U 67 - The Workhorse

The news came as a shock to Neumann at the end of the 1950s, when the German electronics firm Telefunken told Neumann, that because it was the only remaining buyer of its steel tube VF 14 M, further production of the tube was no longer profitable for the company. After one last lot was produced, the volume of which Neumann could decide, the tube's production ceased forever. With this announcement the end of the world-renowned Neumann U 47 microphone drew near.

At a time, when thousands of U 47 were in use worldwide, Neumann began to intensify its development of a successor. The company had already been producing the KM 56 miniature microphone for a few years. That microphone featured selection of all three major directional patterns: omni directional, cardioid and figure-eight. Neumann wanted its new model at least to have these switchable functions.

As for directionality, the legendary Neumann M 7 capsule made it relatively simple to realize both the cardioid and omni directional pickup patterns. However, an exact figure-eight characteristic posed more of a challenge, because the dual diaphragm in the M 7 shares a common central electrode. The accuracy of a bi-directional pickup depends on the precise correlation of the two capsule halves. This problem led to the development of a similar dual capsule, but with two separate back electrodes. In addition to the ability to match the two halves exactly, it also become possible for this capsule to respond optimally for all three patterns. The result is the K 67 capsule, scheduled to be employed in the successor to the U 47.

In the 1950s, it had become fashionable for many popular vocalists to sing almost directly into the microphone. This practice produces a noticeable increase in low frequency response due to the so called proximity effect. Through this, the voice gains volume at low frequencies and sounds fuller. Too much bass, though, can be a problem, and to counter it, a switchable circuit was designed to „roll-off" low frequencies.

A switch located on the microphone head permits changing the low frequency attenuation to become effective at 100 Hz for proximity compensation. The EF 86 tube operates as triode in an anode amplifier configuration into an output transformer with separate feedback windings. The output transformer's special construction helps to eliminate hum and allows internal impedance matching with the following preamplifier.

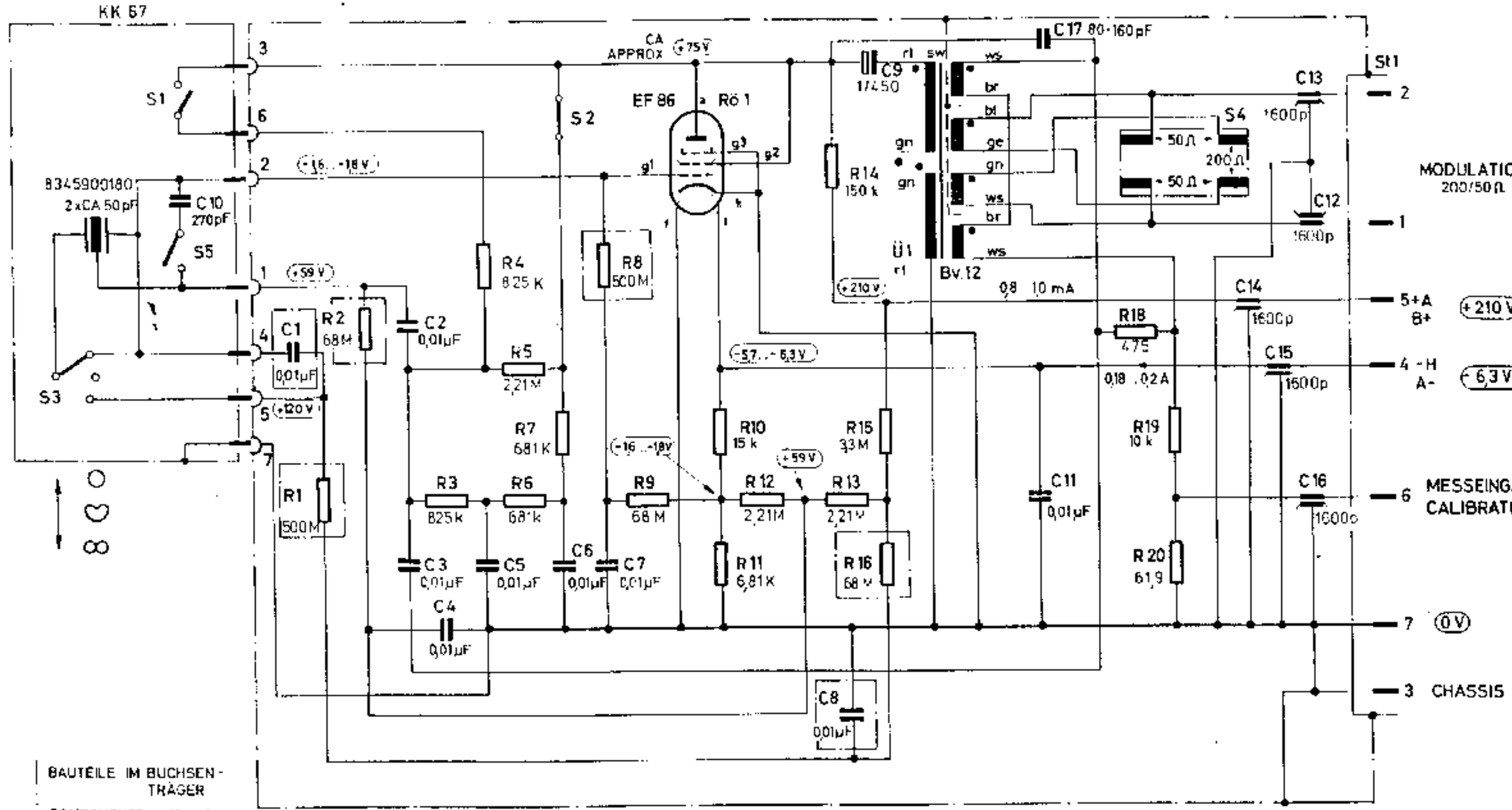
Finally, in 1960, the new microphone was born, which ultimately matured to become the Neumann U 67. Its form is a variation of the typical cone-shaped microphone. It can easily be disassembled without tools and incorporates all the above mentioned features. The prototype series was released as the U 60 to select recording studios for testing. It was renamed U 67 with the start of its market introduction, to honor its renowned predecessor and providing continuity with the U 47.

The U 67 quickly gained a reputation for its unprecedented versatility, making it the ideal microphone for universal applications. The Neumann U 67 became known as a true workhorse for professional recording studios everywhere. Several thousand were sold in the first five years of its production, and as the U 67 gained in popularity, the U 47 declined.

An era ended when the last U 47 was delivered in 1965, with the U 67 having taken the market by storm and firmly established as the legitimate successor. Especially in the US, this microphone had become so well known that our sales reps there were able to release an effective ad with only a picture of the U 67 and the words, „ask anyone". The understatement was enough. Owing to its quality, versatility and shape, the Neumann U 67 became the very symbol of a high quality microphone, often imitated, but never duplicated.

Errors excepted Subject to changes

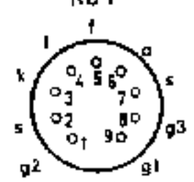
Irrtümer und technische Änderungen vorbehalten



BAUTEILE IM BUCHSENTRÄGER
COMPONENTS ENCASED

SPANNUNGSWERTE STATISCH GEMESSEN
STATICALLY MEASURED VOLTAGES

Rö 1



EF 86

St 1

NT 3470-10 (SPEC.)

AUF DIE STECKER GESEHEN
PIN VIEW

GÜLTIG AB GERÄT NR. 10 000
BEGINNING WITH SERIAL & PART NUMBER 10000

KONDENSATOR-MIKROPHON U67
CONDENSER MICROPHONE U67

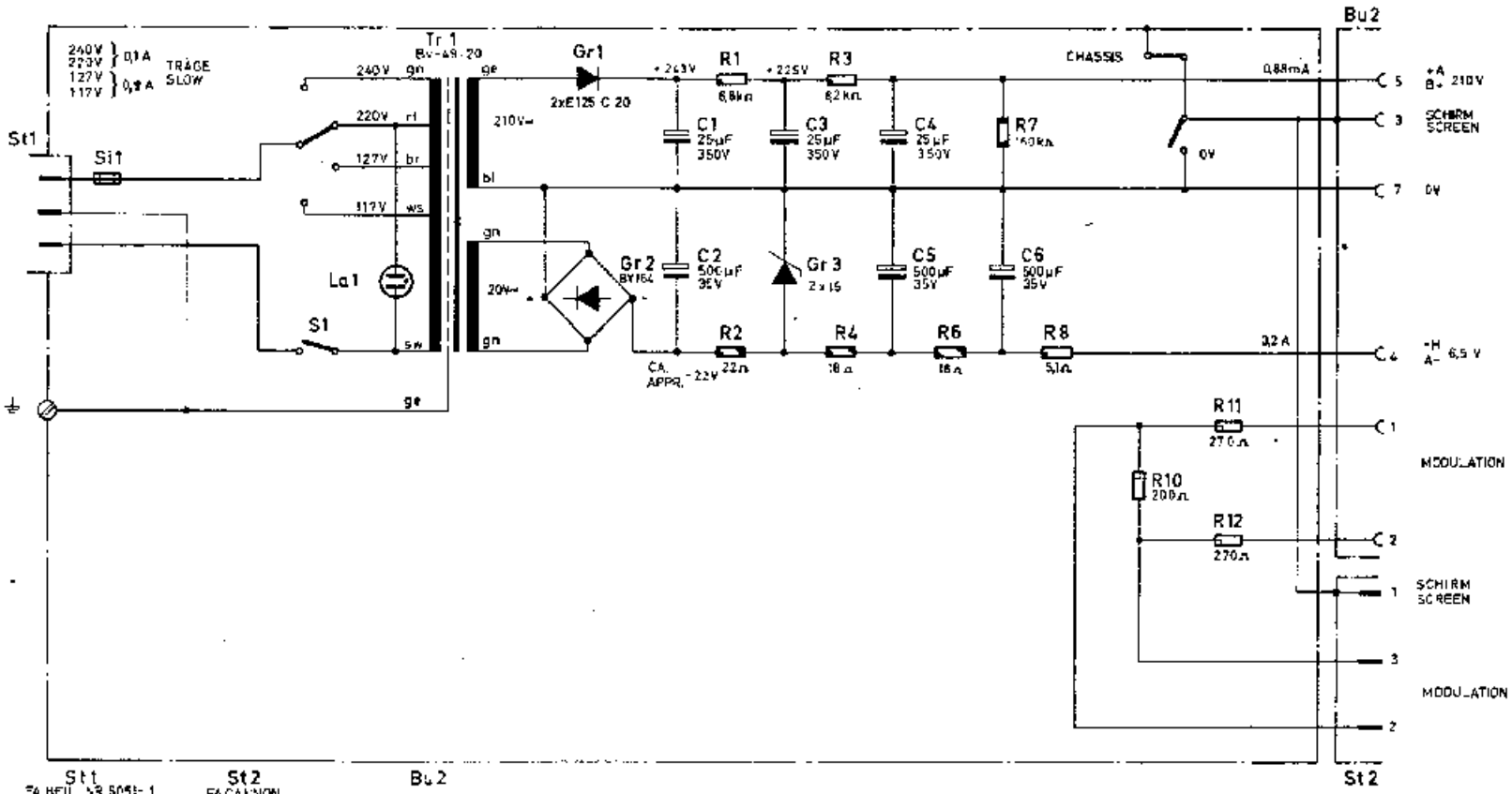
1020390101

GEORG NEUMANN
Laboratorium für Elektroakustik GmbH
BERLIN

BEI ERSATZTEILBESTELLUNG GERÄT NR. UND POS.-ZAHLEN ANGEBEN
FOR REPLACEMENT ALWAYS GIVE SERIAL & PART NUMBER

2 6 02 1e

V-068 AK. 6



St1
FA.HEIL NR.5051-1

AUF DIE STECKER GESEHEN
PIN VIEW

St2
FA.CANNON
XLR-3-32

AUF DIE BUCHSE GESEHEN
SOCKET VIEW

Bu2
T 3471-10

RESISTORS

GERMAN | AMERICAN

0,1W
0,25W
0,3W
0,5W
1W

ALLE SPANNUNGSANGABEN AUF 0V BEZOGEN
ALL VOLTAGES MEASURED RELATED TO 0V

BEI ERSATZTEILBESTELLUNG BITTE GERÄT NR UND POS-ZAHLEN ANGEBEN
FOR REPLACEMENTS PLEASE ALWAYS GIVE SERIAL & PART NUMBER

NETZANSCHLUSSGERÄT NU67u
POWER SUPPLY UNIT NU67u
NU67u-930-06

GEORG NEUMANN
Laboratorium für Elektroakustik GmbH

210
214
303
350

mech. Angaben

1	20	UI 30/25 x 0,35	09012 - 100 - 001.00
		Werkstoff: Mu-Metall Garantie A 50	
		μ = Paketd. 7,1 mm Kerngew.: 0,05 kg	Werkstoff: Polystyrol VI

2 Fehlende Angaben siehe — Schichtung: wechselschichtig/~~gleichschichtig/geklebt~~

Wicklungsangaben

3	Wicklung Nr.	Kupferdraht DIN 46435 lötbar	Cu-Gewicht g	Anfang Farbe Lötö	Anfang Länge Nr.	Windungszahl	zahl/lage	Lagen	Zählerstand	Tesafilm 103 Dicke	Lagen	n. Wdgs.-Lag.	Ende Farbe Lötö	Ende Länge Nr.	Kunststofflitze	Widerstand Ω
4	Grundisolation														d x s	
5	I	0,14		BL	40	390			390				GE	30	08 126 -	≤ 20
6		Zwischenisolation									2					
7	S1	Cu-Folie											SW	20	08 126 -	
8		Zwischenisolation									2					
9	II	0,06		WS	20	125			125				BR	20	08 126 -	≤ 37
10		Zwischenisolation									2					
11	III	0,06		RT	20	2700			2700				GN	20	08 126 -	≤ 1050
12																
13																
14																
15	Ia	0,14		WS	20	390			390				GN	20	08 126 -	
16		Zwischenisolation									2					
17	S2	Cu-Folie											SW	20	08 126 -	
18		Zwischenisolation									2					
19	IIa	0,06		WS	20	125			125				BR	40	08 126 -	
20		Zwischenisolation									2					
21	IIIa	0,06		RT	20	2700			2700				GN	40	08 126 -	
22																
23																
24																
25	Deckisolation										2					

26 Einlegeschild 09012-100-002.00 unter die letzte Lage der Deckisolation legen!

27 Kern: in Vacuum lackgetränkt, wachsgetränkt, mit Lack streichen, grau, schwarz

elektrische Angaben

28 Prüfspannung: 500 V~ 50 Hz 1 min.

29 Leerlaufstrom = Leistungsaufnahme = Watt bei Vollast

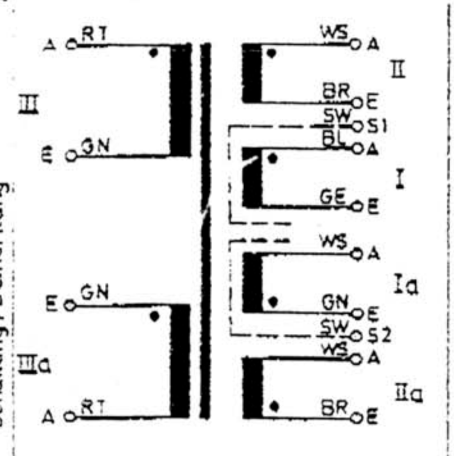
30 Wickl.Nr.

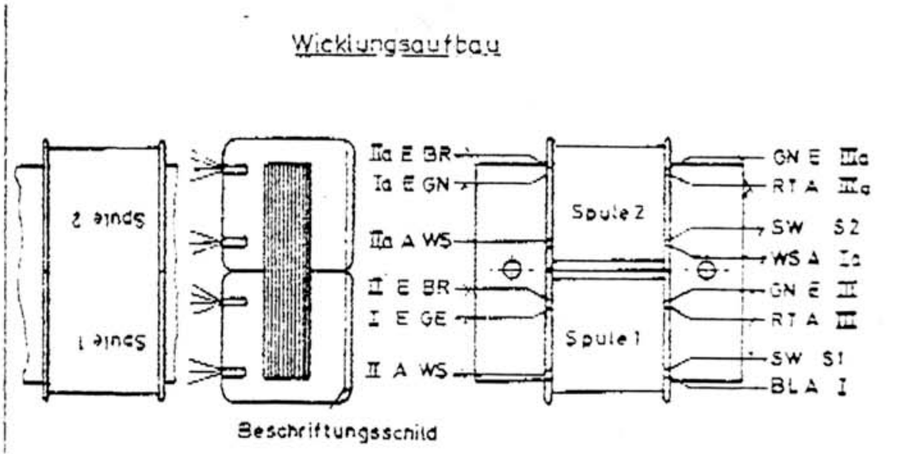
31 U [V] = ± % ± % ± % ± % ± % ± % ± % ± % ± %

32 40 Hz = K_2 = % 1 kHz = K_2 = % 10 kHz = K_2 = %

33 40 Hz = K_3 = % 1 kHz = K_3 = % 10 kHz = K_3 = %

34 Schaltung / Bemerkung





Nur zur information

			70	Tag	Name	Bauvorschrift für:
			Bearb.:	30. 12.		Ausgangsübertrager
			Gepr.:	12. 3.		
			Ges.:			in: 10203, 10230 U67
			GEORG NEUMANN GMBH			Bauvorschrift-Nr.