



DESCRIPTION

The ESRSC is a control interface that enables a contractor to add external control, contact closure, programmable mute functions and status indication to any dynamic or condenser microphone. This phantom-powered interface offers all the programmable local/remote switching functions of the Audio-Technica AT8666RSC Microphone Desk Stand.

Switch function can be set to any of three operating modes: Touch On/Off, Momentary On (“press to talk”), and Momentary Off (“press to mute”).

External contact closure capability permits control of remote devices from a user-supplied switch. A three-position switch on the ESRSC (“Local/Remote/LED Remote”) enables the microphone and the LED status to be controlled locally or from an external device. In remote operation, the user-supplied LED and switch operate independently from the microphone. In LED Remote operation, the user-supplied LED is controlled from an external source.

The ESRSC offers screw-terminal block connectors for mic in, mic out, LED out, and closure out. Users supply their own momentary switch and high-efficiency LED with a luminosity rating of approximately 300 mcd @ 20 mA DC. Mounting hardware is included. The ESRSC can be powered from any 11V to 52V DC phantom power source. The unit has a low-reflectance black finish.

INSTALLATION AND OPERATION

To connect the ESRSC to a user-supplied momentary switch: Connect one terminal of the momentary switch to the ESRSC Push Switch screw-terminal block connector; connect the other terminal of the momentary switch to the ESRSC screw-terminal block connector (adjacent to the Push Switch screw-terminal block connector).

To connect the ESRSC to a user-supplied LED: Connect the + (anode) terminal of the LED to the ESRSC LED Out screw-terminal block connector; connect the – (cathode) terminal of the LED to the ESRSC Ground screw-terminal block connector (adjacent to the LED Out screw-terminal block connector).

To configure a user-supplied on/off switch for touch-on/touch-off, momentary on (“press to talk”), or momentary off (“press to mute”), slide the switch marked “SWITCH FUNCTION” to the appropriate mode. The external contact closure and user-supplied indicator LED follow the operation of the touch switch, when in the local mode.

For applications that require a microphone to remain active or always “on”, regardless of the touch switch setting, a “Local/Remote/LED Remote” control function is provided.

- When the switch marked “CONTROL” is in the “Local” position, the user-supplied switch controls the microphone’s audio output, LED status and contact closure internally.
- When the “CONTROL” switch is in the “Remote” position, the microphone’s audio output remains active or “on” all the time. The user-supplied switch controls only the LED and contact closure.
- When the “CONTROL” switch is in the “LED Remote” position, it allows remote control of the user-supplied LED, for accurate depiction of the microphone’s live status. The LED will remain “on” when driven logic high or open, and “off” when driven logic low or connected to ground. The microphone’s audio output remains active or “on” all the time, and the contact closure follows the configuration of the user-supplied switch.

Refer to the table below for switch/LED/closure states.

CONTROL Switch in “Local” Position

| SW Setting | Microphone Audio | LED | External Contact Closure |
|--------------|------------------------------|------------------------------|-------------------------------|
| TOUCH ON/OFF | Follows user-supplied switch | Follows user-supplied switch | Follows user-supplied switch |
| MOM. ON | “On” when switch is pressed | “On” when switch is pressed | Closed when switch is pressed |
| MOM. OFF | “Off” when switch is pressed | “Off” when switch is pressed | Open when switch is pressed |

CONTROL Switch in “Remote” Position

| SW Setting | Microphone Audio | LED | External Contact Closure |
|--------------|------------------|------------------------------|-------------------------------|
| TOUCH ON/OFF | Always “On” | Follows user-supplied switch | Follows user-supplied switch |
| MOM. ON | Always “On” | “On” when switch is pressed | Closed when switch is pressed |
| MOM. OFF | Always “On” | “Off” when switch is pressed | Open when switch is pressed |

CONTROL Switch in “LED Remote” Position

| SW Setting | Microphone Audio | LED | External Contact Closure |
|--------------|------------------|---------------------|-------------------------------|
| TOUCH ON/OFF | Always “On” | Remotely controlled | Follows user-supplied switch |
| MOM. ON | Always “On” | Remotely controlled | Closed when switch is pressed |
| MOM. OFF | Always “On” | Remotely controlled | Open when switch is pressed |

Output is low impedance balanced. The signal appears across the *Mic Out 2* and *Mic Out 3* screw-terminal block connectors; audio ground (with shield) is connected to *Mic Out 1*. Output is phased so that positive acoustic pressure produces positive voltage on *Mic In 2* (Pin 2). *Closure Out* and its associated *Ground* are the contact closure. The *LED Remote* screw-terminal block connector is the external LED control. Output goes to an audio mixer or other balanced microphone input supplying 11-52V DC phantom power.

Input Connector: a 3-pin screw-terminal block connector accepts a balanced line-level input signal: Pin 1 (shield) is *Mic In 1*; Pin 2 (Audio +) is *Mic In 2*; Pin 3 (Audio -) is *Mic In 3*.

Use the four supplied screws to mount the unit. The unit is designed to operate with either condenser or dynamic microphones.

Architects and Engineers Specifications

The unit shall be a remote switch control interface designed to enable a contractor to add external control, contact closure, programmable mute functions and status indication to any dynamic or condenser microphone. It shall operate from an external 11V to 52V DC phantom power source.

The unit shall enable switch function to be set to any of three operating modes: Touch-On/Off, Momentary On ("press to talk") and Momentary Off ("press to mute").

A three-position "Local/Remote/LED Remote" control function switch shall be provided on the unit. In the "Local" position, the user-supplied microphone shall function as a standard switch-controlled microphone with muting taking place at the microphone. In the "Remote" position, the microphone shall become disengaged from the switching circuit and shall always remain on, providing audio output regardless of the actions of the touch-sensitive on/off switch (thus allowing the switch to control external mute circuits as used with acoustic echo cancellers and other equipment). A third position of this switch shall isolate the LED indicator so that it can be triggered by an external device or tally circuit.

The unit shall offer screw-terminal block connectors for mic in, mic out, LED out, and closure out. Users shall supply their own momentary switch and LED. Mounting hardware shall be included. The unit shall offer a low-reflectance black finish.

The unit shall have a width of 2.36" (60.0 mm), a height of 1.44" (36.7 mm) and a length of 5.13" (130.3 mm). Weight shall be 8.5 oz (240 g).

The Audio-Technica ESRSC is specified.

ESRSC SPECIFICATIONS†

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|-----------------------------------|---|
| ELEMENT | Switch function: touch on/off, momentary on, momentary off; Control: local, remote, LED remote |
| WEIGHT | 240 g (8.5 oz.) |
| DIMENSIONS | 130.3 mm (5.13") long, 60.0 mm (2.36") width, 36.7 mm (1.44") height |
| INPUT CONNECTORS* | 3-position screw-terminal block/plug, 12-24 gauge wire (Phoenix 1754465) |
| OUTPUT CONNECTORS* | 3-position screw-terminal block/plug, 12-24 gauge wire (Phoenix 1754465) |
| OFF ATTENUATION | 44 dB minimum |
| PHANTOM POWER REQUIREMENTS | 11-52V DC, 2 mA typical |
| CONTACT CLOSURE | |
| CLOSURE I/O VOLTAGE | -0.5V to 5.5V |
| CLOSURE THROUGH CURRENT | 100 mA |
| POWER DISSIPATION | 720 mW |
| ON RESISTANCE | 20 +/- 8 ohms |
| I/O LEAKAGE CURRENT | 400 nA |
| LED INPUT | Active when high (+5V DC) TTL compatible |
| MAXIMUM INPUT VOLTAGE | -0.5V to 5.5V |

† In the interest of standards development, A.T.U.S. offers full details on its test methods to other industry professionals on request.

* Note: There are a total of 4 input/output connectors (2 are audio, 2 are control in / out). All of the connectors are 3-position screw terminal block/p plug, 12-24 gauge wire (Phoenix 1754465). Specifications are subject to change without notice.



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