

# AKG

ACOUSTICS

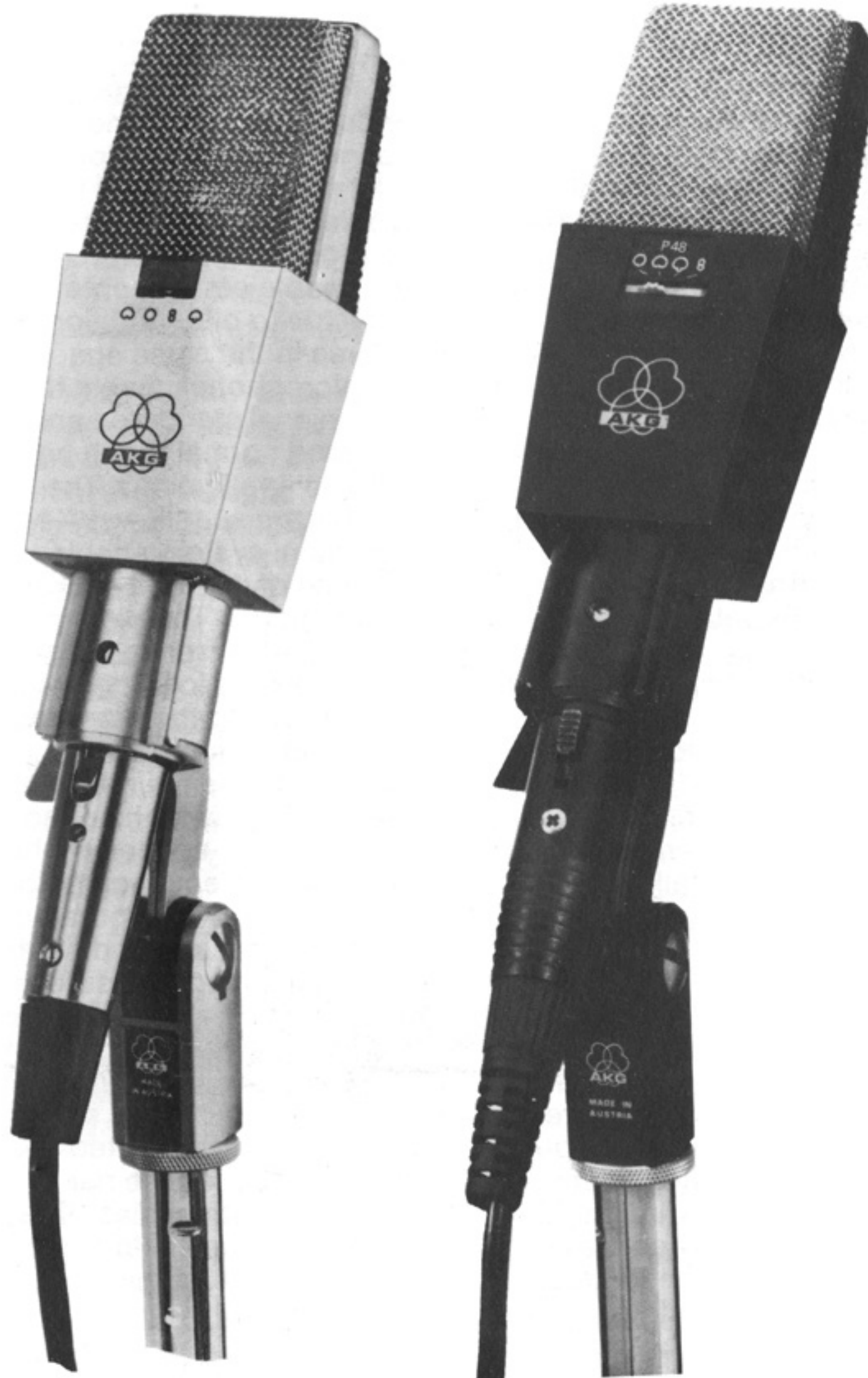
## C414EB

## C414EB-P48

Bedienungshinweise

User Instructions

Mode d'emploi



**Description:**

The design of this large diaphragm condenser microphone is based on experience gained in long-term and worldwide operation of the previous models C 12A, C 12B and C 414 comb. Modern technology and reliable components now enable us to offer additional features in the same space.

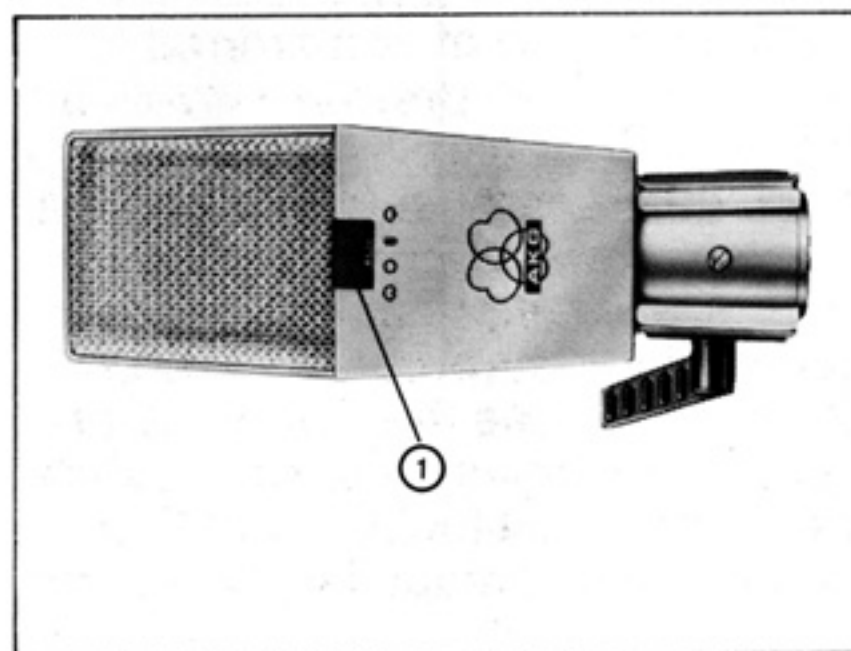
The microphone meets the highest professional standards and will withstand normal rough handling in studio applications. The main features are as follows: A twin-diaphragm system enables the selection of different microphone polar patterns. The diaphragm is manufactured from a special gold-flashed plastic foil. The gold layer is deposited onto the diaphragm only on the outer side to prevent short circuiting to the main electrode when extremely high sound pressure levels are applied to the microphone. Pre-attenuation before the output stage is incorporated to permit the increase of undistorted maximum sound pressure levels by 10 or 20 dB for close-up recordings. This technique inhibits distortion in the small transformers used in the microphone output or sound mixer inputs. The incorporated bass-cut circuitry reduces the risk of distortion at low frequencies. This feature is especially useful in combatting wind noise and stage floor vibration.

The slope of the bass-cut filter is more than 12 dB/octave, the cut-off frequency may be set to 75 Hz or 150 Hz.

The all-metal housing adds to the rejection of r.f. interference when the microphone is used in close proximity to transmitter stations or in conjunction with wireless microphones or other communication equipment.

In addition to extremely wide-range low-distortion performance and temperature/humidity-resistant construction, the microphone offers remarkable operational flexibility.

A recessed switch on the front ① enables the user to select any one of four different polar patterns to adjust for different recording situations. Four different types of microphones are thus combined in only one C 414 EB. The chosen polar patterns are highly uniform and frequency independent to guarantee the same sound character for all angles of incidence.



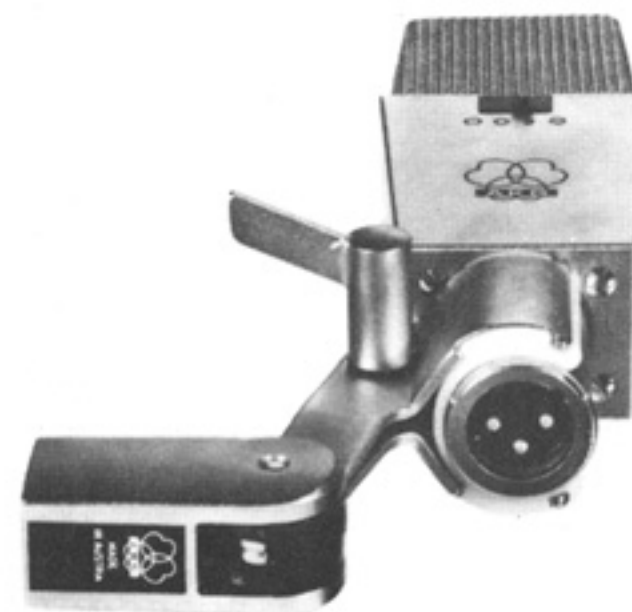
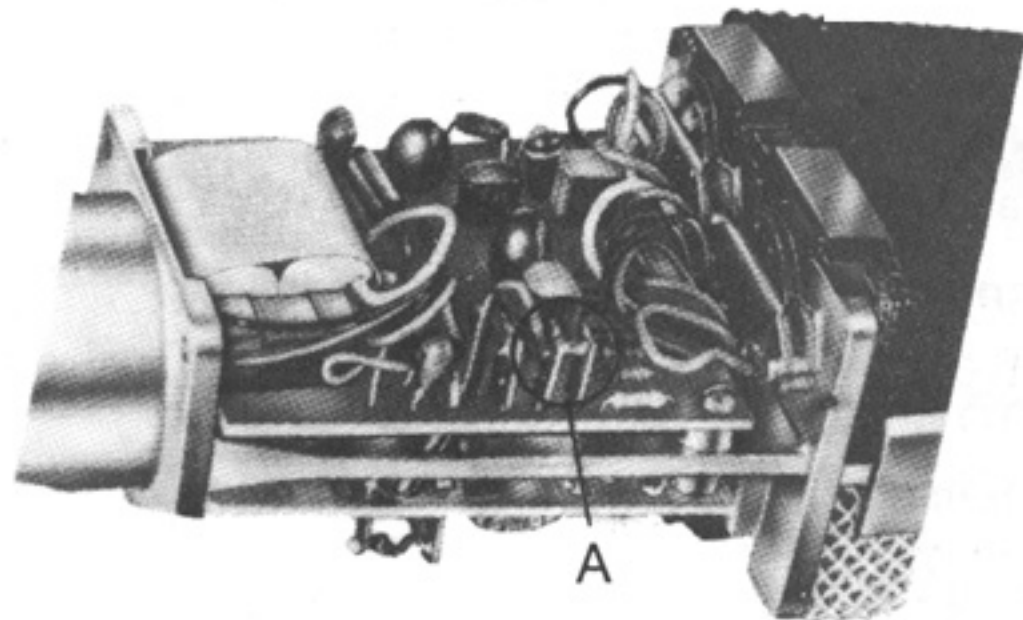
Two different variations in respect to the powering are available:

**The C 414 EB**, prewired for 12 volts phantom power sources (acc. to DIN 45 596), may be easily modified for 48 volts. Simply open the jumper bridged across its internal 8.2 kohms dropping resistor (detail A). The modification may be easily done by removing four screws at the lower housing part and by sliding off the outer housing very carefully from the grid assembly. Reassembling is made in reverse order.

The phantom-power source (9 to 52 volts dc. via a suitable voltage-dropping network specified in DIN 45 596) may be any of the AKG accessory supplies listed in the Technical Data section, or a console, mixer or recorder having the proper dc. fed internally to its own low-impedance floating microphone inputs.

**The C 414 EB – P 48** may be used for standard 48 volts phantom powering systems only. The current consumption is below 1 mA. Both variations are low-impedance balanced output units fitted with a standard 3-pin male XLR-type connector.

The stand adapter provided, model SA 18/3 may be easily removed from the shaft of the microphone by positioning the microphone relative to the adapter as shown, and pulling the adapter in downward direction. The small rim on the microphone shaft will prevent the adapter from accidentally sliding-off, even when the fastening lever is not properly tightened. The standard 3/8" threaded insert on the stand adapter will match most stand or suspension fittings.





## Technical Data of C 414 EB:

Transducer Type:  
Directional Characteristic:

Pressure gradient transducer with twin-condenser diaphragm and FET-preamplifier  
Cardioid, omni-directional, figure-eight and hypercardioid (selectable directly on the microphone)

Sensitivity at 1000 Hz:

$6 \text{ mV/Pa} \triangleq 0.6 \text{ mV/}\mu\text{b} \triangleq -64.4 \text{ dBV}$

Frequency Range:

20 to 20,000 Hz

Impedance:

$\leq 150 \text{ ohms}$

Recommended Load Impedance:

$\geq 500 \text{ ohms}$

Equivalent Noise Level:

20 dB SPL (measured with filter CCITT-C/DIN 45 405)

Unweighted Noise Level:

$\leq 10 \text{ }\mu\text{V r.m.s.}$

Powering:

Universal Phantom Powering according to DIN 45 596 with 9 to 52 volts

Current Consumption:

a) at 12 volts:  $\leq 5.5 \text{ mA}$

b) at 48 volts:  $\leq 3 \text{ mA}$  (when circuit has been modified according the description in this leaflet)

Sound Pressure Level for 0.5% TDH:

$$\left. \begin{array}{l} f = 1 \text{ kHz} \\ f = 10 \text{ kHz} \end{array} \right\} 1600 \text{ }\mu\text{b} \triangleq 160 \text{ Pa} \triangleq 138 \text{ dB SPL}$$

Acceptable Climatic Conditions:

Temperature Range:  $-10^{\circ} \text{ C}$  to  $+60^{\circ} \text{ C}$

Rel. Humidity: 90% ( $+20^{\circ} \text{ C}$ )

85% ( $+60^{\circ} \text{ C}$ )

Connector:

3 pin XLR-type

pin 1 = ground, pin 2 = AF (in phase), pin 3 = AF

Dimensions:

5.6" x 1.8" x 1.4"

Net Weight:

approx. 14 oz

## Technical Data of C 414 EB – P 48:

Identical to C 414 EB except for:

Sensitivity at 1000 Hz

(all patterns, 0 attenuation):

$9 \text{ mV/Pa} \triangleq 0.9 \text{ mV/}\mu\text{b} \triangleq -61 \text{ dBV}$

Impedance:

$\leq 200 \text{ ohms}$

Equivalent Noise Level:

18 dB SPL (measured with Filter CCITT-C acc. to DIN 45 405)

Power Requirement:

48 volts phantom acc. to DIN 45 596

Current Consumption:

$\leq 1 \text{ mA}$

Sound Pressure Level for 0.5% THD

(all patterns, 10 dB-attenuation, 0-roll off):

at 1000 Hz =  $6300 \text{ }\mu\text{b} \triangleq 630 \text{ Pa} \triangleq 150 \text{ dB SPL}$

## Included Accessories:

W 26 foam windscreen

SA 18/3 all-metal stand adapter

Individual frequency curves

Protective case

## Optional Accessories:

H 17 A Elastic shock mount/windscreen combination

N 62 E Power unit to feed two microphones

N 66 E Power unit to feed six microphones

MK 9/10 30 ft microphone cable incl. XLR-type connectors on both ends.

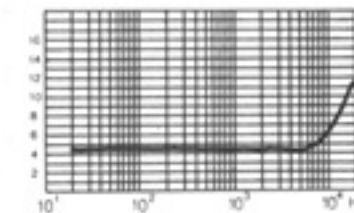
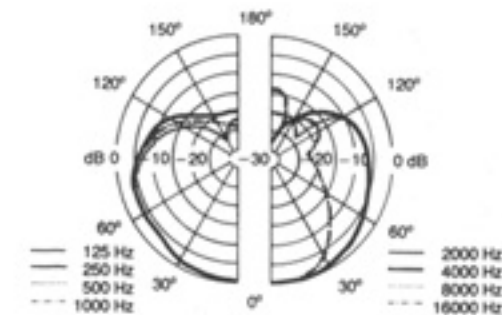
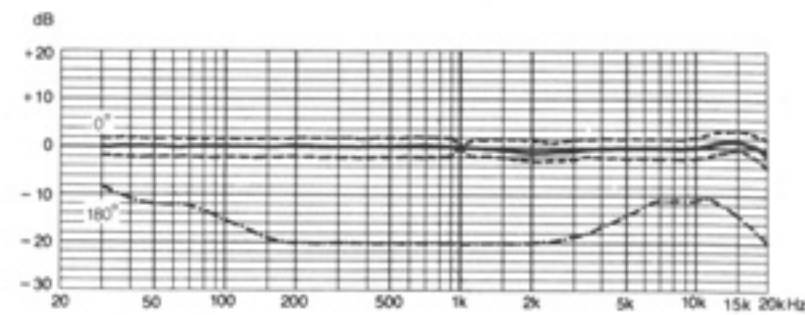
MK 9/20 60 ft. microphone cable incl. XLR-type connectors on both ends.

## Frequency Response Curve:

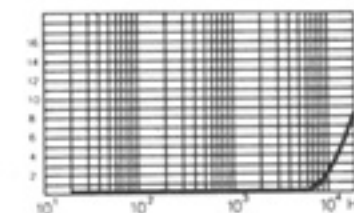
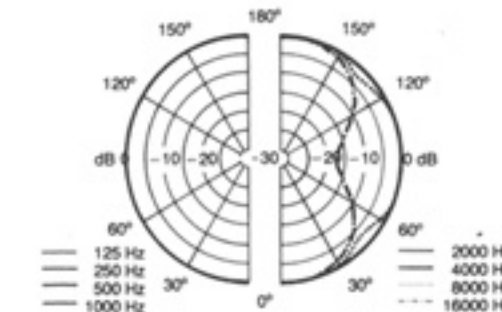
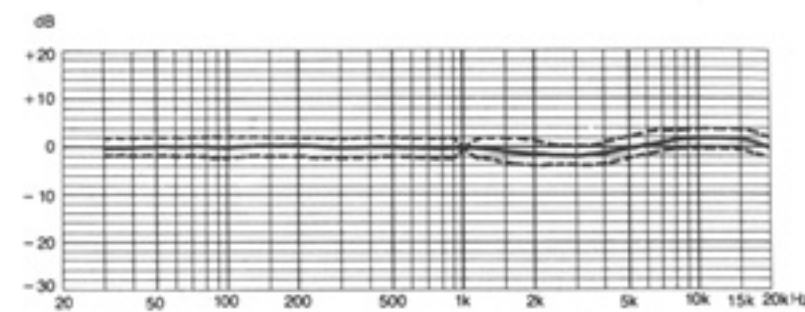
## Polar Response:

## Sound Power concentration factor

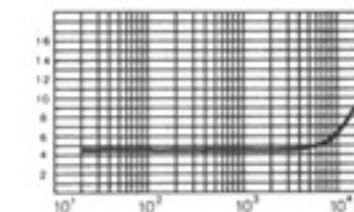
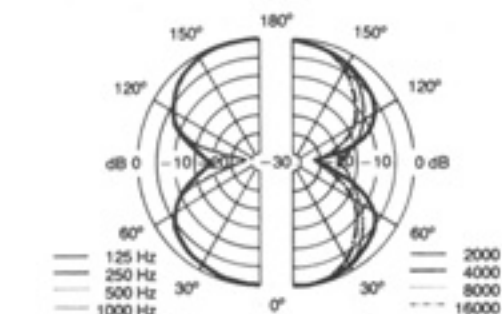
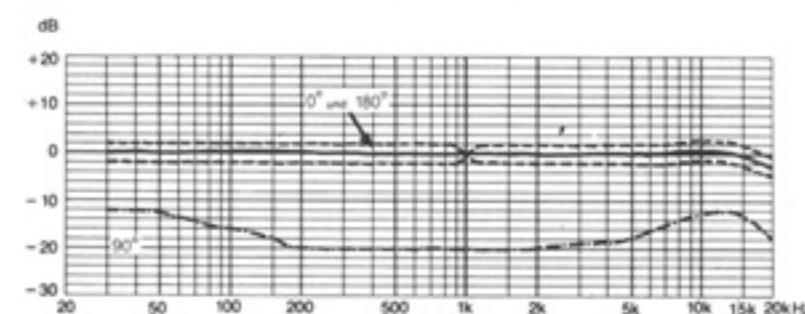
### Cardioid Cardioïde Diagramme polaire



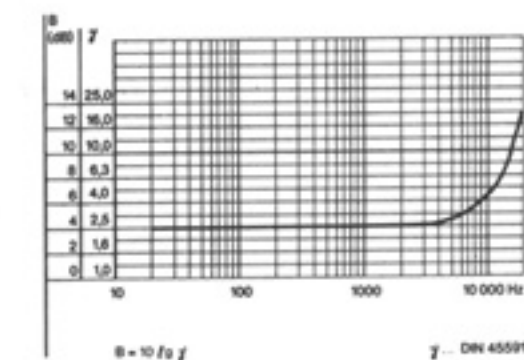
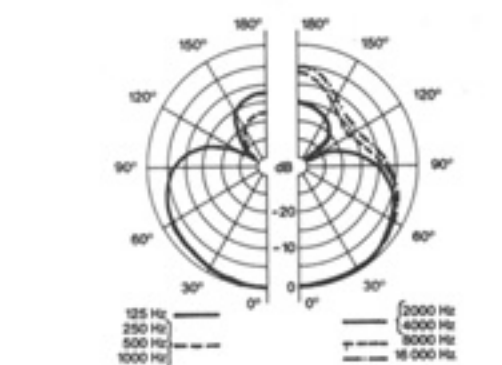
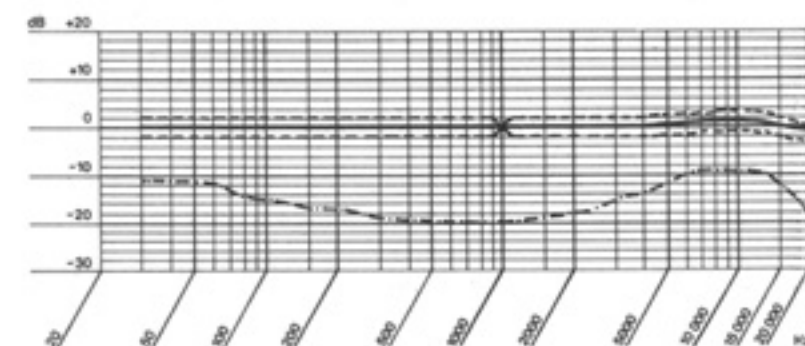
### Omni-directional Facteur de directivité



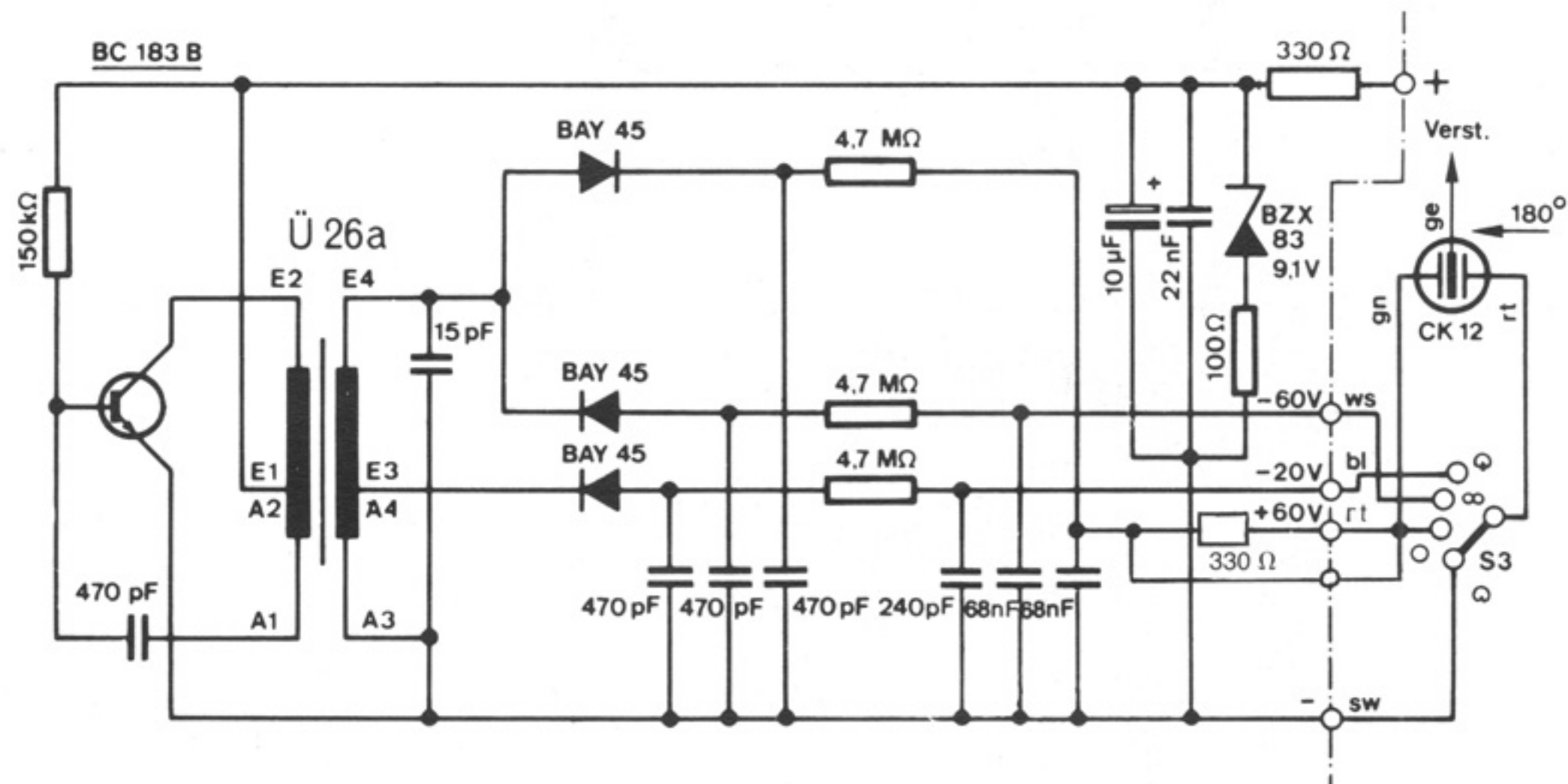
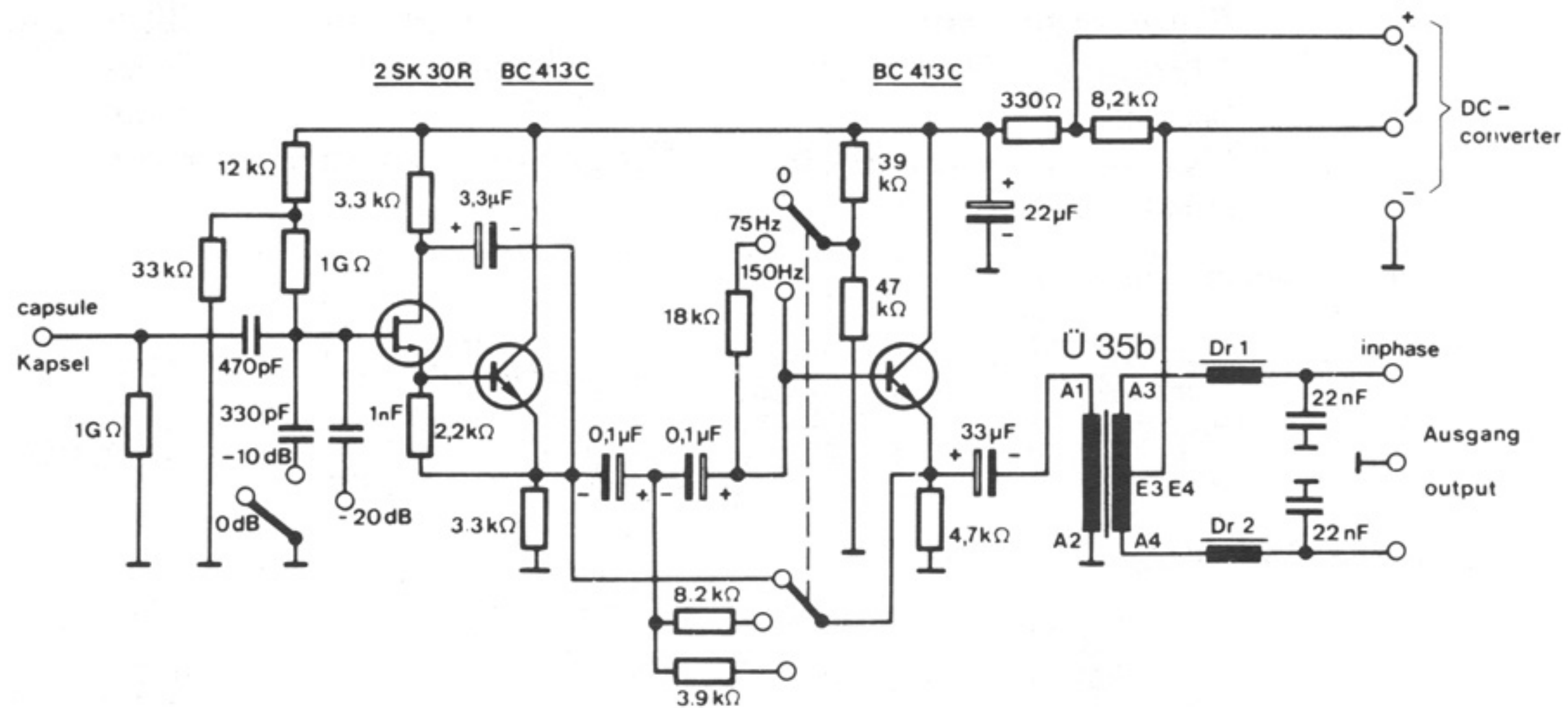
### Figure-eight Omnidirectionnel En huit

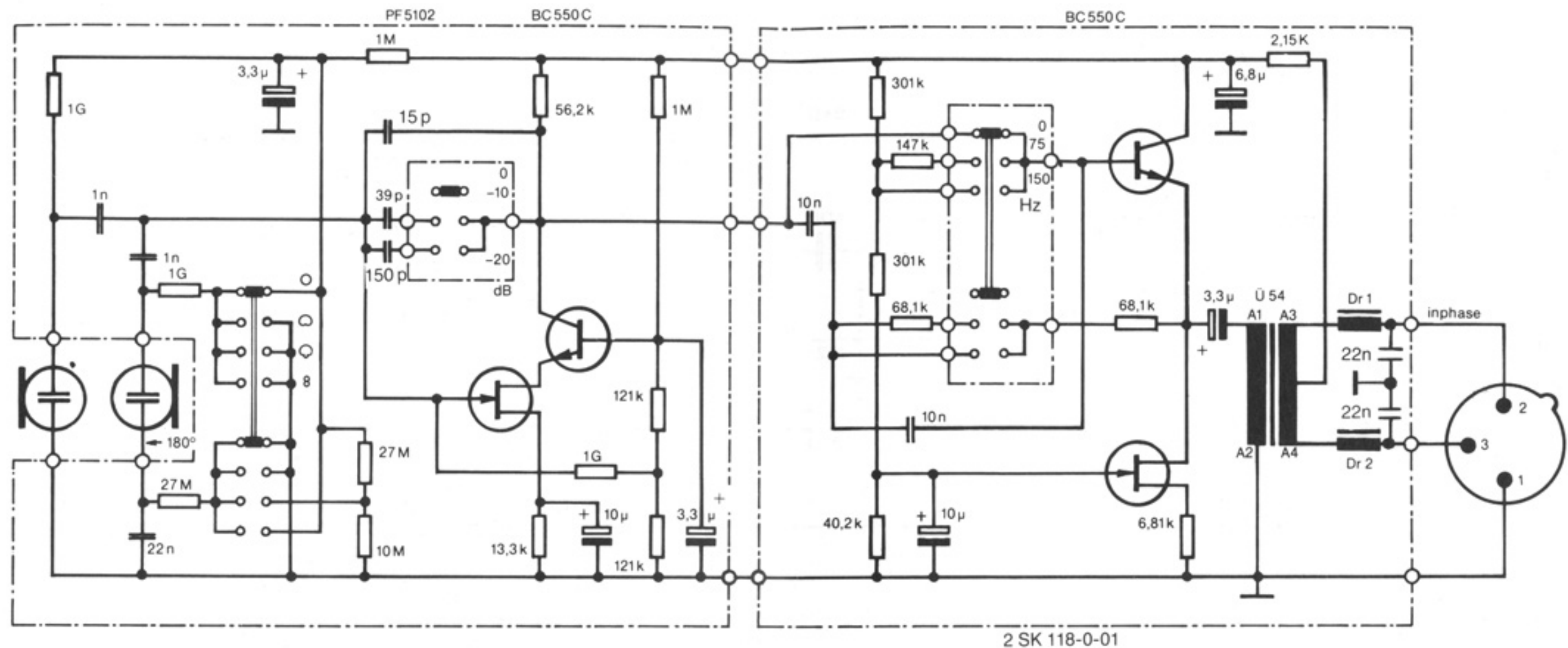


### Hyper-cardioid Hyper-cardioïde



**C 414 EB**





Technische Änderungen vorbehalten. We reserve the right to make technical alterations. Se réserve le droit de modifier ses produits sans preavis ni obligations.

**AKG**  
acoustics

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