TELEFUNKEN
Elektroakustik

Alchemy Series

Microphone Product Manual

TF11 • TF17 • TF29 • TF39 • TF47 • TF51

What's In The Box

System	TF11	TF17	TF29	TF39	TF47	TF51
M 903 Multi Pattern Power Supply				X	X	X
M 902 Fixed Pattern Power Supply			X			
M 803 Tube Microphone Cable			X	X	X	X
M 782 Stand Mount	X	X	X	X	X	X
M 703 Shock Mount	X	X	X	X	X	X
MC11 Microphone Case	X	X				
MS01 Microphone Sleeve	X	X	X	X	X	X
ZC03 Light Weight Carrying Case			X	X	X	X

For a complete list of additional accessories and replacement parts for Alchemy Microphone Series products, please visit **www.t-funk.com.**

Quick Start Guide - TF11 FET & TF17 FET

1. Attach either included mount onto a microphone stand.
2. Thread the microphone into the mount until hand tight.
3. Plug a standard 3-pin microphone cable (not included) into the microphone then into your microphone preamplifier input.
4. Apply +48V phantom power from your microphone preamplifier. Allow the microphone 15 seconds to power up before use.

Quick Start Guide - TF29, TF39, TF47, & TF51

1. Attach either included mount onto a microphone stand.
2. Thread the microphone into the mount until hand tight.
3. Plug the included 7-pin microphone cable into the microphone then into the power supply.
4. Make sure the power supply is set to the correct mains voltage (115V or 230V). Plug the included power cable into the power supply, then into mains power.
5. Connect a standard 3-pin microphone cable to the power supply and then to your microphone preamplifier input.
6. Turn on the power supply. Let the system warm up for 10 minutes before use.

Safety Warning: Vacuum tube microphones, their associated power supplies, and their cables carry potentially harmful voltages. Make sure all connections are made before powering on your microphone system. Do not open your microphone or power supply while it's connected to mains power and powered on. If your microphone stops working, turn it off and visit **www.t-funk.com/repairs** for information on repairing your product.

Series Overview

Designed, hand-built, and tested to strict quality standards in Connecticut, USA, the Alchemy Microphone Series is TELEFUNKEN Elektroakustik's next generation of large diaphragm condensers. These microphone models feature unique sonic profiles developed from the ground up. The bold voicings of the Alchemy Microphone Series are the TF11, TF17, TF29, TF39, TF47, and TF51.

Benefitting from over a decade of in-house microphone design and production, the Alchemy Series is an evolution and expansion of past TELEFUNKEN models. Numerous sonic and mechanical improvements have been implemented in the Alchemy Series, as well as new technologies as found in the TF11 and TF17, TELEFUNKEN's large diaphragm phantom-powered condensers. Boasting a custom designed headgrille for transparency and openness, hand-plugged circuit boards, and premium selected components and transformers, no detail has been left unaddressed. All Alchemy Series microphones ship in sleek, compact protective cases and include two modern mount options and all necessary accessories.

Like all TELEFUNKEN microphones, the Alchemy Series is assembled in the same American facility as the legendary Diamond Series by a small, dedicated team of engineers and technicians. Each microphone is individually tested and listened to. All critical components are quality controlled in-house before assembly, including capsule frequency sweeps, vacuum tube burn-in and noise grading, and transistor biasing for lowest possible distortion. These high standards lead to extremely tight tolerances from microphone to microphone.

The Alchemy Series combines timeless sound quality with TELEFUNKEN reliability in an affordable package. Whether it's the home studio or a commercial facility, the Alchemy Microphone Series is suited for any recording environment.

Stereo Sets

All Alchemy Series microphones are available in Stereo Sets, which include two precision gain and frequency matched microphones and two of each accessory in a premium carrying case. All critical components, including the capsules, tubes, transistors and transformers, are hand-selected and tested for matched gain and frequency response. The vacuum tube-based models include a dual American-made power supply, capable of powering both microphones at one time. These sets offer the user the knowledge and comfort that the tools they are using will give identical responses for the most critical stereo recording.

Stereo System	TF11	TF17	TF29	TF39	TF47	TF51
M 960S Stereo Fixed Pattern Power Supply			X			
M 901S Stereo Multi Pattern Power Supply				X	X	X
M 803 Tube Microphone Cable			2X	2X	2X	2X
M 782 Stand Mount	2X	2X	2X	2X	2X	2X
M 703 Shock Mount	2X	2X	2X	2X	2X	2X
FC03S Stereo Flight Case			X	X	X	X
ZC11S Light Weight Carrying Case	X	X				
MS01 Microphone Sleeve	2X	2X	2X	2X	2X	2X

TF11 FET

Blending an “Austrian” inspired voicing similar to the legendary C12 with modern FET high performance, the phantom-powered TF11 exhibits a beautifully open and detailed frequency response with exceptionally fast transient response, high SPL handling, and low self-noise. The compact, fixed true cardioid TF11 is versatile, portable, and dependable for all recording environments from home to studio to stage.

Recommended Applications

- Live Sound: Drums, Piano, Acoustic Instruments
- Vocals: Pop, Rock
- Drums: Overheads
- Acoustic Guitar
- Cello, Upright Bass
- Percussion

Key Features

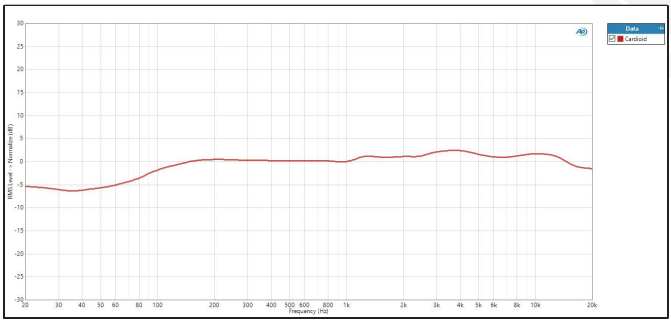
- Fixed true cardioid polar pattern
- Open and detailed tone with fast transient response
- High SPL handling, low noise phantom-powered FET amplifier
- Compact size suitable for all recording environments
- CK12-style capsule and UK-made OEP/Carnhill transformer



Technical Specifications

Specification	TF11
Type	FET Condenser
Polar Pattern	Cardioid
Frequency Range	20 Hz - 20 kHz, ±3 dB
Power Source	+48V Phantom Power
Capsule	TK51S - Edge Terminated Large Diaphragm, Single Membrane
Tube	n/a
Transformer	OEP/Carnhill T218

Specification	TF11
Sensitivity	14 mV/Pa, ±1 dB
THD at 1 kHz, 1 Pa (Amplifier)	0.005%
Output Impedance	< 200 Ω
Maximum SPL (for 1% THD)	> 135 dB
S/N Ratio	90 dBA
Self-Noise (Amplifier)	4 dBA
Dimensions	175 mm L x 46 mm Dia
Weight	545 g



TF17 FET

Combining an iconic mid-forward “German” voicing with modern FET technology, the TF17 is sonically bold with a punchy transient response, high SPL handling, and very low self-noise. With an extended low frequency response, strong midrange, and a smooth top end, its rich timbre can add weight or a smooth complementary character to harsh or thinner sources.

Recommended Applications

- Vocals: R&B, Rap, Rock, Soul
- Drums: Toms, Kick Out, Room
- Electric Guitar & Bass
- Piano
- Brass

Key Features

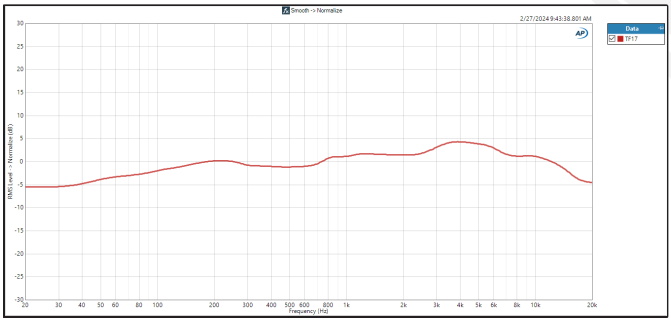
- Fixed true cardioid polar pattern with K47-style capsule
- Bold and forward tonality with punchy transient response
- UK-made OEP/Carnhill transformer with high grade nickel-iron core
- High SPL handling, ultra-low noise phantom-powered FET amplifier
- Compact size suitable for all recording environments



Technical Specifications

Specification	TF17
Type	FET Condenser
Polar Pattern	Cardioid
Frequency Range	20 Hz - 20 kHz, ±3 dB
Power Source	+48V Phantom Power
Capsule	TK47S – Center Terminated Large Diaphragm, Single Membrane
Tube	n/a
Transformer	OEP/Carnhill T217

Specification	TF17
Sensitivity	12 mV/Pa, ±1 dB
THD at 1 kHz, 1 Pa (Amplifier)	0.01%
Output Impedance	< 200 Ω
Maximum SPL (for 1% THD)	> 135 dB
S/N Ratio	91 dBA
Self-Noise (Amplifier)	3 dBA
Dimensions	175 mm L x 46 mm Dia
Weight	545 g



TF29 Copperhead

The fixed true cardioid TF29 is known for its natural, non-hyped tonality, and unparalleled “quality for price”. With a reputation of outstanding sonic performance and value, the Copperhead is a workhorse microphone that accurately and honestly captures nearly any source put in front of it.

TF39 Copperhead Deluxe

The TF39 is an expansion of the “Copperhead” sound with the addition of 3-pattern selection between Cardioid, Omnidirectional, and Figure-8. This added feature set gives the TF39 greater flexibility.

Recommended Applications

- Natural Vocals: Folk, Americana
- Electric Guitar Amps
- Drums: Kick Out, Overheads
- Saxophone

Key Features

- Balanced, natural midrange and high end
- Extended low frequency response
- Premium Swedish-made Lundahl transformer

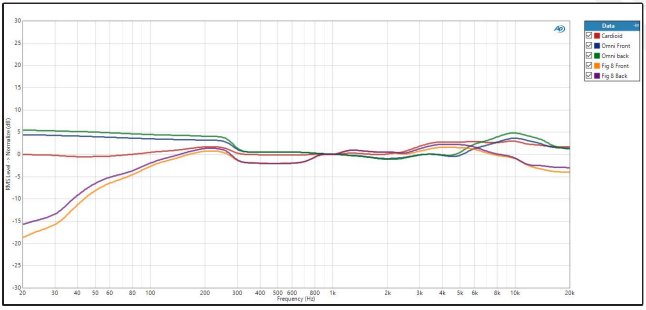


TF39

Technical Specifications

Specification	TF29 / TF39
Type	Vacuum Tube Condenser
Polar Pattern	TF29: Cardioid
	TF39: Cardioid, Omnidirectional, Figure-8
Frequency Range	20 Hz - 20 kHz, ±3 dB
Power Source	External Power Supply
Capsule	TF29: TK67S - Center Terminated Large Diaphragm, Single Membrane
	TF39: TK67 - Center Terminated Large Diaphragm
Tube	NOS GE 5654W

Specification	TF29 / TF39
Transformer	Lundahl LL1935
Sensitivity	17 mV/Pa, ± 1 dB
THD at 1 kHz, 1 Pa (Amplifier)	< 0.3%
Output Impedance	< 300 Ω
Maximum SPL (for 1% THD)	130 dB
S/N Ratio	87 dBA
Self-Noise (Amplifier)	7 dBA
Dimensions	200 mm L x 46 mm Dia
Weight	650 g



TF47

The TF47 is a new design based on the “German” sound, drawing inspiration from the historic U47 and M49. With a deep low end and a forward midrange, the TF47 is excellent for adding depth and presence to any source. These characteristics make it especially ideal for recording vocals, guitar amps, and drums.

Recommended Applications

- Vocals: R&B, Rap, Rock, Soul
- Drums: Toms, Kick Out, Room
- Percussion
- Upright Bass
- Cello
- Trombone

Key Features

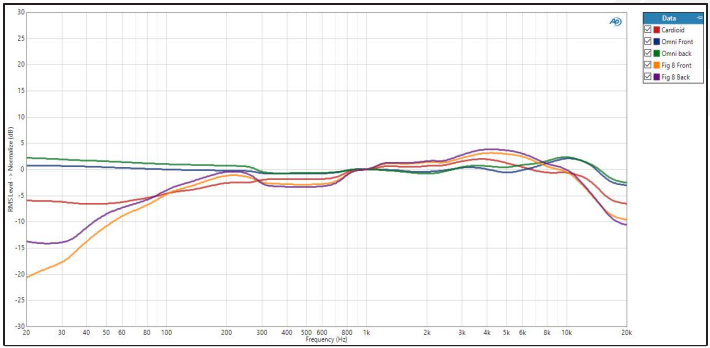
- 3 polar pattern selection
- Full low end and forward midrange, reminiscent of the U47
- Smooth and detailed top end
- Distinct antique nickel finish
- K47-style capsule and BV8 transformer



Technical Specifications

Specification	TF47
Type	Vacuum Tube Condenser
Polar Pattern	Cardioid, Omnidirectional, Figure-8
Frequency Range	20 Hz - 20 kHz, ±3 dB
Power Source	External Power Supply
Capsule	TK47 - Center Terminated Large Diaphragm
Tube	NOS Philips/Raytheon 5840W
Transformer	TELEFUNKEN Elektroakustik BV8

Specification	TF47
Sensitivity	22 mV/Pa, ±1 dB
THD at 1 kHz, 1 Pa (Amplifier)	< 0.3%
Output Impedance	< 300 Ω
Maximum SPL (for 1% THD)	125 dB
S/N Ratio	84 dBA
Self-Noise (Amplifier)	10 dBA
Dimensions	200 mm L x 46 mm Dia
Weight	710 g



TF51

The TF51 is a fresh take on the “Austrian” microphone sound associated with the TELEFUNKEN ELA M 251E and C12. The TF51 continues this legacy, exhibiting a smooth midrange and airy top end, capturing every nuance in pleasant detail. This is a reliable first choice for stand out vocals, acoustic instruments, and percussion.

Recommended Applications

- Vocals: Pop, Rock
- Acoustic Guitar
- Drum Overheads
- Grand Piano
- Violin
- Mandolin

Key Features

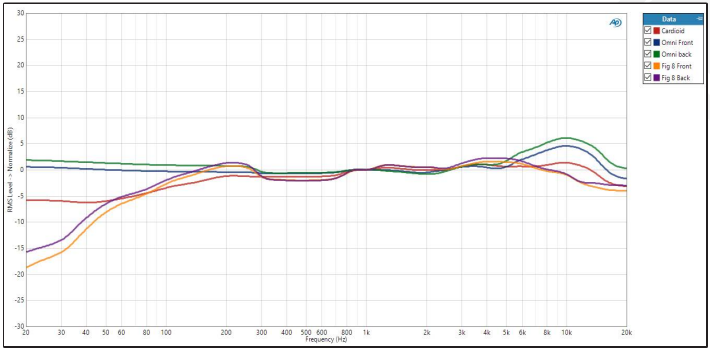
- 3 polar pattern selection
- Airy and open top end, reminiscent of the ELA M 251E
- Balanced low end and natural midrange
- Edge terminated capsule similar to CK12
- Custom German-made Haufe transformer



Technical Specifications

Specification	TF51
Type	Vacuum Tube Condenser
Polar Pattern	Cardioid, Omnidirectional, Figure-8
Frequency Range	20 Hz - 20 kHz, ±3 dB
Power Source	External Power Supply
Capsule	TK51 - Edge Terminated Large Diaphragm
Tube	TELEFUNKEN Elektroakustik 6072A
Transformer	Haufe T31

Specification	TF51
Sensitivity	19 mV/Pa, ±1 dB
THD at 1 kHz, 1 Pa (Amplifier)	< 0.4%
Output Impedance	< 300 Ω
Maximum SPL (for 1% THD)	128 dB
S/N Ratio	86 dBA
Self-Noise (Amplifier)	8 dBA
Dimensions	200 mm L x 46 mm Dia
Weight	615 g



Warranty

TELEFUNKEN Elektroakustik warrants that any capsules and tubes used in their microphones are free from defects in material and workmanship for the period of ninety (90) days from the original date of purchase, and agree to replace any capsule or tube which, under normal installation and use, disclose such defect. This is provided that the complete microphone is delivered to TELEFUNKEN Elektroakustik intact for examination and provided that such examination discloses, in the judgment of TELEFUNKEN Elektroakustik, that the tube or capsule is indeed defective. Upon replacement, TELEFUNKEN Elektroakustik will provide an additional 90-day limited warranty on the new capsule or tube.

This warranty does not extend to any capsule or tube which appears to have been misused, altered, neglected, damaged, or stored in any manner that adversely affects it, or used in violation of instructions furnished by us. This limited warranty shall be void and of no further force or effect whatsoever if the microphone is repaired or modified by any person other than an authorized representative of TELEFUNKEN Elektroakustik. This warranty shall not apply to any defect, failure, or damage caused in whole or in part from attempts by personnel other than TELEFUNKEN Elektroakustik's to open, repair, or service the microphone; nor to damage to a unit which has been modified by persons other than TELEFUNKEN Elektroakustik personnel.

In compliance with the following requirements:
EMC Directive: 2014/30/EU (EN 55013 applied)
Low Voltage Directive: 2014/35/EU (EN 60065 applied)
RoHS2 Directive: 2011/65/EU

CE RoHS

Product Registration

All TELEFUNKEN Elektroakustik customers are encouraged to register recently purchased NEW or USED products. All warranties on Diamond, Alchemy, and SDC Series products are fully transferable between owners for the length specified for each series starting from the date the microphone was purchased as new.

Microphones come with a 90-day warranty for capsule and tube. A one-year warranty covers parts and labor on the amplifier as well as the power supply. Upon registering your new products, the warranty will be increased to one year parts and labor for the capsule and tube, and four years for the amplifier and power supply.

To register your warranty, please head to **www.t-funk.com/warranty** to fill out the Product & Warranty Registration form.

Repairs & Service

Repairs on new TELEFUNKEN Elektroakustik microphones are covered under a limited warranty plan and repair costs will be determined based upon the date of purchase and the date in which the warranty was registered. Repairs & Service covered under the warranty plan are done at no charge for labor, parts and service.

Please visit **www.t-funk.com/repairs** for more information on repairing your TELEFUNKEN microphone.

Diamond Series



Dynamic Series & Drum Packs



Small Diaphragm Condensers



Direct Boxes



Tubes, Accessories, Merch & More!



www.t-funk.com

300 Pleasant Valley Rd, Suite C

South Windsor, CT 06074

+1.860.882.5919