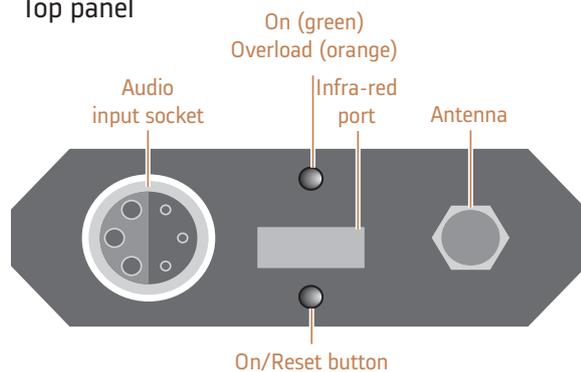




The TX2040 is a small, lightweight battery-powered pocket transmitter for use with a wide range of lapel microphones. All settings can be read and changed via the infra-red port using the SwitchiR™.

Controls, display and connections

Top panel



Infra-red port

Receives commands from and transmits status information back to the SwitchiR infra-red controller.

On/Overload indicator

The LED glows green while the TX2040 is switched on, but will flash orange to indicate an overload in the presence of a high-level audio signal. At this point the low distortion limiter operates.

Brown reset button

Resets the TX2040 and turns it on again from sleep mode. Please use the tip of the antenna to press the button.

Battery compartment

Holds a 6LR61 type 9V alkaline battery.

Audio input

Allows a microphone or input cable to be connected.

SMA antenna connector

SMA socket to which the antenna is connected.

LF cut using SwitchiR

Gives approximately 6dB LF cut at 50Hz, to assist in the reduction of wind noise.

Gain setting using the SwitchiR

Provides eight gain options when used with standard microphones. Position 9 gives maximum gain and each position decreases the gain by approximately 3 to 4dB, giving a total of 30dB of adjustment. Positions 1 and 0

provide line-level input.

The following table gives the equivalent settings for the TX2020:

TX2040	0	1	2	3	4	5	6	7	8	9
TX2020	8	9	0	1	2	3	4	5	6	7

Note: Positions 0 and 1 (8 and 9 on the TX2020) provide line-level input.

Setting up the TX2040

To set up the TX2040:

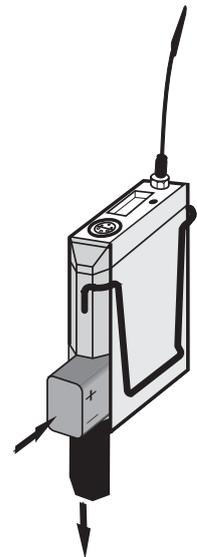
- Fit the battery.
- Connect the antenna.
- Switch on by plugging in the microphone or input cable.
- Check or select the operating frequency.
- Check that the receiver's no signal indicator is not illuminated.
- Check or set the microphone gain.
- Check or set the low frequency cut filter.
- Check the battery status.

These steps are explained below:

Fitting the battery

- Press and slide open the battery compartment door.
- Insert a 6LR61 type 9V alkaline battery with its contacts facing downwards observing the polarity as shown on the sleeve.
- Push the battery down against the spring-loaded contacts and slide the battery compartment door closed, pushing against the spring-loaded contacts.

Do not use excessive force: An electronic resettable fuse protects the transmitter from reverse powering. A low transmitter battery indicator is provided on the DX2040 receiver and on the RK2040 rack in addition to the LED indicator on the TX2040 transmitter.



Connecting the antenna

- Connect the flexible antenna to the SMA connector.

Switching on

- Insert the microphone plug. The LED illuminates green and the transmitter turns on. To turn the transmitter

off remove the lemo plug. Alternatively the TX2040 can be turned off or on, even through clothing, using the Control-X. The LED flashes green when the battery voltage falls below 6.5V. The unit should not be used when the battery is low as poor operation may result.

Connecting the audio input

- Connect the microphone or input cable to the six-pin Lemo socket. Both positive and negative microphone bias voltages are provided, enabling the majority of Lavalier microphones to be used with the TX2040.

Selecting the operating frequency

You can check or change the operating frequency of the TX2040 via the infra-red control using the Switch*i*R.

To check the frequency:

- Press **MENU**. The display shows:



- Align the front of the Switch*i*R with the infra-red port on the TX2040 and press **OK**. The display shows the current frequency. For example:



To change the frequency:

- Press **OK**. The display will alternately flash between showing the frequency and channel number. For example:



- Press \uparrow or \downarrow to scroll through the 32 frequencies read from the transmitter until the desired frequency or channel is displayed. For example:



- Point the Switch*i*R at the infra-red port on the TX2040 and press **OK**. If the command was received successfully the display will show the new set frequency. For example:



Otherwise it will show:



- Repeat the above steps if an error message is displayed, moving the Switch*i*R closer to the infra-red port.

Setting the gain

The steps between gain settings 2-9 are approximately 3 to 4dB. Set the gain position so that the Overload indicator does not flash on during normal operation.

To check the gain setting:

- Press **MENU** followed by \uparrow . The display will indicate:



- Align the front of the Switch*i*R with the infra-red port of the TX2040 and press **OK**. The display will show the current transmitter gain setting:



To change the gain setting:

- Press **OK** again. The display will flash the level setting.
- Press \uparrow or \downarrow to step between gain settings 2-9 until the required gain setting is displayed. For example:



- Align the front of the Switch*i*R with the infra-red port on the transmitter and press **OK**. If the command was received correctly the display will show the new gain setting. For example:



Otherwise the display shows:



- Repeat the previous steps if an error message is displayed, moving the Switch*i*R closer to the infra-red port.

Setting the low frequency cut filter

The LF cut filter gives an approximately 6dB cut at 50Hz to reduce handling and wind noise.

To check the status of the low frequency cut filter:

- Press **MENU**.
- Press \uparrow twice until the display shows:



- Align the front of the Switch*i*R with the infra-red port on the transmitter and press **OK**. The current LF cut filter setting is displayed; for example:



To change the filter setting:

- Press **OK** again. The current setting will flash.
- Press \uparrow or \downarrow to toggle between ON or OFF until the required setting is displayed.
- Align the front of the Switch*i*R with the infra-red port on the transmitter and press **OK**. If the command was received successfully the new setting will be displayed. For example:



Otherwise the display will show:



- Repeat the previous steps if an error message is displayed, moving the Switch*i*R closer to the infra-red port.

Checking the battery status

- Press **MENU**.
- Press \uparrow three times until the display shows:



- Align the front of the Switch*i*R with the infra-red port on the transmitter and press **OK**. The display will show the current battery status:



The battery level can also be checked from the receiver; see the appropriate instructions for the receiver.

Infra-red disable

You can protect the TX2040 from an accidental change of settings, such as in a live performance, by disabling the infra-red port on the transmitter. This will prevent all communication with the transmitter until the brown reset button is pressed, or the battery is disconnected and reconnected via the microphone plug.

Disabling the infra-red port

- Press **MENU**.
- Press \downarrow twice. The display will show:



- Align the front of the Switch*i*R with the infra-red port on the transmitter and press **OK**. If the command was received successfully the display will show:



Note: Once the infra-red port has been disabled, any subsequent interrogation of the transmitter will give an error display; this is not a fault.

Sleep mode

The TX2040 can be put into sleep mode using the Switch*i*R. In the sleep mode the TX2040 uses very little current and the Switch*i*R can still be used to read all settings.

When not in use the power should be switched off by removing the microphone plug or input cable.

Putting the TX2040 into sleep mode

- Press **MENU** followed by \downarrow . The display will indicate:



- Align the front of the Switch*i*R with the infra-red port on the transmitter and press **OK**. The display will show:



To switch the transmitter on again:

- Press **MENU**. The display shows:



- Align the front of the Switch*i*R with the infra-red port on the transmitter and press **OK**. The display shows the current frequency; for example:



Alternatively, you can use the tip of the antenna to press the brown On/Reset button to turn the TX2040 on again.

Technical specification

Frequency range	470MHz–1000MHz
Frequency stability	Better than ETS 300–422
Number of frequencies	32 pre-programmed
Switching bandwidth	Up to 24MHz
Output power	50mW nominal
Gain control range	28dB in 8 steps, plus 2 steps for 600Ω line input
Maximum input level	+8dB gain position 0, 600Ω
Frequency response	50Hz to 18kHz ±1dB
THD	<0.1% at working levels <0.3% at gain position 7 with -6dB input in overload
Battery	9V (IEC 6LR61) Alkaline
Battery life	Typically 10 hours
Size	89 x 60 x 21mm
Weight	135g
Operating temperature range	-20°C to +55°C
Compliant to	R&TTE Directive FCC

EC Declaration of Conformity.

Déclaration de conformité pour la CEE. EG-Konformitäts-Erklärung. Certificato di conformità comunitario. Declaración de Conformidad. EG-Conformiteitsverklaring

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declare that these devices / déclarons que ces appareils / erklären, dass die Produkte / declaramos que estos aparatos / dichiara che questi apparecchi / verklaren, dat deze toestelen

TX2040 Pocket Transmitter

conform to the essential requirements of the R&TTE Directive 1999/5/EC. To demonstrate compliance with these requirements, the following standards were consulted:

sont conformes aux prescriptions fondamentales dan la Directive R&TTE 1999/5/EC. Pour mettre en pratique dans la règle de l'art les prescriptions, il a été tenu compte des normes suivantes:

den einschlägigen Anforderungen der R&TTE-Direktive 1999/5/EC entsprechen. Zur sachgemäßen Umsetzung der in den EG-Richtlinien genannten Anforderungen wurden folgende Normen herangezogen:

complen los requerimientos básicos de la normativa de la normativa R&TTE 1999/5/EC. Con il fin de realizar de forma adecuada los requerimientos referidos en la normativa fueron consultadas las siguientes normativas:

sono conformi alla normativa R&TTE 1999/5/EC. Per un'appropriateo risconto nell'ambito della normativa CEE sono state consultate le seguenti normative:

evereenkomt met de basiseisen van de EG-Richtlijn 1999/5/EC. Om de eisen, die in de EG-Richtlijnen vermeld zijn, in juiste vorm om te zetten, zijn van volgende normen gebruik gemaakt:

Article 3.1a: EN 60065:2002 (Safety of Electrical Equipment)

Article 3.1b: EN 301 489-9:2002 (Electromagnetic Compatibility)

Article 3.2: EN 300 422-2:2000 (Radio Parameters)

Conformity assessed via Annex IV using a Technical Construction. File examined by Notified Body 0891, TRL Compliance Services Ltd.

Lee Stone, Technical Director. May 2004

