, 14" Modular 4P4C (handset size plug) to Stripped & Tinned end
- 44509-1 6 Conductor Cable, 12" Modular 6P6C (RJ11 plug) to Stripped & Tinned end
- CBL-27 4 Conductor Cable, 7' RJ11 Modular Line Cord, RJ11 Plugs on each end
- CBL-28 4 Conductor Cable, 14' RJ11 Modular Line Cord, RJ11 Plugs on each end
- CBL-29 4 Conductor Cable, 25' RJ11 Modular Line Cord, RJ11 Plugs on each end

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