# EXPLORER 100 SERIES USERS MANUAL





# MICRGN

# **INSTRUCTION MANUAL**

Covers the following models:

EXPLORER 100 SERIES - SR116, TX716

SDR116, TX716A

SDR256, TX7256

SDR550, TX700B

Part No: EXp100-1





# Contents

| General Description                        | 1  |
|--|----|
| Diversity                                  | 2  |
| Explorer 100 Transmitters                  | 5  |
| Explorer 100 Transmitter Front Panel       | 6  |
| Explorer 100 Receivers                     | 9  |
| Explorer 100 Receivers Front Panel         | 10 |
| Frequency Control Panel                    |    |
| Powering                                   |    |
| Quick Setting Up Procedure                 |    |
| How to Get the Best from Explorer          | 21 |
| Audio and dc Input/Output Details          | 23 |
| Receiver Connector Details                 | 24 |
| Standard Transmitter Cables - 6 pin LEMO   | 25 |
| Standard Transmitter Cables – 4 pin HIROSE |    |
| Technical Specification                    |    |

### **General Description**

#### THE MICRON HERITAGE

MICRON Wireless microphone and communication systems have been setting industry standards in broadcast and location recording for four decades. The company's designs are focused on using sophisticated electronic engineering to achieve the optimum balance of performance and cost. The Explorer 100 Series combines the legendary MICRON qualities of sonic integrity, long-term reliability and rock-solid construction.

#### **REAL WORLD SURVIVABILITY**

MICRON Explorer 100 transmitters and receivers are manufactured from high strength anodised one-piece aluminium extrusions. They have high-quality connectors and a unique, simple to operate (by feel alone) battery compartment. Explorer Series products offer RF bandwidths up to 32MHz wide, and 256 channels, providing operational flexibility for personal single camera operators, sound recordists and ENG crews.

### **Diversity**

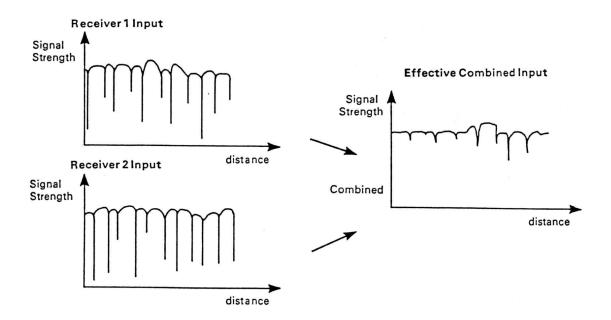
A diversity receiving system gives a dramatic improvement to the dead spot (signal dropout) problem, when compared to a simple receiver. This is because the diversity receiver has a choice of two RF signals, and when one antenna is receiving a weak signal, the other antenna will be receiving a stronger signal.

Signal dropout is usually caused by the direct and reflected signals happening to cancel each other out at the antenna. In reflective steel lined rooms such as studios these dead spots happen regularly at  $^{1}/_{2}$  wavelength intervals as the transmitter is moved.

In the MICRON diversity receiver the combining circuitry automatically rejects the output from the receiving section with the weaker RF signal before it can degrade the audio output. By this means the best signal to noise ratio can be maintained over a large safe operating area.

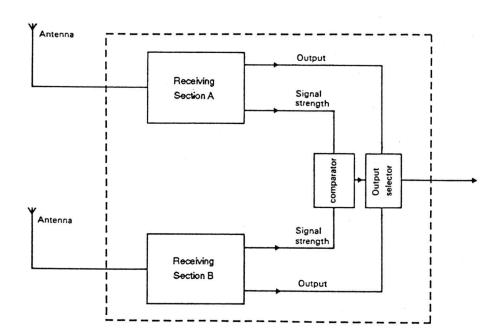
The same result could not be achieved just by connecting two antennas in parallel, either directly or through simple amplifiers. The relative phase of the signals from the two antennas would change as the transmitter was moved and cancellation effects would still occur at the summing point.

The diagram illustrates how a 2 way diversity system fills in almost all of the dips in received signal strength by utilising the stronger signal at all times.



# **Diversity**

Each SDR Diversity Receiver comprises two receiving sections and a combining unit. The receivers operate on the same frequency with their antennas spaced apart, the comparator automatically rejecting the output from the receiver with the weakest received signal. If signals of similar strength are received the audio outputs are mixed to improve the signal to noise ratio. This audio mixing gives a 3dB improvement over conventional switched diversity receivers and results in a greater operating range.



### **Explorer 100 Transmitters**

#### **EXPLORER 100 TRANSMITTERS**

The Explorer 100's multi-channel format provides worldwide compliance with regional frequency allocations and maximum freedom from interference.

#### **Unique Explorer Companding System**

An upgraded Explorer Compression/Expansion system ensures best possible signal to noise performance.

#### **Automatic Gain Control Option**

The design of the limiter in the MICRON Explorer 100 transmitter enables it to be used as an automatic gain control system, without the pumping effect associated with audio AGC systems. It can also be used as a 'distortionless' limiter, to prevent distortion due to over-modulation.

#### 'Overload-proof' Audio Input Amplifier

The variable -gain microphone amplifier has a gain control range of 40dB. Distortion is less than 0.3% over the whole of this range.

#### **LED Volume Indicator (AF Peak)**

One problem associated with radio microphones is the setting of the modulation level. As with tape recording, too low a setting results in a poor signal to noise ratio, too high a setting causes distortion. A common practice is to adjust the audio gain of the transmitter until distortion is heard and then 'back off a bit'. The MICRON transmitter is fitted with a simple LED volume indicator to allow the modulation level to be set quickly and accurately, without having to monitor the receiver output. A '-10' indicator is available only on the TX700B model, which shows modulation metering at 10 dB below limiting level. The addition of this LED simplifies the setting up procedure making it more accurate.

# **Explorer 100 Transmitter Front Panel**

#### **Audio Input Socket**

On transmitter models **TX716A**, **TX7256** and **TX700B**, a 6-pin Lemo connector with gold plated pins is used for the audio input. **TX716** is fitted with a 4-pin Hirose connector for the audio input.

The transmitter offers many audio input options depending on the 'Transmitter Cable' selected.

#### **Set Level Control**

For easy set-up and repeatable gain settings an eight-position modulation level control is used.

#### **Modulation Level and Battery Status Indicator**

The audio input at limiting level is indicated as an AF Peak LED showing modulation status to enable repeatable levels to be set (with '-10' on TX700B only). Battery Status Indicator operates if the battery voltage falls below 6.5 Volts.

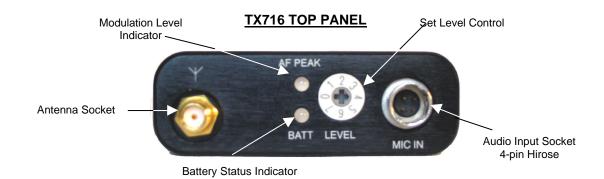
#### **Antenna Socket**

A miniature professional SMA screw socket ensures long-term reliability.

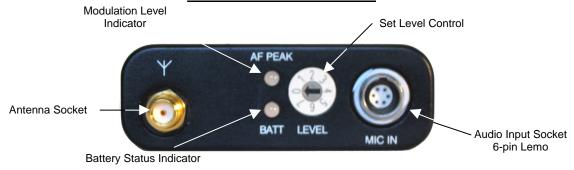
#### Bass - Cut Switch (TX700B only)

The Bass-Cut switch provides added front-end protection, where it may be used to reduce wind noise and counteract close microphone effects.

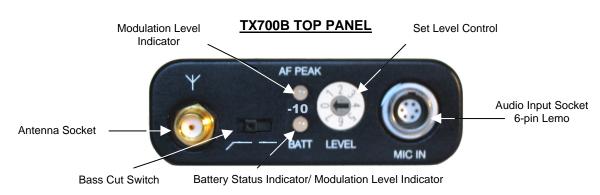
# **Explorer 100 Transmitter Front Panel**



#### **TX716A & TX7256 TOP PANEL**



# **Explorer 100 Transmitter Front Panel**



#### **Multiple Input Microphone Socket**

The 6-pin Lemo & 4-pin Hirose connectors provide:

- 1. Direct powering connection for electret microphones (+ve and -ve bias).
- 2. A high sensitivity input for dynamic microphones.
- 3. Powering for 12V 'T' powered condenser microphones.
- 4. Powering for 12V 'Phantom' powered condenser microphones.
- 5. Powering for 48V 'Phantom' powered condenser microphones with MICRON P48 in-line dc booster.
- 6. Line input capability.
- 7. External powering for transmitter.

For each microphone input different cables are available. See: *Pages 25 & 26 – Standard Transmitter Cables*.

### **Explorer 100 Receivers**

#### **EXPLORER 100 RECEIVERS**

Designed to operate with the new generation of DV camcorders, the Explorer 100 receivers are ultracompact. Useful in situations where receiver size and weight are important, the Explorer 100 receivers maintain absolute integrity in terms of overall quality, performance and reliability, and is small and light enough for easy mounting on camcorders.

Offering excellent standard of RF performance, the receivers feature multiple RF stages to give outstanding sensitivity and selectivity, while the digitally controlled circuitry achieves optimum mobile operation. The receiver's unique noise reduction system provides trouble-free operation in low RF signals and hostile RF environments.

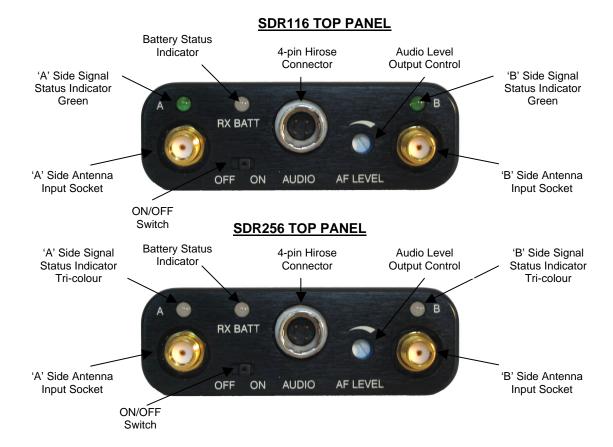
#### **SR116 TOP PANEL**



Standard Receiver

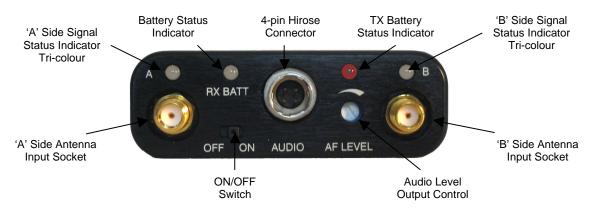
# **Explorer 100 Receivers Front Panel**

#### **Diversity Receivers**



# **Explorer 100 Receivers Front Panel**

#### **SDR550 TOP PANEL**



#### **Antenna Input Socket**

50 ohm SMA coaxial socket for direct connection of the antenna. Unscrewing its outer shell disconnects the antenna SMA connector.

#### **Battery Status Indicator (Tri-colour LED)**

A tri-colour LED continuously displays the internal/external battery condition.

#### **Transmitter Battery Status (only on SDR550)**

A red transmitter battery-warning LED lights up when the supply voltage of the corresponding TX has fallen to 6.5 Volts (approx.)

# **Explorer 100 Receivers Front Panel**

#### **Signal Status Indicator**

SR116: A green LED above the antenna socket displays the received signal strength status.

<u>SDR116:</u> A green LED above each antenna socket continuously display the received signal strength status.

<u>SDR256, SDR550</u>: A tri-colour LED above each antenna socket continuously display the received signal strength status.

#### **Audio Level Output Control**

SR116: A 3-way slide switch to control the audio output level.

SDR116, SDR256, SDR550: A recessed screwdriver operated volume control.

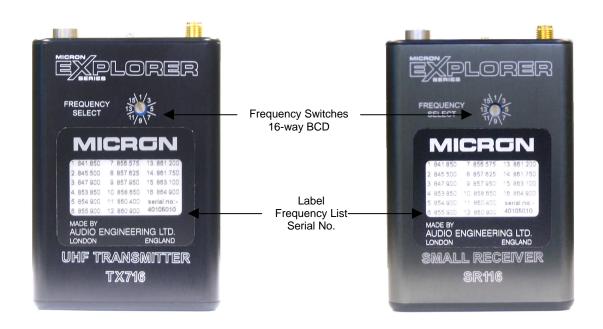
#### **ON/OFF Switch**

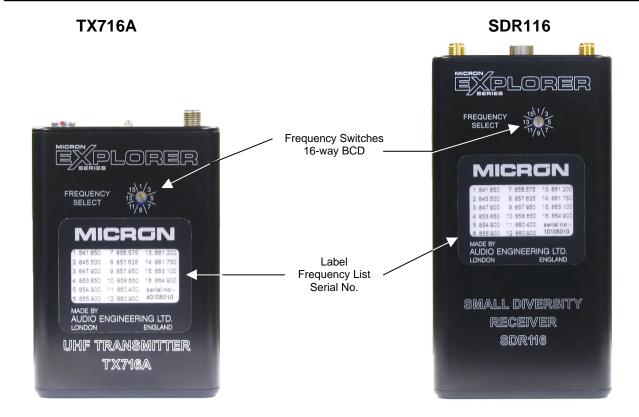
Slide switch to turn the receiver 'ON' or 'OFF'. Flush mounted to prevent accidental operation.

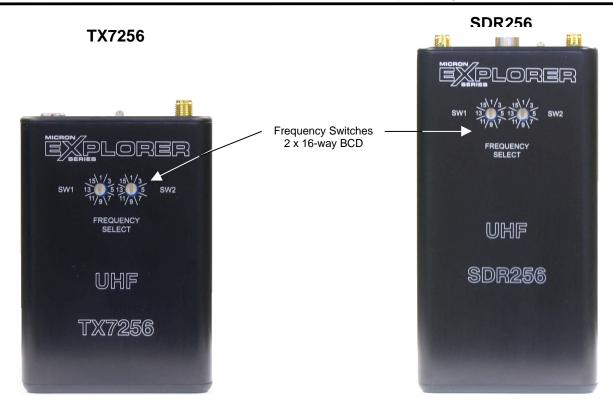
#### **Multi-way Connector**

A 4-pin Hirose connector provides balanced audio output and dc input connections to the receiver.

TX716 SR116







#### **Frequency Change Switches**

Depending upon the model, the unit is either fitted with a single 16-way BCD (Binary Coded Decimal) switch or two 16-way (BCD) switches, which give the user a choice of up to 256 different operating frequencies. The frequency sets are dependant upon the model.

Currently there are 8 models available:

| Model Number:  | Number of Channels: | Frequency Range: |
|----------------|---------------------|------------------|
| SR116, TX716   | 16                  | 470-870MHz       |
| SDR116, TX716A | 16                  | 470-870MHz       |
| SDR256, TX7256 | 256                 | 470-870MHz       |
| SDR550, TX700B | 256                 | 470-870MHz       |

#### **Serial Number Label**

Gives information on:

- 1) Serial No.
- 2) Switchable frequencies in MHz (applies to models with 16 channels)

#### NOTE:

MICRON Explorer 100 pocket transmitters are type tested to meet FCC 47CFR Part 2 & Part 74, from 470-746MHz, and CE and type tested to meet EN 301 489-9 V1.2.1: 2001-EMC and EN 300 422-1 (2000-08) – Radio.

MICRON Explorer 100 receivers are type tested to comply with FCC, EMC and Radio rules from 470-870MHz.

#### **Internal 9V Battery**

The internal battery type should be PP3 9V Alkaline or Lithium type IEC 6LR61 (MN1604).

#### (A) Explorer 100 Receivers

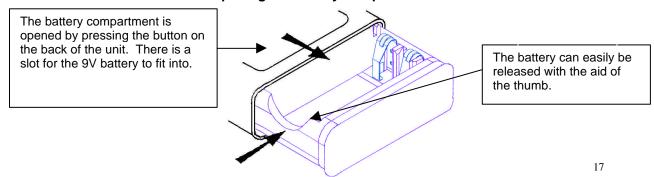
Setting the power switch to 'ON' position, will switch the receiver ON.

#### (B) Explorer 100 Transmitters

Connecting the appropriate standard MICRON audio input lead, or Lavalier Microphone, will switch the TX ON.

As the transmitter RF driver stage is stabilized, the output power remains virtually constant as the battery voltage falls. There will be no loss of range or performance as the battery volts fall from 9 to 6 Volts. The transmitter battery-warning LED lights up when the supply voltage has fallen to 6.5 Volts (approx.)

#### **Opening the battery compartment**



### **Powering**

#### **External Powering**

#### (A) RECEIVERS

External Powering from 7.5 - 16V dc can be supplied by a separate mains unit or from the camera, mixer or tape recorder batteries, providing they are not +ve earth. **Always** use recommended MICRON combinational cables (these cables are fitted with in-line dc-dc regulator and additional filtering).

For powering through the 4-pin Hirose connector, a combination lead is required e.g. AOCPH-HR4

#### (B) TRANSMITTERS

It is recommended that external power only be applied via a MICRON TLP lead, as this lead includes a 9V voltage regulator and dc filtering. For powering through the 4-pin Hirose connector or the 6-pin Lemo connector a combinational lead is required e.g.TLP07CF-6 or TLP07CF-MHR4

It is recommended that the internal batteries be removed when the unit is externally powered. Alkaline and lithium batteries are the most suitable because of their long life and reliability. They have a long shelf life and can be relied on to yield their full rated capacity. A conventional 9V transistor radio battery is NOT recommended.

Battery Life: 6 to 7 hours continuous minimum expected.

Figures are based on a 50mW transmitter @ 25°C

Battery data is approximate, since battery capacity varies with age and ambient temperature, and transmitter consumption varies with antenna position.

### **Quick Setting Up Procedure**

#### Receiver (RX) Setting Up

- Connect provided RX antenna (semi-rigid SMA antenna).
- Fit a PP3 9V Battery, check RX battery status LED.
- Connect Audio output cable and switch on power switch.
- If the battery status LED is AMBER replace RX battery.
- Set the receiver to the required operating frequency.

#### **Interference Check**

- Switch off TX by disconnecting microphone cable.
- Observe signal strength indicator and listen for possible interfering signals from other transmitters (slight flickering of the RF LED showing RED is acceptable). If there is very strong interference then change the frequency until you find a clean channel.
- Set the required audio output level (If not sure about output level, this can be set after TX mic gain has been set)

#### Transmitter (TX) Setting Up

- Fit a PP3 9V battery
- Connect provided TX antenna (flexible SMA antenna)
- Set your TX frequency same as RX
- Switch on TX (by connecting microphone cable to 6-pin Lemo or 4-pin Hirose socket)
- Check TX battery status LED, if RED replace TX battery with a new one
- Check RX Received Signal Strength Indicator LED should be GREEN
- Adjust SET LEVEL gain control, while the performer speaks at correct level so that AF Peak LED comes on all the time, then <u>set gain back by TWO notches</u> - at which AF Peak LED flashes occasionally.

# **Quick Setting Up Procedure**

When setting up the TX700B set the gain control so '-10' LED flashes regularly and '0' LED flashes occasionally.

(for any electret microphones the setting will be Level 4 or 5). The system is now ready to use.

### **How to Get the Best from Explorer**

The level control, in principle, is a peak limiter. Its function is to prevent distortion due to over modulation. Because of the singular design, it can be used as an audio AGC system with great improvement over the 'automatic record' facility of most tape recorders. The heart of the system is a voltage controlled variable gain amplifier, with a control range of 40dB.

The Automatic Level Control (ALC) system can be set so that it operates only in an emergency ('Normal' mode) or so that it adjusts the gain to suit the user's voice level ('Automatic' mode) or so that it operates only at extreme levels ('Low modulation' mode).

When used in the 'Automatic' mode, the control system sets the audio gain so that the average speech level is about 9dB below peak modulation level. This leaves headroom for the short sharp transients, which occur frequently in speech patterns. Having set the gain, the short transients pass without distortion and without further need to change the gain.

# Connect microphone cable and adjust SET LEVEL control by one of the following methods: NORMAL

This method suits most situations when there is time for a rehearsal and gives the optimum balance between dynamic range and signal to noise ratio. Unless an unexpectedly loud sound occurs, the limiter will not operate.

Adjust SET LEVEL control, while performer speaks at correct level, so the AF PEAK LED flashes occasionally -and in the case of the TX700B '-10' LED flashes regularly (for any electret microphones the setting will be Level 4 or 5).

TX is now ready to use.

### How to Get the Best from Explorer

#### **FULLY AUTOMATIC**

This procedure is for News reporting, interviews and other situations where there is no opportunity for rehearsal with the talent. The objective is to preset the audio gain slightly high and allow the limiter to control the level.

Speak in an average to quiet voice with the microphone in a realistic position, while adjusting the SET LEVEL control, so the AF PEAK LED flashes regularly (for any electret microphones the setting will be Level 6 or 7).

TX is now ready to use.

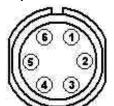
#### LOW MODULATION LEVEL

This procedure is for those situations where the dynamic balance of the dialogue must not be altered at all, such as Theatre Musicals or for stereo productions. In this mode the automatic levelling threshold is set to be above the highest expected input level.

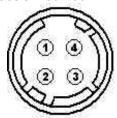
Adjust SET LEVEL control, while performer speaks at normal level, so the **AF PEAK LED NEVER flashes at all.** For Musicals, it may be preferable to adjust the SET LEVEL control on the loudest passage so the AF PEAK LED does not flash. (*For any electret microphones the setting will be Level 0 or 1*) TX is now ready to use.

# **Audio and dc Input/Output Details**

PCB Mounted 6-Way Lemo Connector. (Front View)



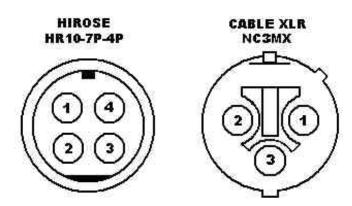
Chassis Mounted 4-Way Hirose Connector



| Pin<br>No: | TX716A,TX7256,TX700B                           |                 | TX716                                   |                 | SR116, SDR116,                | SDR256, SDR550         |  |
|------------|--|-----------------|---|-----------------|-------------------------------|------------------------|--|
| 1          | Microphone in                                  | put             | 0V                                      | Link<br>to turn | (                             | )V                     |  |
| 2          | -5V out for negative microphone:               |                 | PWRON                                   | TX 'ON'         | High Level Output<br>Signal + | Balanced<br>Switchable |  |
| 3          | BATT+ Volts to powe<br>externally power TX wit |                 | Microphone input                        |                 | High Level Output<br>Signal - | Audio Output           |  |
| 4          | Battery -                                      | Link<br>to turn | +9V out for positive biased microphones |                 | External                      | Supply +ve             |  |
| 5          | 0V   | TX 'ON'         | N/A                                     |                 | N                             | J/A                    |  |
| 6          | +9V out for positive microphone:               |                 |   | N/A             | N                             | I/A                    |  |

### **Receiver Connector Details**

#### **Cable Connectors**



All connectors viewed from soldering side. The pin numbers indicate the standard set by MICRON and all cables in this manual.

- AOCH-HR4: ELECTRONICALLY BALANCED AUDIO OUTPUT CABLE
- AOCPH-HR4: ELECTRONICALLY BALANCED AUDIO OUTPUT CABLE (external powering)
- 2AOCPH-HR4: DOUBLE ELECTRONICALLY BALANCED AUDIO OUTPUT CABLE (external powering)

### **Standard Transmitter Cables – 6 pin LEMO**

#### FOR TX716A, TX7256, TX700B

#### **Dynamic Microphone Cable**

- TDN15CF-6 (Dynamic Microphone Cable)
- TDN15CF-6T (Dynamic Microphone Cable, with in-line Transformer)

#### **Condenser AB Powering Cable**

- T12 MICRON-6 (Condenser AB Powering Cable)
- P12 MICRON-6 (Low Voltage 12V Phantom Powering Cable)
- P48 MICRON-6 (Phantom Powering 48V)

#### **Line Input With External Powering**

- TL20CF-6 (Line Input Cable)
- TLPO7CF-6 (Line Input With External Powering Cable -Y Cable)
- 2TLPO7CF-6 (Double Line Input with External Powering Y Cable)

Note: All 'TLP' cables have in-line dc-dc regulators and dc filtering.

#### For best results, the following Electret Microphones are recommended:

- KAT66 (pins1+6 link to Red and Pins 4+5 link to Screen and Black)
- Countryman EMW (pins1+6 link to Red and Pins 4+5 link to Screen and Green)
- COS 11 (pins1+6 link to Black and Pins 4+5 link to Screen and White)
- DPA 4060 (pins1+6 link to Inner and Pins 4+5 link to Screen)
- ECM 77 (pins1+6 link to Red and Pins 4+5 link to Screen and White)
- MKE 2 (pins1+6 link to Red and Pins 4+5 link to Blue and Screen)

Any other brand of electret microphone may be used.

### Standard Transmitter Cables – 4 pin Hirose

#### FOR TX716

#### **Dynamic Microphone Cable**

- DM-MHR4 (Dynamic microphone input adapter cable)
- DM-MHR4T (Dynamic microphone input adapter cable with in-line transformer to give 12dB gain)

#### **Condenser AB Powering Cable**

- T12-MHR4 (T-Powering adapter cable)
- P12-MHR4 (12V low voltage condenser microphone powering cable)
- P48 MHR4 (In-line DC to DC booster cable, for 48V phantom power microphones)

#### **Line Input With External Powering**

- TL20CF-MHR4 (Line input adapter cable)
- TLP07CF-MHR4 (Line input and external powering adapter cable)

Note: All 'TLP' cables have in-line dc-dc regulators and dc filtering.

#### For best results, the following Electret Microphones are recommended:

- KAT66 (pins 3+4 link to Red and Pins 1+2 link to Screen and Black)
- Countryman EMW (pins 3+4 link to Red and Pins 1+2 link to Screen and Green)
- COS 11 (pins 3+4 link to Black and Pins 1+2 link to Screen and White)
- DPA 4060 (pins3+4 link to Inner and Pins 1+2 link to Screen)
- ECM 77 (pins 3+4 link to Red and Pins 1+2 link to Screen and White)
- MKE 2 (pins 3+4 link to Red and Pins 1+2 link to Blue and Screen)

Any other brand of electret microphone may be used.

|                                 | TX716         | SR116         | TX716A        | SDR116        |
|---------------------------------|---------------|---------------|---------------|---------------|
| RF TRANSMISSION<br>SYSYTEM      |               |               |               |               |
| Carrier Range (to order)        | 470 to 870MHz | 470 to 870MHz | 470 to 870MHz | 470 to 870MHz |
| Channels                        | 16            | 16            | 16            | 16            |
| Switching Bandwidth             | 24MHz         | 24MHz         | 24MHz         | 24MHz         |
| Modulation System               | F3EGN         | F3EGN         | F3EGN         | F3EGN         |
| Reference Deviation             | 40kHz         | 40kHz         | 40kHz         | 40kHz         |
| RF Output Power (ERP)           | 50mW          | -             | 50mW          | -             |
| Muting level                    | -             | 1μV nominal   | -             | 1μV nominal   |
| AUDIO                           |               |               |               |               |
| System Signal to Noise<br>Ratio | >105 dB       | >105 dB       | >105 dB       | >105 dB       |

|   | TX716                                       | SR116  | TX716A                                      | SDR116  |
|---|---|--|---|---|
| System Frequency<br>Response              | 80Hz-20kHz                                  | 80Hz-20kHz   | 80Hz-20kHz                                  | 80Hz-20kHz  |
| System Distortion @<br>Limiting threshold | <0.3% THD                                   | <0.3% THD  | <0.3% THD                                   | <0.3% THD   |
|   |   |  |   |   |
| Level Control                             | Manual pre-set,<br>40dB in 8 steps          | 3-position switch  | Manual pre-set,<br>40dB in 8 steps          | Screwdriver<br>operated<br>Volume POT                                   |
|   |   | Hi: $0 \text{dBV} \pm 2 \text{dB}$<br>Mid:- $15 \text{dBV} \pm 2 \text{dB}$<br>Low:- $40 \text{dBV} \pm 2 \text{dB}$ |   | Balanced variable output, -42dBV to 0dBV ± 2dB                          |
|   |   |  |   |   |
| LED Indicators                            | Peak AF Level<br>Indicates AGC<br>Threshold | Signal Strength:<br>Green >1µV<br>No light: Muted  | Peak AF Level<br>Indicates AGC<br>Threshold | Signal Strength:<br>(A side & B side)<br>Green >1µV<br>No signal: Muted |

|                     | TX716                                  | SR116  | TX716A                              | SDR116   |
|---------------------|--|--|-------------------------------------|--|
| Frequency Control   | Screwdriver pre-set                    | Screwdriver pre-set                            | Screwdriver pre-set                 | Screwdriver pre-set                            |
| Battery Type        | IEC 6LR61<br>(MN1604) PP3<br>size      | IEC 6LR61<br>(MN1604) PP3<br>size              | IEC 6LR61<br>(MN1604) PP3<br>size   | IEC 6LR61<br>(MN1604) PP3<br>size              |
|                     | 9V (alkaline)                          | 9V (alkaline)                                  | 9V (alkaline)                       | 9V (alkaline)                                  |
|                     |  |  |                                     |  |
| Current Consumption | 65mA +/-10%                            | 55mA +/-10%                                    | 65mA +/-10%                         | 80mA +/-10%                                    |
| Battery Life        | >6 hours with alkaline battery         | >6 hours with alkaline battery                 | >6 hours with alkaline battery      | >5 hours with alkaline battery                 |
| External Power      | 7.5 to 16V dc<br>(with 'TP'<br>cables) | 7.5 to 16V dc<br>(with 'AOCPH-<br>HR4" cables) | 7.5 to 16V dc<br>(with 'TP' cables) | 7.5 to 16V dc<br>(with 'AOCPH-<br>HR4" cables) |

|                             | TX716                                     | SR116   | TX716A                                    | SDR116  |
|-----------------------------|---|---|---|---|
| Battery<br>Condition<br>LED | Lights at <6.5V                           | Green: >7.0V<br>Amber: >6.5V<br>Red: <6.5V<br>No light: Battery<br>Flat | Lights at <6.5V                           | Green: >7.0V<br>Amber: >6.5V<br>Red: <6.5V<br>No light: Battery<br>Flat |
| Dimensions                  | Width 63mm                                | Width 63mm  | Width 63mm                                | Width 63mm  |
|                             | Depth 22mm                                | Depth 22mm  | Depth 22mm                                | Depth 22mm  |
|                             | Height 91mm                               | Height 91mm   | Height 91mm                               | Height 120mm  |
|                             | Weight 150 grams<br>with battery          | Weight 150 grams<br>with battery  | Weight 150 grams<br>with battery          | Weight 200 grams<br>with battery  |
|                             |   |   |   |   |
| Accessories<br>Supplied     | Antenna, Belt clip,<br>Instruction Manual | Antenna, Belt clip,<br>Instruction Manual                               | Antenna, Belt clip,<br>Instruction Manual | 2 Antennas,<br>Instruction Manual                                       |

|                                 | TX7256        | SDR256        | TX700B        | SDR550        |
|---------------------------------|---------------|---------------|---------------|---------------|
| RF TRANSMISSION<br>SYSYTEM      |               |               |               |               |
| Carrier Range (to order)        | 470 to 870MHz | 470 to 870MHz | 470 to 870MHz | 470 to 870MHz |
| Channels                        | 256           | 256           | 256           | 256           |
| Switching Bandwidth             | 32MHz         | 32MHz         | 32MHz         | 32MHz         |
| Modulation System               | F3EGN         | F3EGN         | F3EGN         | F3EGN         |
| Reference Deviation             | 40kHz         | 40kHz         | 40kHz         | 40kHz         |
| RF Output Power (ERP)           | 50mW          | -             | 50mW          | -             |
| Muting level                    | -             | 1μV nominal   | -             | 1μV nominal   |
| AUDIO                           |               |               |               |               |
| System Signal to Noise<br>Ratio | >105 dB       | >105 dB       | >105 dB       | >105 dB       |

|   | TX7256                                      | SDR256  | TX700B   | SDR550   |
|---|---|---|--|--|
| System Frequency<br>Response              | 80Hz-20kHz                                  | 80Hz-20kHz  | 80Hz-20kHz   | 80Hz-20kHz   |
| System Distortion @<br>Limiting threshold | <0.3% THD                                   | <0.3% THD   | <0.3% THD  | <0.3% THD  |
| Level Control                             | Manual pre-set,<br>40dB in 8 steps          | Screwdriver<br>operated<br>Volume POT   | Manual pre-set,<br>40dB in 8 steps   | Screwdriver<br>operated<br>Volume POT  |
|   |   | Balanced variable<br>output, -42dBV to<br>0dBV ± 2dB                                  |  | Balanced variable<br>output, -42dBV to<br>0dBV ± 2dB   |
| LED Indicators                            | Peak AF Level<br>Indicates AGC<br>Threshold | Signal Strength: (A side & B side) Green: >25µV Amber: >5µV Red: <1µV No light: Muted | Peak AF Level<br>Indicates AGC<br>Threshold '(-10)<br>lights at 10dB<br>below ALC<br>threshold | Signal Strength:<br>(A side & B side)<br>Green: >25µV<br>Amber: >5µV<br>Red: <1µV<br>No light: Muted |
| TX Low Battery Indicator                  | -   | -   | -  | RED LED when TX battery<6.5V   |

|                     | TX7256                                 | SDR256   | TX700B                              | SDR550   |
|---------------------|--|--|-------------------------------------|--|
| Frequency Control   | Screwdriver pre-set                    | Screwdriver pre-set                            | Screwdriver pre-<br>set             | Screwdriver pre-set                            |
| Battery Type        | IEC 6LR61<br>(MN1604) PP3<br>size      | IEC 6LR61<br>(MN1604) PP3<br>size              | IEC 6LR61<br>(MN1604) PP3<br>size   | IEC 6LR61<br>(MN1604) PP3<br>size              |
|                     | 9V (alkaline)                          | 9V (alkaline)                                  | 9V (alkaline)                       | 9V (alkaline)                                  |
|                     |  |  |                                     |  |
| Current Consumption | 65mA +/-10%                            | 85mA +/-10%                                    | 65mA +/-10%                         | 85mA +/-10%                                    |
| Battery Life        | >6 hours with alkaline battery         | > 5 hours with alkaline battery                | >6 hours with alkaline battery      | > 5 hours with alkaline battery                |
| External Power      | 7.5 to 16V dc<br>(with 'TP'<br>cables) | 7.5 to 16V dc<br>(with 'AOCPH-<br>HR4" cables) | 7.5 to 16V dc<br>(with 'TP' cables) | 7.5 to 16V dc<br>(with 'AOCPH-<br>HR4" cables) |

|                             | TX7256                                    | SDR256  | TX700B                                    | SDR550  |
|-----------------------------|---|---|---|---|
| Battery<br>Condition<br>LED | Lights at <6.5V                           | Green: >7.0V<br>Amber: >6.5V<br>Red: <6.5V<br>No light: Battery<br>Flat | Lights at <6.5V                           | Green: >7.0V<br>Amber: >6.5V<br>Red: <6.5V<br>No light: Battery<br>Flat |
| Dimensions                  | Width 63mm                                | Width 63mm  | Width 63mm                                | Width 63mm  |
|                             | Depth 22mm                                | Depth 22mm  | Depth 22mm                                | Depth 22mm  |
|                             | Height 91mm                               | Height 120mm  | Height 91mm                               | Height 120mm  |
|                             | Weight 150 grams<br>with battery          | Weight 200 grams<br>with battery  | Weight 150 grams<br>with battery          | Weight 200 grams<br>with battery  |
|                             |   |   |   |   |
| Accessories<br>Supplied     | Antenna, Belt clip,<br>Instruction Manual | 2 Antennas,<br>Instruction Manual                                       | Antenna, Belt clip,<br>Instruction Manual | 2 Antennas,<br>Instruction Manual                                       |



AUDIO ENGINEERING LIMITED, MICRON HOUSE, 3 NEW ROAD, LONDON N8 8TA Telephone: +44 (0)20 8341 3500 Fax: +44 (0)20 8341 5100 E-mail: sales@micronwireless.co.uk www.micronwireless.co.uk

