# User Guide

# DX2040 True Diversity Receiver



The 2040 range has been designed as a result of extensive feedback from professional sound specialists and sets a new benchmark for radio microphone systems, with several unique features and offering benefits to appeal to sound mixers, directors, and artists.

The DX2040 true diversity receiver in the RMS2040 range can be used with the TX2040 pocket transmitter and the HX2040 handheld transmitter. It is also fully compatible with the TX2020 and TX2000 UHF transmitters. All settings on the DX2040 receiver can be read or changed via infra-red using the SwitchiR or AudiR© for Palm™.

# Controls, display and connections

#### Battery compartment

Holds two 1.5v AA (LR6) type cells.

# On/Off

Switches the power on or off. Additionally the output cable includes a link which disconnects power when the Lemo plug is removed, in which case the switch can be left on.

# Identification plug

Can be fitted with one of the coloured rubber plugs supplied with the DX2040 to identify each unit.

# Audio output

Provides transformer balanced microphone level and adjustable headphone outputs.

# Antenna A and Antenna B

SMA sockets to which the antennae are connected. Indicators next to each antenna indicate which of the unit's two built-in receivers is active at any time.

### Infra-red port

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

#### TX/DX low battery indicators

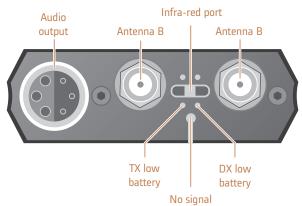
Illuminate when the unit detects low battery power in either the TX2040 Pocket Transmitter or DX2040 Receiver. The units should not be used when a low battery power indicator is illuminated as poor operation may result.

Note: The low DX battery indicator does not function when the receiver is externally powered via Audio Ltd's cables. This is not a fault.

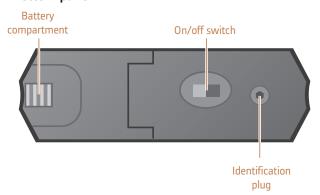
### No-signal indicator

Illuminated when no carrier signal is being received, such as when the transmitter is switched off or set to an incorrect frequency.

# Top panel



# **Bottom** panel



# To set up the DX2040 in conjunction with a TX2040 or HX2040:

- Fit the batteries.
- Connect the A and B antennae.
- Connect the audio output cable.
- Slide the On/Off switch to the On position.
- Select the operating frequency.
- Set the output level.
- Check that one of the A and B indicators is illuminated and that the red 'No signal' indicator is not illuminated.

These steps are explained on the following page:

# **DX2040 True Diversity Receiver**

# Setting up the DX2040

# Fitting the batteries

To open the battery compartment, slide the release catch towards the centre of the DX2040 and flip open the cap. Insert two 1.5 volt AA (LR6) type batteries, negative contact first as shown on the side of the unit, and close the cover. Do not use excessive force.

#### Connecting the antennae

Connect the antennae to the SMA connectors marked Antenna A and Antenna B. Connect the straight antenna to one socket and the right-angled antenna to the other socket.

#### Selecting the operating frequency

You can check or change the operating frequency of the DX2040 receiver via infra-red control using the SwitchiR.

# To check the DX2040 frequency:

• Press MENU. The display shows:



 Align the front of the SwitchiR with the infra-red port on the receiver and press OK. Optimum operating range is between 5 and 15cm. The SwitchiR will display the receiver frequency; for example:



## To change the DX2040 frequency:

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



• Press 🕥 or 💟 to scroll through the 32 frequencies read from the receiver until the required channel or frequency is displayed. For example



 Align the front of the SwitchiR with the infra-red port on the receiver and press OK. If the command was received correctly the display will show the new frequency. For example:



Otherwise the display will show:



Repeat the above steps if an error message is displayed, moving the SwitchiR closer to the infra-red port.

### Setting the output level

The DX2040 output level is attenuated in 1dB steps over a 32dB range, allowing the receiver output to be matched to inputs which require a lower input level. The 0dB reference level is -25dBu.

# To check the DX2040 output level:

- Press MENU.
- Press nonce until the display shows



 Align the front of the SwitchiR with the infra-red port on the receiver and press OK. The display will show the current output level setting; for example:



# To change the receiver output level:

- Press the **OK** button. The AF level display will flash.
- Press or to step between the available output level settings until the required output level is displayed. For example:

 Align the front of the SwitchiR with the infra-red port on the receiver and press **OK**. If the command was received correctly the new level will be displayed. For example:



Otherwise the display will show:



Repeat the above steps if an error message is displayed, moving the SwitchiR closer to the infra-red port.

## Checking the DC power status

To check the status of the receiver's DC power:

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





• Align the front of the Switch*iR* with the infra-red port on the receiver and press **OK**. The display will show the DC voltage:



If the associated transmitter is on while the DC status is being checked the display will alternate between the receiver's DC status and the received transmitter DC status. For example:



The transmitter status is shown as one of the following options:

OPTION	DESCRIPTION
H (high)	Indicates good.
L (low)	Indicates low. Replace as soon as possible.
F (failed)	Transmitter will not function correctly.

# External powering

Audio Ltd has a large selection of cables available for a variety of different applications. If the DX2040 receiver is to be externally powered, ensure that the appropriate cable is used.

# Technical specification

Frequency range	470MHz-1000MHz
Number of frequencies	32 pre-programmed
Switching bandwidth	Up to 24MHz
Sensitivity	-98dBm for 40dB SINAD
Balanced output level	-25dBu
Frequency response	50Hz to 18kHz ±1dB
THD	<0.2% typical
Batteries	2 x 1.5V AA (LR6) type
Battery life	> 4 hours on good alkaline batteries
Size	147 x 64 x 20mm
Weight	250g
Operating temperature range	-20°C to +55°C
Compliant to	ETS 300422 EN 300445(CE) FCC